

Sentiment analysis of virtual brand communities for effective tribal marketing

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Received 17 September 2015
Revised 30 December 2015
28 February 2016
6 June 2016
Accepted 14 July 2016

Abstract

Purpose – By doing sentiment analysis of netnographic data, this study aims to explain the need to give special attention to negative sentiments expressed in virtual tribes, as they play a significant role in translating the informational mode of conversation to the relational mode of conversation. The overall purpose is to aid brand managers in the process of brand co-creation by articulating brand communication targeted to specific audiences based on their shared passions and interests.

Design/methodology/approach – The study adopts a mixed-methods approach. The primary data were collected from two virtual brand communities through qualitative net-based ethnographic methods. Semantria Excel plug-in was used to categorize the extracted consumer statements based on positive, neutral and negative sentiments.

Findings – Managing the negative interactions in the virtual communities and relationship development with members through non-commercial conversations should be the two main priorities for effective brand management. Sentiment analysis specifically helps to identify pain points and consumer sentiments at each stage of the shopper journey. The findings of the study endorse the importance of offering and supporting communities as a valid marketing.

Research limitations/implications – This paper shows how systematic attention to user interactions on virtual brand communities can be used for tribal marketing, which in turn will impact the intangible aspects of the business, such as increasing brand value and loyalty. By engaging the consumers, the social ties among the target audience can be nurtured and strengthened.

Originality/value – This paper focuses on decoding their behavior by unpeeling the consumer statements rather than tangible aspects of the business, such as sales of products or services. It contributes to development of a theoretical framework that outlines how the interactions in virtual brand communities can aid in formulating the functional and communicational strategies for a brand.

Keywords Social media marketing, Etribes and online communities, Marketing communications, Brand management, Online consumer behaviour, Virtual marketing

Paper type Research paper

Introduction

Marshall McLuhan predicted “re-tribalising of human societies” way back in the 1970s. The emergence of social computing (using computational technology to support social interactions and collaboration) has facilitated online community formation by geographically dispersed individuals making McLuhan’s prediction a reality. The spread of the new media technologies, including the internet, has not diminished the primal urge of humans to connect and share,

The authors would like to express their gratitude to Prof. Rajneesh Krishna for initial guidance in articulation of the research topic. They would also like to thank Prof. Varsha Jain and Prof. Kallol Das for their critical comments on the early drafts. They would like to thank Ajinkya Palkar and Naman Mathur for proof reading. Finally, the authors would like to acknowledge the Knowledge Exchange and Information Center at MICA for the timely help with references and generously sharing the vast knowledge bank they have created.



but rather fueled it, and as a result, numerous virtual communities have formed around shared interests, issues, products and brands. As several scholars and marketers have pointed out (such as [Kozinets, 1999](#); [Cova and Cova, 2002](#)), virtual communities have now become an integral part of the marketing and brand management landscape. At first, with Web 1.0, the users were at the receiving end of the content generated by the marketers for promotional activities, but the advent of Web 2.0, with its potential for user-generated content and formation of peer networks, has transformed the way communities come together and are sustained online. With increasing interactions on social media platforms such as Facebook, Twitter, YouTube and LinkedIn, the users are now able to exchange ideas and post their reviews, comments and feedback about brands and products. This transformation has opened the possibilities of brand co-creation and has offered both challenges and newer opportunities for brand management and marketing.

Tribal marketing is an emerging approach, aimed at specific social groups having similar likes and dislikes, and is centered on a product or a service. It is a collective approach toward the consumers who form a tribe around a brand or a product not based on the conventional parameters of age, sex, class or nationality but based on their shared goals, interests and passions. Social media are the most conducive channels for tribal marketing, as they offer the wealth of information that consumers share in online communities about the cultural aspects and reasons for their engagement with the brand. By using this information, brand managers can formulate compelling and unique communication messages to build strong, productive and long-term relationships with their customers.

In this paper, the authors have demonstrated how netnographic data combined with sentiment analysis using a new spreadsheet-based tool help in in-depth examinations of emotions revealed in interactions in virtual brand communities. Such an examination helps the brand managers to design relevant communication strategies that positively channelize the brand co-creation process in the brand's favor.

Understanding virtual communities

The term "virtual community" was coined in 1987 and later expanded in 1993 by Rheingold to suggest a social gathering which is the outcome of the internet when people converse for a longer duration with adequate human feelings to form a personal relationship in the online or virtual world ([Rheingold, 1993](#)). The networked world facilitated by Web 2.0 technologies has empowered such individuals to overcome the geographic and demographic segmentations, and come together to form communities of like-minded people who have a common sentiment for a brand, a product or a celebrity ([Pace et al., 2007](#)). According to [Kozinets \(1999, p. 252\)](#), the virtual communities are very dynamic, active and perceptive; are not very accessible to one-on-one processes; and deliver valuable information on cultural aspects ([Kozinets, 1999](#)).

Virtual brand communities

[Valck et al. \(2009, p. 185\)](#) define a virtual brand community as "a specialized, non-geographically bound, online community, based on social communications and relationships among a brand's consumers". Virtual brand communities have two important components of two-way interactions: business-to-consumer (B2C) and consumer-to-consumer (C2C).

According to [Henning-Thurau \(2004\)](#), there are eight motivational factors which contribute toward the interactions on social platforms: self-enhancement, economic benefits and cost savings, venting negative sentiments, social benefits, concern for other members, helping the brand (company), assisting other consumers and seeking advice from those who have an experience with the brand/product. Their research further states that availing social benefits motivates the consumers to participate in the online communities and stresses upon

the importance of bi-directional interaction of customer engagement. Affiliation and bonding emerge as key motivations for customer participation in virtual brand communities along with instrumental, utility-focused rewards that are perceived as greater than the risks of interacting with strangers (Mollen and Wilson, 2010; Nambisan and Baron, 2007; Nolan *et al.*, 2007; Oldenburg, 1999).

Brodie *et al.* (2013, p. 107) offer a working definition of consumer engagement in a virtual brand community that conceives it as a “multidimensional concept comprising cognitive, emotional, and/or behavioral dimensions” playing a central role in relational exchange. Virtual consumer engagement is also characterized by its context-dependent and dynamic nature. These brand communities are complex co-creative environments, shaping consumers’ interactive experiences with the brand and with one another, which makes the research on such communities rewarding and challenging at the same time.

