

Role of affect in marketplace rumor propagation

Marketplace
rumor
propagation

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Abstract

Purpose – Rumors about products and brands are common occurrence in the marketplace. Often these rumors are shared among consumers using the word of mouth channel. The spread of these rumors is fast and can lead to significant consequences to products and brands. The purpose of this paper is to explore the dynamics of such rumor sharing behavior among consumers. Specifically, this paper investigates the role of positive affect and negative affect in rumor sharing behavior. Three key rumor characteristics (valence, involvement and credibility) are explored as antecedents to positive affect and negative affect.

Design/methodology/approach – The paper collects data from 236 respondents using Amazon MTurk, and conducts a PLS-SEM analysis to explore the role of positive affect and negative affect in rumor sharing contexts.

Findings – Both positive affect and negative affect were found to be significant factors leading to rumor sharing, furthermore positive affect was found to have a stronger influence on rumor sharing as compared to negative affect. The study also delineates the role of valence, involvement and credibility in rumor sharing scenarios, all of which have a strong role in shaping positive affect and negative affect.

Originality/value – The study is novel in using cognitive appraisal theory to illustrate the formation of positive affect and negative affect in rumor encounters. The study conclusively illustrates the role of cognitive appraisal and emotional experiences in the rumor propagation context, and advances the marketing scholarship's understanding significantly.

Keywords Emotions, Affect, PLS-SEM, Word of mouth, Rumor, Cognitive appraisal theory

Paper type Research paper

1. Introduction

Consumers frequently engage in informal communication with one another. The content of such communication can range from sharing consumption experiences, gossiping about new products and disseminating rumors (Berger, 2014). Such communication is termed “word of mouth” (hereafter WOM), which is defined as “informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers” (Westbrook, 1987). WOM has been of significant interest to marketing scholars (Berger, 2014; King *et al.*, 2014) who have found that it influences the spread of information (Goldenberg *et al.*, 2001), enables the acquisition of new customers (Schmitt *et al.*, 2011) and aids the diffusion of products (Chevalier and Mayzlin, 2006). Incidentally, a significant portion of the WOM in circulation consists of rumors (Dubois *et al.*, 2011; Allcott and Gentzkow, 2017). By way of example, in 2008, a website (iReport.com) displayed a rumor claiming that the CEO of Apple Inc., Steve Jobs, may have died of a heart attack. This rumor, although unverified and uncertain, caused excessive panic in the financial markets resulting in a loss of \$9bn to Apple's stock (Dubois *et al.*, 2011). A series of pre-announcement rumors about the iPhone launch between 2002 and 2007 claimed to show leaked pictures/specifications of the product. These rumors were widely circulated among consumers, despite there being no verified source (Sääksjärvi *et al.*, 2017). Similar rumors have plagued brands like P&G, McDonalds and Coca-Cola (Kimmel, 2004). Such rumors can pose significant threats to the credibility of brands (Kimmel and Audrain-Pontevia, 2010).

DiFonzo and Bordia (2007) define rumors as “information statements that circulate among people, are instrumentally relevant, and are unverified.” Rumors spread fast



(Lee and Oh, 2017; Pal *et al.*, 2017; Oh *et al.*, 2013), cause undesirable consequences (Kamins *et al.*, 1997), affect consumer perceptions, influence brand credibility and impinge on loyalty (Kimmel, 2004). Despite these concerns, the marketing scholarship has paid scant attention to this area (Dubois *et al.*, 2011). Studies focusing on WOM have reported the motives, antecedents and consequences of WOM (e.g. Berger, 2014; King *et al.*, 2014), but relatively little is known about the dynamics of rumor propagation (Dubois *et al.*, 2011; Kimmel and Audrain-Pontevia, 2010). Berger (2014) calls for further investigation into “why” WOM is shared among consumers and this paper attempts to put forward an explanation for why rumors (a form of WOM) are shared frequently. The rumor context is interesting since even though the veracity of a rumor is unknown at the time of circulation (Rosnow, 1991), the messages are nevertheless shared swiftly (Oh *et al.*, 2013), are clearly important to consumers, and are even perceived to be factual (Dubois *et al.*, 2011). Hence it is important to know why such unverified rumors circulate in the marketplace.

It is established in the literature that emotions influence interpersonal communication and WOM (Rimé, 2009; Berger, 2014). According to a view derived from the cognitive appraisal theory (CAT) (Lazarus, 1991), emotions are mental states of readiness that arise from appraisals of events (Bagozzi *et al.*, 1999). This study therefore explores the role of the appraisals associated with a rumor episode, the emotions elicited as a consequence of such appraisals, and the subsequent role of such emotions in rumor sharing. Using CAT (Lazarus, 1991) and the two-factor structure of affect (Watson and Tellegen, 1985) this study investigates the relationship between the cognitive, affective and behavioral dimensions of rumor propagation. It is asserted that a consumer’s cognitive appraisals of a rumor will cause affective (emotional) experiences, which, in turn, will drive the consumer to share the rumor. This study explores cognitive appraisals that are associated with three key rumor characteristics (namely, credibility, involvement and rumor valence) that cause emotional experiences (positive and negative affect) that subsequently drive rumor sharing. The next section will: set out the key theoretical foundations for the study; further explain the conceptual relationships; and formulate the research hypotheses.

