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THE EFFECTS OF ONLINE COMMUNITY CUSTOMER REVIEWER
PROFILES ON PERCEPTIONS OF CREDIBILITY

A Thesis in
Information Sciences and Technology

by

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ABSTRACT

It is an easy task for people to browse word-of-mouts (WOM) shared by millions of others online. However, this large amount of information does not always guarantee better decision making, and there presents the risk that users will accept misinformation. As a matter of fact, the computer-mediated nature of electronic word-of-mouth (eWOM) means that its credibility is open to question even as the platforms expand the speed and scope of WOM. In this regard, this study explores how information provided by an online community platform, Yelp.com, supports the receiver’s credibility assessment of eWOM in the context of the community’s restaurant reviews. The results demonstrate that profile elements such as the number of reviews written by a reviewer and the reviewer’s achievement of the community’s elite member status affect at least one dimension of the reviewer’s source credibility. The results also show that the number of friends the reviewer has exerts a relative influence on the receiver’s assessment of credibility. The findings provide a valuable illustration of how people’s perceptions of eWOM credibility are influenced by the online community platform.
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Chapter 1  Introduction

“I actually like Yelp as a consumer. But I do take their reviews not with a grain of salt but with a full saltshaker.” – MM from Seattle in *Here’s Your Chance to Review Yelp* (MM, 2010)

The Internet has revolutionized word-of-mouth (WOM) (De Valck, Van Bruggen, & Wierenga, 2009). It is nothing new that consumers refer to others’ opinions before making a purchase. However, people now have access to more and more varied sources of the information. Currently, people can easily browse opinions posted by millions of “physically distant, psychologically unknown, and literally faceless” fellows in online communities (Ganley & Lampe, 2009). On the one hand, the growth of the Internet has radically increased the amount of information people have access to; however, on the other, there are huge question marks over the credibility of the WOM messages shared in this way. In this situation, what are the clues online community members take into account to evaluate the credibility of electronic word-of-mouth (eWOM) messages?

The power of WOM lies in its relative credibility and persuasiveness. Consumers perceive information from fellow consumers as more authentic and credible than they consider information offered by marketers. According to Roper Research (Keller & Berry, 2003), 83% of American adults consider “people” (friends, family, or others in their social networks) as among the two or three best sources of ideas and information about
restaurants to try. In addition, 71% said the same about places to visit, and 63% responded the same in regard to choosing hotels.

Traditional, face-to-face WOM, though, is restricted to a localized social network (J. J. Brown & Reingen, 1987). The typical orally conveyed WOM is interpersonal, ephemeral, and limited in scope; thus, it is difficult to make an impact on a large population of people over time and space. However, the Internet has enabled many-to-many communication among users (Hoffman & Novak, 1996), and the participatory nature of Web 2.0 has made it much easier for individual consumers to voice their opinions. This has led to the emergence of eWOM.

Unlike traditional WOM, eWOM is generally transferred among strangers via written words. Therefore, receivers cannot obtain knowledge about the senders based on the social context cues used in face-to-face interactions. Moreover, some marketers abuse the attributes of eWOM, even disguising their advertisements so that they appear to be eWOM (Litvin, Goldsmith, & Pan, 2008). Overall, it has become very difficult to assess the credibility of eWOM messages. This issue of credibility is problematic, as consumers must necessarily find it difficult to take full advantage of the reviews shared by others. However, the problem of eWOM’s credibility can be addressed by improving the design of online community platforms such as consumer review sites.

Consumer review sites are a specialized form of online community in which the members share their consumption experiences. The communities provide a “venue”
through which many individuals can express their opinions to a potentially very large audience (Armstrong & Hagel, 1999). On the other, they function as specialized consumer knowledge “reservoirs” that information seekers can easily access (De Valck, et al., 2009). For these reasons, online communities are very influential in terms of disseminating WOM. One distinctive characteristic of online communities as a WOM platform is that they mediate both information exchanges and social interactions among the members. Social interaction is the key element of the online community, and thus many communities are moving in the direction of improving the sociability of the platform, for example, by adopting social networking features.

Yelp.com is one of the leaders of this movement. The popular online review site is enthusiastic about fostering its user community. And, it has strategically incorporated social networking features into its platform, and adopted many tools that enable the members to express themselves and to interact with others. Yelp’s social networking features are cleverly combined with its function as a review site, and the platform presents a brief profile of the reviewer next to each review. The platform displays the reviewer’s name, location, profile photo, number of reviews posted on the site, number of friends, and an elite badge (if the reviewer has elite status). This information both allows the reviewers to present themselves with some context and furnishes some background information to the receivers. In this way, Yelp has succeeded in rewarding individual contributors and highlighting the “real people” behind the reviews.
However, despite the advances in online community environments, there exists limited literature concerning the effects of the new social cues provided by online community platforms on receivers’ perceptions of WOM credibility. In this regard, this study draws on a foundation of social information processing theory and signaling theory to examine how the different profile elements of reviewers affect receivers’ credibility assessment of online reviews. The findings will be valuable inasmuch as they will have implications for marketing and IT managers as well as online community members as senders and receivers of eWOM.
Chapter 2 Literature Review

2.1 Online Communities as a Communication System

The concept of “online community” (also, virtual community) refers to “social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace” (Rheingold, 1993, p.5). Online communities have great influence on people’s lives because they remove the boundaries set by time and distance, making it much easier for people to obtain information, build relationships, keep up and deepen connections, and gather with like-minded people whom they would never have met otherwise (Wang, Yu, & Fesenmaier, 2002). Pew Internet & American Life Project’s study reported that 84% of American Internet users (about 90 million) either contacted or got information from online communities, and 79% of them were in regular contact with at least one online community (2001). In online communities, people are the sources of information. Community members engage in social interactions in the course of information sharing, and there can be little doubt that connecting with other members is an important aspect of the online community experience.

In particular, online communities are a growing channel for WOM communication. Kozinets (1999) highlights the fact that many of these communities are structured around consumption activity, and coined the phrase “virtual communities of consumption,” which indicates “affiliative groups whose online interactions are based upon shared
enthusiasm for, and knowledge of a specific consumption activity or related group of activities” (p.254). Moreover, Bickart and Schindler’s (2001) study indicated that online communities function as important reference groups for consumers.

eWOM transmission and other communication via online communities is largely influenced by the particular technology platform through which the interaction takes place. The technology platforms function as meeting places in offline interaction, and accordingly, they shape the communication among the members (Stanoeva-Slabeva & Schmid, 2001). In this regard, Stanoeva-Slabeva and Schmid referred to the members and the supporting platform as the two constitutional elements of online communities, and Preece (2001) suggested that users, a shared purpose among the users, policy, and computer systems are the basic elements of online communities. On this account, the technology platform plays a central role in promoting and/or undermining eWOM credibility.

2.2 Word-of-Mouth and Consumer Decision Making

In general, WOM is defined as “informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods, services or their sellers” (Westbrook, 1987, p.261). The key defining factors of WOM are (1) the perceived independence of the sender from marketing activity and (2) interpersonal channels as the medium rather than mass media (Litvin, et al., 2008). Cheong and Morrison (2008) reported that consumers are more likely to trust product information
generated by other consumers than information generated by manufacturers, because they believe other consumers are likely to provide more than unconditionally positive comments about products. Day (1971) suggested that WOM is nine times as effective as advertising in terms of changing consumer attitudes in a positive direction.

WOM plays an important role in marketing, because of its influence on consumer decision making. According to information processing theory, in general, consumers’ purchase decision making consists of five stages: (1) problem recognition, (2) information search, (3) alternative evaluation and selection, (4) outlet selection and purchase, and (5) post-purchase processes along with purchase decision making (Hawkins, Best, & Coney, 1995). It is “a funnel-like procedure of narrowing down choices among alternatives,” and consumers tend to seek information that they think will help them to make better choices (Sirakaya & Woodside, 2005, p.815).

The reason consumers seek WOM communication can also be explained using uncertainty reduction theory. When consumers lack knowledge of a product or the expected outcome of consumption, they are likely to engage in uncertainty reduction processes to minimize risk and to maximize consumption value (Hu, Liu, & Zhang, 2008). Moreover, researchers have found WOM to be more important and influential in a service context than in a product context due to the intangibility of services and the level of associated risk (Murray & Schlacter, 1990). This fact is especially meaningful to Yelp.com, as most of the reviews on this site are about service-oriented businesses.
Literature on WOM can be broadly divided into two levels, macro and micro (J. J. Brown & Reingen, 1987) as shown in Figure 2-1. Micro-level studies explore the WOM behaviors and decision-making processes of individual consumers. The literature concentrates on the interactions between four focal points, the antecedents and consequences: (1) WOM sender characteristics and their information-sharing behavior (Anderson, 1998; Engel, Kegerreis, & Blackwell, 1969), (2) WOM receivers and their use of WOM in decision making (Arndt, 1967; Bone, 1995), (3) WOM message properties such as direction and information quality (Mahajan, Muller, & Kerin, 1984; Richins, 1983), and (4) the relational properties between WOM senders and receivers such as tie strength and homophily (J. J. Brown & Reingen, 1987; Gilly, Graham, Wolfinbarger, & Yale, 1998). Macro-level studies focus on the diffusion of WOM in large-scale social networks (J. J. Brown & Reingen, 1987). In face-to-face settings, it is difficult to capture actual WOM transmissions due to the ephemeral nature of verbal communication. Moreover, in these settings, researchers faced problems pertaining to collecting data, especially for macro-level studies; therefore, traditional WOM literature put more emphasis on micro-level studies.
2.3 eWOM and Threats to Credibility

eWOM refers to word-of-mouth communication delivered through Internet-based technology (Litvin, et al., 2008). eWOM takes a variety of formats from e-mails to discussion threads, chatrooms, and even microblog posts, such as tweets (Jansen, Zhang, Sobel, & Chowdury, 2009; Pollach, 2006). eWOM is a complex phenomenon and brings several new dimensions to WOM marketing. Three major ways in which eWOM is differentiated from traditional WOM are as follows: (1) eWOM takes advantage of the unprecedented scale afforded by the Internet,(2) the potential of information systems in terms of controlling and monitoring eWOM, and (3) the new challenges emerging from the characteristics of online interaction, such as identity issues and the absence of contextual cues (Dellarocas, 2003).
The differences between traditional and online WOM have given rise to research trends in eWOM as well as consumers’ eWOM behavior. The fact that many forms of eWOM can be monitored has given rise to a new kind of macro-level WOM research which investigates eWOM as accumulated customer opinion and derives phenomena by observing eWOM as a collective mass (Lee & Lee, 2009). Several studies have indicated that online reviews can be an effective predictor of market response and focused on measuring the collective mass (Fig. 2-2). Dellarocas et al. (2007) demonstrated that online movie reviews represent the opinions of the movie-going population at large, and that online user ratings can be better predictors of box office revenues than professional critic reviews. Also, studies have demonstrated that there is a relationship between the volume of online reviews and sales revenue in the area of book and music sales (Dhar & Chang, 2009; Duan, Gu, & Whinston, 2008).

