The Role of the Prosumer in Social Networks and the Sentiment Analysis for the Customer Experience Management

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Abstract. The renewed economic and social context allows the consumer to play a starring role becoming, from a mere consumer of information, the one who creates and disseminates opinions about products, services and brands. The market is influenced by the experience of customers’ groups shared through different communication channels on the Web 2.0 (such as Facebook, Twitter, Forum, Blog, etc...). The company needs to develop technologies able to capture the opinion of customers, in order to correctly and positively interpret and influence them. Within this evolving scenario, the Sentiment Analysis can support the Management in order to capture relevant information from the Web, rework and interpret the Customer Experience to increase and strengthen the loyalty of customers. The aim of this paper is to explore how these approaches work together and enhance the role of Prosumer.

Keywords: Customer Experience, Quality, Customer Satisfaction, Customer Loyalty, Social Network, Web 2.0, Collaboration.

1. The role of the Prosumer

The postmodern man is forced to live in a complex and chaotic context but this also allow him to explore new horizons that totally change his opinion about interpersonal relationships. Nowadays we are facing a return to the instinct of community, characterized by more intense relationships between people, which thanks to new technologies create highly differentiated local communities facing the primary objective of knowledge sharing. The World Wide Web evolves and it is re-named as Web 2.0 [14], which focuses not on technologies, but on the value of social relationships. Newsgroups, Forums, Blogs, Social Networks or Consumer Generated Media (CGM), they constitutes the instruments of a new sociality that allows the user to assume a new power. From a mere consumer, he becomes a “Prosumer” [21], which takes the shape of a Baudelaire’s “flâneur”, a wanderer trying to discover the different web styles in a curious and disengaged way, which assembles to its taste.

This neologism combines two English words: “producer” and “consumer”, showing the reunification of the two roles that at the beginning of the Industrial Revolution taken separate paths. Hence, in the opinion of Fabris [10], the consumer assumes an increasingly nomadic and active role in the creation of opinions related to the compa-
ny and its products. The Prosumer is nomadic also in a metaphorical sense, because it has the ability to choose between a huge number of products, claiming the autonomy in the choices and demanding for quality. In order to develop effective communications, companies must carefully listening to the customers’ needs and trigger long-term trust relationships.

On the one hand, according to Fabris [6], is seeing a secularization of consumption which has lost its magic. The customer satisfaction, especially in the services sector, is in constant decline and the consumer is less willing to follow the intangibles of a brand spread through advertising, though these are not reflected in the tangible dimension of the product. On the other hand, the postmodern society is characterized by the re-enchantment of the world, the past charm of the brand is now mediated by the experience of customers creating meaning to purchases. Within this context, is assuming relevance the activity of “Virtual trendsetters” [10], which influence millions of users. Consumer Generated Media contain electronic evidence providing the reputation of a brand or product over time and allow to initiate Sentiment Analysis strategies in order to identify customers’ opinions, according to the different categories of products and services developed by companies. According to Bruns [4], the logical evolution of the Prosumer is the “Prouser”, a consumer-producer-user of a product, which need to be continuously improved.

Within this context, the traditional 4P [22] marketing model is not adequate to satisfy customers and need to be replaced by the 4E model based on the value of the “experience” economy as a learning process [9] and on four key elements: engagement, experience, enhance and emotion. Indeed, companies are benefitting from the value of the experience in order to attract and retain customers. According also to Ferraresi and Schmitt [7], companies should create more effective campaigns that provide “hybrid” and “even” holistic experiences to customers through the support of five key concepts: sense, feel, think, act, relate. The semiotic nature of the postmodern brand is assuming an increasingly relevant role within the search for the meaning, the development of life projects to orient and make sense of the everyday life in a complex and fragmented context [10]. For customers, companies are not only an economic actor adapting itself to a market in a collective context, but is an entity prone to correlation, exchange and dialogue [12]. Within this context, assumes relevance the “engagement” process of companies with customers that creates “meaningful” experiences analysed by Boswijk et al. [3], that elaborate the model of Snel [19] from a cognitive perspective by introducing sensory perception and emotions in the meaning formation process, as illustrated in figure 1:

Figure 1 The chain-process of experiencing after Boswijk et al. (2007, p. 20)

The model focuses on the meaning of an experience that is revealed by the emotional experience over time, as experiences are part of the lifelong learning process and affect also unconscious learning. Companies, in order to completely identify,
understand and analyse the levers affecting the improvement of decision making and unconscious learning of customers should use marketing intelligence and convergence techniques. The real power relies in the ability of the Market Intelligence [20] to consolidate information in a comprehensive interpretation of the market and its dynamic. Organising a Marketing Intelligence process is not an easy task, it takes time, investment and motivation, but is a very strategic business asset, especially if associated with sentiment analysis strategies.

