Exploring online social behavior in crowdsourcing communities: A relationship management perspective

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ABSTRACT

With the popularity of social media, crowdsourcing innovation provides new ways to generate original and useful content. It offers a unique opportunity for online crowds to communicate and collaborate on a variety of topics of mutual interest. This study presents an initial attempt to explore and understand online social behavior in crowdsourcing communities, with the insights from both plural subject theory and commitment–trust theory. In particular, two different types of collective intention (i.e., we-mode collective intention, which refers to acting as a group member, and I-mode collective intention, which refers to acting interdependently to contribute to the group goal) were proposed. The research model was empirically examined with longitudinal data collected from 202 wiki users. Findings indicated that, although both I-mode and we-mode collective intentions significantly predicted online social behavior in wiki communities, we-mode collective intention exerted a greater effect on users' behavior. In addition, relationship-orientated factors (e.g., trust and commitment) only affected we-mode, instead of I-mode, collective intention. This study finally yields several implications for both research and practice.

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1. Introduction

The emergence and popularity of social media has greatly transformed the way people work, collaborate and communicate in many different aspects. In particular, more efficient mass-production methods, such as crowdsourcing, are available along with the boom of Web 2.0. Crowdsourcing can be regarded as a type of participative online activity in which a large group of people, especially from online communities, collaborate on solving a wide variety of problems (Doan, Ramakrishnan, & Halevy, 2011). It is different from traditional outsourcing in that the task or problem is outsourced to an undefined public, rather than a specific group of paid employees. Prior studies have identified some basic characteristics of any crowdsourcing initiative, including a clearly defined crowd, a task with a clear goal, benefits received by the crowd, online task assigned process, Internet-based collaborative activity, and so on (Estellés-Arolas & González-Ladrón-de-Guevara, 2012).

Over the past decade, a number of excellent crowdsourcing communities, such as Wikipedia, Linux and Yahoo! Answers, have appeared on the Internet, and this emerging filed is expected to continue growing rapidly (Bayus, 2013). However, the development of crowdsourcing communities also faces some key challenges. For example, how to attract users who have the potential to be contributors is often considered as the first and most important step (Doan et al., 2011).

In the current study, we try to explore what motivates people to participate and contribute in crowdsourcing, with insights from wiki communities. As the pioneer and one of the most successful examples of crowdsourcing, wiki communities such as Wikipedia have attracted millions of people around the world to collaboratively write, organize and modify almost any content involved in the wiki pages. The reason why we claimed wiki-based community as a typical crowdsourcing practice is because its core characteristic lies in the ability to gather a large group of online crowds to achieve a common goal, such as editing or expanding a specific article or a collection of articles. At the same time, collective intelligence would be beneficial to the whole community, while the volunteers also can receive benefits from the crowdsourcing platforms, such as social recognition, self-development, networking and relationship building opportunities. In this regard, people often participate and contribute to wiki communities through

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online social action and mutual cooperation, by sharing their expertise and knowledge.

Previous studies on collective action in the context of wiki communities, such as Wikipedia, have extensively examined individual motivations and decisions based on the intention-based models (e.g., Cho, Chen, & Chung, 2010; Yang & Lai, 2011). It is believed that an individual's intention to engage in collective action is influenced by cognitive, motivational and social-relational factors (Cho et al., 2010; Wang & Wei, 2011). Cyber-psychology is also regarded as an important concept and a useful frame for exploring human interaction with new media (Bagozzi & Lee, 2002; Papadimitriou, 2009). In this study, we believe that mass collaboration occurred on crowdsourcing communities needs to be better understood from a different perspective, which can be expressed as intentional social action. This is because crowdsourcing initiatives have to recruit a crowd of people to engage, collaborate and solve complex issues. It thus cannot be "best characterized by an individual acting in isolation" (Bagozzi, 2007, p. 247). Crowdsourcing projects can be successful only when a group of people jointly express their willingness to contribute and collaborate, either explicitly or implicitly. The decision to participate and contribute to crowdsourcing communities thus represents a social phenomenon that depends on interactions among the participants, instead of an individual's own judgment or intention.

In this regard, it may be more appropriate to examine the crowdsourcing phenomenon by incorporating plural subjects-based conceptual schemes, rather than the commonly studied singular subject-referent intention models (Bagozzi & Dholakia, 2006). This study presents a preliminary attempt to address this issue, and examines collective intention based on the "I" and "we" dichotomy. By adapting and extending current research on plural subject theory and commitment–trust theory, this study aims to understand the antecedents of I-mode and we-mode collective intentions, as well as their impacts on online social behavior. Although some studies have examined we-intention in online social networks (e.g., Cheung, Chiu, & Lee, 2011), as far as we know, this is also the first empirical work dealing with collective intention from both I-mode and we-mode perspectives.