**Figure 2-2.** Recent eWOM literature with market-level view
The measurability of eWOM has drawn considerable attention from academia, and as a result, eWOM literature has concentrated on analysis using observable eWOM messages. In this regard, very few empirical studies have investigated individual consumers’ eWOM behavior on a micro-level. However, as Dellarocas (2003) pointed out, along with its enlarged scale, eWOM gave rise to new challenges coming from the characteristics of computer-mediated communication (CMC) environments. One of the major challenges is the credibility problem due to the anonymity regarding the sender of eWOM.

Given the lack of interpersonal knowledge and the absence of non-verbal cues of eWOM, it is difficult for receivers to evaluate messages by referring to the senders as they do for traditional WOM. Moreover, there is the increased possibility of “stealth marketing” (Litvin, et al., 2008). Companies can easily have their employees write positive reviews about their products and/or post harsh ones about a rival’s product (Litvin, et al., 2008). Regarding the fact that WOM is perceived to be credible because of the sender’s independence from the market (J. Brown, Broderick, & Lee, 2007), the possibility of stealth marketing seriously undermines eWOM credibility. While several stealth-marketing cases have been reported in the music, book, and travel industries (Harmon, 2004; Keates, 2007; White, 1999) and many online community users are aware of the phenomenon, there is little research on how consumers deal with this possibility in their use of eWOM.

Meanwhile, since the early Internet days there have been considerable changes to online communities and other CMC platforms, such that systems now support more
social affordance by implementing social networking features that provide more information about the senders of eWOM. In this regard, there is a need for a scientific investigation into how best to support eWOM’s credibility in association with the changing IT environment.

2.4 Source Credibility

Credibility refers to the extent to which receivers consider information to be believable (Eisend, 2006). Perceptions of credibility affect a receiver’s intention to alter his or her attitude based on the information (Hovland, Janis, & Kelley, 1953), and thus, it is an important concept regarding the WOM influence.

Credibility is not only attributed to the information itself, but also to the source and the medium through which the information is transmitted (Kiousis, 2001). Slater and Rouner (1996) suggested that credibility assessments depend on (1) knowledge of and attitude toward a particular source, (2) attitude toward the reputed credibility, and (3) the quality of a message in terms of its presentation, plausibility, and grounds.

In particular, source credibility refers to a communicator’s positive characteristics, which also influence the receiver’s acceptance of a message (Ohanian, 1990). Source credibility is a multi-dimensional concept, and in general, expertise and trustworthiness are identified as its key elements (Kiousis, 2001). Related to source credibility is the concept of source expertise. Referring to the receivers’ perceptions of the relative competence of the sender of a given message, source expertise is usually determined
through an evaluation of the knowledge possessed by the communicator (J. Brown, et al., 2007; Gotlieb & Sarel, 1991). And, it is characterized by terms such as knowledgeable, experienced, and competent (Fogg, Marshall, Laraki, et al., 2001). Trustworthiness refers to the extent to which receivers perceive the claims made by a communicator to be his or her true opinion (Hovland, et al., 1953); it is generally defined by terms such as well-intentioned, truthful, and unbiased (Fogg, Marshall, Laraki, et al., 2001). These evaluations of a message sender by a receiver take place at the point of contact; therefore, in the case of CMC, the system interface plays a major role in the process of evaluation.

Source credibility has received wide attention from marketers, because the influence of a message on consumers’ behavior is higher when the source is perceived to be credible (Bansal & Voyer, 2000; Dholakia & Sternthal, 1977). In the case of CMC settings, Sussman and Siegal (2003) proposed a model of information adoption in which source credibility is an antecedent of information usefulness and potential information adoption along with the message’s argument quality, thereby explaining how users accept information posted in CMC contexts.

Source credibility is an especially important concept in terms of eWOM, because the power of WOM comes from the sender as a fellow consumer who is independent of a firm’s marketing activity (Cheong & Morrison, 2008). Further, individual consumers have varying degrees of credibility as an information source, and unlike articles in traditional mass media, eWOM posted online have not gone through any publishing or editing processes. Nevertheless, there is not much literature on the source credibility of eWOM. Brown et al. (2007) studied the source credibility of an online community;
however, their study explored the WOM transmissions of an online community in general rather than the transmissions of individual senders’ messages. However, it is worth noting that their results indicate that the online communities themselves function as social proxies for the source. Individual members of online communities are rarely highlighted as subjects of source credibility. This is because early CMC environments were characterized by users being represented only by their user names. The absence of prior relationships and social cues meant that the eWOM literature tended to focus on message content rather than on the sender’s credibility.

However, CMC environments have evolved, such that they now support more social cues to represent the users and provide some ways to address credibility issues. Even though, in general, the face-to-face communication setting is far superior to most CMC systems in terms of identification, accountability, and authorization, it is also possible for CMC systems to provide a stronger basis for interpersonal knowledge, and CMC systems’ ability to maintain and retrieve records can be helpful in these regards (Etzioni & Etzioni, 1999). This study aims to investigate how the new cues provided by online community platforms can help users to assess eWOM messages in terms of their relative credibility.

2.5 Social Information Processing Theory and Signaling Theory

Social information processing theory (SIP) and signaling theory provide possible ways to explain how the changing CMC environment affects user’s perceptions of the credibility of eWOM. The SIP theory of CMC claims that communicators employ
alternative communication cues to compensate for the absence of non-verbal cues used in face-to-face interactions (Walther, 1992). Walther proposed the theory as an alternative to the “cues-filtered-out” approach, which emphasizes how CMC limits the “bandwidth” of social communication (Sproull & Kiesler, 1986).

SIP theory has been supported in several CMC settings, and the results suggest that when people communicate online they either put greater emphasis on the remaining text-based cues or use alternative cues provided by the platform (Walther & Parks, 2002). For this reason, SIP theory is referred to as a “cues filtered out, cues filtered in” approach. In addition, SIP assumes that meaningful social relationships can be built through CMC environments (Walther & Parks, 2002). For example, time stamps of e-mail messages are proven to affect the communicator’s judgment of affection and dominance in the messages (Walther & Tidwell, 1995). Also, Utz’s (Utz, 2000) research suggests that the use of paralanguages such as emoticons in multi-user dungeons (MUD) can be a significant predictor of friendship development. In the area of information systems, Ma and Agarwal’s (2007) study indicates that the use of four types of IT artifacts designed to support virtual co-presence, persistent labeling, self-presentation, and deep profiling promote members’ perception of identity verification.

Vazire and Gosling’s (2004) study of visitors’ personal impressions of personal websites provides a good illustration of use of online cues for interpersonal perception. The study was an extension of Gosling et al.’s (2002) research on the model of interpersonal perception based on physical spaces to online environment. The model proposes two mechanisms through which an individual’s personality is displayed in
physical environments: identity claims and behavioral residues. Identity claims are intentional: they are symbolic statements made by individuals as part of their self-presentation such as the way in which a personal space is decorated (Gosling, et al.). On the other hand, behavioral residues are unintentional: they are physical traces of the individual’s activity in an environment that have not been designed with a focus on self-presentation, such as the way CD collections are organized (Gosling, et al.). Vazire and Gosling (2004) considered personal websites to be a collection of identity claims, and compared observers’ perceptions of website authors’ personalities based on websites with the actual self- and informant-reported personalities of the authors. The results indicate that cues on personal websites communicate valid information about the author.

Signaling theory also provides support for how platform cues can help address the credibility issues related to eWOM. Signals refer to a subset of cues developed to present a quality about the signaler or the surrounding environment (Donath, forthcoming). This theory explains why certain signals are more reliable than others in terms of the costs to disguise the signals (Donath, forthcoming). Though derived from biology and economics, the theory also can be applied to human communication. For instance, in interpersonal communication, people cannot observe all the characteristics of their companions directly; instead, they rely on observable features and actions such as facial expressions, statements, and qualities of speech in order to make inferences (Donath, 2008).

Donath (forthcoming) classifies signals into three categories: handicap, index, and conventional signals. Handicap signals are costly to produce, and the signaler needs to expend considerable resources that are finite such as time and money to produce them
Index signals rely on the signaler possessing a certain quality directly related to the signal; that is, only a signaler who has a quality directly related to the signal to be produced can actually produce that signal (Donath). Donath also defined the handicap signal and the index signal together as an assessment signal in contrast to a conventional signal. Assessment signals are naturally associated with the quality they advertise; thus, receivers can assess the quality when they observe the signals (Donath). Therefore, these signals are reliable. In contrast, conventional signals are related to the quality only by custom or convention, and the signaler does not necessarily need to have the quality in order to produce the signal (Donath). For this reason, people can produce signals by mimicking certain characteristics of individuals who actually have a given quality (Donath). Therefore, conventional signals are rather unstable and open to being used deceptively (Donath). Donath claims that most signals in online contexts are conventional signals, as people can easily manipulate their profiles, words, and images.