2. Conceptual framework and hypotheses

2.1 Cognitive appraisal theory (CAT)

CAT postulates that emotions are a consequence of specific event appraisals (Arnold, 1960; Lazarus, 1991). Such appraisals are the necessary and sufficient condition for eliciting emotions (Bagozzi *et al.*, 1999). CAT has been used extensively in marketing to study consumption emotions (Bagozzi *et al.*, 1999) with various appraisals having been found to influence the emotional experience of individuals (Lazarus, 1991; Roseman, 1991). This study explains three appraisal mechanisms that are critical in the rumor context.

The first of these appraisals is goal congruence/incongruence (Lazarus, 1991), which is similar to the motive consistent/motive inconsistent appraisal (Roseman, 1991). Goal congruence/motive consistent appraisal refers to the extent to which a situation is consistent with a person’s desires. Upon encountering an event, people evaluate its outcome against the outcome they desire, and their subsequent emotions are based on such judgments. Goal congruence/motive consistent appraisals (where the outcome is consistent with the desired outcome) lead to positive emotions, while incongruent appraisals lead to negative emotions. The second appraisal is that of goal relevance (Lazarus, 1991). This is concerned with whether the encountered event is relevant to the individual, and if they have any personal stake in the outcome. Emotions are a consequence only of relevant event appraisals. The third and final appraisal is that of probability (Roseman, 1991), which refers to the certainty of an event’s occurrence. It is postulated that the strength of the elicited emotions will be consonant with the probability (certainty) of the event occurring. There are other appraisals discussed in the literature (Roseman, 1991) but they are not explored in this study, which

argues that it is these three appraisal mechanisms that are responsible for the customer's cognitive evaluation of a rumor and subsequent formation of emotions. The next section will introduce the two-factor structure of affect, which captures the emotional experiences encountered as a consequence of these appraisals.

2.2 *Two-factor structure of affect*

Affect is commonly understood as the internal feeling state (Cohen *et al.*, 2008). Affect occurs at the superordinate and abstract level of emotions, and is the higher order factor of specific emotions (Watson and Tellegen, 1985; Bagozzi *et al.*, 1999). Watson and Tellegen (1985) proposed a two-factor structure of affect using the dimensions of positive affect and negative affect. The emotions experienced by individuals can be grouped into clusters, thereby creating a hierarchical structure. Affect is the most general classification of emotions, wherein positive affect and negative affect are groups of emotions that occupy highly distinctive orthogonal dimensions rather than merely being at the opposite ends of a continuum. According to Watson and Tellegen (1985), high positive affect comprises the emotions of being elated, enthusiastic, excited, etc., while low positive affect comprises the emotions of being drowsy, dull, sleepy, etc. High negative affect includes the emotions of being distressed, fearful, nervous, etc., while low negative affect includes the feelings of being calm, placid, relaxed, etc. This study uses the two-factor structure of affect to capture the emotional experiences encountered by customers as a consequence of relevant appraisals. It further argues that positive affect and negative affect will drive the consumer's decision to share the rumor. In short, CAT and the two-factor structure of affect form the basic theoretical foundations of this study.

The paper identifies three key variables that are known to influence rumor propagation. The literature indicates that involvement (Rosnow, 1991; Kimmel and Audrain-Pontevia, 2010), credibility (Rosnow, 1991; DiFonzo and Bordia, 2007) and rumor valence (Knapp, 1944; Rosnow, 1991; Kamins *et al.*, 1997) are factors that are fundamental to rumor sharing. Although these variables are known to influence rumor propagation, little is known about the mechanism through which they work. The rest of this section will detail the roles of these variables. Using the CAT lens, the paper describes how the variables and subsequent appraisals cause affective experiences. These affective experiences (positive affect and negative affect) are then argued to influence rumor sharing.

2.3 *Rumor valence*

Rumors can be positive or negative depending on the consequences or event described in the rumor (Kamins *et al.*, 1997). Positive rumors generally predict a positive or wishful outcome (Knapp, 1944). A rumor about broccoli reducing the risk of cancer (Kamins *et al.*, 1997) is one that is positive. Negative rumors, on the other hand, are those that portray harmful events (Knapp, 1944). Mobile phone radiation causing cancer is an example of such a negative rumor. The previous literature has largely been divided on the role of valence in rumor transmission, in that some researchers have suggested that negative rumors spread faster (Weenig *et al.*, 2001), while others find that it is positive rumors that do so (Kamins *et al.*, 1997). Nonetheless, valence has been a key variable in rumor propagation (Rosnow, 1991; DiFonzo and Bordia, 2007).

