Encouraging online engagement: The role of interdependent self-construal and social motives in fostering online participation☆

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ABSTRACT

Developing and maintaining a user base that actively contributes to an online community is often essential to a website's success. For many online communities, developing such a user-base can be challenge for web designers. Working from a functionalist perceptive, two studies explored how the individual difference of interdependent self-construal was related to participation and engagement in the online community MovieLens.org. In the first study, we found that those individuals high in interdependent self-construal were particularly *unlikely* to contribute to the website. In an attempt to increase the online engagement of this type of user, we then created an interactive web feature that tapped into the social motives of those high in interdependent self-construal. This feature allows users to create Top Five movie lists that can be shared with other users. In the second study, we found that interdependent self-construal was associated with more use of the Top Five lists feature, that using this feature was associated with more interest in seeing others' lists, which in turn predicted more interest in MovieLens. Implications for web design and psychological theory are discussed.

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1. Introduction

User-generated web content, or content created by the members of an online community rather than by a professional source, has become ubiquitous in today's climate of YouTube, Facebook, Twitter, and Instagram (O'Reilly, 2009). Many websites employ "click-based" advertising business-models, such that user-generated content encourages users to view and purchase specific products (Fulgoni, 2007; Krishnamurthy & Dou, 2008). Furthermore, numerous online communities have achieved success not by monetizing their users' clicks on advertisements, but instead by maximizing the value of the actual contributions that their users volunteer and/or create. For example, Wikipedia editors have created the largest encyclopedia in history, which arguably matches the accuracy of more traditional encyclopedias (Giles, 2005), and contributors to open-source software projects have produced operating-system, web-browser, and web-server software rivaling those produced by the largest software companies in the world (Levine & Prietula, 2013; Muffato, 2006). Moreover, some websites

leverage user contributions to maintain a large membership. Many tech startups initially depend on user-generated content, without actually generating revenue, and are later valued at billions of dollars simply due to a large membership (Wirtz, Schilke, & Ullrich, 2010).

Because online communities often depend on the contributions of their users (O'Reilly, 2009; Wirtz et al., 2010), it is essential that administrators of online communities understand the factors that encourage user interest and involvement with a website or online project. As such, it becomes increasingly important for researchers in the field of human-computer interaction to examine the psychological reasons why users might contribute (or fail to contribute) to online communities. Furthermore, encouraging users to contribute content to an online community often begins with the challenge of determining how best to spark their interest in that community. It seems reasonable that users will be more likely to contribute content to a website when they are engaged with that website and when they are offered a means to provide content that they find compelling. As such, the current research is focused not only on identifying users who might actively contribute, but also to testing an intervention designed to motivate these individuals to actually provide content.

In our first study, we sought to examine the influence of personality traits that, based on relevant theory and previous research, would identify users who are more likely to be oriented towards and engaged with their communities. These traits might then serve as useful predictors in determining who might be particularly likely to participate in online

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communities. In our second study, we used the insights from our initial findings to create and test a website feature designed to increase the participation of these community-oriented users.

1.1. Fostering social connection online

There are numerous examples of online communities that have successfully engaged their users and subsequently benefited from user-generated content. Some communities (i.e., social media) are designed specifically for the sharing of opinions (e.g., Twitter, Reddit, Yelp), while other communities are housed on sites that have an established purpose unrelated to social media, but for which user opinions are a secondary, but still important, component (e.g., Amazon, IMDb). Independent of whether or not community-building is the primary purpose of a website, it is often crucial that online environments foster social connections between users. Although websites will first attract users (i.e., potential content suppliers) through various incentives, further social engagement is often necessary to help the online community continue to grow and flourish (Kraut et al., 2012).

Although some communities have successfully engaged and motivated users to consistently provide content, many other online communities often face significant problems related to lack of contribution, and end up failing as a result (Butler, 2001). Indeed, in many online communities, even ostensibly successful ones like Wikipedia, only a small portion of users actually contribute content, and an even smaller set of users are engaged and dedicated enough to contribute significant amounts of content, as opposed to a single instance of participation (Arthur, 2006;Ortega, Gonzalez-Barahona, & Robles, 2008; Panciera, Halfaker, & Terveen, 2009; Voss, 2005). Although there is some variability among websites, it has been suggested that 90% of website users consume content, 9% of users edit content, and 1% of users actually create content (Arthur, 2006). Because user-generated content is of growing importance to the functioning of many websites, the current research is guided by the following questions: A) Who makes contributions to online communities, and B) why do they do so?

