Multidimensional Online Self in Collective Action: an empirical study on Wikipedia's deletion discussion

Research-in-Progress

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Abstract

A user's trust and trustworthiness is an important facet of her motivation for online knowledge exchange. Current online knowledge exchange becomes increasingly interactive and collaborative, which calls for a more dynamic understanding of online users in this regard. We argue that an online user's self can be reified through her experience and activities within an online community over time rather than becomes a displacement of a corporal self. Drawing upon Goffman's concept of the presentation of self (1959), we propose a three-dimensional view of online self: backstage activity, an artifact of self-representation, and frontstage performance. We develop a research model that explains how a user establishes and maintains self as a trustworthy social member through the three dimensions of online self during collective action.

Keywords: trust, trustworthiness, self-presentation, collective action, user behaviorism

Introduction

Wikipedia, a web 2.0-based online encyclopedia, has accumulated more than 4.4 million articles solely through voluntary knowledge contribution since its launch in 2001. It is currently visited by tens of millions viewers daily.[1] Contemporary users are collaboratively generating shared knowledge on various social IT platforms and consider the shared knowledge artifacts as valuable and reliable knowledge resource. Users also tend to consider them as a crucial means of knowing (Baumer et al. 2011; Boudreau and Lakhani 2009; Chesbrough et al. 2006; Heinonen 2011; Preece and Shneiderman 2009). However, the increasing amount of shared knowledge, member participation, and trust toward the shared knowledge does not always ensure the quality of the shared knowledge (Ma and Agarwal 2007). One

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[1] http://en.wikipedia.org/wiki/Wikipedia:Awareness_statistics#Top_Reference_sites

reason is the fluidal nature of online communities. These self-organizing and emergent social structures are highly flexible and autonomous in that users reserve their right to decide when to enter, what to contribute, and how to act (Preece et al. 2004; Wasko and Faraj 2005). Users are varying in their expertise, experience, passion, and motivation. Online communities often suffer from imbalanced contribution and free riding behaviors among members (Awazu and Desouza 2004; Butler et al. 2007; Gohosh et al. 2002; Lakhani and Von Hippel 2003; Mockus et al. 2002). At the same time, redundant and inconsequential knowledge contribution, mostly made by less experienced users, becomes another challenge to the sustainability of online communities; such knowledge contribution hampers the quality of shared knowledge in online communities, but depreciating such contribution for the sake of quality might discourage members' participation and threaten membership size, numbers crucial to their sustainability (Butler 2001; Durcikova and Gray 2009; Ling et al. 2005; Moskaliuk et al. 2012).

Online communities deploy diverse strategies to encourage the high-quality contribution and active participation such as popularity measures, featured contribution/contributor, ratings, and so on. Amongst all, we found Wikipedia's practice of Deletion Discussion[2] strategy most intriguing in that it screens out poor and irrelevant contributions that might hamper the quality and the trustworthiness of Wikipedia. Users nominate articles they believe are irrelevant and unworthy for deletion. Then, a group of voluntary users form a temporary decision-making board to discuss making recommendations such as to delete, merge, redirect, keep information, and so on. During the deletion discussion, discussants evaluate nominated articles based on the community's values and norms. Acknowledging that not all contributions go through this action, as this is a nomination-based process, this action sets the bar for contributed articles to survive in Wikipedia's knowledge ecosystem.

In this study, we are particularly interested in a user's influence on deletion discussion. Wikipedia sets rigid guidelines for deletion discussion[3], but the process is autonomous and open to anyone. Deletion discussion is also highly interactional and conversational in contrast with article contribution and editing. Although Wikipedia has been known for its altruistic culture (Wagner and Prasarnphanich 2007), it would be reasonable to question if the deletion discussion might be complicated with stronger user's individualistic inclination (e.g., social capital (Kankanhalli et al. 2005; Wasko and Faraj 2005) and status seeking (Lampel and Bhalla 2007)), and, if so, where such inclination comes from and how it affects their behavior and the community.

