WORD OF MOUTH COMMUNICATION WITHIN ONLINE COMMUNITIES: CONCEPTUALIZING THE ONLINE SOCIAL NETWORK

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Word of mouth (WOM) communication is a major part of online consumer interactions, particularly within the environment of online communities. Nevertheless, existing (offline) theory may be inappropriate to describe online WOM and its influence on evaluation and purchase. The authors report the results of a two-stage study aimed at investigating online WOM: a set of in-depth qualitative interviews followed by a social network analysis of a single online community. Combined, the results provide strong evidence that individuals behave as if Web sites themselves are primary "actors" in online social networks and that online communities can act as a social proxy for individual identification. The authors offer a conceptualization of online social networks which takes the Web site into account as an actor, an initial exploration of the concept of a consumer–Web site relationship, and a conceptual model of the online interaction and information evaluation process.

INTRODUCTION

The word of mouth (WOM) industry is experiencing massive growth—since 2004 the Word of Mouth Marketing Association (WOMMA) has grown from 3 to 350 corporate members (WOMMA, 2007). This growth is particularly evident in online and social networking media. Research estimates that while 90% of WOM conversations take place offline (Keller & Berry, 2006), just 15% of consumers account for one third of WOM conversations in America, and those "Conversation Catalysts" rely heavily on the Internet as a resource for the information they pass along to their family and friends (Keller Fay, 2006).

Existing interpersonal communication theories may be inappropriate to describe *online* WOM behavior, since they have tended to focus on face-to-face interaction in which the communicators are in close proximity and can draw upon a wealth of social context cues (Knapp & Daly, 2002). However, research focusing on the social-emotional nature of computer-mediated communication (e.g., Lea & Spears, 1995; Parks & Floyd, 1996; Walther, 1992, 1996; Walther, Anderson, & Park, 1994), based on principles in social cognition and interpersonal relationship development from social psychology, suggest that given enough time, individuals can create fully formed impressions of others based solely on the linguistic content of written electronic messages. It is imperative that marketers understand how these impressions affect the assessment and use of WOM information about products, brands, and firms, and consequential consumer behavior both online and offline.

Both scholars and practitioners of marketing are particularly interested in WOM communication behavior in the context of online communities because of the extraordinary popularity, growth, and influence of such communities. For instance, according to ComScore Media Metrix, MySpace boasts more than 100 million member profiles, the site registers 13 million hits per day, and more than 3 million artists and bands use it to promote albums and engage fans. Google Inc. recently agreed to provide at least $900 million in advertising revenue over $3\frac{1}{2}$ years to News Corp. for the right to broker advertising that appears on MySpace and other sites (Vara, 2006).

Online communities form when enough people carry on computer-mediated nonprivate discussions long enough, with sufficient human feeling, to develop what are considered "social relationships" with other online participants (Rheingold, 1993). These communities are fluid and flexible, and may be based on a wide range of cultural interests and social affiliations. Consumption-related online communities are those networks of people whose online interactions are based upon shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities (Kozinets, 1999). Examples include members of an online forum that share knowledge and experiences of a musical instrument, or readers of and contributors to an online bulletin board devoted to a particular novelist.

Consumption-related online communities essentially represent WOM networks, where individuals with an interest in a product category interact for information such as purchase advice, to affiliate with other like-minded individuals, or to participate in complaint or compliment interactions (Cothrel, 2000; Kozinets, 1999; Hoffman & Novak, 1996). While it can be argued that the WOM communication going on within these online communities has limited social presence in the traditional sense, these communities provide information and social support in both specialized and broadly based relationships, and are becoming an important supplement to social and consumption behavior (Wellman, Salaff, Dimitrova, & Garton, 1996). One study, for example, cited 84% of Internet users having contacted at least one online community (CyberAtlas, 2001). The popularity of these emerging consumption-focused online communities, and the WOM communication going on within them, highlights a need for increasing scholarly attention to be paid to online WOM communication.

To gain new insights in this important area, this exploratory study uses a social network perspective to examine, in an online context, three key influences on the evaluation of marketing information that may explain how WOM influences consumers' decision making and attitude formation: tie strength, homophily, and source credibility. Thus the study makes a theoretical contribution in three primary ways. First, a wide-ranging theoretical review reveals how the process of WOM communication between individuals is likely to differ in an online context. Second, the results of the field research (consisting of in-depth qualitative interviews followed by a social network analysis of an online

community) provide strong evidence that individuals relate to Web sites as if they are primary actors in the social network and that online communities can, therefore, act as a social proxy for individual identification. This extends previous models of online social interaction and shows how online WOM has its own unique benefits and drawbacks. Third, a conceptualization of online social networks is presented, as well as a theoretical framework of the online interaction and information evaluation process, which serves as an agenda for future research into the area.

CONCEPTUAL FOUNDATIONS

Word of Mouth Communication

WOM is a consumer-dominated channel of marketing communication where the sender is independent of the market. It is therefore perceived to be more reliable, credible, and trustworthy by consumers compared to firm-initiated communications (Schiffman & Kanuk, 1995; Arndt, 1967). Traditional communications theory considers WOM as having a powerful influence on behavior, especially on consumers' information search, evaluation, and subsequent decision making (Cox, 1963; Brown & Reingen, 1987; Money, Gilly, & Graham, 1998; G. Silverman, 2001). It provides information concerning product performance and the social and psychological consequences of the purchase decision (Cox, 1963). Offline, WOM can convert lower order cognition and affect into higher order cognition and effect, subsequently leading to committed behaviors (Bristor, 1990). It is the credibility of WOM that, when combined with the premise that a receiver will be more involved in a WOM exchange than in an advertisement, lends itself to the formation of such higher order beliefs and cognitions. Through multiple exchanges, one WOM message can reach and potentially influence many receivers (Lau & Ng, 2001). The outcome of the interpersonal exchanges are provision of, and/or access to, consumption-related information that holds some "informational value" over and above the formal advertising messages provided by the company and that holds influence over the individual's decision making.

Social network analysis has been used to study WOM behavior because its unit of analysis is the exchange of (tangible and intangible) resources between social actors (Brown & Reingen, 1987; Bansal & Voyer, 2000) and it looks at how exchanges between pairs build into networks (Wellman & Berkowitz, 1998). Each kind of resource exchange is considered a social exchange relation, and individuals who maintain the relation are said to maintain a tie. Social network theorists hold that individual, group, and organizational behavior is affected more by the kinds of ties and networks in which actors are involved than by the individual attributes of the actors themselves (Haythornthwaite, 1999).