In the context of CMC, components of the software platform can function as signals. There have been several studies about signaling in the context of social networking. For example, Donath and boyd (2004) claimed that “public displays of social connection” can be strong signals of identity. Also, Lampe, Ellison, & Steinfield (2007) indicated that elements of an online profile can affect relationship building in social networking sites. In addition, other users can assess these elements in order to make sense of a given person’s expertise (Shami, Ehrlich, Gay, & Hancock, 2009).

A fair number of studies support the role of platform cues as signals of online community members’ qualities; yet, there is limited literature on how receivers of eWOM
use the cues to make sense of the credibility of online reviews posted by the members. Therefore, in this study, I assume that user profiles displayed next to the consumer reviews in many online review sites function as a collection of signals about reviewers. And, on this basis, I investigate how they influence the readers’ perceptions of the credibility of eWOM messages. Profile elements present certain aspects about the user who wrote the review, and social networking on the websites can provide some verification regarding the information (Donath & boyd, 2004). In this regard, I will investigate how each profile element affects source credibility of eWOM. This study is significant in that (1) it demonstrates how consumers assess eWOM in terms of credibility in the context of online environments given the threat of stealth marketing and (2) it explores how the online community platform influences the outcomes of eWOM transmissions. Studies on eWOM have generally only considered the IT platform as a context. However, I take a different approach: I examine how the platform’s elements affect the eWOM by signaling the reviewer’s quality, as indicated in Figure 2-3. In this way, then, the present study offers valuable insight into how eWOM is used and understood. Specific research questions and hypotheses are proposed in the next section.
Figure 2-3. Conceptual image of this study.
Chapter 3  Research Questions and Hypotheses

Based on the current state of knowledge and theory regarding eWOM, I propose the following research questions and hypotheses to address the influence of user profile elements on a receiver’s perception of the credibility (expertise and trustworthiness) of a review. The five user profile elements considered are (1) the number of reviews a reviewer has written, (2) the number of friends a reviewer has, (3) a reviewer’s achievement of elite status, (4) a reviewer’s location, and (5) a reviewer’s inclusion of a profile photo. Credibility was conceptualized with the two most general dimensions in the literature: expertise and trustworthiness. The influences of the two dimensions of source credibility—expertise and trustworthiness—are structured into two independent hypotheses, because (1) there is not much literature on how the two dimensions of credibility interact with and influence other factors in the context of online consumer reviews, and (2) research has demonstrated that the two dimensions do not always function equally (Lui & Standing, 1989).

RQ1: Are receivers’ perceptions of the credibility of a review affected by the number of reviews written by the reviewer?

H1a: There is a positive relationship between the number of reviews the reviewer has written and the perceived expertise of reviews by the reviewer.
H1b: There is a positive relationship between the number of reviews the reviewer has written and the perceived trustworthiness of reviews written by the reviewer.

Many online review sites display the number of previously written reviews as a part of the users’ profiles. It is a kind of behavioral residue automatically counted and displayed by the community platform; it is, therefore, a solid signal in that it indicates the reviewer’s previous contributions to the community. The quality of the previous reviews might vary, but the number itself is a definite fact indicating that the reviewer has spent some time to write reviews and has a level of commitment to this activity. In this study, the number of previous reviews is operationalized based on number; that is, a high number of previous reviews is considered a signal of the reviewer’s experience and of interest in a given topic, and moreover of the high credibility of the reviewer’s reviews.

RQ2: Does the number of friends a reviewer has affect the receivers’ perceptions of the credibility of a review written by the reviewer?

H2a: There is a positive relationship between the number of friends the reviewer has and the perceived expertise of a review written by the reviewer.

H2b: There is a positive relationship between the number of friends the reviewer has and the perceived trustworthiness of a review written by the reviewer.

Online communities that incorporate social networking features tend to display the number of friends a user has as a profile element. Number of friends can also be a behavioral residue of the member’s previous activities. Unlike other social networking
sites such as Facebook or MySpace, the social networks on online review sites are less influenced by the members’ offline relationships, and are largely mediated by the reviews written by the members. Members reveal themselves by posting reviews, and on the basis of their reviews they receive friend requests from others. Adding someone as a friend indicates that a user wishes to receive updates on that person’s community activities (in this case, mostly review writing) and that the user wishes to notify the other person about his/her own activities. However, this is not a “fan” relationship. Instead, “friends” is a two-way relationship: for example, if user A considers user B’s reviews to be of no interest, user A can un-friend user B. In this regard, a large number of friends can mean that many people value a reviewer’s opinion, a point that supports that reviewer’s credibility.

RQ3: Does a reviewer’s achievement of elite status affect the receivers’ perceptions of the credibility of a review written by the reviewer?

H3a: There is a positive relationship between a reviewer’s elite status and the perceived expertise of reviews written by the reviewer.

H3b: There is a positive relationship between a reviewer’s elite status and the perceived expertise of reviews written by the reviewer.

Many review sites indicate who their top contributors are by presenting badges that indicate this status. Sundar et al.’s (2009) study indicated that authority cues awarded to a product such as “Editor’s Choice 2007” influence consumer decision making by
prompting heuristic processing. I think that elite status awarded to community members is likely to work in a similar way, by supporting the credibility of the information shared by the reviewers who have this status. Therefore, this study operationalized the reviewer’s ownership of elite status by the designation of an elite badge.

RQ4: Does the reviewer’s relative location (with respect to the location of the restaurant he or she has reviewed) affect receivers’ perceptions of the credibility of reviews written by the reviewer?

H4a: There is a positive relationship between the reviewer’s relative location (with respect to the location of the restaurant he or she has reviewed) and the perceived expertise of reviews written by the reviewer.

H4b: There is a positive relationship between the reviewer’s relative location and the perceived trustworthiness of a review written by the reviewer.

The location of the reviewer can be a signal of the reviewer’s credibility, as restaurants and many local businesses primarily target a population within the area. I assume physically being in same area as a restaurant can signal that the reviewer has a high level of knowledge regarding the restaurant and the competitors. In this study, relative location is operationalized by whether the user lives in the same city as the restaurant he or she has reviewed.

RQ5: Does the reviewer’s inclusion of a profile photo affect the receivers’ perceptions of the credibility of reviews written by the reviewer?
H5a: There is a positive relationship between the reviewer’s inclusion of a profile photo and the perceived expertise of reviews written by the reviewer.

H5b: There is a positive relationship between the reviewer’s inclusion of a profile photo and the perceived trustworthiness of reviews written by the reviewer.

Profile photos are a standard self-presentation strategy on social networking sites. While other profile elements are textual, the profile photo provides visual information about the user. In this regard, the effect of photos has been studied by many researchers. Steinbrueck et al.’s (2002) study suggests that adding photos of customer service agents to an e-bank website has a positive effect on user trust because they create a social presence and induce an interpersonal process that is somewhat similar to face-to-face sales conversation situation. Fogg et al. (2001) also showed that adding a formal photo of the author can raise the perceived credibility of web content. In online communities, setting a profile photo can be interpreted as self-disclosure, and moreover, as a sign of commitment to the community. In this regard, setting a profile photo can have a positive influence on receivers’ perceptions of a reviewer’s credibility. Therefore, the profile photo variable was operationalized as to whether the user had set a profile photo.
Chapter 4  Methods

4.1 Research Setting: Yelp.com

This study employs Yelp.com as its model online community, and the stimuli in the experiment are based on Yelp’s community platform. Yelp is famous for consumer reviews of local businesses. Under the slogan “Real people. Real reviews,” Yelp has grown rapidly since its launch in 2004, and now it is the most popular website in the consumer opinion category (Alexa Internet), and 48th among all websites (Alexa Internet).

Yelp places considerable emphasis on social interactions among its members. Basically, the members have their own profile pages, and they can obtain their own URLs, such as http://yourname.yelp.com. Members can build social relationships with others such as “friends” and “fans” (the main difference is that friends indicates a reciprocal relationship, whereas the fan relationship does not), and the friends network is explicitly displayed to the public and can be explored by others. Such characteristics actually fulfill the definition of social networking sites as described by boyd and Ellison (2008). The idea behind Yelp’s friendship network is that members are likely to trust their friend’s reviews more than those written by others (Zhang, 2009). Therefore, Yelp concluded that highlighting the members as contributors and providing ways for them to express themselves would lead to a positive feedback loop of participation. There are also other features such as the ability to post different kinds of compliments to recognize good
reviews and the ability to create and join sub-communities, such as the Yelp Elite Squad for “the most passionate” members (Yelp).

As well as the profile webpage, Yelp also displays a brief version of the user’s profile next to each review written by that user. The elements included are (1) name, (2) location, (3) profile photo, (4) number of reviews posted on the site, (5) number of friends, and (6) elite badge (if the reviewer has elite status). The present study focuses on examining how this information provided with consumer reviews influences receivers’ perceptions of the credibility of reviews.

4.2 Procedure

To explore the research questions and hypotheses stated in the previous section, an online survey was conducted. The survey consists of two parts: The first part quantitatively tested the proposed hypotheses and the effects of the profile elements, and the second part qualitatively explored how people assess online reviews in terms of credibility and how they use the profile information in those assessments.

At the beginning of the survey, the participants were asked to place themselves in a situation in which they are planning a trip to San Francisco, California, and browsing online restaurant reviews posted on a popular restaurant review site by users. Participants were then asked (1) to assess the credibility of five restaurant reviews and (2) to state the criteria they would use to assess the expertise and trustworthiness of an online review. In the quantitative part, five reviews were shown in a random sequence, and for each review,
participants were randomly assigned to one of two treatment conditions that were identical in everything except for the manipulation of one of five independent variables: (1) the number of reviews the reviewer had written to date, (2) the number of friends a reviewer has, (3) the reviewer’s achievement of elite status, (4) the reviewer’s location, and (5) the reviewer’s inclusion of a profile photo. For the qualitative analysis, one user review was presented, and the participants were asked to state the criteria they would use to assess the expertise and the trustworthiness of the review in two separate questions.