2. Definition of Sentiment Analysis

The literature provides several contributes and complementary definitions of Sentiment Analysis. A well accepted definition of the Sentiment Analysis [24] is: “The task of identifying positive and negative opinions, emotions, and evaluations. Most work on sentiment analysis has been done at the document level, for example distinguishing positive from negative reviews. However, tasks such as multi-perspective question answering and summarization, opinion-oriented information extraction, and mining product reviews require sentence-level or even phrase-level sentiment analysis”.

The Sentiment Analysis can also be defined as: “Sentiment Analysis seeks to identify the viewpoint(s) underlying a text span; an example applications classifying a movie review as “thumbs up” or “thumbs down” [15].

In other words, the field of research is related to the Natural Language Processing, whose purpose is to identify within different textual documents, subjective information (provided by the users) and to initiate, at the same time, a clear analysis methodology to adopt Business Intelligence techniques.

The purchasing decisions of potential customers suffer less the effects of advertising campaigns and tend to consider new factors such as the common opinions of the social networks’ influencers or of informed groups.

Several discussion forums, in order to limit the improper purchases by customers, are dedicated to Customer Experiences related to a particular product. A company, to gain an important competitive advantage, must necessarily know its reputation through a directly analysis of the opinion of the Web about its work. The Sentiment Analysis techniques perform the following functions: they allow companies to automatically and regularly surf on websites, blogs, Social Networks in order to extract “critical” information that can synthesize the opinion of consumers about their products, brands and its main competitors.

This information can be expressed in several forms (comments, structured opinions, episodic tweets, etc…) and in the different contexts offered by the digital world (Social Networks, campaigns, answers to questionnaires, e-mail, chat, etc…). Among the most frequently used methodologies there are the computational linguistics, text analysis, automatic processing of natural languages and the so-called semantic web.

The challenge of the Sentiment Analysis is to analyse a large amount of data (through data mining tools) in order to express opinions, views or emotional feelings, i.e. subjective information. The aim is usually
to find out the attitude of customers towards certain themes or to highlight the overall emotional tone of the communication, in order to also identify the emotional ties with the brand.

Today, it is possible to predict the choices of customers related to a specific product or service with sufficient precision, through tools analysing opinions and comments, such as the Business Intelligence tools, Customer Experience and Brand Reputation Management tools. The use of these tools is aimed at filtering, organizing and analysing data, to focus on both quantitative and qualitative aspects, also to track the positivity and negativity of opinions showing the relative degree of emotional intensity.

These tools are able to cross data from statistical analysis, semantics and interpretation of the written language through the study of syntax, repetition and keywords. The company has only to insert a panel of keywords that the system will be able to recognise and analyse. The study of the natural language crossed with web-crawling and media search systems is based on the development of dedicated platforms. The analysis of the language is developed in three phases:
- identification of the target entity;
- identification of the Social Networks’ related documents (for example through the company page on Facebook, supplied for this purpose and related to personal/regional databases);
- creation of statistics and classifications.

The evolution of the Sentiment Analysis sees the introduction of tools identifying concepts and terminologies useful for the on-going research and to extrapolate from the web the concepts to analyse without the human contribution.

3. How the Sentiment Analysis encourages the Customer Experience Management

The main objectives of the technologies suitable for the measurement of the sentiment are three:
- to influence customers and users networks;
- to measure the efficacy of several marketing levers;
- to transform the traditional CRM in Customer Experience Management.

In the literature, Meyer and Schwager [11], show the differences between CRM and CEM: CRM captures what a company knows about a particular customer his or her history of service requests, product returns, and inquiries, among other things whereas customer experience data capture customers’ subjective thoughts about a particular company. CRM tracks customer actions after the fact; CEM captures the immediate response of the customer to its encounters with the company.

Also Schmitt [17], describes the difference between the approaches, in CRM the problem is focused on information that is important to the company and occasionally helps to shape customer’s behavior through what is called operant conditioning (the consequences of customers’ spending patterns) but rarely establishes an emotional bond with the customer, conversely the management need is an approach that takes
the customer seriously. Such an approach would focus not only on functional product features and functional transaction but also on anything else that provides value during decision making, purchase and usage. It would enable managers to create product and service that consistently delight costumers and provide profit for the firm, CE is that approach.

In this context, analysis is relevant to a new generation touch point (Web, Internet channel, Blog, Forum and Social Network) in order to capture the information about the terms and types of interaction.

This final objective is the most important and requires a more large effort to the company, because it involves a movement from the management of the relationship and measures its quality/and sometimes efficacy) to the active and enthusiastic involvement of the customer. To achieve this result, it is necessary to identify the background noise generated by the market contact points, as the “voice of customers”.

In this regard, it is increasingly important to include in the user profile also affective-emotional dimensions and use this information to understand the relationship between users and brands.

The analysis of information available on the Web allows to obtain data useful for the company, that if are properly managed, can create value and help to increase the Customer Satisfaction influencing also the Customer Experience.