CAT asserts that appraisals of goal congruence (Lazarus, 1991; Bagozzi *et al.*, 1999) or motive consistency (Roseman, 1991) explain an individual's subjective evaluation of whether the stimuli poses positive or negative consequences. Thus, the appraisal yields positive emotions in contexts where the stimulus is goal congruent/motive consistent, and negative emotions when the event is goal incongruent/motive inconsistent. A positive rumor will be appraised as goal congruent if the event described is wishful or pleasant. A negative rumor will be appraised as goal incongruent if the rumor is harmful or threatening. Furthermore, a

positive rumor characterized by a desired outcome (goal congruent) would elicit positive emotions, while a negative rumor characterized by a harmful outcome (goal incongruent) would elicit negative emotions (Bagozzi *et al.*, 1999). Thus, positive rumors (e.g. a gain in stock market returns) will elicit positive emotions or higher positive affect (e.g. joy, happiness, excitement, etc.), whereas negative rumors (e.g. a loss in stock market returns) would elicit negative emotions or higher negative affect (e.g. fear, anger, distress, etc.). Thus, the study hypothesizes the following:

- H1a.* Positive valence of the rumor will positively influence the consumer's experienced positive affect.
- H1b.* Positive valence of the rumor will negatively influence the consumer's experienced negative affect.

2.4 Involvement

A customer will not consider a rumor to be important unless it is relevant to the customer; in other words, unless the customer is involved in the topic of a rumor she/he will not consider it to be important (Chua and Banerjee, 2018; DiFonzo and Bordia, 2017). A measure of involvement is necessary for rumors to be deemed serious enough to be transmitted (Rosnow, 1991; DiFonzo and Bordia, 2007). The basic law of rumor (Allport and Postman, 1947) suggests that the rate at which a rumor circulates will vary with its importance and ambiguity ($R \sim i \times a$). Thus, a rumor that has no importance will not be worth sharing and will probably be ignored by the customer. For example, a customer who is not interested in photography is unlikely to take seriously a rumor about professional DSLR cameras, and is therefore unlikely to share it. Thus, involvement is a key to rumor propagation. According to CAT, goal relevance (Lazarus, 1991) is the mechanism by which individuals evaluate if the stimulus they encounter is relevant to their personal goals. This appraisal helps people to make a judgment about their personal stake in an event; the event, in this context, being the rumor topic. Without involvement (goal relevance), the consumer will ignore the rumor and no emotions will be elicited from the rumor episode (Kamins *et al.*, 1997; Rosnow, 1991; Allport and Postman, 1947). However, with the appraisal of goal relevance, emotions will be elicited and these can be either positive or negative depending on the outcome expressed in the rumor. This study contextualizes involvement as the involvement in the product category. Thus, the study hypothesizes the following:

- H2a.* Involvement in the product category of the rumor will positively influence the consumer's experienced positive affect.
- H2b.* Involvement in the product category of the rumor will positively influence the consumer's experienced negative affect.

2.5 Perceived credibility

The credibility or trust associated with the rumor is another important element in deciding whether to share it or not (Rosnow, 1991). Unless the rumor is credible or believable, it will not be shared (Kimmel, 2004; Lee and Oh, 2017). Since the rumor's veracity is unknown at the time of propagation, this creates ambiguity about the likelihood of its truth, with the possibility of it turning out to be true being something that cannot be completely ruled out (Rosnow, 1991). The extant literature has asserted that it is because of the inherently ambiguous nature of rumors that there always remains the likelihood that they contain at least a kernel of truth (Rosnow, 1991), which will motivate the consumer to be inclined to trust the rumor's content. Rumors are, by definition, unverified but they contain valuable information (DiFonzo and Bordia, 2007). Thus, the credibility (trust) of the rumor will influence the perception of how likely the event described in the rumor is to occur

(Rosnow, 1991). Such perceived credibility of the rumor will indicate the likelihood of the event's occurrence, and therefore influence the customer's decision to share the rumor.

Roseman (1991) has established that certainty is an essential appraisal for eliciting emotions. The appraisal theory view of certainty is associated with the likelihood of the occurrence of the event or the degree of belief in the occurrence of the anticipated event (Roseman, 1991). Most rumors, at the time of circulation, fail to provide evidence that might enable the recipients to ascertain their veracity (Rosnow, 1991) and so the emotions experienced by such individuals would depend on the perceived credibility of the rumor (Roseman, 1991). The chances of eliciting an emotion reduce with lower credibility. Furthermore, Kamins *et al.* (1997) have established that consumers will refrain from sharing rumors that are not considered credible because of the awareness that unconvincing information would not be valued by the recipient. Hence, this study argues that the perceived credibility attached to the rumor will be appraised for the formation of subsequent affective experiences. Thus the study hypothesizes the following:

H3a. Perceived credibility of the rumor will positively influence the consumer's experienced positive affect.