There are many advantages of focusing on virtual brand communities for marketing purposes. First, the reach of virtual brand communities is tremendous owing to the use of varied networks and devices. This allows seamless and rapid communication between the brand and the members as well as among the members (Algesheimer *et al.*, 2004). Second, such communities provide an overview of the consumers’ needs and expectations from the product or service (Andersen, 2005). These may not be explicitly stated in the course of interactions, but can be interpreted by studying and analyzing the emotions associated with those interactions. Consumers can also be encouraged to pitch their ideas by contributing toward product innovation. Finally, this medium leads to a considerable amount of cost reduction in promotional activities (Muniz and O’guinn, 2001). Marketers can skillfully negotiate brand co-construction process with minimal investment by closely examining interactions taking place in the virtual brand communities. According to Brodie *et al.* (2013), engaged consumers exhibit enhanced loyalty, satisfaction, emotional bonding and trust. Examination of virtual brand communities as consumer engagement sites, therefore, has important managerial implications.

Theorizing tribes and tribal marketing

The authors’ conceptualization of e-tribes and tribal marketing draws heavily from the Latin school of thought (Cova and Cova, 2002) that questions the view that new technologies have caused greater individualism. The Latin school stresses on the universal human need to connect and argues that the new technologies have in fact facilitated connections and networks. Of course, the new technology-assisted tribes differ considerably from the primitive ones. While the primitive tribes were based on primordial and lifelong ties, geographic proximity and hierarchical relationships, the new e-tribes have crossed the boundaries of space, are formed around shared problems and passions, have easy entry and exit rituals but at the same time have a shorter life span compared to their predecessors. Besides, one can be a member of multiple e-tribes at the same time.

We must mention here that virtual communities and e-tribes are often used interchangeably in literature and online marketing websites. Some tight-knit virtual communities such as the Harry Potter Alliance or Nerd fighters may act as tribes, while some other large virtual communities may have several tribes within them based on shared interests such as music, technology or photography; shared experiences such as negative encounters with the customer service; or a shared need, such as buying a new cell phone. Kozinets (2001) characterizes e-tribes by three core parameters: shared consciousness of a kind; traditions and rituals; and a sense of obligation or duty to the individual members or to the community as a whole. The tribe members are in a relationship with not only the brand but also fellow tribe members and want to connect with them or watch out for them. The

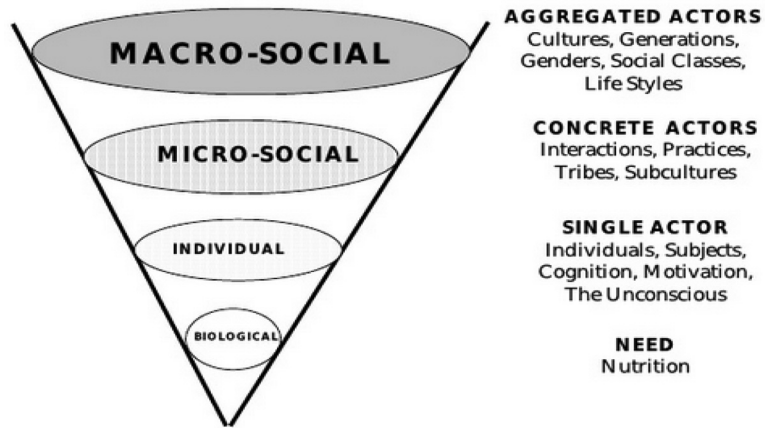
concept of tribe refers to the return of quasi-archaic values: group narcissism, a sense of identification, syncretism and religiosity (Cova and Cova, 2002). The content which is shared among the tribes or what the members say and their relevant actions define an identity for them. Passion is the social glue that defines a tribe. Apart from sharing common interests, the members of a tribe may also have a common culture, values, beliefs and experiences to various extents. The e-WOM (electronic word-of-mouth) effect, therefore, is more heightened among tribe members.

The Latin school emphasizes the importance of social ties in influencing consumer behavior that can be leveraged for brand success within an online context. Tribal marketing is an approach that responds to the “powerful tension between commercial culture and communal collectivities” (Cova *et al.*, 2007). Bernard Cova first mentioned in the *European Journal of Marketing*, the importance of consumer tribes in contemporary times. According to him, the post-modern consumer in the process of expressing and completing the self through self-identity still feels a need for social connectedness (Cova and Cova, 2002). This view holds that people prefer to gather in small groups or tribes and such social groups are more influential on the behavior of people in comparison to marketing organizations (Cova and Cova, 2014).

The principle of tribal marketing is that customers, apart from seeking the products or services which empower them or make them independent, also look for the products or services which will link them to other consumers, i.e. a tribe (Cova and Cova, 2002). Tribal marketing is supported by social-identification theory. As per this theory, people have a tendency to categorize themselves into various social categories so as to enable self-identification within their own society (Ashforth and Mael, 1989). This feeling of “oneness” or “sense of belonging to the group” (Gwinner and Swanson, 2003) may lead to enhancement of social prestige, positive social identification and self-esteem and also provoke the emotions of solidarity and camaraderie (Zillman *et al.*, 1989). Social identity theory states that people tend to associate themselves with the groups which are perceived to be having high esteem in the society (Dutton *et al.*, 1994). The degree of social identification that people have with certain groups can be impacted by the similarity index perceived by the public images of those groups (Jehn *et al.*, 1999). The results of social identification lead to the formation of tribes centered on their shared interests, which can range from an inclination toward art to technical geeking out.

Tribal marketing is different from the conventional approach of relationship marketing, which is driven by the database consisting of segmentation of consumers based on demographics and lifestyle data of individual consumers (Kozinets, 1999) and strives for individual loyalty through purchase incentives. Such marketing approaches cannot fully exploit the content on social media networks, especially the affective or emotional dimension of it, for brand development. On the contrary, tribal marketing relies on relationships – between individual customers and their affective dimension. It is not a radical shift in the identity of a brand, but an evolutionary process. It is a continuous process wherein the relationship is not only built with the consumer but also maintained and enhanced continuously over a period, recognizing their social ties and nurturing these ties for the process of brand co-creation. Figure 1 explains how the tribal marketing approach differs from the conventional approaches. Figure 1 shows that there are essentially four levels of observation of consumption.

The conventional marketing and consumer research concentrate either on the macro-social level or the individual level and ignore the micro-social level (Bagozzi, 2000). In the micro-social level, the main agenda of consumption is to form social links and networks and through this, building a societal frame (Desjeux, 1996). This level mainly deals with the



Source: Desjeux (1996)

Figure 1.
Level of observation of
consumption

interactions taking place between people through various media. These interactions are not always rational and formal. Sentiments and emotions are an integral part of such interactions. Examination of the micro-social level of consumption, therefore, requires a research approach that facilitates probing of both the informative and affective dimensions of social interactions and helps insight mining from these interactions. The authors found that a mixed-methods approach combining netnography with sentiment analysis was useful in this context.

