Using social network analysis to explain communication characteristics of travel-related electronic word-of-mouth on social networking sites

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HIGHLIGHTS

- We viewed eWOM communication on SNSs as a network based on social relationships.
- We examined social ties and network structure with social network analysis.
- Travel-related eWOM communication relies on strong, middling, or weak social ties.
- The communication is structured, loose-knit, flat, and of high centrality.
- Travel-related eWOM on SNSs tends to be dominated by travel interests.

ABSTRACT

Social networking sites (SNSs), which are platforms based on user interactions, currently play increasingly important roles in sharing electronic word-of-mouth (eWOM) among tourists. Viewing eWOM communication on SNSs as a network based on the users' social relationships, this study applied social network analysis to examine the communication characteristics of travel-related eWOM on SNSs from the perspective of both ego and whole networks. Results show that travel-related eWOM communication via SNSs relied on existing social relationships, ties of which can be categorized as strong, of middling strength, or weak. Furthermore, the effect of transmitted information was stronger than that of influential decision-making. The communication network studied was found to be structured, loose-knit, flat, and of high centrality. These results enrich current research on the effects of eWOM and provide a dynamic perspective for understanding how eWOM disseminates and influences users through interactions.

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1. Introduction

A significant symbol of Web 2.0, the boom in social networking sites (SNSs) has also aroused a worldwide upsurge in tourism destination marketing. With SNSs, a great deal of tourists post and share real-time feelings (Gretzel, 2006; Pan, MacLaurin, & Crotts, 2007), as well as travel reviews, opinions, and personal experiences while traveling (Xiang & Gretzel, 2010). In particular, individuals younger than 35 years old with at least a college degree chiefly participate in sharing travel experiences and photos on SNSs (Lo, McKercher, Lo, Cheung, & Law, 2011). Given the general popularity of sharing photos on SNSs, photos depicting travel have especially become a way of self-expression and self-image construction among younger generations (Lo et al., 2011). As mobile Internet capabilities progress, users more often share travel information whenever and wherever possible, which makes sharing via SNSs increasingly prevalent. In fact, travel information provided by SNSs has quickly become commonplace in the day-to-day lives of SNS users.

SNSs such as Facebook, Twitter, Myspace, and Microblog are platforms with dynamic, multimodal features by which users can post, share, and discuss interests with other interested users (Jansen, Zhang, Sobel, & Chowdury, 2009). These features of SNSs

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expand users' social circles as well as increase the frequency of interpersonal contact. Unlike traffic on other websites, users more often form close-knit relationships with each other (Ding & Wang, 2010). Given the strength of these ties, SNSs have transformed traditional information dissemination that relies on central mass media (e.g., newspaper and television). With the popularity of SNSs and general Internet use, a dual-core dumbbell structure of online information dissemination has emerged that includes both main-stream forums and microblogs as well as mainstream portals, which as the two core sources of influence have transformed how peer-to-peer influence works (Li, 2011). In terms of consumption, consumers are no longer passive recipients of information; instead, they actively engage in peer-to-peer product recommendations and electronic word-of-mouth (eWOM) (Chu & Kim, 2011). eWOM of-fers a useful perspective from which to study information dissemination and its influence on users and followers. Since the development of Web 2.0, traditional word-of-mouth (WOM) has had to accommodate eWOM (Chatterjee, 2001; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004), which by comparison is more influential due to its speed, convenience, broadcast appeal, and lack of the pressures of face-to-face interaction (Sun, Youn, Wu, & Kuntaraporn, 2006). Another aspect of such influence is that any communication and contact between communicators and receivers might alter the recipient's attitude, especially regarding purchase decisions (Cheung, Lee, & Thadani, 2009; Kiecker & Cowles, 2002; Park & Kim, 2008; Park & Lee, 2008).

