SOCIAL FACTORS IN USER PERCEPTIONS AND RESPONSES TO ADVERTISING IN ONLINE SOCIAL NETWORKING COMMUNITIES

Fue Zeng, Li Huang, Wenyu Dou

ABSTRACT: With the advent of popular Web destinations such as MySpace and Facebook, online social networking communities now occupy the center stage of e-commerce. Yet these online social networking communities must balance the trade-off between advertising revenue and user experience. Drawing on the sociology and advertising literature, this study investigates the impacts of social identity and group norms on community users' group intentions to accept advertising in online social networking communities. By outlining how this type of group intention could influence community members' perceptions and value judgments of such advertising, this study delineates possible mechanisms by which community members may respond positively to community advertising. The authors test the proposed theoretical framework on a sample of 327 popular online community users in China and obtain general support. Implications for the prospect of advertising in online social networking communities are discussed.

Keywords: Online social networking communities, advertising responses, social factors.

With the advent of popular Web destinations such as MySpace and Facebook, a new kind of online community now occupy the center stage in e-commerce, namely, social networking communities (Bausch and Han 2006). eMarketer (2009) projects that advertising revenue from social network communities in the United States will reach more than 17.9 million, or 15% of total U.S. online advertising revenues, by 2013. The popularity of online networking communities also has been growing in other parts of the world. More than 200 million users per month visit QQ-Zone, the Chinese online social networking community, which is considered the largest social network site in the world (McLeod 2006). Leveraging this huge base of community users, QQ.com earned US$120.9 million in online advertising revenue in 2008 (Tecent 2008).

The rapid growth of online social networking communities has caught the attention of advertisers that hope to find new ways to harness these communities for their advertising purposes (Hart 2007). However, as the communities battle to garner long-term, sustainable advertising revenues, they encounter the severe risk that members will feel exploited if the sites suddenly appear overrun with ads (Mesure and Griggs 2007). The burgeoning industry thus has been under increasing public pressure to strike a balance between the need to generate advertising revenue and members' demand for uninterrupted social experiences (Nutley 2007). The sociological factors in online social networking communities have been examined to understand how social identity and group norms of online community members may influence perceptions of and behavioral responses to advertising.

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This study therefore makes several theoretical contributions. First, an emerging stream of e-commerce literature uses sociological perspectives to examine how social factors may influence community members' participation in communities; we extend this line of inquiry by exploring a different set of outcome measures, namely, how community members perceive and react to advertising in community sites. Second, we bridge the link between sociological factors in online communities and advertising responses by including group intentions (Bagozzi and Dholakia 2002) and establishing that group intentions to accept advertising in online communities emerge from community members' perceptions of that advertising. This application of the group intention perspective is novel in this context and identifies a route by which community members may demonstrate receptiveness to advertising in
online communities. Third, by integrating both sociological perspectives and advertising literature, we develop a conceptual model that illuminates the key factors that underlie community members' responses to advertising in online social networking communities.

CONCEPTUAL FRAMEWORK

Online Social Networking Communities

Online social networking communities are digital networks in which users feel an intrinsic connection to other members (Wellman and Gulia 1999). Following Boyd and Ellison (2007), we define online social networking sites as Web-based services that allow individual users to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

Although the nature and nomenclature of these connections may vary from site to site, communities are fluid and flexible and may be based on a wide range of cultural interests and social affiliations. Group affiliations thus color members' opinions and positions on specific issues, and the interpersonal ties that the community members share increase their willingness to commit to goals identified by the group (Walther 1996; Wellman 1999). Through repeated interactions, common assumptions and shared understanding may emerge among community members (Varey 2002). Meanwhile, social bonds develop as members begin to feel emotional attachments or mutual liking (McCall 1970); in turn, these social bonds tend to foster group cohesiveness.