Netnography as an approach for studying virtual communities

The term netnography is a combination of two terms – net (internet) and ethnography. Netnography is doing ethnographic research in social domains of the online environment (Kozinets, 1997). Ethnography is a valuable approach for examining social phenomena in their natural and holistic state. Originally used by anthropologists, it has since been widely used in disciplines such as sociology, communications, health sciences and marketing for studying cultures and communities globally. Ethnography emphasizes prolonged and intimate immersion in the sites of research. Participant observation and interactions with key informants are the two most used methods of the several methods ethnographers use to collect data. Kozinets (2002), who is one of the leading proponents of netnography, argues that when used appropriately in tandem with theoretical concepts, netnography provides researchers with a lens to the naturally arising consumer behaviors which are related to the levels of inspirations, engagement, language, connections, participation, consumption and symbols of a particular virtual community (Kozinets, 2002). Netnography, therefore, is a useful approach for examining the social dynamics of the members of virtual communities.

Sentiment analysis

Emotions play an important role in marketing decisions, and several theories emphasize the affective dimension of consumer decision-making. Emotional information obtained from online communities can help to determine the likelihood of success of that particular product or service. In the context of online communities, it was Chmiel who stated that emotions are major drivers of interactions in the community and also applied statistical techniques to

examine them (Chmiel *et al.*, 2011). The existing studies suggest that emotions are an important source of information which helps to influence the human behavior and social activities (Bougie *et al.*, 2003). Emotions, therefore, are vital to explaining and predicting the social phenomena pertaining to brand loyalty and brand's success.

Sentiment analysis in the marketing domain has attracted a great deal of attention because of its potential to extract emotions out of formal and informal text using various tools (Leung and Chan, 2008). In this, specifically negative emotions garner more attention, as they impact business in an unfavorable manner, which may lead to negative consequences (Rapson *et al.*, 1993). Romani *et al.* (2011) found that the consumer behavior related to the brand depends on a particular negative emotion; for example, anger leads to complaints, whereas apprehension or worry leads to switching of brands. Moreover, there exists a relationship between the information containing emotions and emotion expressed by the consumers in response to that information, and this gives us various emotional patterns and their significance in influencing other emotions in such virtual communities (Kim *et al.*, 2011). For instance, Bollen *et al.* (2011) observed by analyzing the interactions on Twitter that the fluctuations in the stock index are highly dependent on the public sentiments and can also act as forecasters to economic indicators.

Despite the vast literature on sentiment analysis, there has been limited literature which demonstrates how the results of sentiment analysis can be used for formulating strategies for tribal marketing. Besides, a majority of previous studies, using sentiment analysis, use quantitative data usually obtained through surveys and aim to measure the effect of consumer engagement on the sales of a product/service (Chevalier and Mayzlin, 2006). In this paper, the authors demonstrate the use of sentiment analysis on naturally occurring qualitative data collected through netnography. The purpose is to analyze interactions in selected virtual brand communities and understand the positive and negative influences of such interactions *vis-à-vis* the brands. Such an analysis is expected to help:

- identify pain points and consumer sentiments at each stage of the shopper journey;
- minimize the negative e-WOM by becoming an integral part of social networks of the consumers; and
- develop targeted strategies for brand communication centered around consumer passions and shared interests and not on the product offerings.

Collection and analysis of data

For this mixed-methods research, in-depth analysis of interactions on two virtual brand communities was conducted. A Facebook-based brand community of a smartphone company and an e-commerce company were selected on the basis of the total number of members, frequency of brand's promotional activities, engagement level of the participants and social media presence of the brand. The engagement level of members was gauged by the average number of comments and likes on the brand's activities on the Facebook page. Hsu (2012) as well as Ho and Wang (2015) point out that Facebook brand communities are more user-friendly for the purpose of sharing information regarding a product or service, disseminating marketing messages, sharing feedback and following the recent updates.

The flowchart in Figure 2 outlines the process in which this research was carried out.

Data mining through netnography

The qualitative data were obtained using netnographic methods, specifically participant and non-participant observation. Long-term immersion or "hanging-out" on the site under study is a key requirement for any ethnographic study. The authors immersed themselves in the selected communities for six months. After an initial informal immersion period of three

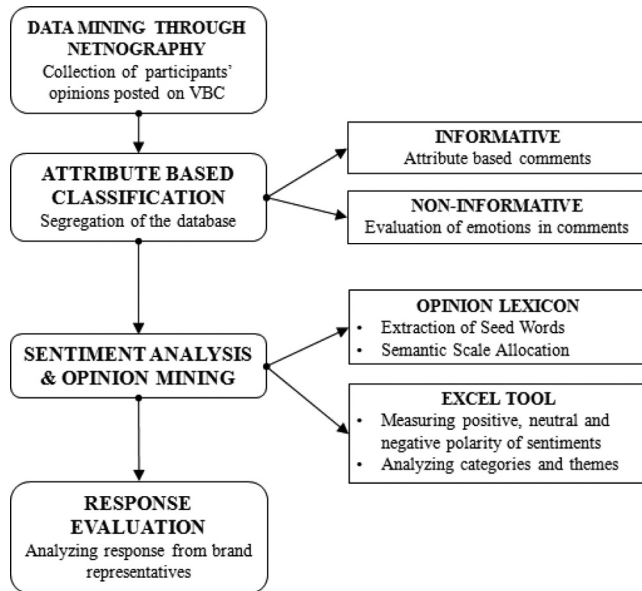


Figure 2.
Flowchart of the
research methodology

months, the authors maintained a journal of observations and wrote memos to themselves. After that the authors began to collect and archive posts, comments and conversations in each community. The data were collected over three months. For the smartphone company, in all, 3,290 comments were analyzed for three different models, and for the e-commerce company, 1,315 comments were considered for three different promotional activities. Non-participant observation involved analyzing various topics of discussion among members as well as the response of the brand to members' concerns. Participant observation involved initiating and aiding the interactions to gain insights on specific consumption patterns.

The quantitative data on sentiments were obtained using Semantria Excel plug-in. Semantria identifies the polarity of the emotions, whether it is positive, negative or neutral, to get a better understanding of the consumers. It can identify how people feel about a particular brand or product by attaching a particular sentiment score to each category, theme or entity. Besides, even brand managers with limited technical resources would find this user-friendly tool accessible. The posts related to the brand's activity on the page include positive, neutral and negative comments along with query and spam posts. The comments considered for this research were only extracted from the *Top Comments* section. The comments which were repetitive and did not yield any information were excluded, as this study aims to examine the themes of the conversations in virtual brand communities.

Attribute-based classification

Attribute-based classification involves a process to collect and segregate the perceptions and opinions related to a particular product. For this research purpose, the verbatim (comments) of the consumers were categorized into *Informative* (based on the nature of attributes mentioned in the comment, length of the comment, the elements mentioned in the comments impacting the brand image and technical specifications of the opinions) and *Non-informative* comments (having no specific product-related information).