H3b. Perceived credibility of the rumor will positively influence the consumer's experienced negative affect.

In sum, the three variables of valence, involvement and credibility will be instrumental in the cognitive appraisal of the rumor using the goal congruence, goal relevance and probability mechanisms. These appraisal mechanisms will elicit affective experiences in customers, which, in turn, will motivate the customer to share the rumor. The next part of this section will discuss the relationship between affect and the customer's intention to share the rumor.

2.6 Intention to share the rumor

The extant literature has asserted that emotions drive interpersonal communication and help in the spread of WOM (Berger, 2014). People generally seek social interactions when faced with emotional experiences (Rimé, 2009). Emotions play a significant role in shaping the virality of content and the faster propagation of WOM (Berger and Milkman, 2012). Appraisal theorists have argued that emotions induce coping tendencies (Lazarus, 1991), which are associated with action tendencies (Frijda *et al.*, 1989). Bagozzi *et al.* (1999) argued that stimulus events will lead to specific appraisals, which, in turn, will elicit emotions and these emotions will finally lead to action tendencies. Irrespective of whether the consumer experiences positive or negative emotions, coping is a desired consequence. Bagozzi *et al.* (1999) suggested that emotions would create a situation of action readiness, often causing both attitudinal and behavioral reactions. Watson and Tellegen (1985) proposed that situations involving high positive affect and/or high negative affect are closely associated with activation. Activation is a continuous state of alertness, experienced as a spectrum that ranges from sleep (low) to excitement (high) via drowsiness, relaxation and alertness (Feldman Barrett and Russell, 1998). Such activation can lead to action tendencies, one of which is to share the rumor. Both positive affect and negative affect will have a positive influence on the consumer's intention to share the rumor, with higher positive affect and/or higher negative affect increasing rumor sharing. Thus, the study hypothesizes the following:

H4. Consumer's experienced positive affect will positively influence the consumer's intention to share the rumor.

H5. Consumer's experienced negative affect will positively influence the consumer's intention to share the rumor.

Positive affect and negative affect are conceptualized to mediate the relationship between valence, credibility, involvement and the consumer's intention to share the rumor.

Such a conceptualization is based on the CAT (Bagozzi *et al.*, 1999). Arnold (1960) had argued that emotions are caused by the following process:

$$\text{Stimuli} \rightarrow \text{Appraisal} \rightarrow \text{Emotions} \rightarrow \text{Action.}$$

Appraisals of stimuli are known to cause emotions, which further lead to action tendencies (Yih *et al.*, 2018; Lazarus, 1991; Roseman, 1991). Therefore affect (emotions) will be an outcome of the cognitive appraisals of the rumor (stimuli). Furthermore, such affective experiences (emotions) will cause sharing of the rumor (action tendencies). Therefore this study proposes that affect will mediate rather than moderate these relationships.

Rimé (2009) suggests that sharing negative emotional experiences would trigger aversive feelings, while sharing positive emotional experiences is savored by individuals. Sharing negative emotional experiences involves the recounting of an aversive experience, while sharing positive emotional experiences provides people with another opportunity to enhance their positive affect (Bryant, 1989). Thus, consumers would be more inclined to share rumors that create a higher positive affect, as compared to those that create a higher negative affect. Hence, the study hypothesizes the following:

H6. Positive affect will have a stronger influence on the consumer’s intention to share the rumor, as compared to negative affect.

Figure 1 provides a summary of all hypotheses under investigation in this study.

3. Methodology

The study uses eight rumors (Table A1) as stimuli to collect data. Rumors were identified from internet archives (www.hoax-slayer.com and www.snopes.com), and further modified by a panel of experts. All messages were labeled as “rumors” or “unconfirmed reports.” Data were collected from 236 respondents to conduct a partial least square based structural equations modeling (PLS–SEM) using SmartPLS 3.0. The remainder of this section provides details of the study’s research design and data analysis methods.

3.1 Participants and procedure

Data were collected from 236 respondents using Amazon MTurk (www.mturk.com). Buhrmester *et al.* (2011) have reported favorably on the platform’s use in collecting data. Since the rumor messages were tailored to India, only respondents from India were allowed to participate in the survey. In return for a monetary reward, respondents read a rumor message (assigned randomly) and then responded to the questionnaire. The rumor characteristics