Social connections among members are the main emphasis of online social networking communities. These connections may be either offline, preexisting (e.g., classmates) or online, newly created (e.g., unknown online friends) connections (Ellison, Steinfield, and Lampe 2007). Raacke and Bonds-Raacke (2008) investigate MySpace and Facebook and find that the vast majority of college students use such friend-networking sites during a significant portion of their day for reasons such as making new friends and locating old acquaintances. Ridings and Gefen (2004) find that social support and friendships represent the two main reasons for participating in online communities. We focus on this type of social networking community for two reasons. First, advertisers hungry for the attractive demographics of the members attracted to most social networking communities are expending huge amounts of money to enter into the fray (Schultz 2007). Second, we hope to build on a burgeoning stream of academic research that investigates social networking communities on the Internet (Algesheimer and Dholakia 2006; Kennett and Matthews 2008).

Social Identity

Social identity serves as a social-cognitive schema (norms, values, and beliefs) for group-related behaviors (e.g., fan clubs) that develops through a process of self-categorization (Hogg and Terry 2000; Tajfel 1981; Terry and Hogg 1996; Turner 1981). Social categorization theories imply that people develop group intentions to act or behave in a specific way toward an issue related to the group (e.g., fighting for the reputation of their idol) and thus maintain a positive, self-defining relationship with the group.

Group Intention

Sociology literature pays considerable attention to the construct of group intention, or community members' commitment to participate in joint community actions, whether according to an implicit or an explicit agreement (Tuomela 1995). Group intention results from an internalization process in which a person adopts the values, beliefs, or attitudes of others on the basis of his or her congruence criteria (Eagly and Chaiken 1993).

In e-commerce research, Bagozzi and Dholakia (2002) argue that online community users collectively develop a unified, group-level attitude (e.g., intend to participate in online community activities) through their interactions and communications in the mediated environment, together, as a group. Scholars also posit that the nature and type of group intentions (e.g., need to participate in online communities) may depend on a community's social characteristics (Bagozzi 2000). We focus on community members' group intentions with regard to accepting advertising in communities and evaluating such advertising.

Community sites confront mounting financial pressures for sustainability and often must pass such pressures on to their users, urging them to be more open to advertising (Armstrong and Hagel 1995). In line with Bagozzi's (2000), Bagozzi and Dholakia's (2002), and Dholakia, Bagozzi, and Pearo's (2004) work on the impact of social identity on group intentions, we posit that online community members with a strong community identity should find it easier to internalize the notion that community advertising is vital for sustaining the community site. The individual member (e.g., Star Wars fan) easily discerns the match between his or her beliefs and those
of other group members, such as the need for the online community site (e.g., Star Wars fan site) to accept some form of advertising. This line of reasoning leads us to hypothesize that when social identities of community site members are stronger, their group intentions with regard to community advertising are more affirmative.

**H1.** Social identity relates positively to group intentions to accept advertising in online social networking communities.

**Group Norms**

Group norms represent the set of shared goals, values, beliefs, and conventions understood and committed to by group members (Postmes, Spears, and Lea 2000). Studies show that group norms in online communities have powerful and consistent influences on group members’ attitudes and behaviors (Hogg and Terry 2000; Terry and Hogg 1996).

We examine a specific type of groups norms, which Shaw (1981) characterizes as group benefit norms, that pertain to issues of great significance to the group, such as the community’s survival. Such norms implicitly generate consensus among members about good community behaviors; for example, the norm might demand that members should support the development of the community (Weldon and Weingart 1993). Scholars argue that when a strong group benefit norm is in place, members realize that they all share a common goal and are more likely to develop group intentions (e.g., Dholakia, Bagozzi, and Pearo 2004). Applying this logic to our research context, when online community members possess a strong group benefit norm, they should be more likely to possess a more concrete group intention about the need to accept advertising in communities, because advertising revenue becomes vital for the community’s survival. Thus, we hypothesize:

**H2:** Group benefit norms relate positively to group intentions to accept advertising in online social networking communities.