Sentiment analysis and opinion mining

The sentiment analysis was performed in two steps: opinion lexicon and Excel tool analysis. Opinion lexicon was formed in two stages. In the first stage, seed words expressing sentiments (such as trouble, worst, pathetic, outstanding, happiness, etc.) were extracted from the comments to make an exhaustive list. Post that, in the second stage, semantic scale allocation was done, in which each word was allocated a numeric value for further analysis. (Refer to [Appendix](#) for details of Stages 1 and 2.) After the document-level classification of the comments, text analysis was done with the help of an Excel plug-in Semantria ([Lexalytics, 2015](#)). The opinion lexicon along with the semantic scale was imported into this tool for further sentiment analysis. The database of comments was fed into this plug-in, and the text analysis program was executed.

Response evaluation

The last stage evaluates the response of the brand manager and community members toward members' posts. The following parameters of response from the brand manager were taken into consideration for evaluation: discussion with the member, offers of support service and contribution in helping the member with a query or a problem. In addition to this, the responses from other members were also evaluated to gauge the extent and nature of conversation happening in the communities and within sub-groups.

Results

Results from qualitative content analysis

Qualitative content analysis of the interactions in both the brand communities showed that apart from conversations arising from general queries on new products and service, different sub-groups of members formed around specific interests and needs. They showed some of the characteristics of tribes such as shared interests, goals and a commitment to watch out for fellow tribe members. Members sought guidance from those more experienced in making purchase decisions. Members freely shared information and experience with those seeking support and thus showed a great potential of either being brand advocates or adversaries. Some such tribes that formed in the communities under study are listed in [Table I](#).

We demonstrate below a slice of conversations in one particular tribe – *the techies*. We also show how negative sentiments circulate among the members. Examination of such sentiments highlights the issues on which the brand managers can work for brand

Tribes	Characteristics
Music enthusiasts	Their main focus while making a purchase decision revolves around various attributes associated with music, like the quality of headphones, the sound system of a particular handset, dB level of the sound, etc
Photography	Their main concern is camera quality, the specifications of the camera in terms of megapixels, various shooting modes, ease of photography, the kind of photos they have taken using the phone, etc
Techies	Their discussions mainly revolve around the processor specifications and other hardware used in the product, and whether they are in-line with the recent trends. Their discussion consists of high level of technical details and shows their command over technical know-how
Serious shoppers	They are heavy online shoppers and make a conscious decision based on the quality, product listing, price and delivery time after comparing these aspects with other e-commerce platforms. They are mostly willing to guide the novices and have confidence in their ability to do so

Table I.
Examples of tribes formed in communities under study

development. The following is an example of conversation among the techies around the topic of Kernel source codes in a mobile phone (Each row represents a different member. The language and grammar have been retained as per the original):

I'm just concerned for MIUI. they really need to add some more useful features to their UI and release the kernel source codes of their devices!

Yeah [...] the kernel source codes are instrumental to a lot of development!

[...] agree with the kernel source but not with ur opinion that miui has cheap clumsy looks [...] may be with miui v5 but have u seen miui 6?

As I myself looking to buy MI3 XIAOMI or REDMINOTE (not 4G) as fom d features MI4 upgradadation dint seem to be worthy.

IMO sawpnil Bro – MI3 too is very worthy MI4 just has 1 GB RAM more & 801 snapdragon instead off 800 of MI3 – with 2.5 GHZ speed [...] where as MI3 has 2.3 GHZ ----- but MI3 has gorilla glass-NFC activities with a much lesser price so I was thinking to buy it(MI3) -- btw whats the price of MI NOTE PRO?

[...] & yes at least feature wise – XIAOMI MI SERIES is ahead of IPHONE 6 – as u told – at lest going by gsmarena.

The excerpt shows that the members have a high potential of influencing their fellow tribe members about technological superiority of one or the other brand. The following excerpt shows negative sentiments expressed by a technologically sound member with a clear intention of warning other members while making a purchase decision:

Samsung never stops Cheating Indians – Selling Cheap Exynos by displaying USA Snapdragon Versions [...]. Yet another act of shameless cheating providing vague specifications by Samsung India. They always sell the Exynos-based version in Indian market for the same price of Snapdragon-based USA edition. Exynos 5,433 in Note4 Indian edition is not good and comes with the same: 1.3GHz-1.9GHz combo as was found in Note3. If you look at Samsung India website, they mention the processor as 2.7GHz with a small disclaimer – it may differ by country and carrier. The truth is, they have only launched Exynos-stupid version here which heats up and lags a lot.

Here is the best part: if you go to any showroom, the model that they have put on display will always be the Snapdragon USA edition, and when you buy it, they will always sell you Exynos version in the box. You can go to Settings->About phone and compare the Model Number. You will be surprised to see that Samsung is CHEATING us all. So, keep yourself informed and dont buy the cheap, stupid version of S5 and Note 4 for a huge price. Otherwise, you will later regret your decision. Go for Sony NOKIA or LG, they don't commit such FORGERY.

We saw no response from the brand representative to such remarks. Even in the majority of the cases of complaints about a specific product or customer service, the brand representative sent an automated response, "Hi XYZ, we trust you as our valuable customer. Please call our customer service 24-hr helpline at 1,800-110-011, 1,800-3000-8282, 1,800-266-828 for instant help on your query". It was also observed that the brand representatives did not acknowledge or respond to comments expressing positive sentiments.

The qualitative analysis showed that there were many openings for the brand representative to step in and join the conversation and offer commercial and non-commercial opportunities to both, positively experience the products and strengthen the social ties

among the members using their shared interests. We will discuss this point further in managerial implications.

Results of sentiment analysis

The Semantria Excel plug-in gives a detailed analysis of the count of facets discussed in the community and how many of them have positive, neutral and negative sentiment polarity.

Table II represents the occurrence of facets in the comments and the number of facets representing positive, neutral and negative sentiments. It can be deduced from the count of negative facets mentioned in Table II that the members on the Facebook page of this smartphone company are highly dissatisfied with customer service, software updates, pricing of the products and overall experience availed by using smartphones of this company. The positive comments revolved more around the design of the phone and its innovational aspect.

Table III shows that although the number of negative comments is 7.5 per cent more than positive comments, the average intensity of sentiment polarity is 16 per cent more. It implies that the negative sentiments are more strongly expressed in comparison to positive sentiments. The engagement is mainly driven by members sharing negative experiences, with a few positive encounters in between. It is observed that the brand advocates tend to show their loyalty and commitment, whereas the members who have faced bitter experiences with the brand tend to show their inclination toward other brands.

The average word count of an informative comment is 117, and the majority of them were negatively polarized, while that of a non-informative comment is 21. It can be inferred that negative comments are more specific in comparison to the positive comments and show high intensity of negative sentiments.