Tie Strength

Little attention has been paid to the impact of social structures on WOM transmission or its relational form (e.g., Brown & Reingen, 1987; Anderson, 1998; Bansal & Voyer, 2000). Yet the properties of the linkage between pairs of communicators that exist independently of specific contents are critical to an understanding of the process of WOM (Knoke & Kuklinski, 1982; Brown & Reingen, 1987). All WOM communication takes place within a social relationship that may be categorized according to the closeness of the relationship between information seeker and the source, represented by the construct tie strength (Money, Gilly, & Graham, 1998; Duhan, Johnson, Wilcox, & Harrel, 1997; Bristor, 1990). Tie strength is "a multidimensional construct that represents the strength of the dyadic interpersonal relationships in the context of social networks" (Money, Gilly, & Graham, 1998, p.79) and includes closeness, intimacy, support, and association (Frenzen & Davis, 1990). The strength of the tie may range from strong to weak depending on the number and types of resources they exchange, the frequency of exchanges, and the intimacy of the exchanges between them (Marsden & Campbell, 1984). Strong ties are characterized by "(a) a sense that the relationship is intimate and special, with a voluntary investment in the tie and a desire for companionship with the partner; (b) an interest in frequent interactions in multiple contexts; and (c) a sense of mutuality of the relationship, with the partner's needs known and supported" (Walker, Wasserman, & Wellman, 1994, p.57).

Research suggests that tie strength affects information flows. Individuals in a strong tie relationship tend to

interact more frequently and exchange more information, compared to those in a weak tie relationship (Brown & Reingen, 1987). Thus, it would seem that consumers would contribute more WOM to strong than weak tie relational partners. In addition, strong ties bear greater influence on the receiver's behavior than weaker ties due to the frequency and perceived importance of social contact among strong-tie individuals (e.g., Bansal & Voyer, 2000). Evidence suggests that a strong tie between a dyad is perceived by dyad members to have a positive influence on their decision making (Leonard-Barton, 1985).

When exploring the formation of relationships between social actors in online communities of consumption, and in particular regarding the place of the online community/Web site itself within the social network, it may be useful to draw upon the consumer-brand relationship literature (Blackston, 1992, 1993; Hess, 1996; Moriarty, Gronstedt, & Duncan, 1996; Palmer, 1996; Fournier, 1998), which itself draws upon Social Exchange Theory to explain how consumers relate to brands. As Palmer (1996, p. 253–4) argues, "individuals have an underlying need for an emotional bond with high-involvement products that they buy. Brand development and relationship development are complementary and substitutable strategies toward this bonding." Fournier (1998, p. 345) states that for "the brand to serve as legitimate relationship partner, it must surpass the personification qualification and actually behave as an active, contributing member of the dyad. Marketing actions conducted under the rubric of interactive and addressable communications qualify the brand as a reciprocating partner." Fournier (1998) identifies six key constructs that suggest strong consumer-brand relationships: love and passion, self-connection, interdependence, commitment, intimacy, and brand partner quality. Indeed, the study of offline and online brand communities, such as the Harley Owners Group (Schouten & McAlexander, 1995), Star Wars fans (Brown, Kozinets, & Sherry, 2003) and even coffee (Kozinets, 2002) has shown that the value gained by the members stems not from the brand itself, but from the social links formed as a result of using the brand.

The idea of using the consumer-brand relationship concept to describe the consumer-online community relationship has considerable face validity. Both brands and consumption-focused online community Web sites share the characteristics of being inanimate, nebulous constructions concerning a market offering from a company. It is generally accepted within the literature that brands can develop personalities and that consumers can have some kind of "relationship" with brands (Franz-Rudolf, Langner, Schmitt, & Geus, 2006; Aggarwal, 2004). It is a logical extension that such concepts may also be applicable to Web sites as well. However, Patterson and O'Malley (2006) point out that the consumer-brand relationship is one, albeit powerful, metaphor (the interpersonal relationship metaphor) built on the employment of another (the brand as personality metaphor). As such, the metaphor is subject to certain limitations (Arndt, 1985) and may not be universally relevant or appropriate. Nevertheless, it is a logical extension of the concept of a brand personality that if brands (or indeed Web sites) have personalities, we can treat them as people for many purposes; if they are people, then we can have relationships with them.

Homophily

Related to, but conceptually distinct from, tie strength is the construct of homophily (Brown & Reingen, 1987). Homophily explains group composition in terms of the similarity of members' characteristics: the extent to which pairs of individuals are similar in terms of certain attributes, such as age, gender, education, or lifestyle (Rogers, 1983). Homophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience (McPherson & Smith-Lovin, 1987). The similarity of individuals predisposes them toward a greater level of interpersonal attraction, trust, and understanding than would be expected among dissimilar individuals (Ruef, Aldrich, & Carter, 2003). Thus, individuals tend to affiliate with others who share similar interests or who are in a similar situation (Schacter, 1959). The stronger the social tie connecting two individuals, the more similar they tend to be (McPherson & Smith-Lovin, 1987; Granovetter, 1973). Tie strength, therefore, increases with homophily. In contrast, heterophilous communication (i.e., nonsimilar individuals such as acquaintances) can facilitate the flow of information between diverse segments of a social system (Rogers, 1983).

Computer-Mediated Communication

The basis of tie strength and homophily—the degree to which individuals regard each other as close and similar—is identity, which is dependent on social and contextual cues. In an offline environment, the assessment of homophily is based on cues such as gender, age, social and professional status, and ethnicity, but in an online environment, these cues may be "filtered out," that is, missing, reduced, camouflaged, or even intentionally falsified. Early studies based on the cues-filtered-out model of computer-mediated communication (CMC) suggested that CMC restricted communication (Hiltz, Johnson, & Turoff, 1986), offered lower levels of satisfaction, and could be less productive than face-to-face interaction (Kiesler & Sproull, 1992; Siegel, Dubrovsky, Kiesler, & McGuire, 1986). The reduction of social context cues such as verbal nuances (e.g., gaze, body language), physical context (e.g., meeting sites, seating arrangements), and observable information about social characteristics (e.g., age, gender, race), combined with the disinhibition that can result from anonymity, were used to explain both high levels of anti-social and aggressive exchanges (Kiesler, Zubrow, Moses, & Geller, 1985; Siegel Dubrovsky, Kiesler, & McGuire, 1986), and a greater sense of status equalization (Sproull & Kiesler, 1986). However, such research is not consistent with the contemporary growth in online communities that are expressly focused on social bonding and communicating among individuals, such as MySpace. More recent work based on Walther's (1992) Social Information Processing model has found positive, socially rich, relational behavior in online communities and the development of both friendly and romantic relationships (Walther, 1992, 1996; Tidwell & Walther, 2002; Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, & Scherlis, 1998; Utz, 2000).