Likewise, travel-related eWOM on SNSs may significantly affect the cognition and behavior of potential tourists. Tourism is an experiential good; consumers cannot perceive the quality of tourism products in advance. Therefore, interpersonal communi-cations have become an important technique to reducing the risks of travel (Murray, 1991). Litvin, Goldsmith, and Pan (2008) point out that interpersonal influence and WOM were ranked the most important sources of information for purchase decisions. Partly as a result, Chu and Kim (2011) suggest that product-focused eWOM on SNSs is a unique phenomenon with important social implications. Therefore, the characteristics of communication via eWOM on SNSs requires more sustained attention, particularly from the perspec-tive of network structure and social relationships, which allows a more thorough examination of how interpersonal influence can spread among users and followers (Chu & Kim, 2011). From this perspective, studying the communication characteristics of travel-related eWOM on SNSs can expand the present understanding of eWOM's influence, especially as it pertains to tourists and the tourism industry.

Currently, SNS regarding tourism has received scant scholarly attention. Most research exploring the function of SNSs for locating tourism information, as well as users' motivations and behavior, has neglected to investigate communication among users. By contrast, eWOM communication and how it affects consumers' purchase decisions has gradually attracted the attention of re-searchers (Jansen et al., 2009; Lee & Youn, 2009; Riegner, 2007). Current research is conducted from three perspectives—namely, those of the communicator, the receiver, and the communication process. Although studies on the communication process are well outnumbered by those on communicators and receivers, recent research has begun to study the social characteristics of eWOM communication. Nevertheless, most studies thus far have consid-ered consumers to be independent individuals and have thus emphasized the effects of eWOM on online purchase decision-making, while research on eWOM via SNSs remains in its infancy. In the meantime, eWOM communication in those studies is static, for few have conducted their research from a dynamic perspective and considered communication as a dynamic dissemination pro-cess. Therefore, this study focuses on the communication of travel-related eWOM on SNSs to underscore its practical and academic significance.

To these ends, this study performed social network analysis (SNA) to examine the communication characteristics of travel-related eWOM on SNSs from the perspective of social ties and network structure. Its results not only enrich the existing theoretical research, but also provide further inspiration for conducting effec-tive word-of-mouth marketing on SNSs in the tourism industry.

2. Literature review

2.1. SNS research in tourism

Most research on SNSs has been published since 2008 and pri-marily emphasized user motives and behaviors. Among SNS research, the few travel-related studies can be grouped into two categories. On the one hand, most studies have considered SNSs to be one kind of social media in terms of their use for travel-related information searches. Using Google as a search engine, Xiang and Gretzel (2010) investigated the role of social media in online searches for travel-related information. The results showed that SNSs were not yet the main sources for users seeking travel-related information. Meanwhile, other research has suggested that user trust of travel websites varies significantly; the three types considered most trustworthy were official websites of tourism bureaus, websites of travel agencies, and third-party websites (Burgess, Sellitto, Cox, & Buultjens, 2011; Yoo, Lee, & Gretzel, 2009). Though trust of SNSs was lower than expected and SNSs are far from the most popular way to gather travel-related information, the reasons for both conditions have gone unaddressed in these studies. Furthermore, rapid changes that occur as mobile Internet become popularized may have altered the conditions in recent years.

On the other hand, tourism studies have also focused on the use of SNSs in terms of user characteristics and motivations for sharing. Current studies in this category remain in the descriptive stage. Lo et al. (2011) found that most people sharing travel photos were young and well-educated, as well as had substantial incomes, rich travel experiences, and a willingness to involve themselves in the destination. Huang, Basu, and Hsu (2010) identified three func-tional motives for sharing travel-related information via SNSs—namely, obtaining travel information, disseminating infor-mation, and documenting personal experiences—and that of these motives, obtaining travel information was the most important. Both studies described nevertheless failed to present the characteristics of the social network—namely, the effect of social features on tourists.

In sum, research of SNSs in tourism remains in its infancy. Though earlier studies explored the function of SNSs for locating travel information, most neglected to investigate the communica-tion process, for few conducted their research from a dynamic perspective. If substantial characteristics of SNSs have been over-looked, such oversight precludes further understanding of the acquisition and impact of travel information. At the same time, since few studies viewed online travel-related information as eWOM, we have viewed travel-related information as such and, moreover, sought to provide a dynamic perspective for under-standing how eWOM disseminates information and influences users.

2.2. Communication research on eWOM

Current research on eWOM is conducted from three perspecti-ves—namely, those of the communicator, the receiver, and the communication process.