The rest of this paper is organized as follows. We introduce our three-dimensional conceptual framework of online self, using Goffman's concept of the presentation of self (1959). We propose a research model that explicates how the three dimensions of a user's online self are interrelated and influence a user's behavioral tendency during deletion discussion. Then, we explain our research method. We close this paper by discussing implications for research and practice.

A Multidimensional View on Online Self

Early literature on user's online behavior in the Information Systems has focused mainly on motivations for knowledge contribution and sharing and subsumed them under two broad categories: altruism and social capital (Von Hippel and Von Krogh 2003; Wasko and Faraj 2005). Thanks to the prevalent use of social media and Web 2.0 technologies, users have become increasingly acquainted with knowledge contribution and sharing behaviors in various online platforms and contexts, such as online forums, (micro)blogs, Q&A platforms, user collaborations, and idea competition (Baumer et al. 2011; Boudreau and Lakhani 2009; Chesbrough et al. 2006; Heinonen 2011; Preece and Shneiderman 2009). Knowledge contribution and sharing has currently become an increasingly ongoing social interaction among well-versed users rather than unidirectional knowledge gifting to strangers. In a sense, knowledge is co-created through collective action. This change calls for a more dynamic and in-depth conceptualization of users

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[2] http://en.wikipedia.org/wiki/Wikipedia:Deletion_process#Search_all_deletion_discussions
[3] https://en.wikipedia.org/wiki/Wikipedia:Guide_to_deletion

than a motivated surrogate from the real world; users "create" their identity that is what counterparts infer to during online interaction. This may sound like another study on online trust, but we would like to distinguish our study from those studies that consider trust as an important facet of a user's motivation for knowledge contribution and seeking behaviors (Ardichvili et al. 2003; Chiu et al. 2006; Hsu et al. 2007). In this study, we are interested in the generative nature of a user's trustworthiness during collective action—how a user establishes and exercises the trustworthiness of self.

Goffman's idea of the *planed* presentation of self during interpersonal interaction (italic added) has been an established conceptual ground for understanding co-located, face-to-face interactions where actors can continually access multiple channels of information about self-presentation through direct perception (Leary and Kowalski 1990; Tseëlon 1992). According to Goffman (1959), the presentation of self is often complicated with an actor's willfulness to present herself to counterparts as a proper actor in terms of morality, expertise, and common interest. At the same time, she tends to influence her counterparts and the definition of the situation by maneuvering her self-presentation because counterparts plan their future course of actions based on the information received from the situation and other actors residing in the setting (Barker 1968).

Although its direct application to online settings is challenging due to the limited access to such ambient information, we believe the premises about establishing and maintaining self during social interaction to be valid in collective action; such tendency might be stronger in an online setting than in the real world. Hogan (2010) distinguishes two dimensions of the presentation of self in an online setting — performances and exhibition. Due to the discrete and distributed nature of collective action, users are able to and tend to frame their online self-presentation selectively and purposefully like a "curator"; a curator displays pictures in a refined ambience to deliver a theme of the exhibition. In this way, users' online self-presentation becomes a subjective and abstract artifact — representation (e.g., user profile and status) rather than performance — emits both attended and unattended information to observers. For instance, a blogger creates a blog and posts updates, while revealing only selective information about herself that she thinks adds trustworthiness to her blog. Readers of her blog can build their trust toward the blog and the blogger based only on the "exhibition." However, when she begins to interact with readers by commenting interactively, she performs in front of the readers. According to speech act theory (Austin 1962; Searle 1969), words encompass illocutionary power that a speaker exercises to change observers' perception and action using statements. In an online setting, the exchange of discrete written communication displaces co-located interaction, and it is "performed" by an actor rather than displayed (Jung 2012). For instance, a user displays her user ID and profile to exhibit "self" but interacts with others by engaging in discrete written communication for various purposes such as information, conversation, and persuasion. Although the exhibition of self and performative actions exists in a same format as digital "artifacts, the record of past performance" (Hogan 2010), they are distinct in nature. Thus, we further elaborate the presentation of online self and propose a three-dimensional conceptual framework reflecting distinct intentions of presenting self during collective action: backstage activity, an artifact of self-representation, and frontstage performance (Figure 1).