The fictitious travel situation was introduced to prevent the participants from relating the stimulus reviews to specific restaurants in the town in which the survey was being conducted. Five reviews for quantitative analysis were shown in random sequence to prevent a verification of a hypothesis being affected by the reviews shown ahead, and qualitative analysis questions were placed after the quantitative section for the same reason. Manipulation of independent variables was based on a pilot survey, the details of which are stated in the experimental treatment section. The complete survey is presented in Appendix A.

4.3 Participants

One hundred and twenty-nine students (90 male, 39 female) from an undergraduate course in information science participated in the survey. Participants received extra credit for participating in the study. More than half of the participants were heavy users of the Internet, using it more than three hours a day, and over 90% of the participants said that
they were at least somewhat familiar with online communities and social media. Table 4-1 indicates the summary of sample demographics.

Table 4-1
Sample Demographics ($N = 129$)

<table>
<thead>
<tr>
<th></th>
<th>Mean or % (N)</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69.8% (90)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>30.2% (39)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>19.97</td>
<td>1.62</td>
</tr>
<tr>
<td>How many hours a day do you use the Internet?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 30 minutes</td>
<td>0% (0)</td>
<td></td>
</tr>
<tr>
<td>30 minutes to one hour</td>
<td>3.9% (5)</td>
<td></td>
</tr>
<tr>
<td>1 to 2 hours</td>
<td>17.1% (22)</td>
<td></td>
</tr>
<tr>
<td>2 to 3 hours</td>
<td>23.3% (30)</td>
<td></td>
</tr>
<tr>
<td>3 to 4 hours</td>
<td>27.9% (36)</td>
<td></td>
</tr>
<tr>
<td>More than 4 hours</td>
<td>27.9% (36)</td>
<td></td>
</tr>
<tr>
<td>How familiar are you with online communities and social media?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all familiar</td>
<td>0.8% (1)</td>
<td></td>
</tr>
<tr>
<td>Not very familiar</td>
<td>6.2% (8)</td>
<td></td>
</tr>
<tr>
<td>Somewhat familiar</td>
<td>41.1% (53)</td>
<td></td>
</tr>
<tr>
<td>Very familiar</td>
<td>51.9% (67)</td>
<td></td>
</tr>
</tbody>
</table>

4.4 Stimulus Material and Experimental Treatments

Six consumer reviews were created as stimulus materials based on the review format of Yelp. Five reviews were developed to quantitatively investigate the effect of each of
five independent variables (the number of reviews written by a reviewer, the number of friends, elite status, location, and inclusion of a profile photo), and the sixth review was developed to qualitatively explore the criteria participants used to assess the expertise/trustworthiness of a consumer review.

Figure 4-1 shows a sample consumer review used in the survey, with all reviews presented in Appendix B. The reviews basically emulated the structure of the user reviews on Yelp.com. All the reviews pertained to restaurants. Since review category can be an important moderating factor, we stayed with a single review category, selecting “restaurant” because it is the most popular category on Yelp: it is the category about which the most people share information. Synthesis Alliance reported that 94% of people seek or provide information about restaurants (Allsop, Bassett, & Hoskins, 2007).

All six reviews are composed of a reviewer profile part on the left and a message part on the right. The message part was controlled in this study, and only the consumer profile part was manipulated. Also, the presentation of the elements of the user profile part was adjusted because the study participants were not recruited from among actual users of Yelp.com; therefore, they were unlikely to be unfamiliar with the platform. None of the elements were added or excluded, but they were enlarged and replaced with the versions that appear on the individual profile pages. In particular, on Yelp, the number of friends and the number of reviews only appear with icons in the profile next to each review, but we added the captions “reviews” and “friends.” Also, the elite status on Yelp is indicated with plain text, but we replaced it with a badge on the individual member’s profile page.
Figure 4-1. A sample stimulus review.

For the message part of the review, six reviews were written for six different restaurant categories: Japanese, Italian, Mexican, steakhouse, sandwich place, and brunch restaurant. All six were four-star reviews, as four-star is the most common rating on Yelp and it is close to the average (3.77 stars) of star ratings of Yelp reviews (as of Sept, 2008, from Yelp’s FAQ page, the review distribution graph is presented in Appendix C) (Yelp). Accordingly the contents of the reviews were mainly positive with some references to minor shortcomings. The reviews were written by reconstituting several four-star reviews in the six restaurant categories. Each review was about a hundred words long, and each was written around the components of food, service, atmosphere, and value.

For each of the five consumer reviews for quantitative analysis, only one of the five independent variables was manipulated in the different conditions, and the other four variables were controlled. Manipulation of the number of friends and the number of reviews written by a reviewer were based on a pre-survey administered to eight people. The results of the pre-survey indicated that people think an average user of a restaurant review site would have written 5.56 ($SD = 4.65$) reviews, and more than 11.81 ($SD = 8.90$)
reviews can be considered to be many. For the number of friends, people considered 9.5 ($SD = 8.65$) as the average number of friends a reviewer would have, and said that 28.75 ($SD = 29.97$) friends can be considered many. In consideration of the results, 5.5 reviews and 9.5 reviews were used as the baseline numbers for the average reviewer profiles, and for the cases of many-reviews and many-friends conditions, the number of reviews and number of friends were set to surpass 11.81 and 28.75, respectively. Also, profile photos used to manipulate the reviewer profiles were chosen based on the criteria of an image of a person in which the person’s face was not highlighted and that did not show a restaurant or any eating activity. In addition, three of the photos were of females and two were of males.

To test H1a and H1b, a sandwich place review was used with manipulation of the number of reviews written by the reviewer into two conditions: many-reviews and few-reviews. For the many-reviews condition, the number of reviews a reviewer had written to date was 239, while for the few-reviews condition, the number was 1. The profile elements other than the number of reviews were identical for the two conditions. For both conditions, the reviewer did not have elite status, lived in San Francisco, had nine friends on the website, and had set a profile photo.

To test H2a and H2b, a Japanese restaurant review was used with manipulation of the number of friends of the reviewer into two conditions: many-friends and few-friends. For the many-friends condition, the number of friends the reviewer had was set to 384, while for the few-friends condition, the number was 1. The profile elements other than the number of friends were identical for the two conditions. For both conditions, the
reviewer did not have elite status, lived in San Francisco, had previously written 11 reviews on the website, and had set a profile photo. The reviewer profile for the Japanese restaurant review had a higher number of previous reviews than the baseline value, because for the social networks on the online review sites, people identify potential friends by reading others’ reviews; therefore, the number of friends tends to depend on the number of reviews. In this regard, I assumed that it would be realistic for the reviewer profile to indicate a higher number of reviews when the number of friends was manipulated into the many- and few-friends conditions.

To test H3a and H3b, a Mexican restaurant review was used with a user profile in two conditions: elite and non-elite. The elite condition profile presented the badge indicating that the reviewer is 2010 Yelp elite member, while the non-elite condition profile did not. For both conditions, the reviewer lived in San Francisco, had written 45 reviews to the website to date, had nine friends, and had set a profile photo. The number of reviews and the number of friends for the Mexican restaurant reviewer were set based on an actual elite reviewer’s profile. Yelp conceptualizes its “Elite Squad” as active evangelists and role models both online and offline (Yelp, 2010). Therefore, the elite members tend to have high numbers of reviews and friends, but there is not a clear standard for elite membership. I searched over 500 Yelp user profiles and used the numbers combination from an elite member closest to our baseline numbers of reviews and friends.

To test H4a and H4b, a steakhouse review was used with a user profile in two conditions: local and out-of-town. For the local condition, the location of the reviewer
was San Francisco, California, the same as the location of the restaurant. For the out-of-town condition, the reviewer’s location was Warrensburg, California; a town that does not exist. Other than the location, the profile elements were identical—a non-elite member who had written five reviews, had nine friends in the network, and had set a profile photo.

To test H5a and H5b, an Italian restaurant review was used with manipulation of the user profile into two conditions: no-photo and with-photo. For the no-profile photo condition, the user profile part displayed an image of a person in silhouette with a question mark as used in Yelp.com to indicate that a reviewer has not set a profile photo. Unlike the other conditions, for the with-photo condition, there were two sub-conditions with two different photos: photo A and photo B. I assumed that the content of the profile photo moderates the effect of the photo set-up; therefore, I prepared two photos to illustrate different situations, thereby ensuring that the result is not attributable to the characteristics of a particular photo. Other profile elements were equal for all conditions. The reviewer did not have elite status, lived in San Francisco, had written five reviews to date, and had eight friends on the website.

Table 4-2 shows the summary of stimulus materials and experimental treatments.
Table 4-2
Summary of Stimulus Materials and Experimental Treatments

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of friends</th>
<th>Number of reviews</th>
<th>Elite status</th>
<th>Profile photo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td><strong>384</strong></td>
<td>11</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Condition 2</td>
<td>1</td>
<td>11</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Sandwich:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td>9</td>
<td><strong>239</strong></td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Condition 2</td>
<td>9</td>
<td>1</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Mexican:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td>9</td>
<td>45</td>
<td><strong>Yes</strong></td>
<td>San Francisco</td>
</tr>
<tr>
<td>Condition 2</td>
<td>9</td>
<td>45</td>
<td><strong>No</strong></td>
<td>San Francisco</td>
</tr>
<tr>
<td>Steakhouse:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td>9</td>
<td>5</td>
<td>No</td>
<td><strong>San Francisco</strong></td>
</tr>
<tr>
<td>Condition 2</td>
<td>9</td>
<td>5</td>
<td>No</td>
<td><strong>Warrensburg</strong></td>
</tr>
<tr>
<td>Italian:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td>8</td>
<td>5</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Condition 2</td>
<td>8</td>
<td>5</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Condition 3</td>
<td>8</td>
<td>5</td>
<td>No</td>
<td>San Francisco</td>
</tr>
<tr>
<td>Brunch:</td>
<td><strong>349</strong></td>
<td><strong>221</strong></td>
<td>Yes</td>
<td>San Francisco</td>
</tr>
</tbody>
</table>

For the brunch restaurant review for the qualitative analysis, there was only one condition in which all the elements of the reviewer’s profile were manipulated to the directions in which the hypotheses for quantitative analysis predicted high credibility. Therefore, the member’s profile for the brunch restaurant reviewer had 349 friends and 221 reviews, included a profile photo, had elite status, and lived in San Francisco. After
seeing the review, the participants were asked two open-ended questions (1) what criteria would they use to assess the expertise of the review and (2) what criteria would they use to assess the trustworthiness of the review.