**Perceived Ad Relevance**

The topic of contextual relevance has long been a focal issue of Internet advertising research (e.g., Hunt 1998) due to its great potential for delivering highly targeted ads that match the decision context of online users. Research shows that contextually relevant ads attract more attention and consequently influence Internet advertising effectiveness (Li and Bukovac 1999). Building on this line of inquiry, we investigate how social network community users’ perceptions of advertising relevancy may influence their willingness to accept advertising in online social networking communities.

Advertising sponsorship literature also uses perceived relevance as a key construct that delineates the extent to which consumers perceive advertising as relevant for a particular media context (Rodgers 2004), such as a GNC advertisement in Yahoo!’s health section. Conceivably, this effect may depend on the associative learning principle, which suggests that stronger advertising alignment establishes explanatory links that help consumers determine the advertiser-consumer connection. Similarly, community users may view advertising on community sites as acceptable if it seems relevant to their main community themes (part of their identity expression) and does not annoy them by including commercial messages in which they would not be interested (McCormick 2006).

When members of a community possess a strong group identity, they tend to have greater expectations about the content related to their community sites as a symbol of their community identity; that is, embedded advertising should be relevant to community themes. As a result, users with stronger identity should be more likely to trust the good intentions of the community site; whatever the community site does should be for the benefit of its members. Presumably, this mechanism operates on the reciprocity principle within a social exchange framework (Gouldner 1960). A community member with a strong group identity therefore should contribute more to the community and anticipate reciprocity, such that he or she expects the site to do good for the whole community as well—for example, accepting only advertising that seems congruent with the theme of the community. This theorization leads to the following prediction:

**H3:** Social identity relates positively to perceived ad relevance in online social networking communities.

In a similar vein, when community members possess strong group benefit norms, they tend to do good for the community. According to the reciprocity principle, they expect the community site to do the same, which implies that communities should accept only advertisements that are congruent with community themes. The stronger group benefit norm for community users, the more likely they are to consider advertising in the community pertinent. Put formally:

**H4:** Group benefit norms relate positively to perceived ad relevance in online social networking communities.
Finally, when online social networking community members maintain more resilient and positive group intentions about the need to accept advertising in their communities, they likely internalize the notion that advertising benefits the community’s sustainability. As a result, these members should form favorable evaluations of advertising in communities, which in turn suggests the following prediction:

**H5:** Group intentions to accept advertising in online social networking communities relates positively to perceived ad relevance in community sites.

**Perceived Ad Value**

Advertising value provides an overall representation of the worth of advertising to consumers (Ducoffe 1995). Existing literature suggests that consumers view advertising’s ability to supply information as a primary reason for approving of it (Bauer and Greyser 1968). Research in online advertising also shows that advertising can offer value to Internet users in the form of more relevant information (Ducoffe 1996). When online community members possess a distinct group intention about the need for advertising, they should be able to internalize the notion that advertising benefits the community. As a result, these members should be more inclined to develop favorable evaluations of the advertising. We also hypothesize that they perceive a higher degree of value of advertising in the community:

**H6:** Group intentions to accept advertising in online social networking communities relates positively to perceived ad value in community sites.

Finally, cognitive studies of associative links suggest people tend to regard relevant information as more accessible in their attitude formation (Rodgers 2004). The more community members perceive advertising as relevant to the community themes, and thus more relevant to community members, the more likely they are to find such information useful, which should result in a higher level of perceived ad value. In turn,

**H7:** Perceived ad relevance relates positively to perceived ad value.

**Behavioral Intentions to Accept Advertising in Online Communities**

A prominent feature of Internet advertising is its interactivity and ability to record Internet users’ behavioral responses (e.g., intentions), which span a wide range of actions from noticing and paying attention to clicking and product purchasing (Rodgers and Thorson 2000).

Advertising scholars tend to agree on the importance of advertising message relevancy for advertising effectiveness (e.g., Lee and Mason 1999; Muehling and McCann 1993). The more relevant the advertising message to the media context, the more likely the message can affect consumers’ attitudes positively and influence their behavioral responses to the advertising. This discussion leads to the following hypothesis:

**H8:** Perceived ad relevance relates positively to behavioral intentions to accept advertising in online social networking communities.