Figure 1. Three Dimensions of Online Self in Collective actions
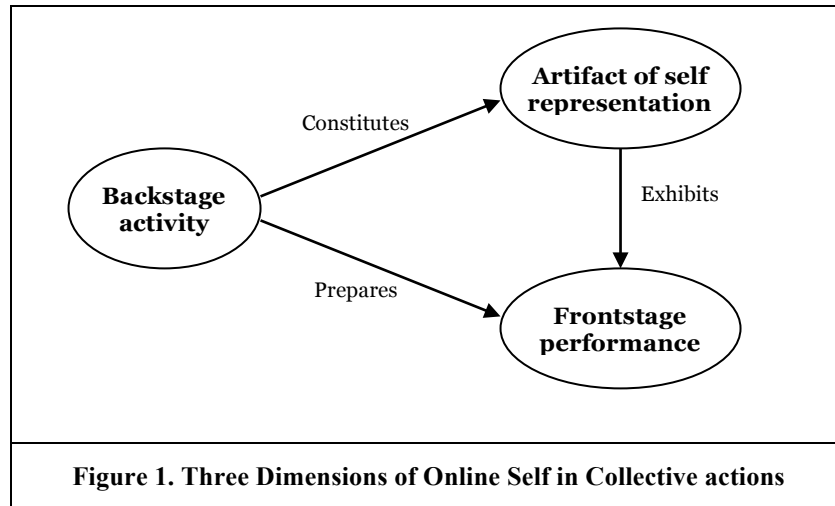
Backstage activity

Goffman (1959) distinguishes backstage from the frontstage; the backstage is a personal place where an actor can be oneself and prepares her presentation to observers as an acceptable actor in the front, whereas the front stage is where she directly interacts with counterparts. We envision the backstage of a user's online self to be an online community where she dwells rather than an offline space for two reasons. First, the backstage is not simply a living place, but a place where an actor gains her social identity as a social member of the space and learns how to establish herself as an acceptable social member. Second, a user has multiple affiliates each of which needs distinct identity and value. Online self is not merely a surrogate of an offline self, but a crucial constitutive part of an individual as a whole. Indeed, an online self and her online activities are the crucial means of understanding an offline individual and vice versa. The backstage of collective action in this context is a broader online behavior setting where all members of a community, material and non-material artifacts, shared beliefs and mission of the community, and social norms are interconnected and mutually constituted through interactions over time (Ingold 2000). For example, Wikipedia has unique social norms to achieve its mission and beliefs as a free online encyclopedia solely created by users' voluntary contribution. A user's past and cumulative activities in the backstage (e.g., article contribution, editing, reputation, and so on) not only constitutes the ecological online setting, but also constitutes her identity and characteristics as a social member of Wikipedia.

Artifact of self-representation

A user exists as a digital artifact in an online behavior setting and exhibits selectively chosen information to present herself to others in a desired way (Dominick 1999; Hogan 2010; Papacharissi 2002). As the artifact is already complicated with purposes, perspectives and symbols, we call this as an artifact of self-representation. The representation varies in term of social presence, the nature of content, purpose, and so on. Although a user can include any information in the artifact, a user of knowledge-oriented online communities like Wikipedia needs to exhibit information that can better demonstrate herself as a member with expertise, morality, and identity as required by the community. We assume that such information is necessarily gained from a user's backstage activities within the community. The artifact exists in a click distance from the frontstage during collective action and limitedly displayed to the extent that others can recognize the ownership of the frontstage performance.

