

Chapter 9

Exploring the Properties of Online Social Network Data and Their Implications for Consumer Social Data Analytics

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ABSTRACT

The prediction of consumer behavior is largely based on the analysis of consumer data using statistics as a tool for prediction. Thanks to online social networks, large quantities of heterogeneous consumer data are now available at competitive costs. Though they have much in common with conventional data, online social network datasets display several different properties. The exploration of these unique properties is indispensable to insuring the accuracy of predictions and data analytics. This chapter presents online social data, discusses seven properties of online social network data, suggests some analysis tools, and draws implications regarding the use of social data analytics.

INTRODUCTION

A guiding of business principles is “increase customer satisfaction”. Satisfied customers are believed to be more loyal to the brand, predisposed to recommend it to others, and more willing to share experiences and establish long-term relationships.

Marketers always strive for customers’ satisfaction. This task, however, is not easy. To maximize customer satisfaction, a firm has to pass through multiple challenges. First, it needs to identify its clientele. Who are the customers? Second, it has to identify their needs and desires. What satisfies customers? Third, it has to look at its competitors’

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offerings. What are other businesses doing to identify research and satisfy customers? Besides, the concept of satisfaction is also a challenge as satisfaction is a personal feeling about an object, a product or a service. It has no unique definition among customers and hence, its determinants are variable. Customer satisfaction not only depends on the firm's offerings but also on the individual consumers' evolving perceptions.. Defining satisfaction thus implies a broad understanding of the consumer.

The multidisciplinary nature of consumer behavior research supports the complexity of the concept of satisfaction. For decades, marketers have been trying to explore and understand consumers, identify their needs and desires, and monitor their behaviors. Large quantities of heterogeneous data and reliable analysis techniques have been required to conduct this research. Fortunately, today's marketers have plenty of methods and techniques, and an extensive access to consumer data thanks to the popularity of information technologies. Social media, for instance, (e.g., websites, social networks, blogs, forums, and mobile phones applications) have provided firms with an abundance of consumer information. However, financial constraints oblige that marketing resources be efficiently allocated while ensuring that accuracy is maintained during the analysis of the information. . Unlike decades ago, the issue today is no longer how to collect large amounts of data but rather how to optimize the use of these immense quantities of available consumer data, especially digital data. Therefore, the abundance of consumer data should not be seen as an unencumbered advantage to marketers.

This chapter is inspired by the Chinese proverb "do not give me a fish, instead teach me how to catch fish," and therefore provides a set of guidelines to enlighten consumer analysts about the particularities of online social data and the implications of these characteristics to consumer social data analytics. The aim is to share with

marketers several properties of online social data and to discuss the respective measures, in light of these properties, that contribute to the optimization of consumer social data analytics.

An overview of online social networks (OSN) or social media networks and their utility to consumer research opens this chapter. Social data's properties and their implications for consumer social data analytics are then presented and discussed. A practical illustration then follows this discussion. The chapter closes with some concluding remarks.

ONLINE SOCIAL NETWORKS

Nature has made it essential for humans to interact and exchange, to create social networks of some form. Especially in the business community, networking is often vital for the success of firms. Network ties allow for the exchanging of ideas, problem solving, opportunities sharing, and allows for access to knowledge while saving time and energy. Networks have been always effective in satisfying the informational needs of businesses; whether the objective is to learn about a customer or a competitor, to get information about new offers, to get updated about a new legislation or policy, or to catch new opportunities. The effectiveness of social networks is due mainly to a structure that allows the instant exchange of data across multiple and often distant actors.

A network is made of nodes and relationships. The nodes are the participants or actors inside the network. The actors create, transform, receive and send information. One actor is at the same time a stimulator and a reactor. He stimulates other actors by issuing signals (e.g., comments on a post) and reacts to others' stimulations. The relationships are the links between the actors. They are the channels through which the stimuli and the reactions created by the actors are transferred. These interactions allow for immediate access to

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