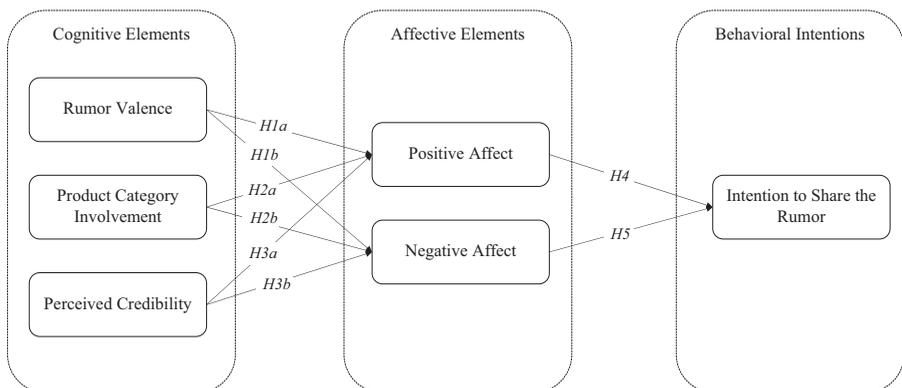


Figure 1.
Conceptual model

(valence, involvement and credibility) were varied by the use of different rumor messages (Table AI). Valence and perceived credibility were related to the content, while different product categories were used to vary involvement. The sample size ($n = 236$) was adequately larger than the criterion mentioned by Hair *et al.*'s (2014) PLS–SEM guidelines (recommended sample size = 147); and based on statistical power analysis as suggested by Cohen (1992), tested using G*Power software (recommended sample size = 204).

3.2 Measures used

Prior studies have operationalized valence by measuring the consumer's attitude toward the outcome of the rumor. Kamins *et al.* (1997) used a single item, i.e., "how good or bad" the event described in the rumor was to respondents (Cronbach's $\alpha = 0.79$). Dubois *et al.* (2011) used a semantic differential scale assessing how "unfavorable/favorable," "negative/positive" and "good/bad" the event described was (Cronbach's $\alpha = 0.75$). This study uses three items to capture valence (Table I). Responses were collected in a five-point Likert format, ranging from strongly disagree to strongly agree.

Perceived credibility was measured using the scale suggested by Gürhan-Canli and Maheswaran (2000). The scale consists of five items (Table I). The scale has displayed adequate reliability indices in previous studies (Cronbach's $\alpha = 0.77$ – 0.89). Responses were collected in a five-point Likert format, ranging from strongly disagree to strongly agree.

Involvement was measured using a modified version of Traylor and Joseph's (1984) scale. Five items were used (Table I). The scale has displayed adequate reliability indices in earlier studies (Cronbach's $\alpha = 0.92$). Responses were collected in a five-point Likert format, ranging from strongly disagree to strongly agree.

Positive affect and negative affect were measured using a modified version of the positive and negative affect schedule (PANAS) (Watson *et al.*, 1988). The original PANAS scale has 20 items. This study uses a shortened version of PANAS (ten items) proposed by Kercher (1992). The scale has displayed adequate reliability indices in earlier studies for measuring positive affect (Cronbach's $\alpha = 0.75$ – 0.87) and negative affect (Cronbach's $\alpha = 0.81$ – 0.90). Five items each were used to measure positive affect and negative affect (Table I). Responses were collected in a five-point Likert format, ranging from strongly disagree to strongly agree.

Intention to share the rumor was measured using five items (Table I). Kamins *et al.* (1997) have used items like "how likely they were to tell others" (Cronbach's $\alpha = 0.90$), and (this is) "the kind of thing you would mention to other people" (Cronbach's $\alpha = 0.63$). This study adapted the measure to differentiate between the types of recipient. The second item was dropped due to low Cronbach's α reported by Kamins *et al.* (1997). The next section will discuss the PLS–SEM analysis method and the findings.

4. Analysis

The analysis was done using PLS–SEM. SEM is a well-established methodology in marketing (Bagozzi, 2004). SEM can be performed either by a variance-based PLS (PLS–SEM) method, or by a covariance based method. PLS–SEM is appropriate for testing models that do not have sample size complexities or strict normality assumptions (Chin, 1998). For this study PLS–SEM is appropriate because a few weak constructs do not influence all the latent variable estimates (Reinartz *et al.*, 2009). To ensure the additional robustness of the estimates, 1,000 bootstrapped subsamples were used in PLS–SEM (Hair *et al.*, 2014).

4.1 Measurement model

The results of the reliability and validity assessments of the scales are reported in Table I. Reliability and internal consistency were assessed using the composite reliability (CR) and