Despite limited nonverbal cues, it is clear that social resources such as emotional support, companionship, and a sense of belonging are visibly exchanged online between individuals who do not know each other in the offline environment (Haythornthwaite, 1999). Kumar and Benbasat (2002, p. 1) propose a new construct of Para-Social Presence, the perceptual illusion of nonmediation, defined as "the extent to which a medium facilitates a sense of understanding, connection, involvement and interaction among participating social entities." Clearly, alternative cues or proxies for individual information are being used. Without identity information, determining online homophily will be significantly different to the online individual determinant of the construct. Additionally, the bases for determining homophily may be different in that other psychological comparisons of similarity, such as an inclusive mind-set (Blanton, 2001) or shared group identity (Brewer & Weber, 1991), may come into play rather than on shared social characteristics such as gender and socioeconomic status (Wellman, Salaff, Dimitrova, & Garton, 1996; Kollock & Smith, 1996).

The restriction of identity information outlined above, together with alternative (and potentially confusing or misunderstood) contextual cues, will also impact on the interpretation of the online content itself. The evaluation of that content, in terms of its credibility, is a fundamental component of the value the WOM network has for its actors in that the perceived credibility of the communication source may influence the final judgment of the actor in the network (Grewal, Gotlieb, & Marmorstein, 1994).

Source Credibility

Source credibility theory identifies source expertise and source bias as elements that affect the credibility of an information source (Buda & Zhang, 2000; Birnbaum & Stegner, 1979). Source expertise refers to the perceived competence of the source providing the information. Source bias, also conceptualized as source trustworthiness, refers to the possible bias/incentives that may be reflected in the source's information (Eagly & Chaiken, 1993; Perloff, 1993; DeZoort, Hermanson, & Houston, 1993). A source should be perceived as more credible when it (1) possesses greater expertise and (2) is less prone to bias.

Proponents of the elaboration likelihood model (cognitive response theory) maintain that persuasion is a joint function of the recipients' involvement in the outcome and the communicator's credibility (Hass, 1981). Communicators with positive attributes (which can be evaluated in terms of homophily and tie strength) are assumed to be more persuasive than communicators with less positive attributes (Eagley & Chaiken, 1993). Attribution theory suggests that when consumers are presented with a message, they will make an effort to assess whether the message

provides an accurate representation. If the message lacks in credibility, it will be discounted and will not be very persuasive (Buda, 2003; Kelly, 1967, 1972). However, behavioral influences are higher when the credibility of the source is high than when it is low (e.g., Dholakia & Sternthal, 1977; Bansal & Voyer, 2000).

Whether or not a message sender is perceived as an "expert" (and thus of high credibility) is determined from an evaluation of the knowledge that person holds (Gotlieb & Sarel, 1991), as well as if—by virtue of his or her occupation, social training or experience—that person is in a unique position (Schiffman & Kanuk, 1995). However, in the online environment, such evaluations must be made from the relatively impersonal text-based resource exchange provided by actors in the site network. Knowledge of the individual's attributes and background is limited, and evaluation will take place in a reduced- or altered-cues environment.

Persons highly ranked in expertise are also likely to possess greater awareness and knowledge about a market and products within it (Mitchell & Dacin, 1996), with communication receivers relying on that expert's knowledge for their purchase decision. These expert individuals, often identified as opinion leaders (Katz & Lazarsfeld, 1955), accelerate the diffusion of information. Reputation is thus key to allocating a value to information (e.g., Tadelis, 2002) and although some communities employ online reputation mechanisms (Dellarocas, 2003) or provide explicit information about contributors (e.g., posting history, photograph, location, feedback profiles), these tend to be either moderated by the brand owner (e.g., www.bbc.co.uk; www.tivocommunity.com), transaction-focused (e.g., www.ebay.com), or paid opinion forums (e.g., www.epinions.com). Such sites are not strictly representative of online WOM, key characteristics of which include that communities are consumer-moderated and leisure-focused, where members are not paid for their contributions. This clearly demarks online WOM from other brand-focused communications online in a similar manner to offline WOM compared with other offline brand communications.

In such online WOM situations, the reduced or altered contextual cues and identity information mediate the ability to identify and recognize opinion leaders. Readers of online community postings are thus faced with the task of evaluating the opinions of complete strangers. A proxy for individual credibility must, therefore, be identified.

Similarly, proxies for evaluating trustworthiness will need to be determined online. Customers pay more attention to WOM because it is perceived as credible, custom tailored, and generated by people having no self-interest in pushing a product (e.g., Arndt, 1967; G. Silverman, 1997). Individual evaluation of WOM trustworthiness will be determined in terms of the receiver's belief that the sender's opinions are unbiased (Gotlieb & Sarel, 1991). Offline, perceptions of trustworthiness develop from the social relations the actors participate in. The social network may also determine trustworthiness online, but without the ability to evaluate an individual, other cues may be emphasized.

In summary, how WOM exchanges affect subsequent consumer behavior is shaped by three key influences: tie strength, homophily, and source credibility. Existing theory is based on face-to-face WOM transmission. Online, identity may be difficult to ascertain, which will impact perceptions of online tie strength, homophily, and source credibility. To determine the flow and nature of WOM in online communities, it is critical to (a) explore whether and how the constructs of tie strength, homophily, and source credibility differ to their offline counterparts and (b) to ascertain the impact on the nomological net of relations between these constructs.