The consensus in advertising literature also implies that when consumers perceive that advertising contains useful information, they become more likely to respond to it (e.g., Ducoffe 1996; Muehling and McCann 1993). Following this line of logic, we posit that when community members perceive advertising in the community as more useful, they are more likely to exhibit positive behavioral responses.

**H9:** Perceived ad value relates positively to behavioral intentions to advertising in online social networking communities.

**METHOD**

**Subjects and Procedure**

The study’s setting is China, which contains the largest Internet population (298 million users) in the world (CNNIC 2008). In addition, the nation’s young Internet users have rapidly embraced online community Web sites (Xu 2007), and spending in online advertising has been quickly rising since 1998 (Sachoff 2007).

The 327 study participants, recruited by a snowball procedure by four research assistants, vary in age from 22 to 31 years (mean age = 26.7 years). Each participant must have been enrolled as a member in his or her most visited community site for at least three months and spend at least four hours a week there. On average, participants (48.8% female, 90% between 20 and 29 years of age) had been members of their communities for 1.56 years and spent 6.2 hours a week in them.

At the beginning of the study, participants first listed the online social networking community that they visited most frequently. The most frequently mentioned (more than 90%) were QQ-Zone, Tianya Club, and Mop Space, all popular social networking community Web sites for young people in China. Participants imagined that they had logged on "to the community site that you frequently visit and engage in your
regular community activities.” Recent reports (Ramesh 2007) indicate that users of these three sites are highly active participants in the communities; they often browse other members’ profiles, post comments, and respond to others’ comments. In this regard, these community users are very well connected to other users-probably in contrast with a more “fragmented” social networking site such as Facebook, in which users’ attachments are largely to smaller groups. The survey was administered online in Chinese and followed standard back-translation procedures (Brislin 1976).

MEASURES
We develop the survey instrument by adopting existing validated scales when possible. On the basis of focus group interviews and a separate pretest, we also refine the questionnaire and modify some items. We present the constructs and item details in Table 1.

Table 1. Confirmatory Factor Analysis of the Measures

<table>
<thead>
<tr>
<th>Construct and Source</th>
<th>Operational Measures of Construct</th>
<th>SFL</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 Fit Indexes</td>
<td>$\chi^2 = 181.67$, df = 94, $\chi^2/df = 1.93$; GFI = .94, CFI = .97, RMSEA = .05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative social identity</td>
<td>AVE=.68, CR=.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I am an important member of the community.</td>
<td>.87</td>
<td>18.48</td>
<td></td>
</tr>
<tr>
<td>2. I am a valuable member of the community.</td>
<td>.89</td>
<td>19.18</td>
<td></td>
</tr>
<tr>
<td>3. I can impress other members of the community.</td>
<td>.71</td>
<td>14.16</td>
<td></td>
</tr>
<tr>
<td>Cognitive social identity</td>
<td>AVE=.61, CR=.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. My identity in the community is similar to that of other members in this community.</td>
<td>.70</td>
<td>13.51</td>
<td></td>
</tr>
<tr>
<td>2. My identity is congruent with the community theme.</td>
<td>.84</td>
<td>17.37</td>
<td></td>
</tr>
<tr>
<td>3. My self image is congruent with the community’s image.</td>
<td>.79</td>
<td>15.76</td>
<td></td>
</tr>
<tr>
<td>Affective social identity</td>
<td>AVE=.63, CR=.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I have sense of strong belonging to this community.</td>
<td>.71</td>
<td>13.99</td>
<td></td>
</tr>
<tr>
<td>2. I believe that I am one of the community members</td>
<td>.83</td>
<td>17.18</td>
<td></td>
</tr>
<tr>
<td>3. I am strongly attached to the community.</td>
<td>.84</td>
<td>17.61</td>
<td></td>
</tr>
<tr>
<td>Group norms</td>
<td>AVE=.77, CR=.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. We support actions that can benefit the community.</td>
<td>.88</td>
<td>19.86</td>
<td></td>
</tr>
<tr>
<td>2. We try our best to do things that can benefit the community.</td>
<td>.87</td>
<td>19.68</td>
<td></td>
</tr>
<tr>
<td>3. We are opposed to things that may harm the community.</td>
<td>.88</td>
<td>19.83</td>
<td></td>
</tr>
<tr>
<td>4. We avoid doing things that may harm the community.</td>
<td>.89</td>
<td>20.22</td>
<td></td>
</tr>
<tr>
<td>Group intention</td>
<td>AVE=.69, CR=.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Members of this community consider community advertising to be normal.</td>
<td>.85</td>
<td>17.98</td>
<td></td>
</tr>
<tr>
<td>2. Members of this community consider community advertising a part of the community offering.</td>
<td>.91</td>
<td>19.97</td>
<td></td>
</tr>
<tr>
<td>3. Members of this community consider community advertising a source of information.</td>
<td>.73</td>
<td>14.70</td>
<td></td>
</tr>
</tbody>
</table>
Model 2 Fit Indexes $\chi^2 = 43.48$, df = 24, $\chi^2$/df = 1.81; GFI = .97, CFI = .99, RMSEA = .05