The computational analysis of speeches, narrative and affectivity was born during the Nineties. At that time, the interest in the opinion mining was very remarkable, although in reality it was developed only since 2001, when the automatic classification methods were also used for the natural language processing and information retrieval through the use of data coming from the reviews of the first websites, in order to train the algorithms. Then, with the proliferation of Blogs and Social Networks, it became obvious the commercial potential of this new research area that can be considered as a branch of “Subjectivity Analysis”. The most common techniques are the “Opinion mining”, “Sentiment Analysis” and the “Social media monitoring and analysis” that can be used in an interchangeable way.

The biggest obstacle is the complexity and ambiguity of the language used in “opinioned” texts. Furthermore, a text can contain figures of speeches and implicit references, which automatic processing has not yet have been developed satisfactorily, as they make complex the recognition by the computer. Moreover, the object of the opinion is often constituted by several parties, each with its own characteristics, and the opinions are not related to the same author.

In a purely theoretical context, the system could be integrated into a conventional search engine, by entering a query and a subsequent activation of a manual opinions’ search or automatically classifying the categories of queries.

The first step is the retrieval of a set of opinioned documents relevant to the query on the Web, raised by Social Networks (Facebook, Twitter, etc.) and from specialized websites (as Epinions containing only reviews). The system has to recognize the “polarity” of opinions expressed in each of the opinioned documents, i.e. the positive and negative polarity can be graduated to a relative scale. With reference to the techniques involved, to separate factual documents from opinioned documents and to discriminate the positive and negative polarities, we use classification methods requiring a set
of pre-classified training objects in the particular domain under investigation. Alternatively, we can build a subjective lexicon in which the words are labelled with the a priori polarities. In this case we use a small set of words and we define the polarity of the other words by analysing the co-occurrences and using definitions from dictionaries and thesauri. The last phase of the opinion mining involves the aggregation and visualization of results, both through textual summaries of documents and opinions, both through graphical schemes highlighting the individual opinions of the subjects.

Once obtained reliable information, we can start the Customer Experience analysis in order to exceed the expectations of customers, anticipate and meet the unconscious desires of clients [17]. It is important to focus on satisfaction that is necessary but not sufficient to interpret customer's behaviour that give value to organizations. Certainly, Customer Satisfaction doesn't give an accurate prediction of loyalty. To obtain this behaviour it is necessary that customers are not only satisfied, but they also have to experience positive feelings toward the brand/company. The consumer experience with the brand comprises two components: satisfaction with the transaction and emotional involvement.

The Customer Experience Management is aimed at developing an analytical view of the analysis of the entire customer life cycle.

Within this context, Bernd Schmitt, in the “Experiential Marketing”, it breaks up the experience in five areas defined as “Strategic Experiential Module” [17] (see Table 1).

<table>
<thead>
<tr>
<th>Experiences</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense</td>
<td>Sensoring impact: sight, smell, hearing, touch and taste</td>
</tr>
<tr>
<td>Feel</td>
<td>Sentiments, feelings and affective experiences area</td>
</tr>
<tr>
<td>Think</td>
<td>Creative and cognitive area</td>
</tr>
<tr>
<td>Act</td>
<td>Physical, body and lifestyle area</td>
</tr>
<tr>
<td>Relate</td>
<td>Relationships between individuals included in a social defined context</td>
</tr>
</tbody>
</table>

Table 1 Schmitt B.H., “Experiential Marketing: How to Get Consumers to Sense, Feel, Think, Act and Relate to Your Company and Brands”

The management of these categories allows the company to establish contacts with customers in order to meet and satisfy their needs.

The customer experience management is becoming the company main objective in order to track customer contacts through interactions in different channels, using knowledge of its customers and contextualizing it to maximize the service, and then to provide an unforgettable experience. To make this, companies must get into the “customer's shoes” and analyse all their interactions in order to discover the really important things for him.

In this context, it is very important the Sentiment Analysis to capture emotion and the feeling that “client” or “user” in general have on the company. Therefore organi-
zation adopt solutions to improve and increase customer loyalty through customized services that create a memorable experience.

4. Final Considerations

The Customer Experience Management and the Sentiment Analysis are aimed at governing the relationships between the customer and the company, in order to meet consumers’ needs by creating a long-term trust relationship. The introduction of the approach based on the Customer Experience Management is an imperative condition to increase the level of quality perceived from customers and allow the company to improve their competitive advantage. In the next future, we expect a large increase of mobile purchases. Within this context, the Customer Experience Management will assume a new value in order to intercept new customers’ segments.

Companies need to identify the best tools required to assess the satisfaction of mobile customers and the levers that will increase this kind of purchases, also to understand the mobile user behaviour. The Mobile Customer Experience Management will allow companies to make clear and profitable investment decisions, accelerate the time to market of several technologies and increase the volume of instantaneous purchases and sales complementary to the traditional purchase’s categories.

The next step will be the empirical study of Sentiment Analysis application for Customer Experience in the organization. The objective is to gain insights from social media multi-lingual summarisation, identify trends, combine the data gathered with that of the Marketing Intelligence activities, in order to develop a sentiment index able to measure company and product reputation, and effectively manage the customer experiences.

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