METHOD

Study 1 Sampling and Data Collection

Study 1 comprised a qualitative interview study, designed to explore the potential differences in social network constructs in an online environment. Our approach was inspired by Strauss's (e.g., Strauss & Corbin, 1998) ideas on grounded methodology, which recommend that at each stage of research, some appreciation from a prior stage (either theoretical or field-based) be incorporated. We did not a priori specify a sample size, but ultimately interviewed 30 respondents from a wide range of backgrounds and demographic segments. Their ages ranged from 22 to 43, and there were 11 females and 19 males. Education varied from

high school up to postgraduate degrees, and respondents had occupations ranging from students, administrators, technical specialists, and professionals to high-level managers. While the demographic spread of respondents was large, the sample was nevertheless selected along purposive lines with an attempt to concentrate on high users of the Internet as "key informants" (cf. G. Silverman 2001). Furthermore, our theory does not place a significant emphasis on individual characteristics (such as demographics), and thus—in keeping with our theory discovery aims—we attempted to achieve a wide spread to enhance our ability to generate large amounts of information (cf. Zaltman, Lemasters, & Heffring, 1982). Respondents were solicited through means of personal contact in the first instance; however, snowballing was also used to expand the sample and generate additional contacts. In order to ensure the appropriateness of participants, early in each interview a number of screening questions were asked to ensure that each respondent understood the idea of online communities and was a regular user of such Web sites.

The interviews lasted between 45 and 90 minutes, and all were taped without objection. An interview guide, developed from existing theory and inductive reasoning combined with discussions between the authors and other expert assessors, was used to ensure consistency across the multiple interviews. In order to further enhance comparability, all interviews were conducted by a single author. While the interviews were carried out in a semi-structured manner, constant probing was able to uncover rich insight and unexpected examples. Respondents were asked to relate and describe their interactions with various online community sites on the Internet, as well as trying to categorize them into groupings along what they felt were significant variables of difference. The aim was to discover how consumers interact on different communities, and the key factors impacting on their behavior and interactions. While a range of interactions was investigated empirically, the focus of the study was to develop theory based on social exchanges operating *solely* in an online environment. These exchanges may consist of receiving and/or sending WOM communication to online communities such as discussion boards and chat rooms where the relationship is *not* pursued offline.

Study 2 Sampling and Data Collection

In order to more closely examine some of the key issues that had emerged from the qualitative interviews, we performed a detailed examination of a single online social network. Study 2 took a case study approach to explore how a social network operates online and the dimensionality of the social network constructs evident. Subsequent to the interview period, a census of computer texts of one online community was collected over a period of three months (May–July 2004). In order to select an appropriate community, we looked to theoretical criteria (e.g., Strauss & Corbin, 1998). In particular, the community Web site www.buffy-boards.com demonstrated a consumption-related online community of an experiential product, and as a result is highly appropriate for our purposes. The online community operates for fans of the TV programs *Buffy the Vampire Slayer* and *Angel*. Even though both series have ended, there is still an extremely active community operating around these programs and the relevant merchandise (e.g., DVDs, memorabilia, and the like). This type of community shares characteristics with many of the communities that were referred to by respondents in Study 1. While reliable demographic characteristics of the community members were not available, we expect them to be broadly similar to those studied in Study 1. Specifically, many commentators have referred to the broad demographic appeal of *Buffy the Vampire Slayer*, for example, "*Buffy* attracted a broad demographic. It was a show that children, their teenage siblings, and their parents could watch" (Johnson, 2003). Users of the discussion board have to register and Web monikers are used to anonymously identify individual postings and contributors. The computer texts are structured into threads (a specific subject area posted by an individual contributor to initiate an online communication) and postings (individual online communications within a thread). We identified 112 discussion threads, with 1,151 postings by 106 contributors. The contributors within the 3-month period correspond to 54% of total registered users.

Study 1 Analysis Approach

To ensure rigor in analysis, a number of methods were employed (Miles & Huberman, 1994). Data were

transcribed verbatim as soon as possible and without waiting until all interviews were completed (D. Silverman, 2000). QSR NVIVO was utilized to organize and code the transcripts following a meaning condensation and categorization approach (Kvale, 1996). In keeping with the approach of the research, some prior structure was set down, but emergent themes were free to evolve "up" from the data, which resulted in a coding strategy somewhere between either wholly inductive or completely confirmatory. This approach was adopted as prior theoretical work had already suggested a number of key constructs (e.g., homophily and tie strength), and thus coding at first proceeded using these as preliminary structuring devices. However, we were cautious not to pre-empt new themes and concepts from emerging, and especially vigilant not to prejudice the development of the actual "content" of previously suggested constructs. A single coder with constant constructive discussion of themes as they arose was utilized, which is essentially a peer evaluation–style process such as that suggested by Miles and Huberman (1994). A second author then coded two of the interview transcripts and compared results. An acceptable 87% inter-judge reliability index was calculated (Perreault & Leigh, 1989). A combination of within-case and cross-case analysis techniques was employed (Miles & Huberman, 1994). The cross-case analysis conceptually ordered data, rather than compared and contrasted respondent characteristics (say, male and female), since our theory is at this stage a general one.

Study 2 Analysis Approach

We approached the second stage of the analysis in sequential fashion with the first, with the primary aim of exploring key aspects of the interview findings. However, we did not rule out re-approaching the interview data in light of emergent findings from the network analysis. In this way we reaped some of the benefits of an iterative or cyclical approach to qualitative analysis (Dey, 2004).

A social network analysis of the interactions between users, discussion threads, and individual postings was undertaken. Specifically, we analyzed two main aspects of the network: a) the content of each piece of communication, and b) the location and relationship of each piece of communication in relation to the others in the network (i.e., the structure of the network). The content of the communications was analyzed with a generally similar approach as Study 1, although we based our analysis primarily on the findings of Study 1 rather than existing theory. To determine the structure of the network, we coded posts according to which thread they belonged to, who started the thread, who the poster was, and who they were talking to. For example, the code [T1 (5,0), (1,5)] codes thread 1 (ordered by date) as T1, the first bracketed numbers refer to the user who started the thread and who they were speaking to (5,0), and the second bracketed numbers (1,5) refer to the user who has written the post (user 1) directed to user 5 (the recipient of the post). When 0 is used, this refers to a post being directed to the community as a whole, rather than a specific individual. Frequency of total posting (usage), frequency of communication between individual and site, and communication between individual and individual is thus addressed.

RESULTS AND DISCUSSION

Conceptualizing Social Networks

In the following section, we discuss the findings from the two studies on the major differences and similarities in three key constructs driving a social relationship on- and offline. Table 1 summarizes the conceptualizations of offline and online homophily, tie strength, and source credibility.