<table>
<thead>
<tr>
<th>Perceived ad relevance</th>
<th>1. Advertising in this community is relevant to me.</th>
<th>.78</th>
<th>15.97</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Advertising in this community is important to me.</td>
<td>.90</td>
<td>19.65</td>
</tr>
<tr>
<td></td>
<td>3. Advertising in this community means a lot to me.</td>
<td>.84</td>
<td>17.96</td>
</tr>
<tr>
<td>AVE=.70. CR=.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived ad value</td>
<td>1. Advertising in this community is useful to me.</td>
<td>.89</td>
<td>19.84</td>
</tr>
<tr>
<td>AVE=.74. CR=.89</td>
<td>2. Advertising in this community is valuable to me.</td>
<td>.90</td>
<td>20.32</td>
</tr>
<tr>
<td></td>
<td>3. Advertising in this community is an important source of information for me.</td>
<td>.79</td>
<td>16.52</td>
</tr>
<tr>
<td>Behavioral responses to community ads AVE=.74 CR=.89</td>
<td>1. I will click advertisements shown in this community.</td>
<td>.86</td>
<td>18.74</td>
</tr>
<tr>
<td></td>
<td>2. I will pay attention to advertisements shown in this community.</td>
<td>.84</td>
<td>18.14</td>
</tr>
<tr>
<td></td>
<td>3. I will search for related information about advertisements shown in this community.</td>
<td>.87</td>
<td>18.97</td>
</tr>
</tbody>
</table>

Notes: SFL = standardized factor loading; AVE = average variance extracted; CR = composite reliability; df = degrees of freedom; GFI = goodness-of-fit index; CFI = confirmatory fit index; RMSEA = root mean square error of approximation. The scale format for each of these measures is 1 = "strongly disagree" and 7 = "strongly agree."

Our conceptualization of "social identity" is based on Bagozzi and Dholakia’s work (Bagozzi and Dholakia 2002; Dholakia, Bagozzi, and Pearo 2004) and consists of three dimensions: evaluative social identity, cognitive social identity, and affective social identity, each of which contains three items. We adapt the group intention construct from the same sources (Bagozzi and Dholakia 2002; Dholakia, Bagozzi, and Pearo 2004); it consists of three items with which we examine the extent to which group members are willing to act jointly to achieve a common objective.