The rest of this paper is organized as follows. The next section addresses the theoretical background and research hypotheses. This is followed by a detailed description of research methodology in Section 3 and data analysis results in Section 4. This study concludes with the discussion of the findings, and implications for both research and practice.

2. Theoretical background and hypotheses development

Recently, collective behavior on social media platforms has attracted increasing attentions from both academia and industry (Cheung & Lee, 2010; Kong, Kwok, & Fang, 2012; Turel & Zhang, 2011). Although social media-supported innovation and collaboration require the collective efforts and interdependence among two or more people (Li, Chau, & Lou, 2005), and the decision making is collectively shared and mutually made in nature (Bagozzi, 2007), previous studies still placed a great emphasis on personal intention in the form of "I predict that I would use the system" (Turel & Zhang, 2011). Only recently, a few studies have started to consider the concept of "we" in collective intention development (e.g., Cheung & Lee, 2010; Cheung et al., 2011; Shen, Cheung, & Lee, 2013). However, it is obvious that even if the intentions are interdependent and interrelated, the participants do not always regard themselves as members of a focal group. In view of two different types of collective intention (i.e., we-mode collective intention, which refers to acting as a group member, and I-mode collective intention, which refers to acting interdependently to contribute

to the group goal), a research model is developed, as depicted in Fig. 1, based on plural subject theory and commitment–trust theory. A description of the model and its research variables, as well as justifications for the research hypotheses will be addressed.

2.1. Plural subject theory

Gilbert (1989) was the first to propose the plural subject theory, which includes a view of ontological holism about groups, and defines social collectives in terms of common knowledge of expressed willingness to participate in joint actions. In particular, social collectives are characterized by two essential features. First, the participants share a commitment to certain goals, beliefs, intentions or actions. Second, such commitment is a common knowledge among them (Sheehy, 2002). A plural subject thus is formed when the participants jointly commit to achieve a goal or perform an action together. Compared to the conceptual schemes commonly used for examining singular action, plural subject theory represents an understanding of persons as social individuals in a central sense of collective beliefs and acting together. In this regard, for decision making in relation to two or more people and involving mutual, shared or joint processes, plural subject theory may be a more appropriate approach for examining the underlying decision-making processes (Bagozzi, 2007).

The conceptualization and specification of group and social decision making, based on the plural subject theory, bring about the idea of collection or joint intentions. Different from the concept of personal intention, which is defined as "a person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" (Eagly & Chaiken, 1993), collective intention can be regarded as "pool of wills" where "individual wills" of all group members are combined together to form a "group will" simultaneously and interdependently (Bagozzi, 2000; Gilbert, 1996). The concept of collective intention was interpreted and expressed in two forms in the literature, which are I-mode and we-mode collective intentions respectively (Tuomela, 2006). In the we-mode sense, the participants intend and function as group members, and the action is conceived as the group acting or experiencing as a unit (Bagozzi & Lee, 2002). In this regard, a we-mode collective intention is often expressible by "we will perform an action jointly" (Tuomela, 2005). This contrasts with I-mode collective intention where individuals in a social group intend and act as private persons to perform an action contributing to the achievement of a group goal. It is also important to realize that the I-mode collective intention is conceptually different from the more commonly studied personal intention because the former refers to a joint action, which one cannot perform alone (Bagozzi & Lee, 2002). In this regard, the decisions and actions in the I-mode sense, to some extent, are simultaneous and interdependent. In the current study, we present an attempt to re-specify behavioral intentions used in prior research, and empirically examine the I-mode and we-mode collective intentions in crowdsourcing communities. Following prior studies on the relationship between intentions and actual behavior (Ajzen & Fishbein, 1980), both I-mode and
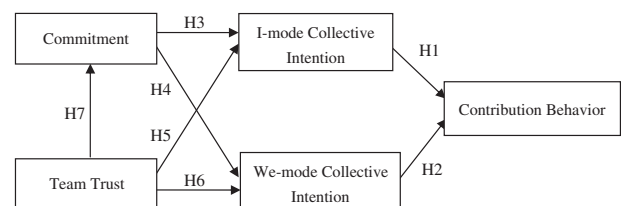

Fig. 1. Research model.