Online Homophily. Traditional notions of homophily focus on the congruence between the characteristics of the actors in a social network, based on individual attributes such as gender, age, and education (Schacter, 1959; Ruef, Aldrich, & Carter, 2003). Both Studies 1 and 2 identified homophilous social relations as germane in the online environment. However, our findings suggest that homophily of an interpersonal relationship, as based on an evaluation of individual characteristics, is not particularly relevant in an online context. Rather, the findings suggest that it is notions of shared group interests and group mind-set, evaluated at the level of the Web site itself, which drive online homophily.

In Study 1, respondents commonly mentioned themes which appeared to display some kind of social affiliation

TABLE 1	A Comparison Between Offline and Online Social Network Constructs

	OFFLINE	**ONLINE**
Tie Strength		
Definition	The intensity of a social relation between pairs of individuals	The intensity of an interactive and personalized relationship between an individual and a Web site
Dimensions	• Importance attached to social relation • Frequency of social contact • Type of social relation	• Online Web site reciprocity • Emotional Web site closeness
Homophily		
Definition	The degree to which pairs of individuals are similar in terms of certain attributes	The congruence between a user's psychological attributes and Web site content
Dimensions	• Matched demographic/lifestyle attributes	• Shared group interests • Shared mindset
Source Credibility		
Definition	Perceived competence of the individual source providing information	Perceived competence of the Web site and its membership
Dimensions	• Source bias (trustworthiness) • Source expertise	• Site trustworthiness • Actors' expertise

with Web sites whose content, rather than the characteristics of the individual members, demonstrated a homophily of interests with the user. Here, content refers to the *actual textual content* (i.e., the information content) of the Web site, rather than who actually provides that information (i.e., the individual users). One interviewee typified this with the comment "[the Web site] tries to use the technology as it should be used, to help you get more out of your interest area."

Both studies demonstrated that online homophily is almost entirely independent of interpersonal factors, such as an evaluation of individual age and socioeconomic class, traditionally associated with homophily. Instead, other means of evaluating homophily, at the level of the Web site, took precedence. The dominant dimension of online homophily identified in Study 1 was shared group interests. A match between the information seeker's own interests and the content provided by the Web site was discussed by 90% of our respondents: "My interests are reflected in my use of it . . . if I want anything, it's there," or "It feels more relevant and it is more . . . personal to me." A number of interview respondents also commented that a broad range of information was important. This seemed to tap into the idea of "serendipitous" information. More specifically, sites with a broad range of relevant content were seen as more likely to introduce unexpected things of interest, feeding into the idea that the user and Web site had a "shared interest" of some kind. For example, "With these [sites] I might find out about lots of other different things I was interested in." Similar but distinct was the idea that sites which were less task-specific appeared more homophilous. For example, task-specific sites tended to be interacted with in a very focused manner—"when I go to [Web site] and am looking for a specific CD"—whereas more general sites were used in a broader fashion, almost like talking to a "friend," as these comments from two respondents show: "If I want to be entertained, if I've got some time . . . and I don't have anything to do, then I know that I will be

able to find an issue that engages me that I can read about," and "I go for 'Notes and Queries' and tend to get pulled into [debates] that sort of thing, because you happen to be on the site and it's there." Again, it seems that this lack of specificity influences a greater feeling of "shared interests."

Analysis of Study 2 identified a further dimension of online homophily based on psychological similarity—group mind-set. Group mind-set, textual expressions of a like-minded group of people, is illustrated in the online community through gratifications and collective postings. Gratifications are postings thanking other contributors, showing appreciation and generally supporting the consensus opinion. For example, T17 (58,0), (35,58): "Thank you very much. Very interesting indeed"; T97 (87,0), (86,87): "Very cool, thanks for posting this." 42% of posts received a gratifying post in response, with 44% of the users within the sample engaging in gratifying behavior. Collective postings refer to the online community as a group. The use of collective words such as "our," "we," and "us" in the context of group feelings and opinions suggests members perceive the community as a unit that thinks and feels in a convergent way. For example, T52 (87,0), (88,87): "We have to remember that even though we may be mad at her we all still love her!"

Online Tie Strength. Moving to the concept of tie strength, our results clearly suggest that the idea of individual-to-individual social ties is less relevant in an online environment than an offline one. None of our respondents explicitly mentioned any type of "interpersonal relationship" between themselves as an information seeker and another individual as the information source, as traditional theorists have conceptualized tie strength (e.g., Money, Gilly, & Graham, 1998; Frenzen & Davis, 1990). Rather, subjects appeared to use Web sites themselves as proxies for individuals. Thus, tie strength was developed between an information seeker and an information source as offline theory suggests, but online the information "source" was a Web site, not an individual, which was discussed in some way by 80% of our interviewees in Study 1. One respondent summarized her sense of intimacy with Web sites with this quote regarding how she categorized different types of online community sites: "I've categorized them really as my closeness to them . . . personally,

the experience I have of them is that I feel very close to these three [Web sites]."

Study 1 identified "interaction" or Web site reciprocity as the most commonly mentioned aspect of tie strength, with 60% of respondents commenting on this. Interaction here was described by respondents as specifically being driven by the Web site itself—not between individual users. For example, "There's more interaction between [the Web site] and me." This could be influenced by regular emails and updates automatically generated by a Web site. Overall, it seemed that respondents wanted to develop these close "relationships" with online community Web sites, with one particularly illustrative comment being "I like the recommendations 'cos it makes me feel like they know me."

In addition, Study 2 provided evidence of a Web site relationship through both the substantial number of collective rather than individual postings (65%) together with the "humanization" attributed to the Web site and commented on by several posters, for example, T23 (35,0), "*You* always understand me" (emphasis added); and T79 (56,0), "Great minds! We're always on the same wavelength here. I've come home!"

Source Credibility. Both studies demonstrated that Web site factors again assumed a predominant place in individuals' evaluation of source credibility, and thus the Web site can be seen as being an actor in the social networking process. However, users also appeared to spend at least some effort on attempting to evaluate individuals who provided information to the Web site, as well as the Web site itself. In Study 2, individuals were identified as experts on the basis of their knowledge (dissemination of hard to find information and use of Web site–specific language perceived as "in the know") and their opinions actively sought. For example, T52 (45,23), "You know your stuff Bangal, thanks for update!"; T17 (58,0), (58,35), "Lol. . .that's right (35), living and breathing the Jossverse is the only way to go!:P." Nevertheless, evaluations of individual sources appeared to be based on factors specific to the online context, which in turn were strongly based on the Web site and content itself rather than the individual—something of a circular relationship.

