Chapter 8: The Marketing Science of Sentiment Analysis

To make smart changes in business strategy and operations, you need to understand what your customers are telling you through their tweets, reviews, and blog posts.

Many market analysts now use sentiment analysis to get customer insights from social media, tweeter and blogs by aggregating and analyzing Open Data and combine all the information.

Text analysis is now used for many applications. A pharmaceutical company, for example, might use text analysis to speed up the process of drug development. If you want to bring a new drug to market, first find out the prior research. You need to be able to not only search based on particular keywords, but also to understand when a paper has been described.

If you're doing marketing," Grimes said: "you want to know what people have to say about your company's products? What are the particular flaws in the product? What do they really like? What do they think about the pricing, about the customer service, for not only your products but you competitors'?' The web has huge data can be extracted and analyzed by using sentiment analysis.

IBM Meets Jane Austen

Sentiment analysis just means whether a particular tweet or review is positive or negative and can be entirely misleading if they miss important context. What's positive to you might be negative to me. A more sophisticated analysis will decompose a message or document into particular elements. Those elements could be the names of persons, places, companies, products, concepts or themes.

In a conference on sentiment analysis, the speaker defined using sentiment analysis to:

• Predict political unrest in Kashmir and the results of a national election in Pakistan
• Determine how effective antismoking scare ads are
• Find and fix problems with online payment systems
• Do text analysis of idiomatic Chinese
• Lay the data-based groundwork for campaigns to appeal to customers emotionally

Most applications of sentiment analysis are using a hybrid of machine and human work.

Julie Wittes describes the machine analysis as a kind of "metal detector" that finds trends of interest to her company's consumer-focused clients.

Examples of using sentiment analysis:

Unilever, for example, used sentiment analysis to study consumer opinions on websites it set up about its products.

Cofounder and chair Deb Roy says that they are "combing the entire landscape to find all the comments about TV" that they can analyze to create what they call the TV Genome,

Sentiment analysis can also be used for competitive intelligence and strategy. One European consulting firm, has done this kind of analysis for telecom companies.

Some companies are now figuring out how to analyze audio recordings for their words and for cues to emotional content like rapid speech, raised voices, or one speaker interrupting another.

What's Your Sentiment About City Government?

Text analysis of online reviews can tell a business how its customers feel and shows how to fix what's bothering them.

The city started with five agencies in the pilot: the Department of Motor Vehicles, Transportation, Parks and Recreation, Public Works, and Consumer and Regulatory Affairs. The company analyzed Twitter, Facebook, blogs, and online forms the city agencies made available to people who used their services.

Gathering information has started and then they coded the sentiment on a five-point scale from very negative to very positive. The agencies got to work improving their operations, and six months later, their new grades were much improved.

Realizing the Business Potential

Sentiment analysis is an evolving field: it's tantalizing and useful but still imperfect.

It's particularly vexing, to try to figure out when a tweet is straightforward and when it's sarcastic. In addition, there is no standard accuracy measure.

Government agencies and academics use sentiment analysis for national security and to detect potential terrorist activity.

Since the best results seem to come from a machine-human hybrid approach, but used with intelligence and care, sentiment analysis is a powerful tool to help you understand your customers, your business environment, and your strengths and vulnerabilities.

The most important thing, is to consider first whether sentiment analysis is right for your needs, and, if so, how you will use it. It can start by determining business goals by collecting and analyzing attitudinal data. Determine what data is most promising and the steps you'd need to collect, filter, and transform and analyze the data and the presentation interfaces you'd need in order to convey insights that are usable for decision making.

Finally, be sure you know why you're using sentiment analysis and how you'll use it before you dive in.