For the first five reviews, the participants were asked to assess the credibility of each review. The items to measure the two dependent variables were taken from Ohanian’s (1990) scale of the source credibility of celebrity endorsers. Ohanian indicated five terms—expertise, experienced, knowledgeable, qualified, and skilled—as the items for measuring expertise, and five terms—trustworthy, reliable, sincere, honest, and reliable—as the items for measuring trustworthiness. In this study, participants were asked to indicate how well the reviews could be described with the ten terms. The responses were on a 7-point scale from 1 (Not at all) to 7 (Very well).
Chapter 5  Results

5.1  Dependent Measures

To develop the measures for expertise and trustworthiness, exploratory factor analyses were conducted on the ten items using principal-component analysis with varimax rotation. Since the data was collected for five consumer reviews, there were five sets of factor analyses, and they were independent of each other. Before each factor analysis, statistical outliers (both univariate and multivariate) were removed from the datasets. The key objectives of the factor analyses were (1) to confirm whether components of the two credibility dimensions, expertise and trustworthiness, accorded with the literature on source credibility in the context of online consumer reviews, and (2) to examine the relationships among the items.

The results of five factor analyses were reasonably consistent except for the results for the Italian restaurant review. Table 5-1 displays the factor loading results for the sandwich place review. (All five factor analyses results are presented in Appendix D.) The analyses indicated the presence of two components with eigenvalues greater than 1, accounting for over 68.63% of the total variance of the ten source credibility items. Other than the Italian restaurant review case, five items—expertise, experienced, skilled, knowledgeable, and qualified—loaded heavily on the first factor and were conceptualized as an expertise factor as indicted by the literature. The other five items—trustworthiness, dependable, reliable, honest, and sincere—were loaded heavily on the second
(trustworthiness) factor. Cronbach’s $\alpha$ for five expertise items was over .89, and for five trustworthiness items the number was over .86. Table 5-2 summarizes the reliability tests. For the Italian restaurant review, “dependable” loaded more heavily on the expertise factor (.61 for expertise factor and .50 for trustworthiness factor); however, (1) for the other four reviews, dependable consistently loaded heavily on the trustworthiness factor; (2) conceptually, dependable is closer to trustworthiness items such as reliable; and (3) even for the Italian restaurant review, the Cronbach’s $\alpha$ for five items was still high (.87) when dependable was included as a trustworthiness item. Therefore, I followed the results for the other four analyses and used dependable as a trustworthiness item. In addition, I used two scales, expertise and trustworthiness, which were created by averaging the ratings of the five items representing each factor.

Table 5-1

*Factor Loading for Source Credibility Scale Using Principal Components and Varimax Rotation*

<table>
<thead>
<tr>
<th></th>
<th>Expertise</th>
<th>Trustworthiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expertise</td>
<td>.880</td>
<td>.154</td>
</tr>
<tr>
<td>Qualified</td>
<td>.827</td>
<td>.298</td>
</tr>
<tr>
<td>Experienced</td>
<td>.766</td>
<td>.286</td>
</tr>
<tr>
<td>Knowledgeable</td>
<td>.755</td>
<td>.389</td>
</tr>
<tr>
<td>Skilled</td>
<td>.742</td>
<td>.163</td>
</tr>
<tr>
<td>Sincere</td>
<td>.077</td>
<td>.898</td>
</tr>
<tr>
<td></td>
<td>Expertise (five items)</td>
<td>Trustworthiness (five items)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Honest</td>
<td>.187  (.872)</td>
<td></td>
</tr>
<tr>
<td>Trustworthy</td>
<td>.416  (.759)</td>
<td></td>
</tr>
<tr>
<td>Reliable</td>
<td>.411  (.729)</td>
<td></td>
</tr>
<tr>
<td>Dependable</td>
<td>.367  (.720)</td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.754  1.496</td>
<td></td>
</tr>
<tr>
<td>Proportion of Variance (%)</td>
<td>57.536  14.957</td>
<td></td>
</tr>
</tbody>
</table>

Table 5-2
Summary of Reliability Tests (Cronbach’s Alpha)

<table>
<thead>
<tr>
<th></th>
<th>Expertise (five items)</th>
<th>Trustworthiness (five items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese</td>
<td>.900  .856</td>
<td></td>
</tr>
<tr>
<td>Steakhouse</td>
<td>.938  .904</td>
<td></td>
</tr>
<tr>
<td>Sandwich place</td>
<td>.893  .903</td>
<td></td>
</tr>
<tr>
<td>Italian</td>
<td>.905  .865</td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>.924  .902</td>
<td></td>
</tr>
</tbody>
</table>

One more point to note in the factor analysis results is that there were two sub-dimensions among the five trustworthiness items, even though they were specified as a single factor by Kaiser’s rule and the Scree plot. Two of the items, sincere and honest, only loaded heavily on trustworthiness and little on expertise; however, the other three items, trustworthy, reliable and dependable, moderately loaded on the expertise factor,
too. I interpret the emergence of this clustering pattern in trustworthiness items to be caused by our research context, online review, and our choice of restaurant as the review category.

Previous source credibility studies focussed on sources such as salespeople or spokespeople who have relatively homogeneous abilities and clear intentions (Eisend, 2006). However, the expertise and trustworthiness of online reviewers varies greatly. In addition, readers cannot be confident about a reviewer’s intention, since there is a possibility of stealth marketing. Also, I assume the category of online reviews used in the experiment affected the factor loading of trustworthiness items. Unlike some utility-oriented products, the restaurant is a service category; therefore, WOM is greatly affected by the individual reviewer’s personal taste. For this reason, users are likely to evaluate the trustworthiness of an online review not only based on the reviewer’s intention, but also based on whether the reviewer’s tastes are similar to their own. I consider these to be the reasons for the existence of sub-groups in trustworthiness items.

5.2 Quantitative Findings I – Test of Hypotheses

The quantitative analysis of this study consisted of two parts: (1) analysis to test the hypotheses and (2) analysis to explore the indirect, relative influences of profile elements.

To test the proposed hypotheses, multiple one-way ANOVAs were conducted. With the ANOVAs, I looked at whether the manipulation of the five individual variables made
direct differences to the participants’ perceptions of the expertise and trustworthiness of
the restaurant reviews.

Hypotheses 1a and 1b predicted that the number of reviews a reviewer had written
would have a positive influence on the receivers’ perceptions of the expertise and the
trustworthiness of the consumer review written by the reviewer. A one-way ANOVA
supported the positive relationship between the number of reviews and the reviewer’s
source expertise. The many-reviews group perceived the expertise of the review as higher
($M = 5.07, SD = .94$) than did the few-reviews group ($M = 4.35, SE = 1.00$), $F(1, 122) =
17.00, p < .001, partial \eta^2 = .12$. The relationship between the number of reviews written
by a reviewer and source trustworthiness was also supported by a one-way ANOVA. The
many-reviews group perceived the trustworthiness of the review as higher ($M = 5.31, SD
= .80$) than did the few-reviews group ($M = 4.81, SD = 1.12$), $F(1, 122) = 8.27, p < .01,
partial \eta^2 = .06$.

Hypotheses 2a and 2b expected that the number of friends a reviewer had would
have a positive influence on the receivers’ perceptions of the expertise and
trustworthiness of the consumer review written by the reviewer. The results of one-way
ANOVA revealed no significant relationship for either source expertise, $F(1, 123) = .95,
p = .33, partial \eta^2 = .01$, or source trustworthiness, $F(1, 123) = 2.18, p = .14, partial \eta^2
= .02$.

Hypotheses 3a and 3b predicted that elite status would have a positive effect on the
reviewer’s source expertise and source trustworthiness. A one-way ANOVA supported
the positive relationship between the elite symbol on the profile and the reviewer’s source expertise. The participants assessed the expertise of the review with elite status more highly ($M = 5.09, SD = 1.08$) than did the participants looked at the review without this status ($M = 4.55, SE = 1.00$), $F(1, 125) = 8.39, p < .01$, partial $\eta^2 = .06$. However, a one-way ANOVA revealed no significant relationship between the elite symbol and the source trustworthiness of a reviewer $F(1, 125) = 3.52, p = .06$, partial $\eta^2 = .03$.

Hypotheses 4a and 4b predicted that when a reviewer lived in the same area as the restaurant he/she had reviewed this would have a positive effect on the receivers’ perceptions of the expertise and the trustworthiness of the review. The results of one-way ANOVA revealed no significant relationship for either source expertise, $F(1, 122) = 1.13, p = .29$, partial $\eta^2 = .01$, or source trustworthiness, $F(1, 122) = .09, p = .77$, partial $\eta^2 = .00$.

Hypotheses 5a and 5b predicted that a reviewer’s inclusion of a profile photo would have a positive effect on the receivers’ perception of the expertise and trustworthiness of the review. The results of one-way ANOVA revealed no significant relationship for either source expertise, $F(2, 120) = .26, p = .77$, partial $\eta^2 = .00$, or source trustworthiness, $F(2, 120) = .01, p = .99$, partial $\eta^2 = .00$.

