

Abstract

The gradual spread of social networks, general (such as Twitter, Facebook or Google+, the latest platform developed by Google) and specialized (eg. LinkedIn professional communities), has made available a massive and unprecedented amount of data on users' preferences and opinions.

These data are available in large quantities and in real time, can have horizontal and territorial characterization (due to the possibility of geo location for smartphones, tablets and embedded in MID (Mobile Internet Device) generation), or vertical (in terms of personal, cultural, professional and sectorial guidelines and in terms of purchasing power).

The quality and immediacy (temporal and spatial) of these data on user trends, with the statement (now consolidated) Web 2.0 (Web 3.0 today) expands the participatory dimension of the choices and institutions. More than on the field of ideas and opinions available on the net, businesses and institutions should focus on the value of virtual communities to change their marketing strategies, starting from the concept of stakeholders, developing, and monitoring of the guidelines, new methods of CRM.

Development in these areas, web applications and services dedicated to the world of multimedia in general, must always assume a careful design phase based on an analysis of users' needs.

This analysis is historically based on customer satisfaction surveys, questionnaires and complex user survey operations of the market based on traditional techniques, long lead times, high cost of implementation and level of reliability proportional only to the high burden of its actions.

In recent years, however, an interesting trend is developing scientific answer to this type of requirements that are based on the analysis of user behavior during exposure to an advertisement for the product or service, rather than during (and this is the case of web tools and multimedia) the use of the same.

The family of tools and methodologies that are part of this scenario is represented by Sentiment Analysis (rather than Opinion Mining). The Sentiment Analysis is the basis of marketing strategies and communication, and defines the respective guidelines and new shares, as the same viral marketing on social networks. Today these techniques for analyzing and monitoring users' tastes and opinions are growing rapidly, with immediate applications in the field of business intelligence and monitoring the reputation of the brand.

The opportunity is offered by the real nature of social networks, where the cognitive dimension is combined with the emotional, enhancing the sharing, then the community aspect rather than the individual. This has an impact on the immediate consumption of products and services by introducing collective values such as those related to the environment, ethics, social welfare.

Thus firms and institutions, through the network, may provide information and experience of the potential audience, defined, as mentioned, both horizontally and vertically. These are new data, not coming from the network proximity (stakeholders) or by off-line marketing.

In opposition to the marketing, which records either passive target potential directing corporate strategies, the Sentiment Analysis becomes a dynamic element of interrelation, in turn fueling the passion (indeed, by leveraging passions) of the users and their attachment to brand. Now we can know with sufficient accuracy, consumers and users' "mood" regard to a specific product or service thanks to tools that analyze opinions and comments, such as the tools used in the field of Business / Government Intelligence, CRM and Brand Reputation Management. They are able to identify, filter, organize and analyze data, focusing on both quantitative and qualitative aspects that draw the positivity or negativity of the opinions and the level of emotional intensity. The latter is a particularly important factor that can affect a negative sentiment with respect to the brand.

Sharing, in fact, has more orientation of the comment. From the researcher's point of view, the used technology has

relatively young elements, for which, however, there is already an established casuistry. This at least for text analysis and forecasting "feel" that they are able to inspire in users. On the other side, the analysis of images, speech and multimedia represents a young scenario for which there are numerous application examples. The aim of this work is to first provide a broad overview of the state of the art family of methodologies and tools used by the scientific community and by the same market in the field of sentiment analysis. It will start from everything related to the analysis of written texts (both in general and in the instruments of net society) and then propagate research in the analysis for the sentiment analysis on multimedia in general. It will be necessary to identify an area of useful work to develop a targeted testing phase that allows to compare these instruments with the real behavior of the subjects. This will allow, finally, on the one hand, to assess the level of reliability and, secondly, to configure an environment that, downstream of this experimentation, can be effectively adopted during the design phase of any interface or application that is desired strongly oriented to users.

In addition to marketing itself and the launch of new industrial products, these areas where research is addressing in depth, this environment would use in a diverse series of scenarios ranging from applications for education and teaching distance, the platforms for the delivery of health and social care, the portals of public administration strongly interested in a high satisfaction of users in usability, and finally (but not least) the whole set of web applications and multimedia dedicated to world of disability.

These actors, in fact, are more sensitive to patterns of use of a message and its own analysis of their reactions (real or simulated products in the experimentation) you get very rich information to be used later in development. With regard to the organization of the pages that follow, after a first part dedicated to the analysis of the state of the art methodologies, scientific opinions and tools, we will show

the project environment and identify the experimental sample testing, obtained with a series of adaptations of the interfaces of use and combination of software tools specially dedicated. In the third stage we will examine in detail all the experimental data obtained in the course of business and in the fourth and final part we will explain the scientific conclusions of the work presented and the final environment useful for future applications in both scientific and directly aimed at the market and marketing is the development of user interfaces.