A common theme in the results was concerned with some kind of "authority" that the Web site could generate, which then gave any information on that site more weight. This was evident in quotes in Study 1 such as, "There's something to do with the bricks and mortar element of it," and "Sites like [Web site] get their authority because you've got a mass variety of different users . . . you're going to get 40% of idiots but . . . 60% of people who know what they are talking about." Prior experience also seemed to be an influence on how people evaluated the credibility of any information they got from a Web site, for example: "The third prong of authority is the experience from the same site. . .did I get the right [information] last time? Was the information useful? Yes it was, I'm going back."
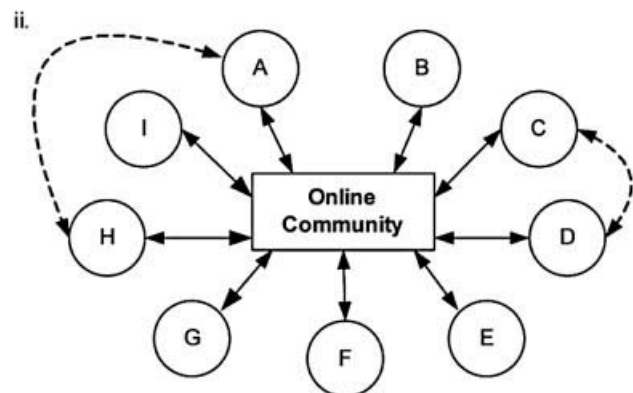
The Form of Online Social Networks

The findings above consistently suggest that Web sites are perceived by Web users as actors in their own right in online social networks. Specifically, in the online context, individuals seemed to more commonly interact with Web sites and information, rather than with actual individuals. In particular, it is interesting that the individual "source" of any information is never mentioned except in terms of credibility. Even here though the comments are more to do with "assumptions" about the source—which are often driven by Web site or content factors rather than any independent knowledge of the source itself. This is interesting because homophily and tie strength in an offline context are, by definition, concerned with individual-to-individual relationships. In an online context it seems they are driven primarily by Web site factors such as information content and Web site reciprocity. Thus, the actors in online social networks appear to be individuals who "relate" to Web sites rather than other individuals—only occasionally engaging in individual-to-individual contact (where one can assume traditional offline social network models would become more applicable).

Figure 1 expresses this online social network conceptualization in comparison to offline social information flows. The model in Figure 1 suggests that a collective of individuals each contribute and receive information from an online community. However, once the information is posted, the online community becomes the

primary unit of relationship rather than the individual. To take credibility as a focus of the example, each individual contributes some of their own credibility to the community (through, for instance, expertise), and in turn their information also gains credibility from association with the community. The social exchange is thus between an online community and an individual. Of course, as the diagram shows, it is perfectly possible for individuals to communicate and relate without mediation of the Web site, but this is likely to be less common and subject to more traditional models of social networks. However, our results suggest that these traditional models may be less adequate for explaining the process of online social networking, such as the use of the Web site as a proxy for interpersonal contact.

i.
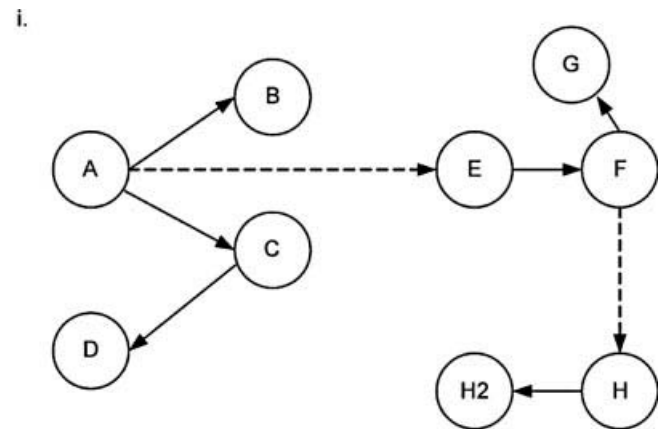
Offline strong (complete line) & weak (dashed line) network flows.

ii.

Online strong one-to-many network flows.

Figure 1

An Online Social Network

Consumer–Web Site Relationship

The above findings present evidence of the concept of a consumer–Web site relationship. The analysis now moves to an examination of the type of relationships exhibited in this study and is based on Fournier's (1998) typology of consumer-brand relationships.

There are two broad categories of relationship presented: the "formal" or "functional" relationships, and the "personal" or "emotional" relationships. Consumers have formal relationships with online communities/ Web sites that are visited purely to meet informational needs. The need for information appeared to be twofold for many respondents. First, "targeted" information needs were strongly characteristic of motivations to use online WOM information, as exemplified by quotes in Study 1 such as these: "I used [the Web site] as a source of information because I was considering selling my desk-top," "If I was looking for something, I'd go there," and, in Study 2, T12 (62,0), "Anyone know when the special edition Box set 5 is out?" Essentially, consumers who had a specific purchase or information need in mind appeared to have a specific set of Web sites that they could go to for their information needs. In this case, it would seem that Web sites which were not in consumers' evoked set were not visited. Second, respondents reported that not only did they engage in WOM behavior when they had a specific information need, but also in a nontargeted manner, what could be termed "information browsing." More specifically, it appeared to be common for consumers to simply visit a Web site to see what information was there, in a field they were interested in. For example, in Study 1, "I go to browse, just to have a look around," or, "I would browse in [Web site] for ideas for gifts, but also to see what offers are on"; and, in Study 2, T50 (25,0), (70,25), "I was just surfing, any info on SMG is great."

In terms of the personal or emotional relationships portrayed in the study, the first general type uncovered can be likened to Fournier's (1998) description of "casual buddies" where the relationship is low in intimacy but regularly reinforced. For example, it was common for respondents in Study 1 to mention a set of Web sites that they regularly visit for the purpose of browsing, many of which were the same as the ones they used for specific information searching.

Participants also often mentioned a routine they had developed with different sites, such as, "Once a week I'll go to [Web site] and see what gossip there is on the latest kit. [Other Web site] is a resource for IT, so I might go there once a month." In Study 2, posting statistics indicated that 25% of registered users contributed "more than once a week," while 36% "browse monthly." Thus, in some ways one could consider the need for information to have become a habit, where individuals felt they had to continue "keeping up" with the latest information.