Frontstage performance

Goffman (1959) defined performance as "all the activity of an individual which occurs during a period marked by his continuous presence before particular set of observers and which has some influence on the observers" (p. 13) and as a place to envision where the performance occurs, in "front" in contrast to the backstage. Although collective action is asynchronous by nature, sequences of knowledge exchange on online platforms are viewed by observers, influence them intentionally and unintentionally, and evoke

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their reaction. We view such sequential knowledge exchange to be frontstage performance in an online setting. For example, a user engages in a discussion thread in an online forum by adding her comments and threads on the discussion. The online forum is the frontstage, and her comments and threads are her front-stage performances.

The frontstage performance is purposeful and planned in that an actor intends to influence observers and avoid any failure during the performance, such as embarrassment and disruption. Goffman (1959) argued that an actor could avoid such failures by pursuing the consistency between appearance and manner and their coherence within a setting. A user's ability to maintain coherence and consistency are largely mobilized from her past experience and stereotypical thinking that she has gained from her past social interaction. In the same vein, we argue that a user prepares her frontstage performance from her backstage activity from which she has learned acceptable norms, expertise, and identify.

To recap, we distinguish among the three dimensions of online self during collective action: a user's backstage activity becomes reliable substances that constitute an artifact of self-representation; the backstage activity prepares her frontstage performance by mobilizing relevant rules and attributes of the frontstage performance; and the artifact of self-representation becomes an entity of the frontstage performance that is selectively displayed during collective action.

Research Model

Our research model explains that a user establishes and maintains self as a trustworthy and acceptable actor through the three dimensions of online self during collective action (Figure 2). Wikipedia's deletion discussion evaluates articles with questionable quality and intention and decides how to handle them to sustain its mission as a useful open encyclopedia. This collective action is highly community-oriented, and it is necessary for discussants to demonstrate their beliefs and qualifications in the community's value properly to perform effectively. As such, we put more focus on expertise, social norms, and shared identity as important facets of a user's trustworthiness.

Figure 2. Research Model
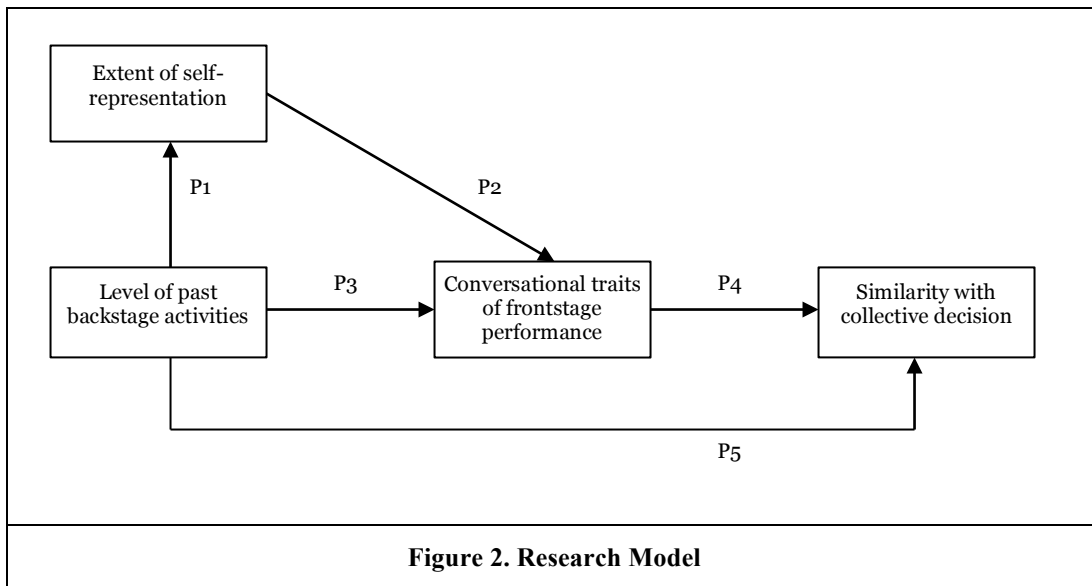
Level of backstage activity