The results indicated that some elements of the reviewer profile do influence the perceived expertise and/or the perceived trustworthiness of the review written by the reviewer. In particular, the results showed a positive relationship between the number of
reviews and perceptions of both source expertise and source trustworthiness, and between elite membership status and perceptions of source expertise.

5.3 Quantitative Findings II – Indirect Influences

The second part of the quantitative analysis explored indirect, relative influences of profile elements. Even though only one of the profile elements was manipulated into different conditions for each of the five restaurant reviews, all the other elements were presented in all reviewer profiles. Since all participants saw all five reviews, the profiles could have functioned as referent points to evaluate other profiles. Therefore, the credibility assessments of a review could have been influenced by the profile elements of other reviews. One of the qualitative responses also implied this: “In fact I am inclined to go back and lower my ratings of the other reviewers. Alas, I am not allowed.”

Given that the participants were presented with the reviews in a random sequence (as well as randomly assigned to manipulated conditions), any one of the five reviews could have influenced half of the credibility assessments of any one of the other reviews. Based on this assumption, I conducted ANOVAs to investigate how the manipulation of profile elements influenced the credibility assessment of other reviews.

The results indicate three positive relationships: (1) between manipulation of number of friends in the Japanese restaurant reviewer’s profile and the readers’ expertise assessment of the Italian restaurant review, (2) between the manipulation of the number of friends in the Japanese restaurant reviewer’s profile and the readers’ trustworthiness
assessment of the steakhouse review, and (3) between the manipulation of the number of friends in the Japanese restaurant reviewer’s profile and the readers’ trustworthiness assessment of the Italian restaurant review.

In particular, the respondents who saw the many-friends profile for the Japanese restaurant review perceived the trustworthiness of the Steakhouse review as higher ($M = 5.32, SD = .88$) than did the few-friends group ($M = 4.97, SD = .97$), $F(1, 122) = 4.59, p < .05$, partial $\eta^2 = .04$.

Similarly, the respondents who saw the many-friends profile for the Japanese restaurant review perceived the expertise of the Italian restaurant review as higher ($M = 5.05, SD = 1.07$) than did the few-friends group ($M = 4.70, SD = .85$), $F(1, 121) = 4.05, p < .05$, partial $\eta^2 = .03$.

Lastly, the participants who were assigned to the many-friends profile for the Japanese restaurant review perceived the trustworthiness of the Italian restaurant review as higher ($M = 5.41, SD = .78$) than did the few-friends group ($M = 5.09, SD = .84$), $F(1, 121) = 4.79, p < .05$, partial $\eta^2 = .04$.

In brief, only the manipulation of the number of friends had a relative influence on the credibility assessment of the other reviews, and only the Steakhouse review (manipulated for location) and the Italian restaurant review (manipulated for photo) were affected by the manipulation of the other review profiles.
5.4 Qualitative Findings

Qualitative analysis was conducted to provide a deeper understanding of the results from the quantitative analysis. The results provided a good explanation of how consumers assess the expertise and trustworthiness of an online review in general as well as how the profile information of a reviewer affects a receiver’s perception of the expertise and the trustworthiness of a review. A quantitative summary of the responses are presented in Tables 5-3 and 5-4.

Table 5-3
Summary of Responses on Expertise Question

<table>
<thead>
<tr>
<th>Profile Element</th>
<th>% of participants who mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of reviews</td>
<td>29.46</td>
</tr>
<tr>
<td>Number of friends</td>
<td>10.85</td>
</tr>
<tr>
<td>Elite status</td>
<td>18.60</td>
</tr>
<tr>
<td>Reviewer location</td>
<td>2.33</td>
</tr>
<tr>
<td>Photo</td>
<td>2.33</td>
</tr>
<tr>
<td>Specificity of description</td>
<td>26.36</td>
</tr>
<tr>
<td>Word choice, writing, grammar</td>
<td>27.91</td>
</tr>
<tr>
<td>Content</td>
<td>32.56</td>
</tr>
<tr>
<td>Tone, voice, overall</td>
<td>6.20</td>
</tr>
<tr>
<td>Been there, often</td>
<td>11.63</td>
</tr>
</tbody>
</table>
Table 5-4  
*Summary of Responses on Trustworthiness Question*

<table>
<thead>
<tr>
<th>Profile Element</th>
<th>% of participants who mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of reviews</td>
<td>27.91</td>
</tr>
<tr>
<td>Number of friends</td>
<td>28.68</td>
</tr>
<tr>
<td>Elite status</td>
<td>14.00</td>
</tr>
<tr>
<td>Reviewer location</td>
<td>0.78</td>
</tr>
<tr>
<td>Photo</td>
<td>3.88</td>
</tr>
<tr>
<td>Message</td>
<td></td>
</tr>
<tr>
<td>Specificity of description</td>
<td>11.63</td>
</tr>
<tr>
<td>Word choice, writing, grammar</td>
<td>7.75</td>
</tr>
<tr>
<td>Content</td>
<td>18.61</td>
</tr>
<tr>
<td>Tone, voice, overall</td>
<td>17.83</td>
</tr>
<tr>
<td>Balanced, both good and bad</td>
<td>15.50</td>
</tr>
</tbody>
</table>

Several patterns emerged from the participants’ comments. I will first describe the differences in the ways that the participants assessed expertise and trustworthiness, and then consider how they used the profile information as cues of credibility.

Basically, the participants used both the reviewer profile information and the review itself to assess the expertise and the trustworthiness of the online review. However, the responses indicated that the assessment of trustworthiness is likely to be much more complex than the assessment of expertise. While the answers for the expertise question tend to be clear and straightforward, several respondents explicitly stated that it is difficult to judge trustworthiness. Also, for the assessment of trustworthiness, “the fact that it is a consumer review” or “whether it is really a consumer review” played an
important role in the evaluation. Many of the answers implied that the participants considered the possibility that the review could be written by a representative of the restaurant, and those typically paid attention to the fact that the review noted both good and bad points about the restaurant and that the reviewer had written reviews about other restaurants, too:

*I look to see if they say only good things about the restaurant, because that could be an employee or the owner. I also look at number of reviews because someone just trashing a restaurant or trying to promote theirs would likely have a low number of reviews.*

*She gave her name and picture so it seems like she is just a regular person not trying to fool you. She wrote a recommendation that wasn’t over the top and seems like she actually enjoyed the food.*

On the other hand, some people said that they considered the review to be trustworthy since it was written by a consumer, thinking highly of the time and effort taken to post the review:

*I believe they all reviewers have to be somewhat trustworthy because they wouldn’t waste their time writing a review if they didn’t believe what they were saying.*

*Just the fact that this person voluntarily gave up time out of her day means she cares enough to speak highly of the restaurant. The restaurant doesn’t require you*
to rate the service after the meal, so this person took the time to say something sincere.

The way the participants assessed expertise put more emphasis on the actual review compared to the way the participants judged trustworthiness. Many considered the reviewer’s writing style and word choices:

*The reviewer is very expert. She has a good background about the food. She can describe the food in an understandable way and uses specific words to express her opinion about the food.*

*How eloquently he or she describes and speaks about the restaurant, and their grammar. Also, how they speak of the food, its freshness and quantity.*

Further, the responses revealed that two different kinds of expertise influenced the participants’ credibility assessment: expertise related to the overall culinary experience of the reviewer and expertise regarding the specific restaurant reviewed. Participants captured the signals of the first type of expertise from both the profile elements and the review message, while assessment of the second type of expertise was mostly based on the review itself:

*The fact that she has written 221 reviews makes me think she knows what she’s talking about.*
I would see how well they wrote the assessment of their culinary abilities and adjectives used in their descriptions of the food.

The reviewer has obviously visited the restaurant more than once, which gives me the impression that they have expertise on the spot, at least more so than someone who has only stopped in once.

Lastly, some comments suggested that the ways expertise and trustworthiness are influenced by and affect other variables are quite distinct.

I would trust this person’s review even though it is not an expert review the opinion feels more realistic and can relate to.

The sentence structure and vocabulary was very elementary. The reviewer did not go into great detail about the menu or even give helpful reviews on her favorite dishes. This gave me the impression of low expertise.... In a way, the dumb sound of the review makes me trust it more. It doesn't sound like the owner of the restaurant attempting to embellish his/her establishment.

Many participants made comments about the number of reviews written by the reviewer, the number of friends the reviewer had, and the elite status of the reviewer. Also, though fewer in number, there were some comments regarding the profile photo and the location of the reviewer.
There were many comments about the number of reviews written by the reviewer as a criterion to assess credibility for both expertise and trustworthiness. Participants tended to connect the number of reviews to experience and enthusiasm:

Also if the person had a high number of reviews he had more experience reviewing food on the web and was really passionate (or addicted) to expressing his opinion online.

The level of supposed expertise was determined by the number of reviews the person has left on the site. The number of reviews can determine how many restaurants one has visited and written about. One who loves visiting restaurants will frequent the site, so can be considered a lover of food.

Trustworthiness is hard to judge just based on the review. If I had to pick something it’d be the number of reviews because if someone has done 221 reviews they are probably serious about doing it and would be honest.

The comments about the number of friends of the reviewer had appeared more frequently as a criterion for trustworthiness judgment. Many of them indicated that people consider friendship as a sign of trust from other people:

To determine the trustworthiness, I looked at the number of friends and reviews the users has. This signifies that people have had success by following the reviews.

She has a lot of friends so I assume that since other people trust her, I could too.
Another interesting point about the number of friends and the number of reviews is that many participants mentioned the two together, and some explicitly stated that the two numbers interact:

*I assessed the reviewer’s expertise by looking at the amount of friends and reviews. She has a large amount, especially when compared to previous reviews, of both. Because she has so many reviews and friends, not only does she write a lot of reviews, but a lot of people must take into consideration her opinion.*

*I also looked at the Friends to Review ratio, which was VERY important to me. If the person had a really high number of reviews and a few number of friends that implied that he wasn’t very accurate or else he was an internet geek spending all of his time on the computer without actually doing anything. The fewer number of reviews actually implied that they don’t review often but when they do it’s about something they’re very passionate about.*

Several participants commented on the elite status of the reviewer. They tended to infer the effort made by the reviewer to obtain the status. Another characteristic of comments on elite status is that they offered little explanation about why they had used it as a criterion:

*She has ’10 Elite. It probably takes a lot to earn an elite status.*

*I looked at the number of reviews and friends they had, and if they had an “elite” rating.*
There were few comments about the profile photo and the location of the reviewer, and in the case of the profile photo, some participants noted the details of the photo.