Unfamiliar Web sites that are visited by following links from known Web sites can be described as "flings"—short-term engagements of high emotional or resource-based reward, but lacking any commitment: "I'll see what's going on, follow some links," or "Some of these are linked to other sites, so I might just click through." It would seem likely that if the linked Web site was then found to have good information, it could then become a casual buddy.

The most common type of relationship identified in Study 1 and clearly defined in at least 25% of posters in Study 2 could be described as a "committed partnership." Respondents in Study 1 discussed how they had developed long-term relationships with particular online communities—they needed to remain "part of a scene." This was particularly the case where they had a higher degree of involvement in a product category. Some of the respondents also mentioned the social value of gossip within product categories in which they were interested. Knowledge of such unofficial information seemed to have some kind of social value, in that those who possessed gossip could a) feel close to their interest area, an "expert" in essence, and b) demonstrate their knowledge and "insider" status by reporting this gossip to other WOM networks. In Study 2, in addition to regular contribution, the committed partnership posters are keen to demonstrate their expertise through both specialist product knowledge—T41 (42,0), "Download this link for a Director's cut of the big one!"—and use of in-group language—T97 (59,0), (59,24), "Way to go Buffster! Wadddoya want from the Jossverse?"

The final type of consumer–Web site relationship identified in the study focused around "social concern." where some respondents felt a duty of some

kind to participate in an online community. This was not an especially common theme, with only a few respondents mentioning it in the interview in Study 1, but those who did demonstrate a social concern did so quite strongly. It was particularly evident in those respondents who were interested in something that could be a minority interest, or one with a strong group identity—as one respondent said, "If you write your own review and you see it there you think, 'yes, I am contributing'. . .with artists who only have a very small audience, you feel like you're doing something." Again, a high level of involvement in a category was important, but it seemed to interact with first, a knowledge that the category was not one of mass interest, and second, with a particular type of individual. It seemed that those prone to develop relationships based on social concern were motivated by a sense of fellowship: "I like the community aspect of it, it amazes me that it works and that people agree . . . that does surprise me and it's very nice that people trust each other." This theme was further illustrated in Study 2, for example, T17 (58,0), (3,58): "All our efforts may not have been able to get a season 6 but they may have convinced the WB to give us a TV movie." This type of relationship has no direct correlation within Fournier's (1998) typology and appears to contain elements of the permanence of a "best friendship" and the devotion of a "committed partnership," but driven by a sense of altruism rather than reciprocity. As an aside, such relationships may become more and more prevalent in an offline brand context in the future, as social and ethically focused brands grow in impact and popularity (e.g., Nicholls & Opal, 2006).

Interacting Within an Online Social Network: A Theoretical Framework

The final section of results illustrates the relationships between the constructs identified above and positions them within a wider context of engagement in a social network. Figure 2 illustrates the hypotheses presented.

Social Interactions Online. Comparable to offline theory, site tie strength should increase with site homophily (H2) (McPherson & Smith-Lovin, 1987; Granovetter, 1973). Theoretically, a closer match between individuals' interests and those exhibited by

the Web site should result in a stronger tie between a Web site and user. This was evident in the empirical results of Study 1; describing the Web sites they felt close to, respondents stated, "It feels more relevant and . . . personal to me," "[The site] recognizes me more than others do," and "This [Web site] is more of a personal activity, so I feel closer to it than [others]."

Credibility evaluations also appeared to be made at least partly on the basis of the respondent's involvement in the Web site itself (expressed through site tie strength and site homophily). More specifically, in Study 1 it was clearly evident that Web sites to which respondents appeared to have closer ties were described, in ways such as "the one I think is most trustworthy" or having "an extra prong of authority," whereas a less trusted site was described as "a dodgy one which no-one has ever heard of." Similarly, in Study 2, T56 (4,0), (56,4): "I'm addicted to BB (Buffy-Boards) though, I trust ya'll with my SMG fantasies:D" (H4). In terms of homophily, sites that dealt with subjects' personal interests were commonly mentioned in Study 1 as more "safe"; in fact, one interviewee mentioned how she trusted the information from one homophilous Web site so implicitly that "if they are recommended, sometimes I just buy [products] without even listening to them first," while another respondent summed up the importance of homophily in this context with, "I love how you can get things from overseas that you can't get here . . . also that you can trust that it's the actual thing you want . . . and you will get it" (H3). Thus, site tie strength and site homophily seem to activate the trustworthiness dimension of source credibility.
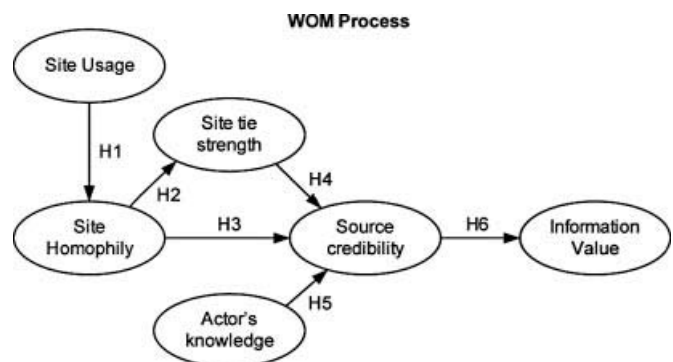

Figure 2

The Nomological Context of an Online Social Network

Numerous respondents in Study 1 also related how they took account of the perceived "knowledge" of those individuals who were interacting on a site and the impact it had on the evaluation of the credibility of the communication. For example, comments typical of the latter were: "You get information directly back from [the author], she actually writes to you," "The Web site that has reviews from expert people, like the people that work there," and "In the Technical Forums, the sort of people who are answering questions are very knowledgeable people." The expertise dimension of source credibility, therefore, seems to be activated from the actor's perceived knowledge (H_5). Interestingly, sometimes respondents even related what appeared to be a process of "adding" perceived knowledge and expertise to certain information by assuming that it came from experts such as company employees. An illustrative example of the latter was, "I think it's supposed to be users, but I've got a feeling that a lot of them are Apple employees that just go in there and say, 'I know this.'"