The group benefit norm, also from Bagozzi and Dholakia (2002) and Dholakia, Bagozzi, and Pearo (2004), taps the extent to which respondents are willing to support things that benefit the community. We measure perceived ad value with three items from Ducoffe (1996) and base our perceived ad relevance measure on the scale of Drolet, Williams, and Lau-Gesk (2007), which reveals the extent to which respondents consider community advertising pertinent. Finally, we develop three items to measure behavioral intentions toward community advertising on the basis of Rodgers and Thorson’s (2000) conceptualization and thus examine a wide range of reactions to advertising, including clicking and paying attention to community advertising. All items use seven-point Likert scales (1 = strongly disagree, 7 = strongly agree).

Reliability and Validity

We test the validity and reliability of the study’s measurement models with confirmatory factor analysis (CFA) using AMOS 7.0. We group theoretically related constructs to ensure acceptable estimate-to-observation ratios (Bentler and Chou 1987). The first CFA model (Model 1) includes evaluative social identity, affective social identity, cognitive social identity, group norms, and group intentions. The second CFA model (Model 2) includes perceived ad value, perceived ad relevancy, and responses to community ads. The results indicate that both CFA models offer acceptable fit (Model 1: $\chi^2 = 181.67$, degrees of freedom [df] = 94, $\chi^2$/df = 1.93; goodness-of-fit index [GFI] = .94, confirmatory fit index [CFI] = .97, root mean squared error of approximation [RMSEA] = .05; Model 2: $\chi^2 = 43.8$, df = 24, $\chi^2$/df = 1.81; GFI = .97, CFI = .99, RMSEA = .05).
To estimate the internal consistency of the constructs, we use composite reliability (CR) and average variance extracted (AVE). The CRs for all constructs are greater than the .7 threshold (Hair et al. 1998), and the AVEs are all above the recommended .5 level (Hair et al. 1998), which means more than half of the variance observed is accounted for by the hypothesized constructs. In addition, because the CR and AVE for all constructs in the model (see Table 1) are significantly higher than the stipulated criteria, we have evidence of good internal consistency.

For assessing convergent validity, we rely on factor loadings from the CFA. All items load significantly on their expected constructs, and we detect no significant cross-loadings, in support of the convergent validity of the measurement items and the unidimensionality of the latent constructs. The overall fit of the model also supports unidimensionality (Steenkamp and Van Trijp 1991).

We evaluate the discriminant validity of the model constructs using two different approaches. First, for each pair of factors, we compare the χ² value for a measurement model that constrains their correlation to 1 with a baseline measurement model without this constraint. The χ² difference tests performed for each pair of factors consistently reveal significant differences (Tables 2 and 3), which suggest all measures achieve discriminant validity.

### Table 2. Chi-Square Difference Test for Model 1

<table>
<thead>
<tr>
<th>Δχ²</th>
<th>I.</th>
<th>II.</th>
<th>III.</th>
<th>IV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Evaluative social identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Affective social identity</td>
<td>251.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III. Cognitive social identity</td>
<td>224.67</td>
<td>133.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV. Group norm</td>
<td>436.62</td>
<td>269.08</td>
<td>265.53</td>
<td></td>
</tr>
<tr>
<td>V. Group intention</td>
<td>437.21</td>
<td>305.98</td>
<td>295.47</td>
<td>321.34</td>
</tr>
</tbody>
</table>

Notes: All p < .001.

### Table 3. Chi-Square Difference Test for Model 2

<table>
<thead>
<tr>
<th>Δχ²</th>
<th>I.</th>
<th>II.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Perceived ad value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Perceived ad relevancy</td>
<td>255.32</td>
<td></td>
</tr>
<tr>
<td>III. Response</td>
<td>361.80</td>
<td>392.05</td>
</tr>
</tbody>
</table>

Notes: All p < .001.