We define the backstage activity as a user's past activities in a community and measure it using quantitative data, such as the number of a user's article creation, the number of article editing, affiliation, the year of memberships, the frequency of communication with others, and the number of acknowledgement. The data is an unbiased cumulative record of a user's dwelling in the community. The

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level of a user's past backstage activity is an indicator of her experience and the familiarity with the rules and values of the community (Ma and Agarwal 2007). The backstage activity is the most instrumental dimension of online self in that it prepares a user to attain what are acceptable behavioral codes in the front and what effective ways to present self to observers for them to perceive her as an acceptable member of the community. Thus, we posit that the level of past backstage activity can influence the following three constructs: the extent of self-representation, dialogic traits of frontstage performance, and the similarity with collective decision.

Extent of self-representation

A user profile page is a unique artifact of self-representation that a user creates at her discretion. Each user perceives the importance of a user profile page differently and expends different amounts of time and effort on those activities, but a user who is more aware that her profile will be viewed by observers, tends to have a strong perception of self and to contribute more with greater satisfaction (Ma and Agarwal 2007). We approach the extent of self-representation in four aspects: media richness, biographical focus, shared identity focus, and information focus (Kaplan and Haenlein 2010; Miller 1995). We measure media richness (vividness) with non-textual content such as graphical symbols and pictures and the rest with the number of words used to describe each category (Papacharissi 2002). We assume that media richness and biographical focus reflect a user's egoistic inclination whereas shared identity focus and informational focus are oriented from her altruistic social inclination. In knowledge-based communities like Wikipedia, we assume that a user tends to perceive herself as a knowledge collaborator and desire to present herself in that way. We thus posit that a user's past backstage activity will positively influence the extent of shared identity and informational foci in her self-representation, whereas there is little or no influence on media richness and biographical foci (P1). We also posit that a user who expends more efforts on her user profile would perform effectively in the frontstage (P2).

Conversational Traits of frontstage performance

The frontstage of this collective action, Wikipedia's deletion discussion, has an established procedure and espoused values and norms. A user is expected to perform within this frame to avoid any embarrassment and disruption (Goffman 1959; Sacks and Jefferson 1992). To do so, a user needs to demonstrate her knowledge of particular subject matters and her conformity to such values, which we believe is reflected in her conversational traits. In particular, we note such traits as word count per recommendation as a measure of quality and effort (Blumenstock 2008), the number of inner references, the number of outer references, the number of social norms referred to, and the sentiment. We posit that such conversational traits are largely mobilized from a user's past experience within the community (P3).

Similarity with a collective decision

Collective action is an open democratic process and does not need to be unanimous. However, we presume that a user with the greater past backstage activity is more likely to share a stereotypical perspective of the community. The user can successfully mobilize it into her conversational traits during frontstage performance. Here, we would like to distinguish between two types of users: an experienced user with notable past backstage activity and a well-versed user with effective conversational traits. We presume that both users tend to make recommendations that are close to collective decisions but in distinct manners; an experienced user does so by relying more on the shared values and stereotypical perspective that leads to similar recommendations at the end whereas a well-versed user with less backstage activity does so by using effective conversational traits strategically to influence an outcome of collective action. Therefore, we posit that a user's conversational traits in her frontstage performance positively influence the similarity with collective decision (P4). However, we presume that the backstage activity has stronger influence on the similarity with a collective decision than the conversational traits of the frontstage performance (P5).

In sum, this multidimensional approach to a user's influence on collective action leads to the following five propositions:

Proposition 1. A user's past backstage activity positively influences the extent of shared identity and informational foci whereas negative or no influences the extent of media richness and biographical foci.

Proposition 2: The more a user expends efforts on her user profile, the more effectively she performs in the front.

Proposition 3. The extent of a user's past backstage activity positively influences her conversational traits, thus promoting the community's values and norms.

