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Research In Brief

An empirical study of a social network site: Exploring the effects of social capital and information disclosure

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ARTICLE INFO

ABSTRACT

With theoretical bases in information self-disclosure and social capital, this study investigates what factors predict increased comments and favorites in a photography-related social network site. A content analysis of 558 photos on Flickr's Explore page, as well as the analogous photographer profile pages, resulted in a rich data set on photographic characteristics, as well as indicators of information self-disclosure and social capital. Regression analysis indicated that, when controlling for photographic characteristics and other independent variables, photo comments and photo favorites were positively correlated with one another, three social capital indicators were positively associated with the two dependent variables (i.e., photo comments and favorites), and indicators of information self-disclosure were positive predictors in two cases. These findings are considered in regards to theory on social capital and information self-disclosure and, more broadly, on how social network sites function.

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Social networking sites (SNSs) have emerged to transform how individuals socially interact (Pfeil et al., 2009), with 74% of adult Internet users having used SNSs (Pew, 2014). SNSs provide the opportunity for users to build and maintain social connections online via interactions with online friends (Ellison et al., 2006). Research on SNSs has commonly centered theoretically on social capital and information self-disclosure.

Defined at the individual level, social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (p. 248) (Bourdieu, 1986). Social networks have pertinence in social capital theory. The interactive features of SNSs increase the frequency of interpersonal interaction (Valenzuela et al., 2009), maintain existent social relationships (Ellison et al., 2007), and expand social networks (Ha et al., 2015). Related social capital processes are pertinent in the current study's context of Flickr. Registration of an account allows users to post photos online, as well as create their own profile page and add other Flickr users to contact lists. Social capital can be operationally defined in two regards on Flickr: (1) users' connections to particular Flickr groups (i.e., user-group connections); and (2) users' connections with individual Flickr users (i.e., user-user connections).

Providing another theoretical framework for SNSs is information self-disclosure, which refers to the process of making messages about oneself known to others and in music, books, and movies; and uploading of one's photos, thoughts and comments (Gross and Acquisti, 2005). By diminishing uncertainty and increasing perceived similarities, users can build close relationships (Antheunis et al., 2010). Previous studies found that online self-disclosure positively predicts maintenance and expansion of social networks (Krasnova et al., 2010), allowance for positive self-presentation (Boyd, 2007; Ellison

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et al., 2006), fulfillment of pleasure motives (Hui et al., 2006), and emotional catharsis and self-clarification (Greene et al., 2006).

In this study, we test the following three hypotheses specific to SNSs:

H1. Viewer comments will be positively associated with viewer favorites.

H2. Social capital will be positively associated with the reception of viewer comments and favorites.

H3. Information self-disclose will be positively associated with the reception of viewer comments and favorites.

1. Methods

The hypotheses were tested with data from a content analysis of Flickr Explore page photos and analogous user profile pages. A constructed week sample of Flickr Explore page photos was randomly derived, including one Monday, one Tuesday, one Wednesday, and so forth in October 2011. The dataset was a census of the top 80 photos on the Flickr's Explore list for each of these seven days. By dropping two video clips, the final dataset consisted of 558 unique photographs and analogous profile pages. Trained coders assessed each photograph page and profile page. Intercoder reliability was calculated with Cohen's Kappa at three different times during the coding process (Cohen, 1960), indicating acceptable reliability (1st phase: Overall κ = .95, Range = .74–1.00; 2nd phase: Overall κ = .99, Range = .91–1.00; 3rd phase: Overall κ = .99, Range = .92–1.00).

The two dependent variables were on viewer favoring of photos and viewer commenting on photos. These items were also positioned as independent variables in the predicting one another. The other primary independent variables were specific to social capital and information self-disclosure. Social capital was assessed with the following three coding categories specific to a photographer: (1) photographer favorited photos; (2) photographer contacts; and (3) photographer group membership. Information self-disclosure was assessed with the following eight coding categories specific to a photographer: (1) name given; (2) gender given; (3) singleness given; (4) personal website given; (5) occupation given; (6) hometown given; (7) current location given; and (8) email given. Control variables included whether a photo was in color, number of people depicted in a photo, number of years a photographer had been a member of Flickr, number of groups the photo was present in, number of tags on a photo, and total number of photos a photographer had on Flickr. Photo groups was collapsed, resulting in a measure from 0 to 10 (5), 11 to 20 (15.5), 31 to 30 (25.5), 31 to 40 (35.5), and 41 to 50 (45.5).

Outliers were indicated by the Grubbs test for the following variables: tags, photographer photos, comments, faves, comments, contact, photographer groups, photographer favorites, and people in photos. The values of outliers, in each case, were replaced with the highest value of a non-outlier. Statistical analysis included the specification of two Ordinary Least Squares (OLS) regression models—one predicting viewer commenting on photos and one predicting viewer favoring of photos. Variables were entered in two blocks: (1) control variables; and (2) primary independent variables.

2. Results

Descriptive statistics for the coding categories are displayed in Table 1. The effects of the control variables and main predictors are depicted in Table 2. Hypothesis 1 received strong support. Viewer favoring significantly predicts viewer commenting in Model 2 (β = .61), and viewer commenting significantly predicts viewer favoring in Model 4 (β = .69). Providing support for Hypothesis 2, regression analysis provided support for this hypothesis in three cases. In particular, photographer favorited photos positively predicted viewer commenting on photos (β = .18) (see Model 2 in Table 2), number of photographer's contacts positively predicted viewer favoring of photos (β = .08) (See Model 4 in Table 2), and number of groups photographer joined positively predicted viewer commenting on photos (β = .08) (See Model 2 in Table 2).

Hypothesis 3 was supported in two cases. As depicted in Models 2 and 4 in Table 2, photographer's name given positively predicted viewer commenting on photos (β = .06) and photographer's personal website given positively predicted viewer favoring on photos (β = .09). However, two significant effects were converse to our expectation: photographer's personal website given negatively predicted viewer commenting on photos (β = −.12) and photographer's gender given negatively predicted viewer favoring on photos (β = −.09).

3. Discussion

The significant associations between viewer commenting and viewer favoring not only indicate the linkage between these two outcomes, but also present a stringent context for testing the significance of the social capital and information disclosure variables. In terms of social capital, we found that three dimensions of user-user interaction—photographer favorited photos, number of photographer's contacts and photographer's Flickr group membership—led to a higher frequency of viewer commenting and favoring on photos. Thus, the more photographers favorite other users' photos, the more likely they are to receive favorites and comments in return. Moreover, the more contacts a photographer has, the more likely he/she is to receive favorites and comments. Moreover, user connection with particular Flickr groups (i.e., user-group connections) was another significant predictor. These results imply that user interactions in relation to the Flickr Explore page