Similarly, the interpretation of Table IV of the e-commerce community suggests that members have an intense dislike for their customer service and, as the observation data show, are of the opinion that the company delivers fake products (Table V).

Facet	Facet count	Positive facets	Neutral facets	Negative facets
Phone	204	48	130	26
Company ^a	370	55	290	25
Service	160	5	105	50
Problem	24	0	5	19
Experience	42	2	8	32
Update	60	9	42	9
Company	38	0	26	12
Price	38	0	24	14
Product	51	0	30	21
Customer	28	0	16	12

Table II.
Facet count for
smartphone
community

Note: ^a The facet is the name of the company

Polarity	No. of comments	Average intensity of polarity
Positive	1,325	1.665
Neutral	513	0.011
Negative	1,452	-1.93

Table III.
Polarity results for
smartphone
community

Table IV.
Facet count for e-commerce community

Facet	Facet count	Positive facets	Neutral facets	Negative facets
Customer	57	6	36	15
Product	16	1	13	2
Company ^a	15	1	13	1
Order	20	0	18	2
Fake	9	0	2	7
Phone	8	0	8	0
Price	8	0	6	2
Problem	8	0	0	8
Deal	7	1	5	1
Win	7	3	3	1
Time	6	0	2	4

Note: ^aThe facet is the name of the company

Table V.
Polarity results for e-commerce community

Polarity	No. of comments	Average intensity of polarity
Positive	460	1.05
Neutral	286	0.014
Negative	569	-1.422

The average word count of an informative comment is 109, and the majority of them were negatively polarized, while that of a non-informative comment is 20. This re-verifies the inference drawn from the previous community that the negatively polarized comments have a greater influence and are the drivers of the conversation. Hence, it can be inferred that dissatisfaction leads to negative e-WOM, which can influence the novice users also.

Framework for brand marketing

The following theoretical framework has emerged from the analysis of the interactions on the selected virtual brand communities. This framework outlines how the interactions in virtual brand communities can aid in formulating the functional and communication strategies for a brand (Figure 3).

Product/Service elements

The analysis shows that three main product/service elements impact the conversations in virtual brand communities: features and complexity, specifications and involvement. We have explained the three elements below.

New users have undeveloped knowledge structure about the features and usage of the product and hence are apprehensive of availing service or purchasing the product with a given complexity level. The features of a product, manner of usage and expected product/service lifetime are frequent topics of discussion. This gives rise to an inquiry regarding the product or service specifications, mostly from novice users. The interactions are also driven by the extent of product or service involvement. High-involvement products or services entail intense research and pre-purchase discussions. Negative responses from experienced users attract a high proportion of queries from novice users. Such conversations are mostly aimed at minimizing any sort of potential risks involved in a purchase decision. For example:

Can we get Note 4 Accessories in India like Note 4 Wireless Charging back cover, Wireless Charging Kit, and other note 4 accessories available on note 4 global site and accessories section?

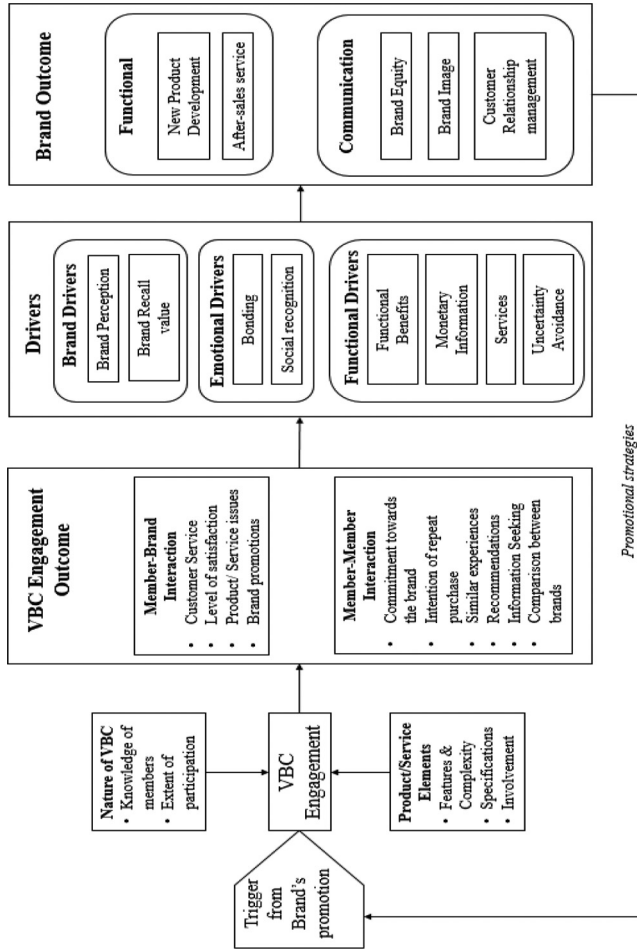


Figure 3. Framework for brand marketing

This comment received responses from other users providing guidance pertaining to the query, but no response from the side of the brand representative.

Composition and dynamism of the virtual brand community

The composition and dynamism of the virtual brand community play a vital role in giving direction to the conversations. Knowledgeable and active members enhance the quality of interactions. Conversations involving the comparison between various brands, supported by technical facts and recent industry trends, tend to have a distinctive impact on the members. The comments having the negative polarity of sentiments have higher technical specifications and showcase expectations from that product or service. Members with great technical expertise tend to ask more specific questions like:

Will there be any Android Update for Samsung Galaxy Note 8.0 (N5100). It still runs on age old Android 4.2.2, which doesn't support Android Wearable, which is essential and handy for 8" Tablet. This is not so old model of device. Many other devices in same price range has got Android update. But this has not got any update since long time.

Whereas members having little technical know-how tend to pose generic and broader questions such as "Samsung galaxy core prime details please". The conversation can be functional or social depending on the extent of member participation and motivation in sharing their experiences with others.

Virtual brand community engagement outcome

Two types of interaction take place in the community: member-brand interaction and member-to-member interaction.

Member-brand representative interaction. The interaction between the brand representative and a member is formal in nature. Companies use these communities as a part of their brand management strategies to generate leads. Themes of discussion from the brand side are basically for the promotion of their product or service. The brand also assists the members to avail product information by responding to them in reply to their posts. Members mainly interact with the brand to show their feeling of disgust toward the brand. Discussions of problems faced are conducted at a length. In the communities examined for this study, the response from the brand representative was minimalist to this kind of discussions.