Overall, the results from the qualitative analysis provided good support for the results of the quantitative analysis.
Chapter 6 Discussion

6.1 Interpretation and Implications

This study explored how consumers use the elements of online reviewer’s profiles to assess the credibility (expertise/trustworthiness) of the reviews. In summary, the results demonstrated that there are positive relationships between (1) the number of reviews written by the reviewer and the source expertise of the review, (2) the number of reviews written by the reviewer and the source trustworthiness of the review, and (3) the reviewer’s achievement of elite member status and the source expertise of the review. Further, even though I could not illustrate the direct effect of the number of friends a reviewer had, this factor did have an indirect relative influence on the credibility assessment of other restaurant reviews. Finally, the qualitative analysis provided good explanations and support for the quantitative findings.

Among the profile elements, the number of reviews showed strong influence on the readers’ assessments of both expertise and trustworthiness. Proceeding from this fact, I assume that the number of reviews signals experience and enthusiasm to readers. Many qualitative responses gave credit to the reviewer for taking the time to visit and review different restaurants, as well as for cumulative experience regarding the topic. Also, in particular, for trustworthiness, participants used a large number of previous reviews as an indication that the reviewer had not written a review for no other reason than to promote a particular restaurant—i.e., the reviewers considered multiple reviews as indicating that
the reviewer was not engaged in stealth marketing. Further, manipulation of the number of reviews did not demonstrate any indirect influence on the assessments of the other reviews, and the sandwich place review, which was used for the manipulation of the number of reviews, was not affected by the manipulations of profile elements in the other reviewer profiles. I view this as indicating that readers of online reviews interpret and evaluate the number of reviews as an absolute rather than a relative value, and that the number of reviews is one of the primary criteria they use to evaluate the credibility of a reviewer.

On the other hand, the number of friends did not demonstrate any direct influence on the participants’ evaluations of expertise and trustworthiness. However, many qualitative responses indicated that the participants recognize a high number of friends as a community-wise signal of the reviewer’s trustworthiness. Since the social network on the online review site is mediated by user reviews, receivers seem to consider the number of friends to be a signal that other community members value the reviewer’s opinion. Also, manipulation of number of friends showed some indirect influence on the credibility assessment of other reviews. There are multiple possible explanations for the overall result. First of all, there is a possibility that the effect of the number of friends could have been moderated by the number of reviews. The Japanese restaurant review used to test the effect of number of friends had a higher number of reviews than the baseline number for reviews. Participants may have evaluated the credibility of a reviewer solely based on the number of previously written reviews when the number was high, and a direct or indirect effect of the number of friends might only be apparent when the number of
reviews is low. Secondly, the ratio between number of friends and number of reviews might have played a role in the interpretation of the number of friends. Some people might have considered the reviewer with many friends as someone who enjoys being friends with many people on social networking sites, because of the relatively small number of reviews written. Also, they might have perceived the friends:reviews ratio of other reviewers’ to be relatively higher than the many-reviews profile of the Japanese-restaurant reviewer. Clearly, more research is needed to explain how users of online review sites interpret the number of friends of an online reviewer.

The achievement of elite status demonstrated a positive relationship with readers’ assessment of expertise. I consider this to be a consequence of heuristic processing and of respect for authority (Yelp in this case). Qualitative responses also demonstrated that participants appreciated the effort the reviewer must have made to earn the status, and they also seemed to give authoritative value to the status. Lastly, the manipulation of elite status did not show any indirect influence on credibility assessments of the other reviews. I assume that participants considered the elite member as a special case rather than seeing other reviewers as inferior ones. I also think this might have resulted from the fact that only one of the five reviewers was an elite member even for the respondents who were assigned for the elite status condition for the review. If most of the reviewer profiles had shown the elite membership badge, elite status might have had some relative influence on the credibility assessment of other reviews.

The location of a reviewer did not show any direct or indirect relationship with either source expertise or source trustworthiness, and this factor was only mentioned by a few
participants (2.33% for expertise and 0.78% for trustworthiness) in the qualitative study. However, I think that in some cases the location of a reviewer may still have some influence on credibility assessment. For example, if there is a strong association between the restaurant category and the reviewer’s location such as a French restaurant in New York City reviewed by a user in Paris, the reviewer’s location may become a consideration. Also, this study used a fake name for the town in the out-of-town condition in order to prevent any predisposition regarding an actual town, and the fake town was located in California (as San Francisco is). If the out-of-town condition had used a city outside of California, there might have been difference. There can be several confounding factors regarding reviewer location, and location might influence the credibility assessment in operationalization other than local vs. out-of-town. For example, the relative distance between the reviewer and the reader might have some effect. I believe several questions merit discussion regarding location.

Finally, the inclusion of a profile photo did not demonstrate any direct or indirect relationship with either source expertise or source trustworthiness, and there were only a few comments regarding the photo in the qualitative responses (2.33% for expertise and 3.88% for trustworthiness). Similar to reviewer location, there could be various confounding factors regarding operationalization of the photo variable. Most simply, the profile photo might have been too small or the fact that the photos did not display the reviewer’s face boldly may have limited the influence of the profile photos. This study focused on the reviewer’s intention in setting the profile photo, but there is still a strong possibility that the effect of including a photo was moderated by the content of the photo.
One of the few comments about the profile photo supports this possibility: “She is also standing in front of an eatery in her profile picture.” (None of the photos used in the quantitative analysis showed anything related to a restaurant or eating activity.) The results indicated that the mere inclusion of a profile photo cannot by itself increase source expertise or source trustworthiness either by enhancing social presence or by signaling the member’s commitment to the community. Clearly, there is a need for further investigation regarding the content of profile photos.

Besides confounding factors related to each of the profile elements, I assume two other factors might have influenced the quantitative results. First of all, there could have been moderating effects of the review messages on the effect of profile elements. For example, the restaurant categories used for the reviews may have affected the effects of the profile elements, or the reviews themselves might have demonstrated a high level of expertise and trustworthiness, and the participants might not have put much emphasis on the profile parts. In this regard, it would be useful to conduct to extend this research by asking participants to review messages with varying qualities. Secondly, as already noted in the discussion about the number of friends element, there is a strong possibility that there are interaction effects among the five profile elements. The present study, then, is a first step; there is a definite need to conduct further studies on multivariate effects.

Overall, the results of this study support social information processing theory, and further provide empirical evidence that participants employed the cues supported by the online community platform in assessing the credibility of eWOM. Also, the results correspond with the logic of signaling theory, since the signals that are more difficult to
imitate and/or consume the most resources had a positive influence on the source credibility of the reviewer.

The findings of this study have both theoretical and practical implications. First, the study suggests that the platforms of the online review sites can help consumers assess the credibility of eWOM by providing cues to the qualities of reviewers. This especially provides implications for managers who want to leverage the benefit of eWOM marketing. The results suggest that hasty attempts at stealth marketing may not be effective. Many consumers have no trouble recognizing fake eWOM messages, and now eWOM platforms provide better support for consumers to assess the credibility of online reviews. In this regard, eWOM campaigns should pay more attention to having people with high source credibility write reviews for their products or services.

Secondly, this study suggests that when social networking features are incorporated with user-generated reviews that there is a strong positive impact on perceptions of the reviews’ trustworthiness—a point that has implications for managers of online communities. Thoughtful adoption of social networking features can improve the credibility of the information transferred through the community as well as stimulating community activities. Social networking can be a way to express and disseminate the wisdom of crowds among the community members.

It should also be noted that the findings from the qualitative analysis suggest the possibility that there are interactions between the effect of the number of reviews and the effect of the number of friends on the source credibility of a reviewer. In this case,
individual reviewers would benefit from working on building their social networks through the website as well as on the quality of their reviews if they wish to be regarded as highly credible.

Lastly, the analysis of qualitative study indicates that the absence of social context cues due to the characteristics of CMC environments makes the assessment of trustworthiness more complicated than the assessment of expertise. This corresponds with the pattern of the factor loading results for the trustworthiness items. People value honesty and sincerity as aspects of trustworthiness, but they also look at whether the reviewer has the ability to provide objective reviews and whether the reviewer shares their own tastes. These facts suggest that there is a need for more studies on the dimensions of source credibility in the context of eWOM.

A limitation of this study is the fact that it only tested positive reviews. The direction of the review message may play a moderating role in the relationship between the reviewer’s profile information and source credibility. Moreover, this study may not be generalizable to consumer reviews in different categories, such as digital devices and clothing. Further studies are needed in order to confirm and generalize the findings.

6.2 Conclusion

This study examined the influence of reviewer profile elements on the receivers’ perceptions of expertise and trustworthiness of reviews. The results demonstrated that the number of reviews written by the reviewer and the reviewer’s achievement of elite status
affect at least one dimension of the reviewer’s source credibility, and the number of friends the reviewer has showed relative influence on the credibility assessments of other reviews. This study is unique in that it focused on individual reviewers in an online community as a subject of eWOM source credibility. The findings are important because they provide valuable insight into how people’s eWOM behaviors are shaped by the IT platform and how online communities can better support credible eWOM transmissions by incorporating social networking features.
References


presented at the Proceedings of the SIGCHI conference on Human factors in computing systems.


Appendix A – Complete Survey

1. Introduction

Place yourself in the following situation:

Imagine that you are planning a trip to San Francisco, California. You have never been to the city, and do not have much information about it. Therefore, now you are surfing the Internet to obtain information about San Francisco. You are browsing an online restaurant review site (like Yelp.com), where you can find restaurant reviews written by the users. In the website, you see five user-generated reviews.