Second, we use the most stringent test offered by Fornell and Larcker (1981). For all possible pairs of constructs, we compare the correlation value between the two latent constructs with the square root of the AVE for each construct and find that in no case does the correlation value exceed the square root of the AVE (see Tables 4 and 5), in strong support of the discriminant validity of all constructs in our study. In summary, the internal consistency, convergent validity, and discriminant validity results indicate we may proceed to estimate the structural model.
Table 4. Construct Correlation Values and Comparison with AVE in Model 1

<table>
<thead>
<tr>
<th></th>
<th>I.</th>
<th>II.</th>
<th>III.</th>
<th>IV.</th>
<th>V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Evaluative social identity</td>
<td>(.82)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Affective social identity</td>
<td>.55</td>
<td>(.79)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III. Cognitive social identity</td>
<td>.55</td>
<td>.68</td>
<td>(.78)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV. Group norm</td>
<td>.31</td>
<td>.52</td>
<td>.48</td>
<td>.88</td>
<td></td>
</tr>
<tr>
<td>V. Group intention</td>
<td>.29</td>
<td>.44</td>
<td>.36</td>
<td>.60</td>
<td>(.83)</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses are the square root of each AVE value.

Table 5. Construct Correlation Values and Comparison with AVE in Model 2

<table>
<thead>
<tr>
<th></th>
<th>I.</th>
<th>II.</th>
<th>III.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Perceived ad value</td>
<td>(.86)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Perceived ad relevancy</td>
<td>.67</td>
<td>(.84)</td>
<td></td>
</tr>
<tr>
<td>III. Response</td>
<td>.60</td>
<td>.46</td>
<td>(.86)</td>
</tr>
</tbody>
</table>

Notes: Numbers in parentheses are the square root of each AVE value.

STRUCTURAL MODEL

Because the measurement model exhibits satisfactory properties, we may conduct a structural model analysis to test our hypotheses using maximum likelihood estimation. The structural model (Figure 1) contains six model constructs, represented as single indicators with summated scales (Price, Arnould, and Tierney 1995). We establish the measurement scale for each construct by fixing the error term to 1 minus its reliability (Hibbard, Kumar, and Stern 2001). The fit indices suggest a suitable fit ($\chi^2 = 11.39$, $df = 5$, $\chi^2/df = 2.28$, $GFI = .99$, $CFI = .99$, $RMSEA = .06$).
Social identity had a positive effect on group intention ($\gamma = .22, p < .01$), in clear support of H1. Group norms have a positive effect on group intention ($\gamma = .45, p < .001$), in support of H2, and social identity leads to positive perceived ad relevancy ($\gamma = .39, p < .001$), in support of H3. However, the path from group norms to perceived ad relevancy, though significant, is negative ($\gamma = -.038, p < .001$). Thus, H4 does not receive support.

In H5, we propose that group intention should be positively associated with perceived ad relevancy, and the results support this claim ($\beta = .45, p < .001$). The path from group intention to perceived ad value is positive and significant ($\beta = .40, p < .001$), in support of H6. In H7, we relate perceived ad relevancy and perceived ad value, and the results show support for this hypothesis ($\beta = .47, p < .001$). Because the path from perceived ad relevancy to response to community advertising is positive and significant, we also find support for H8 ($\beta = .28, p < .001$). Finally, perceived ad value relates positively and significantly to response to community advertising ($\beta = .49, p < .001$), so H9 also receives support.

**DISCUSSION**

The role and impact of advertising in online social networking communities have the utmost importance for the long-term sustainability of these communities (Hart 2007). Therefore, we investigate how two key social characteristics of online communities (i.e., social identity and group norms) may influence members' responses to advertising. Using a survey of Chinese social community users, we find that these two factors affect community members' group intentions to accept advertising in online communities, which could lead to more positive behavioral responses to advertising. We discuss some key study insights and their implications next.

**Importance of Social Identity and Group Norms**

From a theoretical perspective, our findings can add insights to social networking community literature. Despite the hype about advertising in online social networking communities, few studies endeavor to understand the unique characteristics of advertising in this group setting, in which advertising responses are not strictly personal actions but rather can be shaped by overall community characteristics. In this connection, we focus on two group-level factors, social identity and group norms.