Proposition 4: A user's conversational traits in the frontstage performance positively influence the similarity of her recommendations with a collective decision.

Proposition 5: An experienced user's past backstage activity has a stronger influence on a user's tendency to make similar recommendations than a well-versed user's.

Research Method

We collected data from Wikipedia's deletion discussion archive. We chose the first 120 deletion discussions from every month of 2014, which comprised a sample size of 1,440 deletion discussions. From the sample, we extracted a list of about 1,200 user IDs. We excluded those users who had an invalid ID such as an IP address that made marginal appearances within the sampled deletion discussions. We reduced the initial list to 500 user IDs based on the number of their appearances in the sampled deletion discussion.

We collected our data from three sources: user statistics, user profiles, and deletion discussions in which each user participated during the selected period. We collected the data about the backstage performance from user activity statistics available from Wikipedia. We collected the data about the self-representation of user profile pages. We will develop a coding instrument where multiple coders identified distinct categories of information and their quantitative data. Finally, we collected data about the conversational traits of frontstage performance and their conformity to collective decision from deletion discussion.

The proposed model was evaluated using nonlinear variance-based structural equation modeling (SEM), a powerful multivariate technique for the analysis of causal models with simultaneous estimation of structural and measurement model parameters (Chin 1998; Kock 2011; Lohmoller 1989). Variance-based SEM is generally recommended when the requirement of multivariate normality is not met in a dataset (Chin 1998; Siegel and Castellan 1988), which we expect to be the case given the nature of our variables. This nonlinear analysis will enable the analytical identification of unobserved heterogeneity at the structural model and properly account for it in the estimation of path coefficients (Guo et al. 2011; Kock 2011). We will analyze the model using classic composite-based as well as factor-based algorithms (Kock, 2014), so that we can contrast the results; the latter, factor-based algorithms, yield the same results as covariance-based SEM algorithms.

Discussion

Our study was initiated with a simple doubt that a user's trustworthiness is not only given, but also, more importantly, gained purposefully. We expect to see significant relationships among the proposed three dimensions of online self and the behavioral consequence that is the tendency to make similar recommendations to collective decision. Based on the anticipated relationships, we expect to capture a dynamic nature of a user's trustworthiness and ways to improve it during collective action. Our study is solely developed from Wikipedia's deletion discussion. However, our study findings can be generalizable because Wikipedia's collaborative platform has been widely used in various contexts (Majchrzak et al. 2012) and because there has always been the need to take action on inconsequential contribution.

Our research model and the anticipated outcomes will have several implications for research and practice.

First, our multi-dimensional conceptualization of online self suggests a richer lens of investigating online collective action. With our characterization, we propose that a user's self can be adequately, and possibly independently, reified through her experience and activities within online behavior settings over time rather than a displacement of the corporal self.

Second, current online environments provide unbounded opportunities for gathering distributed knowledge contribution such as crowdsourcing, open innovations, user reviews, and other various online activities. A user's perceived identity verification, the extent to which a user's information is made visible to observers, plays a crucial role in enhancing user knowledge contribution and satisfaction (Ma and Agarwal 2007). We advance one step further and propose that the coherence between the backstage performance (i.e., deep profiling) and self-representation becomes a latent variable of the varying degree of self-presentation that we expect to have significant influence on user behavior and satisfaction.

Third, we propose the coherence between the backstage activity and self-representation as an indicator of a user's trustworthiness and the credibility of her contribution and its influence on her front stage performance with others. Expecting the relationships to be significant, we propose that varying interventions of ensuring coherence could be a means of improving the effectiveness of online collective action for knowledge integration that necessitates consensual criteria, social norms, and, most importantly, reliable actors.

We undertook a novel research objective and developed a research model to serve it. We collected data from multiple resources, developed an instrument to evaluate variables, and conducted inter-coder reliability tests to ensure the reliability and the validity of our study. However, we invite multiple future studies that test our research model, replicate our study design in different contexts, and examine its reliability and validity.

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