Constructs and items	Factor loading ^b
<i>Credibility</i>	
I think that the above message is highly believable	0.90
To me, the above message is completely true	0.89
The above message is totally acceptable to me	0.90
I believe the message is credible	0.87
The above message is completely trustworthy	0.87
<i>Involvement</i>	
When other people see me using product ^a , they form an opinion about me	0.81
You can tell a lot about a person by seeing the product ^a they use	0.87
My product ^a help me express who I am	0.89
Seeing someone else's product ^a tells me a lot about them	0.90
When I am using my product ^a , others see me in the way I want them to see me	0.87
<i>Valence</i>	
Message invokes positive feelings	0.87
The outcome described in the message is positive	0.89
The message is negative in nature ^R	0.64
<i>Negative affect (NA)</i>	
I am afraid	0.92
I am distressed	0.76
I am nervous	0.91
I am scared	0.91
I am upset	0.89
<i>Positive affect (PA)</i>	
I am alert	0.69
I am determined	0.85
I am enthusiastic	0.82
I am excited	0.82
I am inspired	0.85
<i>Intention to share</i>	
I will share the message with immediate family members	0.83
I will share the message with friends	0.82
I will share the message with strangers	0.85
I will share the message on Facebook/Twitter/etc. on social media	0.85
I will share the message on public review websites/forums	0.75
Notes: R: Reverse coded item. ^a Product was changed with appropriate product category for each rumor message; ^b all factor loadings were significant at $p < 0.01$	

Table I.
Scale items and
loadings for
latent constructs

Cronbach's α (CA) measures. Results indicated that all CR values were greater than 0.85, and all CA values were greater than 0.74; both of which indicate good internal consistency and reliability. The convergent validity of the model was assessed using the average variance extracted (AVE) criterion, and by evaluating factor loadings. Results indicate that all AVE scores were greater than the minimum threshold of 0.50 (Bagozzi and Yi, 1988), and factor loadings were greater than 0.60, indicating adequate convergent validity.

Discriminant validity was assessed by comparing the inter-construct correlations to the square root of respective AVEs (Fornell and Larcker, 1981). The square root of AVEs should be greater than the inter-construct correlations to establish discriminant validity. It can be seen in Table II that the model establishes good discriminant validity. Discriminant validity was also assessed using the heterotrait-monotrait ratio of correlations (HTMT) (Henseler *et al.*, 2015), whereby the maximum HTMT values for each construct were found to be less than the threshold of 0.90 (Table II), establishing acceptable discriminant validity.

4.2 Structural model

Two criteria were used to assess the overall quality of the model. R^2 was evaluated for each latent variable, and the Stone–Geisser Q^2 test (Geisser, 1974; Stone, 1974) was carried out to establish the predictive validity and overall quality of the model. All endogenous variables had an R^2 value greater than the threshold of 0.10 (Falk and Miller, 1992), and all latent variables displayed acceptable Q^2 values larger than 0 (Chin, 1998). Positive affect ($R^2 = 0.50$, $Q^2 = 0.32$), negative affect ($R^2 = 0.13$, $Q^2 = 0.09$) and intention to share ($R^2 = 0.40$, $Q^2 = 0.26$) displayed adequate parameters (Hair *et al.*, 2014), thus proving the predictive relevance and validity of constructs. Table III provides the results of the PLS–SEM analysis and the results of the hypotheses tests.

Rumor valence positively influenced positive affect, and negatively influenced negative affect. This provided support for *H1a* ($\beta = 0.18$, $p = 0.00$) and *H1b* ($\beta = -0.38$, $p = 0.00$). Involvement positively influenced both positive affect and negative affect, providing support for *H2a* ($\beta = 0.33$, $p = 0.00$) and *H2b* ($\beta = 0.15$, $p = 0.01$). Perceived credibility positively influenced both positive affect and negative affect, thereby supporting *H3a* ($\beta = 0.42$, $p = 0.00$) and *H3b* ($\beta = 0.18$, $p = 0.00$). Positive affect was reported to positively influence consumer intentions to share the rumor, supporting *H4* ($\beta = 0.61$, $p = 0.00$). Negative affect was also found to positively influence a consumer’s intention to share the rumor, providing support for *H5* ($\beta = 0.15$, $p = 0.00$). The mediating effects of positive affect and negative affect were assessed using the PROCESS Procedure for SPSS (Hayes, 2013) using 10,000 subsamples. Mediation is established if the bias corrected confidence interval (CI) does not contain 0. Positive affect was found to mediate the relationship between valence and intention to share (indirect effect = 0.26, CI = 0.19 –0.35), credibility and intention to share (indirect effect = 0.25, CI = 0.18 –0.34) and involvement and intention to share (indirect effect = 0.29, CI = 0.21 –0.38). Negative affect was also found to mediate the relationship between valence and intention to share (indirect effect = -0.03, CI = -0.06 to -0.01), credibility and intention to share (indirect effect = 0.01, CI = 0.00 –0.03) and involvement and intention to share (indirect effect = 0.01, CI = 0.00 –0.04). Thus mediation of all the hypothesized paths was established.