Member-to-member interaction. The interaction between two members or among a group of members is informal in nature. The members join a particular virtual brand community if they have a relationship established with the brand or it is their aspirational brand. The member-to-member interaction depends on the time at which the brand triggers the conversation. The scope of the discussions transforms from information-seeking, monetary and complaint issues to a relational mode. It is during the relational mode that discussion around interests is initiated, and this may result in the formation of tribes. For example, for the smartphone community, there is a set of members who are passionate photographers and they prioritize the camera specification while making purchase decision. Gradually the conversation can turn to the kind of photography they are interested in and the tricks they have tried to achieve particular effects. Music enthusiasts focus on the sound quality of the headphones and speakers of that particular smartphone model and in the course of the conversation may reveal their music and artist preferences that may trigger further conversations. In the case of the e-commerce community, the discussions take place around the wide range of products depending on the interests of the members.

Emotions at various stages of the shopper journey. The valence of emotional influence affects various stages of the shopper journey. We identified five main stages of the shopper

journey around which discussions took place. Emotions expressed at each stage also varied (Table VI).

As evident from the comments posted by the members, the information stage deals with a general inquiry wherein the consumer tries to collect as much information as possible. As they start narrowing down their options, during the comparison stage, they become more particular regarding the reviews, and this apprehension intensifies in the shortlisting and purchase stage. In post purchase, they discuss their initial experiences and later when they start using the product or service for a longer duration, they portray their emotions related to that product or service. Table VII summarizes emotions associated with each stage which were observed in the communities.

Stage	Examples of comments
Information search	Upcoming Smartphones of Samsung in new year under the rate 20,000 Shopping on Flipkart is very easy & exciting too. The products are genuine and available easily with complete & detailed information
Comparison	Will the Xiaomi Mi Note Pro give the likes of Samsung Mobile India's Galaxy Note 4 a run for their money? And how will the two Displays compare? Will the Snapdragon 810 in Mi Note Pro wipe the floor with the Snapdragon 805 found in the Note 4? Will the MiUi finally get rid of the cheap and clumsy look it wears and open up a better, decent looking UI? (Both 5.7") 1440p Super Amoledvs 1440p IPS LCD? When is next big billion ay coming??
Shortlist and purchase	Why is it that a Note 2 has a different display than the Note 3 and Note 3 Neo? Note 2 seems to have a gravity on the Green Color while other ones are much bluish when seen, even though both are Super AMOLEDs Is it about Pixel Arrangement or density? They had promised to offer a Biggest sale last Diwali and Gave Only 15 per cent Discount on limited products. Meh !
Post purchase	Can anyone tell me if m i able to update s5 Kiktkat to Lolipop version of android?? Got an duplicate product from the flip kart the order num od 100824435636515 the i phone charger god know how many products are original and fake????? they are cheaters
Usage	Samsung hardware lacks quality. .I have 2 Galaxy Notes and both circuit boards got replaced. . .costs so much that we can buy a new phone. . . Always they send below quality material, non matching with the displayed material. Think twice B4 making order, First check the quality, then make payments to the courier boy

Table VI.
Examples of comments showcasing various stages of consumer journey

Information search	Comparison	Shortlist and purchase	Post purchase	Usage
Trust	Apprehension	Apprehension	Anger	Anger
Fear	Trust	Fear	Disgust	Annoyance
Anticipation	Fear	Interest	Sadness	Sadness
Interest	Interest	Joy	Satisfaction	Anticipation
Pensiveness				

Table VII.
Mapping emotions at various stages of consumer journey

On the basis of Semantria Excel plug-in analysis and qualitative analysis, various stages of the shopper journey are mapped comparatively on the basis of two parameters: consumer engagement in that stage and intensity of negative emotions depicted at that stage. The comparison stage and the shortlist stage involve a lot of research pertaining to the product and brands. The purchase stage involves the critical decision-making process wherein the consumer eliminates all the choices but one. Hence, all these three stages have a high level of consumer engagement. Also, shortlisting and purchase stages show the highest intensity of negative emotions which influences the consumer decision, followed by the comparison stage. These two stages play a critical role in influencing the novice users, and hence, managers should intervene during these stages as per the requirement.

Drivers of sales

The outcome of engagement in virtual brand communities leads to identification of key aspects of brands such as the perception of the brand in consumers' mindset, consumers' association with the brand, level of loyalty, etc. This can be used to conceptualize significant micro-social factors such as their common interests, specific expectations from a particular product and their user behavior to target the consumer base. The facets discovered through sentiment analysis and qualitative analysis can be utilized to segregate the attributes of a product or service under various categories such as brand-specific concerns, self-association with the brand, intangible benefits associated with the brand and several functional aspects of the product, which drive the sales of the product or service.

Brand drivers. The brand drivers are categorized into two main parts – brand perception and brand recall value – depending on the extent to which they will impact the overall brand value.

Brand perception. The brand perception integrates into social identity of the consumer, and such a brand association delivers social, emotional and functional incentives to consumers. Brand elements such as brand promotions *vis-à-vis* what the brand delivers, which can possibly hamper brand image, can be extracted by the negatively polarized conversations. These elements then can be used to re-sketch the brand character to increase the level of association with their customer base.

Brand recall value. Brand identification symbolizes attitudinal factors pertaining to the product or service. These attitudinal and functional elements are discussed in virtual brand communities which tend to remain in the sub-conscious mind of the consumer but are expressed only when a certain kind of environment is provided. Consumers belonging to similar sub-cultures, like passionate photographers, software geeks, early adopters of a newly launched product, etc., express the functional aspects of a brand in a language specific to that tribe.

Emotional drivers. Emotional drivers drive the association of an individual with the brand and are associated with the factors that can instill the feeling of oneness with the brand. Bonding and social recognition were the two dominant emotional drivers evident in the virtual communities examined.

Bonding. Interactions in any community are assisted by social and emotional benefits associated with the brand. During the transit from the informational to the relational mode, support conversations are interlinked with societal well-being. This promotes bonding and connection among the members of a virtual brand community. The bonding is often short-lived, as the members do not converse in a real world and their goals and interest might change over time. In such a scenario, the elements (based on the shared interests and passions) acting as catalysts to creating relationships further multiply to generate more conversations resulting into more connections.

Social recognition. Membership in various social groups alters the psychological outlook toward that brand. Consumers look for constituents in a brand which are embedded with their desired social identity, like pride, prestige, their know-how, etc. They seek iconic prestige for themselves routed through the brand which can be gauged by the facets of the sentiment analysis, such as satisfaction level, pride in using the product of that brand, referrals and positive WOM around that brand.

Functional drivers. Functional drivers focus on the tangible aspects of the brand which influence the purchase decision. Functional drivers evident in the virtual communities can be further classified according to the following four dimensions: functional benefits, monetary information, services and uncertainty avoidance.

Functional benefits. Members avail functional benefits directly from other members having enormous technical expertise and a wide spectrum of acquaintance with the relevant product or industry. Such members provide in-depth information concerning the technical specifications, fraudulent products, latest price trends of the industry, potential problems that can arise in a particular product and solutions to deal with such problems.