1.2. Self-construal theory

Consistent with the interdisciplinary nature of human-computer interaction, the present investigation tackles the problem of online contributions using existing theory on personality, motivation, and identity. Although the breadth of these questions invites many directions for research, we chose to examine them using a heretofore-underexplored psychological perspective that may help to identify who will contribute to online communities, and why; specifically, we will examine the role of the psychological construct of *self-construal* (Singelis, 1994). Self-construal was identified as a trait that might predict contributions to online communities, in that it reflects the extent to which people define themselves in terms of connectedness to groups and collectives. To the extent that individuals prioritize collective goals over individual achievements (Cross, Hardin, & Gercek-Swing, 2011), this should manifest itself as behavior such as making contributions in order to benefit an online community, even if that behaviors requires a sacrifice of individual time and effort.

Although the self-construal construct is heavily rooted in cultural psychology, an area focused on unearthing similarities and differences among people from varying cultures (Markus & Kitayama, 1991), psychologists developed self-construal theory primarily to account for individual variation, rather than assuming homogeneity among all members of a single culture (Singelis, 1994). The theoretical conceptualization of self-construal originally articulated two broad sub-dimensions, *interdependent self-construal* and *independent self-construal* (Singelis, 1994). Although all individuals are thought to define themselves in terms of both dimensions (Brewer, 2008; Cross et al., 2011; Singelis, 1994), people differ to *the extent* to which each dimension is incorporated into the sense of self (i.e., self-construal). Self-construal

theory then articulates motivations that are important to people for whom a particular facet of self-construal is prominent. Individuals who are high in *interdependent self-construal* are more likely to define themselves in terms of social roles and qualities that emphasize how they relate to other people. Specifically, individuals high in interdependent self-construal possess an identity that is especially likely to be dependent on social connection and integration within social networks. In contrast, people who are high in *independent self-construal* are tend to define themselves in terms of distinctive qualities that set them apart from other people.

Importantly, being high in one dimension does not preclude high self-construal on another (Cross et al., 2011; Singelis, 1994). As such, although the current research is grounded broadly in self-construal theory, we focus primarily on *interdependent self-construal* as a construct of interest, which specifically addresses prioritizing group-oriented goals into an individual's motivations and goals. Given the motivation of those high in interdependent self-construal is often to achieve community-based goals, those high in interdependent self-construal may be important individuals to target in fostering online communities through encouraging user-generated content.

Self-construal theory is a prominent psychological theory with clear implications for motivation in numerous domains, but it has yet to be applied in online-participation contexts (Cross et al., 2011). Pockets of research have revealed divergent patterns of online behavior based on interdependent self-construal, providing little consistency among the findings. Specifically, findings indicate that individuals who are higher in interdependent self-construal are more suspicious of purchasing products online (Park & Jun, 2003) and are less likely to purchase products online (Frost, Goode, & Hart, 2010), partly attributed to the absence of human contact during the process. In another line of research, it was shown that when purchasing products online, individuals who are higher in interdependent self-construal are more swayed by reviews written by fellow customers and are less swayed by impersonal organizational testimonials (Sia et al., 2009). Finally, in online settings that are clearly meant to promote social connections (i.e., avatar-based online video games), individuals higher in interdependent self-construal report more immersion and greater satisfaction with the gaming experience (Jin & Park, 2009). Notably, it has consistently been shown that interdependent self-construal is a stronger predictor of online behavior than other aspects of self-construal (e.g., Frost et al., 2010; Park & Jun, 2003), supporting our decision to focus on interdependent self-construal.

Overall, the extant research on self-construal in the online setting 1) is only in its nascent stages, 2) often examines self-construal indirectly using a culturally-based framework, as opposed to the more proper self-construal framework that takes individual variation into account, 3) fails to looks at the provision of user-generated content, and 4) has yet to tackle the question of how web designers can implement features to directly influence their users' behaviors, based on self-construal principles.

1.3. The functional approach to community participation

The present research is also informed by the *functional approach* to behavior, a theoretical perspective that is concerned with the specific reasons or motives (i.e., functions) underlying the initiation and maintenance of behavior across myriad behavioral domains (Katz, 1960; Smith, Bruner, & White, 1956; Snyder & Cantor, 1998). This approach asserts that a specific behavior can have diverse motivational underpinnings, meaning that the same behavior can be performed for entirely different reasons depending on the individual who is performing that behavior.In short, the same behavior can be guided by different motivations (i.e., can perform different functions) for different people. In recent years, this approach has been used, among other purposes, to understand why people choose to serve as volunteers in the communities to which they belong (Clary et al., 1998). Volunteerism is a form of