	1	2	3	4	5	6	HTMT ^a
1. Credibility	0.88						0.64
2. Valence	0.33**	0.81					0.53
3. Involvement	0.27**	0.28**	0.87				0.56
4. Positive Affect	0.57**	0.42**	0.51**	0.81			0.70
5. Negative Affect	0.10	-0.26**	0.12*	-0.01	0.88		0.31
6. Intention to Share	0.57**	0.15*	0.34**	0.61**	0.13*	0.82	0.70

Notes: Sq. root of AVE shown along the diagonal. ^aHTMT values reported are maximum for each construct. *Correlation significant at $p < 0.05$; **correlation significant at $p < 0.01$

Table II.
Discriminant validity
assessment

Hypotheses	β	Sig.	Finding
<i>H1a</i>	0.18	0.00	Supported
<i>H1b</i>	-0.38	0.00	Supported
<i>H2a</i>	0.33	0.00	Supported
<i>H2b</i>	0.15	0.01	Supported
<i>H3a</i>	0.42	0.00	Supported
<i>H3b</i>	0.18	0.00	Supported
<i>H4</i>	0.61	0.00	Supported
<i>H5</i>	0.15	0.00	Supported
<i>H6</i>	na	0.00	Supported

Table III.
Results of PLS–SEM
analysis and
hypotheses tests

H6 asserted that positive affect (as compared to negative affect) is more influential on a consumer's rumor sharing intention. *H6* was investigated by comparing the path coefficients and effect sizes (f^2) (Cohen, 1988) of positive affect and negative affect on the consumer's intention to share the rumor. Hair *et al.* (2014) suggest that such comparisons of path coefficients and f^2 is an appropriate method of establishing the relative importance of various predictors. PLS-SEM reported that the path coefficient and f^2 value of positive affect \rightarrow intention to share the rumor ($\beta = 0.61, p < 0.00, f^2 = 0.63, SE = 0.04$) was greater than negative affect \rightarrow intention to share the rumor ($\beta = 0.15, p = 0.00, f^2 = 0.03, SE = 0.05$), which provides support for *H6* (Hair *et al.*, 2014). To further establish significant differences, a *z*-test was conducted. Results of the *z*-test indicated that the association of positive affect \rightarrow intention to share the rumor ($\beta = 0.61, p = 0.00, f^2 = 0.63, SE = 0.04$) was greater than the relationship of negative affect \rightarrow intention to share the rumor ($\beta = 0.15, p = 0.00, f^2 = 0.03, SE = 0.05$), $z = 6.17, p < 0.00$, thus further supporting *H6*. In summary, Table III provides details of all hypotheses tests. It was found that all nine hypothesized relationships were found to be significant in the context of rumor propagation.

5. Discussion

Rumors are shared informally by consumers over the WOM channel (DiFonzo and Bordia, 2007). This study explains the dynamics of rumor propagation using conceptual underpinnings taken from the CAT (Lazarus, 1991) and the two-factor structure of affect (Watson and Tellegen, 1985). Affect is a significant contributor to marketplace behavior (Cohen *et al.*, 2008) and this study contributes to the growing stream of literature on the role of affect in marketing. Emotions have been established to be a consequence of certain cognitive appraisals (Lazarus, 1991), and the role of such emotions has been of significant interest to marketing researchers (Bagozzi *et al.*, 1999). This study examines the role of emotions in rumor encounters by exploring affect (Watson and Tellegen, 1985). In doing so, the study contributes to the marketing scholarship's understanding of the role played by emotions in rumor propagation in the marketplace.

5.1 Theoretical contributions

The paper makes the following advancements to the understanding of "why" rumors are shared by consumers. First, the study delineates the role played by positive affect and negative affect in rumor sharing, and is among the first studies to do so. The study establishes that both positive and negative affect are significant predictors of rumor sharing, with both positively influencing rumor propagation. Positive affect was found to have a greater impact on rumor propagation than negative affect, signifying that consumers are more inclined to share positive experiences (Rimé, 2009). Second, the prior literature (Kamins *et al.*, 1997; Weenig *et al.*, 2001) has been divided about the role of valence in rumor propagation. This study illustrates that it is the emotional experience, and not just rumor valence, that will cause rumor propagation.

Third, the study was able to establish that rumors about favorable events cause positive affect (e.g. enthusiastic, active, alert, etc.) whereas rumors about unfavorable events cause stronger negative affect (e.g. sadness, disgust, nervousness, etc.). It also finds that product category involvement and perceived credibility influence positive affect and negative affect. The study therefore provides a comprehensive theoretical foundation for "why" rumors are shared.

Finally, it was established that goal congruence, goal relevance and probability are the three fundamental appraisal mechanisms that spark rumor propagation. The paper illustrates that cognitive appraisals lead to affective elements, which, in turn, lead to behavioral intentions (Bagozzi *et al.*, 1999), thereby explaining the dynamics of rumor propagation.

5.2 Managerial implications

First, this study identifies the role of emotional experiences in rumor sharing. Rumor management strategists (Kimmel, 2004; Kimmel and Audrain-Pontevia, 2010) should pay attention to managing the emotional experiences of consumers rather than merely providing counter information to the rumor. Second, managers designing pre-announcement rumors (Kohli, 1999) should do so to engineer positive affect. Content should be focused on rumors that have been crafted to be credible and engaging. Finally, it is imperative that brands continuously monitor online WOM to ascertain any potentially damaging rumors. Managers should concentrate resources on mining for affective sentiments in online WOM. Sentiments contained in these rumors should be evaluated to prioritize rumor control strategies.