The stronger the social identity possessed by online community members, the more likely they are to develop group intentions to accept advertising in online communities. We also confirm that a stronger group (benefit) norm has a positive effect on such group intentions. These two findings provide clear evidence that in social networking community Web sites, the identity of community members and their
norms help shape the formation of group intentions to accept advertising.

From a managerial perspective, operators of social networking community sites should appreciate the roles played by group norms and social identity in shaping users’ acceptances of online advertising in these Web sites. Specifically, operators can identify ways in which they can exert (some) influence on users’ group benefit norms and social identity. The implication for online communities that seek to garner advertising revenue is that they must first build a strong sense of group identity and a robust group benefit norm through various means. For instance, online communities could employ educational campaigns to instill a sense of belonging among users (i.e., to enhance social identity perceptions). They also could propagate the benefits of accepting advertising for the long-term survival of community Web sites to enhance the group benefit norm. These actions, when implemented properly, can improve the likelihood that community users become more receptive to accepting advertising on such Web sites.

In the meantime, advertisers that hope to harness the power of community advertising should shift their focus from the individual to the group level. Furthermore, when deciding where to place their advertising, advertisers should select those sites with strong group identity and group benefit norms, because these communities offer the greatest potential of being receptive to advertising.

Perceived Relevance and Value of Advertising in Online Communities

The results of this study also contribute to online advertising literature, especially in the fast growing yet poorly understood field of advertising in online social communities. If online networking communities want to achieve positive member responses to advertising, they should consider two key perceptual factors that have pivotal effects on behavioral responses: perceived relevance and value of community advertising. Specifically, when users perceive community advertising as more relevant to the theme of community and thus more congruent to the extension of their social identities, they regard that advertising as more valuable and exhibit more positive behavioral responses to it.

Our results also indicate that to understand these two pivotal perceptual factors clearly, community sites could rely on both direct and indirect mechanisms. Because strong group identity enables members to spot the relevancy of community advertising, community sites could attempt to facilitate and develop strong group identities through incentive designs, community recognition systems, and so forth. Strong group identity and group (benefit) norms also may lead to more concrete group intentions to accept community advertising, which could result in higher relevancy and value perceptions about community advertising.

LIMITATIONS AND FURTHER RESEARCH

A particularly unexpected finding from this study warrants more attention. Specifically, we find that a strong group norm leads to lower relevancy perceptions about community advertising among community users. This finding may suggest, unfortunately, that most of the advertisements that appear in online social communities are not relevant for most users. It is also likely that certain kinds of social communities have stronger negative predispositions against accepting advertising than others. For instance, a social network of Chinese students studying in New Zealand, given its focus on fostering social relationships, may exhibit a higher level of opposition to advertising than a product-oriented user community, such as a community of iPhone users. Many community Web sites probably cannot afford to be picky about accepting relevant ads either. Furthermore, our study focuses exclusively on social communities for which the main objective is to forge relationships among users. Hence, our findings with regard to "social" communities may not be applicable to other types of online communities; we encourage future research to extend the scope of our investigations.

Further research also should investigate pertinent moderators in this regard, such as community members’ status (core or peripheral) or trust of the community’s capability to deliver relevant ads. Other fruitful research directions might identify group factors (e.g., group power structure) that might facilitate advertisers’ ability to form close bonds with members of social networking environments. Finally, investigations of group opinion leadership in online social networking communities could offer additional insights into how advertising works in them.

Another limitation is the study’s single country context. Nevertheless, we believe China, the country with the largest internet population and the biggest online market is a good representative context for future trends in social networking communities, as well as online advertising development.

CONCLUSION

Online community members’ responses to community advertising depend on their perceptions of the relevance and
value of community advertising, and these perceptions are either directly or indirectly influenced by group identity and group norms. Therefore, community sites in pursuit of advertising revenue should strive to create strong identity and group benefit norms among members. Ultimately, only when community users are comfortable with the presence of advertising in community sites will they be responsive to community advertising.

REFERENCES


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