

## Chapter 34

# Proposed Techniques for Data Collection and Analysis in the Study of News–Oriented Virtual Communities

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### **ABSTRACT**

*News providers today offer interactive sources that engage people, enable them to build community, and to participate in the news. At the same time, the digital interfaces through which people access the news are continually evolving, diverse, and oftentimes visually complex. How these factors shape human information seeking in news-oriented virtual communities is a relatively new area of study and therefore greater understanding of their influence on human behavior is of much practical value. In this chapter, the authors explore trends and developments in news-oriented virtual communities. They review several data collection and analysis techniques such as content analysis, usability testing and eye-tracking and propose that these techniques and associated tools can aid the study of news communities. They examine the implications these techniques have for better understanding human behavior in virtual communities as well as for improving the design of these environments.*

### **BACKGROUND**

There has been no shortage of excitement lately around the growing array of virtual communities available from the web. Global online communities now include hundreds of millions of members who are able to communicate almost instantaneously.

Increasingly, traditional news organizations are finding they are being outpaced in coverage of world events by cadres of “citizen journalists” reporting in real time via social network sites such as Twitter and Facebook. For instance, no one expected the popular uprising that erupted in the wake of the Iranian presidential election results, which purportedly showed Mahmoud Ahmadine-

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jad as the landslide winner. Tens of thousands of “tweets” -- or short messages not exceeding 140 characters -- began originating out of Iran, painting a vivid picture of the groundswell of popular discontent with the regime. Ostrow (2009) noted that major networks like CNN were no match for Twitter and Facebook, which were out in front.

A convergence of newspaper, television, and interactive media is occurring on major news sites. The interface through which people get news is no longer dominated by newspaper, television, and radio. While they remain primary news outlets, people access news through web pages, news feeds, newsgroups, and podcasts using personal computers, mobile devices, and a host of other electronic technologies. Moreover, despite valid concerns about the credibility of information being posted, proliferations of social network websites help deliver news faster and more interactively, rather than being “filtered” and processed by editors. Twitter -- and other social network sites -- offer a value that some traditional media outlets cannot offer, and that is the ability of citizens to participate in the reporting of events in real time. In essence, everyone has access to the newsroom with breaking news, which has distinct implications for how people engage with the news and, in the process, commune with others. Social network sites along with emergent technologies and the ensuing media convergence contribute to making news access instantaneous and interactive. They afford the potential for news-oriented social relations and virtual communities to evolve.

Understanding the complexity of social relations and interactions occurring within communities is an arduous scientific endeavor but one of much importance, given their pervasiveness and worldwide use. While the amount of research relevant to virtual communities has grown, it is still lacking (Blanchard, 2004; Wellman & Gulia, 1999). Building a community is a sociological endeavor that requires developers and researchers to understand human behaviors such as why do people join and how do they participate

(D’Hertefelt, 2000). Such an understanding will benefit investigators as well as the organizations that sponsor communities (Ridings & Gefen, 2004). It is particularly vital for news organizations that deliver continuously changing content to millions of people who engage with it. In addition, because the digital interfaces with which people commune are continually evolving, diverse, and oftentimes visually complex, there is also need to better understand how the design of such spaces influence social relations and communications.

In this chapter, the authors explore trends and developments in news-oriented virtual communities. They provide an overview of several data collection and analysis techniques and propose that these techniques can be useful in the study of news communities; specifically in explicating the human behavior (e.g., communicative, interactional, and relational) occurring within communities as well as in analyzing the influence of digital environments or interfaces on community. The authors outline four data collection techniques:

1. Content analysis and precepts of social network theory
2. Visualization, Mapping Temporal Relations of Discussions Software
3. Usability testing techniques
4. Eye-tracking and visual attention metrics

They review each technique with examples. In some cases, ZDNet, an online news provider for the technology industry, is discussed to explain the method.

## **VIRTUAL COMMUNITIES AND SOCIAL NETWORKS**

### **Virtual Communities**

Virtual communities are communities of like-minded or interested parties that subscribe to social networks, blogs, and other online media

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