Each review is composed of the actual review and reviewer information. The actual review section includes (1) the star rating of the restaurant given by the reviewer, (2) the date the review was posted, and (3) the review in a few short paragraphs. The reviewer information section includes (1) the reviewer’s photo, (2) the number of friends he or she has in the website, (3) the number of reviews the reviewer wrote, (4) the name of the reviewer, (5) the location of the reviewer, and (6) elite badge when the reviewer is an elite member of the restaurant review site. The elite badge indicates a high level of activity on the website.

Please keep in mind the situation, and proceed to the next page.

NOTE: Once you begin the survey, you cannot go back to a previous page. Please do not click the “back” button on your browser or refresh the page during your survey.
2. Review I – Japanese Restaurant

(In the actual survey, reviews I through V appeared in a random order)

While surfing the restaurant review site, you find a Japanese restaurant in San Francisco. You like Japanese food, and consider visiting the restaurant. Here is a recent user review about the restaurant. Please, look at the review carefully, and answer the following questions.

(random assignment into one of two conditions)

Figure_Apx 1. Japanese restaurant review

How well do the following adjectives describe the review?
Please choose the appropriate response for each item:

Expertise  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Experienced (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Knowledgeable (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Qualified (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Skilled (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Trustworthy (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Reliable (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Sincere (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Honest (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Dependable (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)

3. Review II – Steakhouse

(In the actual survey, reviews I through V appeared in a random order)

While surfing the restaurant review site, you find a Steakhouse in San Francisco. You like steak, and consider visiting the restaurant. Here is a recent user review about the restaurant. Please, look at the review carefully, and answer the following questions.

(random assignment into one of two conditions)

How well do the following adjectives describe the review?

Please choose the appropriate response for each item:

- Expertise (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Experienced (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Knowledgeable (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Qualified (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Skilled (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Trustworthy (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Reliable (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
- Sincere (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Honest   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Dependable   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)

4. Review III – Italian Restaurant
(In the actual survey, reviews I through V appeared in a random order)

While surfing the restaurant review site, you find an Italian in San Francisco. You like Italian food, and consider visiting the restaurant. Here is a recent user review about the restaurant. Please, look at the review carefully, and answer the following questions.

(random assignment into one of three conditions)

Figure_Apx 3. Italian restaurant review

How well do the following adjectives describe the review?
Please choose the appropriate response for each item:

Expertise   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Experienced   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Knowledgeable   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Qualified   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Skilled   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Trustworthy   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Reliable   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Sincere   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Honest   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Dependable   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)

5. Review IV – Sandwich Place
(In the actual survey, reviews I through V appeared in a random order)

While surfing the restaurant review site, you find a sandwich place in San Francisco. You like sandwich, and consider visiting the restaurant. Here is a recent user review about the restaurant. Please, look at the review carefully, and answer the following questions.

(random assignment into one of two conditions)

Figure_Apx 4. Sandwich place review

How well do the following adjectives describe the review?
Please choose the appropriate response for each item:

Expertise   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Experienced   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Knowledgeable   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Qualified   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Skilled   (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
6. Review V – Mexican Restaurant

(In the actual survey, reviews I through V appeared in a random order)

While surfing the restaurant review site, you find a Mexican restaurant in San Francisco. You like Mexican food, and consider visiting the restaurant. Here is a recent user review about the restaurant. Please, look at the review carefully, and answer the following questions.

(Figure_Apx 5. Mexican restaurant review)

How well do the following adjectives describe the review?

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Not at all</th>
<th>1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Knowledgeable  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Qualified  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Skilled  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Trustworthy  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Reliable  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Sincere  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Honest  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)
Dependable  (Not at all) 1 – 2 – 3 – 4 – 5 – 6 – 7 (Very well)

7. Review VI – Brunch Restaurant

Here is a recent user review about a brunch restaurant in San Francisco. Please, look at the review carefully, and answer the following questions.

![Figure_Apx 6. Brunch place review](image)

Great spot for brunch, and one that takes reservations. The space itself is tastefully decorated. The tables are tight but the tall ceilings and windows along the front open up the space, it has a nice, warm atmosphere for brunch, and the staff is very friendly.

The food here is fantastic. My two favorite are the French Toast and the Eggs Benedict. The French Toast is huge and made with the perfect crisp and not overwhelmingly sweet. The Eggs Benedict is the best I've had in town as the Hollandaise sauce was perfect.

Great food, good service and reasonable prices. I would definitely recommend this place to anyone looking for a fairly casual great meal!

What criteria did you use to determine the level of expertise of the reviewer who wrote the review? What are the grounds of your assessment?

Please write your answer here:

What criteria did you use to determine the level of trustworthiness of the review? What are the grounds of your assessment?
Please write your answer here:

8. Demographics

a. What is your age? (Enter a two-digit number)

b. What is your gender?

c. How many hours a day do you use the Internet?
   - None
   - Less than 30 minutes
   - 30 minutes to 1 hour
   - 1 to 2 hours
   - 2 to 3 hours
   - 3 to 4 hours
   - More than 4 hours

d. How familiar are you with online communities and social media?
   - Not at all familiar
   - Not very familiar
   - Somewhat familiar
   - Very familiar

e. Have you experienced any website that provides user-generated restaurant reviews?
Please mark the ones you experienced.
   - Yelp.com
   - Citysearch.com
   - Zagat.com
   - Urbanspoon.com
   - Opentable.com
   - Chow.com
Other:

f. How often do you look at restaurant review sites?
   Never
   Rarely
   Sometimes
   Often
   Always

9. Thank you!

If you are being offered extra credit points for your participation in this study, please provide your name and PSU ID (such as abc123) below. Otherwise, type "none."

This is the end of the survey.
   Thanks a lot!
Appendix B – Stimuli Set

1. Japanese Restaurant Reviews: many-friends vs. few-friends

**Figure Apx 7.** Japanese restaurant review - many-friends condition

**Figure Apx 8.** Japanese restaurant review - few-friends condition
2. Sandwich Place Reviews: many-reviews vs. few-reviews

Figure Apx 9. Sandwich place review – many-reviews condition

Figure Apx 10. Sandwich place review – many-reviews condition
3. Mexican Restaurant Reviews: Elite vs. non-Elite

**Figure_Apx 11.** Mexican Restaurant Review – Elite member condition

This charming restaurant serves nice Mexican food. The atmosphere is authentic and fun, and there is great live music, which makes the place really festive. Also, the staff is energized and friendly.

I would like to talk about their chips and salsas. You get three different kinds of salsas with your tortilla chips. They are all spicy but delicious. Also, the chips are just out of the fryer and very good. The food comes out a little slowly, but I think it's acceptable, since the food is delicious and the prices are not too high.

I would gladly recommend this place to my friends.

**Figure_Apx 12.** Mexican Restaurant Review – Non-elite member condition

This charming restaurant serves nice Mexican food. The atmosphere is authentic and fun, and there is great live music, which makes the place really festive. Also, the staff is energized and friendly.

I would like to talk about their chips and salsas. You get three different kinds of salsas with your tortilla chips. They are all spicy but delicious. Also, the chips are just out of the fryer and very good. The food comes out a little slowly, but I think it's acceptable, since the food is delicious and the prices are not too high.

I would gladly recommend this place to my friends.
4. Steakhouse Reviews: local vs. out-of-town

Figure_Apx 13. Steakhouse review – local condition

Figure_Apx 14. Steakhouse review – out-of-town condition
5. Italian Restaurant Reviews: no profile photo vs. profile photo A or B

**Figure Apx 15.** Italian restaurant review – no profile photo condition

This is a quaint little place with fun and comfy decor. Due to its small size, it's a bit crowded, however the crowd is definitely there for good reason. Heavenly crust with first-rate ingredients as toppings.

They offer one of the best pizzas in the city, and although their pies are a bit pricier than other pizzerias, they're worth the money. The thin crust is really what makes their pizza. The crust is thin and tasted great on its own. Also, the toppings are fresh and tasty.

The service is excellent and the staff is very friendly. One last thing, during prime dinner times, there will be a wait. Be prepared for that!

**Figure Apx 16.** Italian restaurant review – profile photo A condition

This is a quaint little place with fun and comfy decor. Due to its small size, it's a bit crowded, however the crowd is definitely there for good reason. Heavenly crust with first-rate ingredients as toppings.

They offer one of the best pizzas in the city, and although their pies are a bit pricier than other pizzerias, they're worth the money. The thin crust is really what makes their pizza. The crust is thin and tasted great on its own. Also, the toppings are fresh and tasty.

The service is excellent and the staff is very friendly. One last thing, during prime dinner times, there will be a wait. Be prepared for that!

**Figure Apx 17.** Italian restaurant review – profile photo B condition
6. Brunch Restaurant Reviews

Great spot for brunch, and one that takes reservations. The space itself is tastefully decorated. The tables are tight but the tall ceilings and windows along the front open up the space. It has a nice, warm atmosphere for brunch, and the staff is very friendly.

The food here is fantastic. My two favorite are the French Toast and the Eggs Benedict. The French Toast is huge and made with the perfect crisp and not overwhelmingly sweet. The Eggs Benedict is the best I've had in town as the Hollandaise sauce was perfect.

Great food, good service and reasonable prices. I would definitely recommend this place to anyone looking for a tasty casual great meal!

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Figure_Apx 18. Brunch restaurant review
Appendix C – Yelp Review Rating Distribution

Figure_Apx 19. Yelp review rating distribution


http://www.yelp.com/faq (Yelp)
# Appendix D – Factor Analysis Results

Table Apx 1.
Factor analysis results for sandwich place review experiment

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*Factor analysis results for Japanese restaurant review experiment*

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*Factor analysis results for steakhouse review experiment*

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*Factor analysis results for sandwich place review experiment*

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