5.3 Societal implications

Rumors are common occurrences in society, particularly in uncertain or ambiguous situations. Natural disasters, wars, etc. are plagued with rumors (Rosnow, 1991). Under these circumstances, rumor management becomes essential (Edy and Risley-Baird, 2016). The findings of this paper can be advanced to aid the handling of rumors by managing the emotional experiences of people. Rosnow (1991) has highlighted the necessity of managing anxiety in such situations, and this study provides more detail about this, which can be utilized by agencies managing such rumors.

5.4 Limitations and future research

First, the study uses the two-factor structure of affect to categorize emotions; future research must study specific emotions (e.g. anger, joy, etc.). Second, the role of demographic factors (age, gender, etc.) is not evaluated, and this is something that can be further advanced in future studies. Third, the sample size ($n = 236$) is a limitation of this study. Future research should use a bigger sample, which could also explore cultural differences. Finally, data are collected from Amazon Mturk, which captures a sample of consumers who are technologically aware; future studies must look at other customer groups as well.

In conclusion, this study uses CAT, and the two-factor structure of affect to highlight the role of antecedent appraisals in shaping the consumer's emotions. Both positive affect and negative affect are significant antecedents of rumor propagation, with positive affect being the stronger influencer. The study conclusively illustrates the role of cognitive appraisal and emotional experiences in the rumor propagation context, and advances the marketing scholarship's understanding significantly.

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- Rumor 1 Think before you drink XXX or XXX or any another soft drink. Have you ever thought what you drink when you drink an aerated drink? You gulp down carbon dioxide, something that nobody in the world would advise you to do. Rumor says that two months ago, there was a competition in Delhi University “Who can drink the most XXX?” The winner drank 8 bottles and died on the spot because too much carbon dioxide in the blood and not enough oxygen. From then on, “all soft drinks have been banned from the university”
- Rumor 2 Diet XXX is the best soft drink that you can consume. Rumors suggest that the new diet soda available in the market is claimed to have 0 calories and 99% water in its ingredients. The diet soda is considered to be safer than all other packaged beverages. The rumor suggests that the diet soda has artificial sweeteners and is sugar free, making it safe on the health requirements of urban youth
- Rumor 3 Rumors suggest that shampoo can cause cancer. The word goes around says that substance by the name of Sodium Laureth Sulfate or simply SLS; found in most shampoo can cause cancer. Most of the manufactures use it because it produces a lot of foam and it is cheap. This substance (SLS) is what makes the shampoo foamy, hence most manufacturers use it in their products. Another possible carcinogen is the dandruff prevention medication in shampoo called Ketoconazole. This substance is used in all anti-dandruff shampoo; but new rumors suggest that this too can be dangerous and lead to cancer in regular use
- Rumor 4 The word is going around in the market that shampoo can actually help you to have better hair. Shampoo provides you better hair growth and healthier hair. The use of shampoo regularly can reduce hair fall and increase the longevity of beautiful hair. Rumors even suggest that the more frequently one uses shampoo, the better it is for the hair
- Rumor 5 “I felt headaches all the time so I went to see a doctor; I suspected that it might have to do with my exposure to mobile phones” said a rumor spreading on social media. In 2011, rumors suggested that radio frequency electromagnetic fields are possibly carcinogenic to humans, based on an increased risk for glioma, a malignant kind of brain cancer, related to the use of wireless phones. The rumor suggests that the use of mobile phones and being in a place with such towers can both be dangerous
- Rumor 6 There are unconfirmed reports doing rounds on the internet that a new smart phone will be launched in May, 2015. Rumors indicate that this flagship device will be priced around Rs 25,000; and will be called “Mighty.” It is rumored that the device will have a “floating touch” feature, which will allow users to navigate their phones without ever touching the display. It is rumored to be provided the phone with a quad core processor and a 50 mp resolution camera; this makes it the best camera for any smart phone till now and surely very advanced technology for cheap prices
- Rumor 7 Rumors have erupted suggesting that major social media websites are providing access to user content for third party advertisements. These rumors suggested that social media websites have started providing access to advertisers to use your pictures in their ads on the social media. This rumor goes on to say that if you don’t explicitly secure your photos with the privacy settings, advertisers will be using your pictures to lure your friends into their ads by using your photos in these ads
- Rumor 8 Rumors suggest that social media firms like XXX/XXX, etc. have partnered with NGOs and charitable organizations to help in social causes. The rumor suggests that when members forward or like a social cause in the social media, the system tracks the popularity of such issues and the partnering NGOs and charitable organizations take up the most popular issues and help them
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Table AI.
Rumor messages
used in the study

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