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Social media in qualitative research: Challenges and recommendations

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ABSTRACT

The emergence of social media on the Internet provides an opportunity for information systems researchers to examine new phenomena in new ways. However, for various reasons qualitative researchers in IS have not fully embraced this opportunity. This paper looks at the potential use of social media in qualitative research in information systems. It discusses some of the challenges of using social media and suggests how qualitative IS researchers can design their studies to capitalize on social media data. After discussing an illustrative qualitative study, the paper makes recommendations for the use of social media in qualitative research in IS.

1. Introduction

The emergence of social media on the Internet provides qualitative researchers with a new window into people's outer and inner worlds, their experiences and their interpretation of these. There is literally a flood of qualitative data pouring into the Internet every day on Twitter, Facebook, LinkedIn, blogs, wikis and so forth, all of which can be downloaded, interpreted, and analysed by the qualitative researcher. At the moment our quantitative colleagues are making good use of this flood of data, for example, by using big data analytics to analyse such things as the statistical relationships between the users of Twitter and their information sharing behaviour (Shi, Rui, & Whinston, 2014). By contrast, qualitative studies in IS using social media data are few and far between (Müller, Junglas, vom Brocke, & Debortoli, 2016). This suggests to us that we as qualitative researchers in IS have a tremendous opportunity to use social media in order to provide additional insights to those provided by our quantitative colleagues. This is especially so given that 90% of all digital content on the Internet today is estimated to be unstructured data (Vijayan, 2015), with most of this of a qualitative nature.

1.1. Motivation

We began this research project with a hunch that quantitative researchers in information systems are making good use of social media data, but qualitative researchers are not. Therefore, to confirm this hunch, we conducted a literature search for social media articles within ten highly ranked information systems journals from 2009 to 2015. These journals were from the AIS Senior Scholars basket of eight top journals namely, *European Journal of Information Systems*, *Information Systems Journal*, *Information Systems Research*, *Journal of AIS*, *Journal of Information Technology*, *Journal of MIS*, Journal of Strategic Information Systems and *MIS*

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Quarterly. To this list, we added two journals where qualitative research is particularly welcome i.e. *Information & Organization* and *Information Technology & People*.

One of the first things we discovered is that authors use many alternative terminologies for social media. For example, Vaast, Davidson, and Mattson (2013) use the term "new media of the Internet", while Ameripour, Nicholson, and Newman (2010) use the term "Internet social networks." Therefore, we searched using a variety of terms such as social media, microblog, wiki, enterprise 2.0, online social network, online community, web 2.0, and blog (Wang, Min, & Liu, 2014).

Our hunch about the use of social media data by IS researchers was confirmed. We found that the vast majority of articles use quantitative research methods, with only a small number using a qualitative methodology of some kind (sometimes as part of a mixed methods study). We performed the same search queries mentioned above in journals from other business disciplines, and found the same pattern: in disciplines such as marketing, management, human resources, and international business, most studies using social media data are quantitative, not qualitative.

We also discovered a difference in the type of data used by quantitative and qualitative IS researchers. Most quantitative researchers used data directly extracted from social media platforms. The types of quantitative data varied but included data items such as message counts, messages downloaded, friend counts, number of posts, or level of participation. Only a few quantitative papers used data from online surveys. By contrast, most qualitative papers on social media did not use qualitative data extracted directly from social media platforms. The most common data collection method was interviews of social media users. Only a small number of papers used qualitative data directly gathered from social media platforms (e.g. Ameripour et al., 2010; Germonprez & Hovorka, 2013; Payton & Kvasny, 2012; Vaast et al., 2013; Vaast & Levina, 2015).

Our review of the IS research literature thus suggests a lost opportunity. Quantitative researchers in IS are making good use of qualitative data from social media platforms, but qualitative researchers are not. Only a few qualitative researchers in IS are currently utilizing the vast amounts of qualitative data that are available from social media sites. Our survey of the research literature is consistent with the findings of Müller et al. (2016).

We believe one probable reason for this state of affairs is that there are few qualitative research methods papers about the use of social media and big data in IS. Hence our motivation in writing this paper – we want to encourage qualitative researchers in IS to start using this rich and potentially interesting source of data. Therefore, the purpose of this paper is to suggest how qualitative researchers in information systems can use social media data. Although the valueof qualitative social media data has been addressed for specific purposes suchas supplementing quantitative social networking studies (e.g. Whelan,Teigland, Vaast, & Butler, 2016), as far as we are aware, this is one of the first qualitative research methods contributions to the IS research literature about the use of social media. We discuss how qualitative IS researchers can design their studies to capitalize on social media and discuss some of the challenges of using social media data. This paper should be of interest to PhD students, to supervisors who are unsure about the conduct of research on social media and its implications, and to researchers who are interested in combining traditional qualitative techniques with social media studies.

The paper is organized as follows. In Section 2 we discuss the nature of social media and how it might be possible to design IS research studies to capitalize on social media. In Section 3 we discuss some of the opportunities and challenges of using social media in IS research. In Section 4 we provide an illustrative example of using social media in IS. Section 5 makes some recommendations for using social media data. The final section is the Discussion and conclusions.

2. Designing IS research studies to capitalize on social media

As qualitative IS researchers, we need to figure out a way to design IS research studies to capitalize on social media data. What are the socio-technical boundaries of interest? Should we study the use of social media within an organization, between organizations, by a virtual community resident on a platform, or by a virtual community that spans platforms? These and many other scenarios are possible. Before we decide upon the boundaries, however, we first need to discuss the nature of the phenomenon we are intending to study.

Social media are computer-based tools (such as websites and apps) that enable people to create and share content with other people and/or participate in a community. Bradley (2010), from the Gartner group, says that at their foundation all types of social media are a set of technologies that can construct and enable a potentially large community of participants to collaborate. Whereas IT tools to support collaboration have existed for decades, new social-media technologies enable collaboration on a much grander scale (Bradley, 2010).

The term "social media" is usually related to web 2.0 applications such as blogs, social networking sites, or video/image/file sharing platforms, and wikis (Fuchs, 2013). Kaplan and Haenlein (2010) define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content." This definition introduces us to two key concepts common to social media: technology and content. The authors see social media as dependent on mobile and web-based technologies. These create highly interactive media through which individuals and communities share, co-create, discuss, and modify user-generated content.

Shirky (2011, p. 20) says that social media are tools that "increase our ability to share, to co-operate, with one another". Boyd (2009) claims that social media is a collection of software allowing people to collaborate, play, share, and communicate and is characterized by user generated content. Lovink (2011) says that social media facilitates social interactions, while Meikle and Young (2012) add that social media includes the creation of a profile, contacts, and the interaction between those contacts. Most researchers seem to agree or at least imply that social media can introduce major and pervasive changes to communications between individuals, organizations, and communities.