Monetary information. Monetary information regarding the products plays a vital role in making the purchase decision. It depends on the level of product involvement; higher the involvement, more concerned the consumers are while making an investment. The promotional events, discount offers, contests, lucky draw and earning cash points after every purchase trigger intense conversations in communities, which are majorly initiated by the brand. It is important to assess the response of members toward such monetary incentives offered by the brand because the engagement triggered by incentivizing the products is short-lived and takes the form of emotional interaction in the long run. Besides, such responses from members convert the passive members or lurkers to active ones.

Services. The ease of providing brand-related information through online media is the main incentive for the brand managers and members to participate in virtual brand communities. These communities have an unparalleled competence to facilitate pre-purchase and post-purchase service from members or from the brand directly. Members usually suggest alternatives to avail a particular service in case the brand fails to serve the consumers up to their expectations.

Uncertainty avoidance. Most members want to minimize uncertainties and reduce potential risks as well as discomfort during and post purchase. These communities play a vital role in making the consumer familiar and comfortable with the purchase. The elements, around which uncertainty persists and which increase the ambiguity, can be evaluated from the conversations taking place in virtual brand communities.

Brand outcome

The brand managers can make the necessary amendments after evaluating the key drivers and various micro-social factors. The two main dimensions to work upon from the brand side are functional aspects and communication.

Functional aspects. New product development and after-sales service are two key functional areas where the brand manager can initiate necessary amendments. Virtual brand communities provide the brand managers a window to the desirable products, new features to be inculcated in the upcoming products, consumers' needs which remain in their subconscious mind unless a conversation is triggered and ways to cope up with the upcoming technological trends. This research helps in bridging the gap between the consumers' expectations and brand deliverables. After-sales service or service development is another important functional facet. Consumers require a seamless product experience, and for this purpose, pre-purchase and post-purchase services need to be enhanced. Rather than

leaving this important task of guiding the members to other members, the brand managers should remain involved in creating a positive product experience. This would go a long way in trust development. Various service-related attributes such as a quick response from the brand side, directions to use the product/service and providing viable solutions in case of technical failures can enhance the service aspect of the brand.

Communication. Brand equity, brand image and customer relationship management are the three main aspects of communication strategy to which marketers need to cater to.

Brand equity. It is highly dependent on the associations made by the customer. Higher engagement, through such social media platforms, between the brand and the consumer results in an increase in loyalty, trust, satisfaction and commitment, which ultimately alter the brand equity. After the success of the flagship product, appropriate brand extensions can be launched in lines with consumer requirement and with relevant advertising. The strength of a brand enhances the attitudinal strength of the consumer toward a particular product associated with the brand. The products having a positive inclination can further fortify the brand by proper emotional and social engagement from the brand's side. Virtual brand communities can assist companies to fortify their brand equity by making it easier for the consumers to remember the brand.

Brand image. It is a symbolic representation of the subcultures of members of the community. More the cultural connect with the brand, higher the commitment to the brand. The conversations taking place in communities give birth to various cultural sub-groups such as tech geeks, music lovers, nature lovers, photography enthusiasts, etc. The companies should focus on instilling these cultural aspects in their brand so as to encapsulate a two-way interactive engagement. The experiential and instrumental values drawn as a result of such an engagement can further foster trust and loyalty in the minds of consumers.

Customer relationship management. It is a key to building brand trust and brand loyalty. Virtual brand communities are important channels for receiving customer feedback and queries which result into many informational benefits. Self-disclosure by members is a significant aspect of relationship development and is distinctly witnessed on social media platforms. A symbiotic relationship developed through such communities helps both the company and the consumer to gain simultaneously.

Managerial implications

The results of the present study have significant managerial implications. The results endorse some of the recommendations made by scholars such as [Cova et al. \(2011\)](#); [Kozinets \(1999, 2002\)](#) and [Wiertz and Ruyter \(2007\)](#). Here we would like to focus on two significant practices that would channelize the brand co-creation process in the brand's favor: first, the brand representative should become a member of the community in a true sense, and second, the brand representative with the support of the brand manager should skillfully manage negative sentiments expressed during interactions.

The literature on virtual brand communities and tribal marketing stresses again and again the importance of nurturing the member-to-member interaction through strengthening social ties. Brand managers should achieve this through non-commercial activities that respond to specific shared interests and needs of different tribes that have formed around the brand. Social ties form in two ways in a virtual brand community and also in a tribe: first, around the primary interest in the product, and second, around specific shared interests, passions, learnings and technical expertise. The brand representative has to nurture both the processes. [Wiertz and de Ruyter's \(2007\)](#) study of firm-hosted online communities reports that commitment to the community and its members is a key driving factor for the highest-contributing community members (in terms of both quantity and quality). [Brodie](#)

et al. (2013, p. 112) also argue that online communities welcome marketers only if they are contributing to the community and emphasize engagements from the brand side, which consumers perceive to be non-commercially driven. The present study endorses the recommendations of researchers such as Andersen (2005) and Ramaswamy (2009) that knowledge sharing, educating and enabling consumers to co-develop would become important tasks for marketers. Instead of aggressively pushing the brand on such communities, brand managers may promote activities such as contests, workshops and online exhibits to nurture social ties among like-minded members. It might help to explore the scope of participating in existing communities before initiating a new community.

The second priority for a brand manager would be to identify positive and negative sentiments being expressed during interactions. Both positive and negative sentiments get amplified in a virtual community and especially in a tribe due to strong social ties. Periodic netnographic research and sentiment analysis are very useful methods for gauging customer sentiments. Positive sentiments also need to be acknowledged and nurtured. The negative sentiments, however, have a stronger and adverse impact on the business, and therefore, the brand representatives of virtual communities should be trained to informally and yet sincerely respond to negative sentiments, offer necessary guidance and generate a feeling of trust among members.

Implications for further research

Our exploratory study shows how insights gained through an analysis of interactions in virtual brand communities help brand managers in addressing the shared interests and needs of members to enhance the brand value. The study further demonstrates how negative sentiments expressed in virtual tribes should be paid special attention to channelize the brand co-creation process in the brand's favor. There is, however, much scope for further theoretical and empirical research on the topic. Despite some noteworthy efforts, there is still no comprehensive theoretical framework on virtual consumer engagement. Studies using big data as well as those using the qualitative thick data would help build a comprehensive understanding of consumer engagement in the virtual communities. A number of studies focusing on a wide range of large and niche communities, different product and business categories, different consumer cultures and different platforms such as Facebook, Twitter, YouTube, Pinterest and Instagram would contribute to building a comprehensive understanding of virtual brand communities and its implication for marketing. Kumar *et al.* (2010) propose a framework of "Total Customer Engagement Value". They argue that valuing customers based solely on their transactions with a firm may not provide a correct indication of customer engagement. They propose that the customer purchase behavior, referral behavior, the influence on other customers and the value added to the firm by a knowledgeable customer feedback are important components to examine to avoid undervaluation and overvaluation of customers. Future research will do well to examine these and other specific dimensions of consumer engagement.