The Value of Online Word of Mouth. Word-of-mouth communication literature has long suggested that the *value* of word-of-mouth information, in terms of both its influence on decision making and the impact on attitude formation, is a joint function of the receiver's involvement in the communication and the communicator's credibility (e.g., Hass, 1981). While extant literature reports that high involvement is a fundamental characteristic of online relationships (e.g., Hiltz & Turoff, 1993; Rheingold, 1993), our results support existing word-of-mouth theory by also suggesting that respondents' evaluations of the credibility of information (both in terms of the actual individual source and the Web site itself) strongly fed into their evaluations of the ultimate value of that information (H6). For example, a large proportion of respondents in Study 1 and participants in Study 2 mentioned credibility and information value in the same breath. For example, comments typical of the latter were, "You get better information about the companies than you get from your own management," "I ultimately chose it because it was the Editor's Choice . . . and I felt that that was quite a safe bet," and "Most of time I don't bother to read the manufacturer's description, I jump immediately to other people's ratings." These comments exemplify the value that respondents placed on information which they deemed to be of high credibility.

CONCLUSIONS

Research in marketing is currently in an embryonic state regarding the electronic marketplace, both in terms of how consumers interact with each other online and how firms can utilize the Internet to drive value creation activities. Of central concern to marketers is the exploration of the consumer experience and attitudes to interaction within online communities. Online consumers are more active and discerning, are more accessible to one-on-one processes, and can provide a wealth of valuable cultural and marketing information that enables consumers to have a major hand in both the design of products themselves and the attachment of socio-cultural symbolism or "meaning" to those products. WOM has a greater impact on product judgments, attitude formation, and decision making than formal marketing communications (e.g., Herr, Kardes & Kim, 1991; Bone, 1995).

While research has clearly identified the potential of online communities, there is little evidence of how online social ties are formed. The qualitative results presented here make a theoretical contribution by providing evidence that the flow of information between participants in online networks may be different in nature than in an offline context. The exploratory findings provide some important theoretical distinctions between online and offline conceptualizations of tie strength, homophily, and source credibility. These three constructs differ markedly online to their offline counterparts, with the Web site itself acting as a social proxy for tie strength and homophily identification. Credibility lies closer to the offline conceptualization but carries some unique attributes due to the nature of the environment in which the WOM social network is created and propagated; consumers seem to evaluate the credibility of online WOM information in relation to the Web site it is sourced from, as well as the individual contributor of that information.

Managerial Implications. For marketers, understanding how WOM networks differ online is particularly pertinent in terms of Web design and marketing communication strategy. To generate a sense of group mind-set and shared interests, online brand communities should include a wide range of interests that have a direct, but nonintrusive, connection with the brand. For instance, Hindustan Lever has created a brand community around its *Sunsilk* shampoo

(http://gangofgirls.com) where over 500,000 members discuss their shampoos, make-up, boyfriends, their favorite music, sport, politics, and so on. Interactive features include a makeover zone where girls can try out new hairstyles, a chill-out zone with movie reviews, games, and an animated "*Sunsilk* Buddy" that is downloaded onto the computer desktop and which provides reminders and hair care tips. Ensuring that brand activity is relevant to a social network's core audience is crucial for advertisers wanting to tap into niche communities (Carter, 2006).

To develop strong online ties with consumers, marketers are increasingly engaging with virtual social worlds such as Second Life where multiple "players" interact with each other through digital personas called avatars. Unlike traditional games that are played to win, virtual social worlds are open-ended simulations in which the attraction is socializing, collaborating, and creating. Second Life, which has attracted over a million members since 2003, even has its own virtual currency that can be converted to U.S. dollars. Immersive virtual worlds place user-generated content and the ability to personalize online environments within a 3-dimensional, experiential platform where the user has control. In this way, the consumer develops emotional, enduring relationships with both the online community and other members based on shared interests and reciprocity. Firms can go beyond written text outside of virtual worlds by using animated talking avatars to guide and advise visitors to their corporate Web sites, which may be particularly useful for firms offering complex products and services. Other 2-dimensional technologies such as wikis (software that provides an easy way for users to collaboratively author content) allow marketers to support extremely social, technology-savvy brand enthusiasts and because they rely on the wisdom of crowds, wikis can help marketers address the issues of most concern.

In terms of source credibility, recent research by Ipsos MORI commissioned by Marketing Week (Hotwire, 2006) of Internet users across Europe showed that blogs are second only to newspapers as a trusted information source, with 24% of respondents considering blogs to be the most trusted source, well ahead of television advertising (17%) and e-mail marketing (14%). The use of blogs can also provide a "voice" to the brand, reinforcing the sense of brand personality. However, with over 57 million blogs from which to choose, campaigns targeting bloggers need to be well researched and planned, and while CEO blogs may achieve a high profile, only 2% of UK consumers trust the information they contain. The primary message for marketing practitioners is the need to understand that they share control of the brand with consumers who want and expect to engage with them in a rich online dialogue. Online social media offer the opportunity to connect with audiences drifting away from traditional media.

Marketers should be aware of the risks involved in attempting to influence online WOM—dialogue should be open, honest, and authentic, or marketers risk a costly backlash. *Cillit Bang* created a fictional character that posted a comment to a blogger's story about his reconciliation with his father after a 30-year separation that contained an advertisement for bleach, prompting a massive wave of negative publicity both online and offline.

Limitations and Future Research. Of course, there are also limitations to our approach, some of which are inherent to our method and others perhaps to our context. First, experienced Internet users were used within Study 1 in order to be certain of their experience with the issues being researched. While this was important at these early stages of the conceptualization, we recognize that there is a possibility that less experienced Internet users may evaluate information differently. For example, lack of experience may lead to naivety and credibility being given to all information on the Internet (witness the recent growth of online encyclopedias such as Wikipedia). Future research should explore whether there are any important differences in Internet users of different levels of experience or usage. Furthermore, only one online community was selected for Study 2. The experiential nature of the product category chosen within this community may restrict the generalizability of these results. As well as this, we did not examine how individuals integrate online with offline information, such as that from magazines or advertisements. While this was not our aim it does seem to be of likely importance, and thus we recommend future research look more deeply into the relevant issues. This exploratory study supported the existence of several

types of consumer–Web-site relationships. Further research is required to fully conceptualize this idea and move toward the development of measures.

In conclusion, we have identified three key constructs that appear to influence how consumers evaluate information in an online context, without the benefit of traditional offline social cues. We found that consumers appear to show signs that suggest they feel as if they are interacting with Web sites rather than individuals themselves, when looking at information online. However, much more needs to be understood about the differences between the social aspects of information evaluation online, and we have provided some initial directions for future research. We hope future research will take on board our key findings about how individuals interact with Web sites and information, in order to expand our knowledge of this important area.

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