It has also been observed that different kinds of customers and members in a virtual brand community play different roles at different stages of their involvement. Besides, consumer engagement in virtual brand communities involves cognitive, affective and behavioral dimensions. More netnographic research examining such different roles, stages and dimensions and their implication on co-creation of the brand would be welcome. The sentiment analysis for this research purpose is done by an Excel plug-in Semantria. More advanced tools like SentiWordNet can be used to get a detailed analysis of the sentiment polarity.

We caution against an overly celebratory approach to tribal marketing. An important characteristic of virtual communities and e-tribes is their impermanence. There are also issues of trust and risk. Further research can help us understand the process of formation and dispersion of communities and tribes and the motivations fueling these processes. Longitudinal studies can make a significant contribution to understanding the life cycles of different virtual communities, but such studies are not very common (please see Nolan *et al.*, 2007 as an example of longitudinal study).

Finally, virtual brand communities and their management are only a small but significant part of the integrated marketing communication. Focusing on such communities at the cost of other online and offline components of the total environment would be detrimental to the brand value. Consumers increasingly express their consumer identities in the communities that are primarily designed for entertainment or political purpose. Future multi-sited research on the convergence of online and offline consumer engagement will provide meaningful insights into integrated marketing strategies.

Conclusion

In this paper, the authors have demonstrated how combining netnographic data with sentiment analysis using a spreadsheet-based tool helps in in-depth examinations of emotions revealed in interactions in virtual brand communities. Virtual brand communities provide ample opportunities for marketers to make use of online social ties, which help to launch and reinforce the brand meanings while constantly altering them. Virtual brand communities and tribes are difficult to handle in some ways, as they demand a full commitment from the brand side to deliver to the constantly changing expectations of the members. It is necessary to deal with the communities using a subtle, light, amiable approach, as the brand cannot control the information posted by the consumers. Brand representatives need a range of strategies for functioning as valued and trusted members of the virtual brand communities. They should focus on non-commercial initiatives that speak to the niche interests and goals of different tribes within brand communities. Negative sentiments impact the purchase decision by creating a room for competitors in the minds of consumers, so marketers need to cater to them by focusing on their pain points. At the same time, it is important to participate in positive interaction threads. Although identification of the tribes and supporting them is a difficult and time-consuming endeavor, catering to the shared interests, goals and needs of the tribes would go a long way in channelizing the human propensity for community formation toward positive brand co-creation.

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Appendix

Semantic scale allocation

The allocation of the seed words on the semantic scale was done on the basis of the text discussing about the product features, attributes, specifications, reasoning and comparison with other brands. The words were put in the order depending on their occurrence in the document-level classification and the manner of consumer testimonial, which includes length of comment, alphabetic case of the seed words, adverbs and adjectives defining seed words and use of seed word in context to brand.

Relative rating inference was done to allocate the semantic scale. The opinion lexicon was tabulated in the order of intensity. The scale was taken in the range of -5 to $+5$, with -5 having highest intensity of negativity and $+5$ having highest intensity of positivity. The relative rating was given in the following manner:

- Assign the most negative word the numeric intensity of -5 and most positive word the numeric intensity of $+5$.
- Taking that as reference, the intensity for other words depicting negative sentiments was calculated as: intensity of preceding word $- (-5/93)$.
- The intensity for words depicting positive sentiments was calculated as: intensity of preceding word $- (5/36)$.

Word	Intensity score	Word	Intensity score	Word	Intensity score
Fake	-5.000	Doubt	-3.333	Cannot	-1.667
Shame	-4.946	Unfortunate	-3.280	Redundant	-1.613
Never	-4.892	Cheapest	-3.226	Pain	-1.559
Sucks	-4.839	Cheat	-3.172	Trouble	-1.505
Irritated	-4.785	Worst	-3.118	Crying	-1.452
Defect	-4.731	Faulty	-3.065	Reckless	-1.398
Irritating	-4.677	Harassment	-3.011	Sub-standard	-1.344
Defective	-4.624	Damaged	-2.957	Uneducated	-1.290
Annoying	-4.570	Lost	-2.903	Blasted	-1.237
Pathetic	-4.516	Compensation	-2.849	Inconvenience	-1.183
Horrible	-4.462	Arrogant	-2.796	In vain	-1.129
Spit	-4.409	Degraded	-2.742	Replacement	-1.075
Regret	-4.355	Duplicate	-2.688	Bad	-1.022
Regretting	-4.301	Nothing	-2.634	Ethics	-0.968
Crap	-4.247	Cheap	-2.581	Refused	-0.914
Sham	-4.194	Replaced	-2.527	Complaint	-0.860
Beware	-4.140	Heating	-2.473	Complain	-0.806
Unprofessional	-4.086	Disappointed	-2.419	Lacks	-0.753
Fail	-4.032	Unbearable	-2.366	Lack	-0.699
Fails	-3.978	Humiliation	-2.312	Slow	-0.645
Discontinue	-3.925	Fraud	-2.258	Incomplete	-0.591
Frustration	-3.871	Delay	-2.204	Incompetent	-0.538
Frustrated	-3.817	Rubbish	-2.151	Sudden	-0.484
Garbage	-3.763	Mistake	-2.097	Sad	-0.430
Problem	-3.710	Delete	-2.043	Scared	-0.376
Useless	-3.656	Deleting	-1.989	Poor	-0.323
Baddest	-3.602	Hang	-1.935	Lie	-0.269
Don't	-3.548	Hangs	-1.882	Response	-0.215
Dont	-3.495	Cost	-1.828	Breaking	-0.161
Suffering	-3.441	Hung	-1.774	Stops	-0.108
Waste	-3.387	Price	-1.720	Stop	-0.054

Table AI.
Negative words
intensity score

Table AII.
Positive words
intensity score

Word	Intensity score	Word	Intensity score	Word	Intensity score
Excellent	5.000	Best	3.378	Advised	1.757
Outstanding	4.865	Impressive	3.243	Brand	1.622
Stunning	4.730	Beautiful	3.108	Great	1.486
Gorgeous	4.595	Brilliant	2.973	Cute	1.351
Amazing	4.459	Love	2.838	Good	1.216
Trust	4.324	Attractive	2.703	Satisfied	1.081
Fabulous	4.189	Superb	2.568	Nice	0.946
Genuine	4.054	Hobby	2.432	Lovely	0.811
Mindblowing	3.919	Happiness	2.297	Easy	0.676
Favorite	3.784	Durable	2.162	Like	0.541
Awesome	3.649	Smart	2.027	New	0.405
Efficient	3.514	Exciting	1.892	Fine	0.270

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