ABSTRACT
We report the results of an experiment in which consumers were instructed to gather online information about one of five specific product topics by accessing either online discussions (i.e., Internet forums or bulletin boards) or marketer-generated online information (i.e., corporate webpages). At the end of a 12-week period, the consumers who gathered information from online discussions reported greater interest in the product topic than did those consumers who acquired information from the marketer-generated sources. We discuss the study’s implications for better understanding word-of-mouth communication and for developing more successful consumer websites.
Longtime backpacker Bruce Walker . . . first came upon Backpacker Magazine’s online forums about two years ago. “My first thought was, ‘This is nuts,’” he says. “I couldn’t see how spending time on the Web had anything to do with the outdoors.” But he was impressed by the expertise and patience expressed by users of the forum. After . . . a few months . . ., he and seven other forum users from all over the country—almost none of whom had previously met offline—embarked together on a three-day hiking trip into the Smoky Mountains. “The camaraderie I’ve found on the Internet has altered my experience of the outdoors,” Mr. Walker says. (Conners, 1999)

The above is an example of a consumer’s experience with an Internet forum. Electronically based forums, bulletin boards, listservs, and newsgroups all provide consumers with the ability to share their experiences, opinions, and knowledge with others on specific topics. The popularity of these electronic exchanges is reflected in the vast number of exchange venues available as well as the number of postings on popular discussion forums. For example, Forum One (www.forumone.com) includes over 310,000 registered online forums in its directory. David Cohen, the cofounder of ParentsPlace.com (www.parentsplace.com) claims that the average visit duration to the community spaces on this website (e.g., forums and chats) is approximately 4 to 6 times longer than visits to noncommunity areas on the same site (Forum One Report, 1997). Hagel and Armstrong (1997) suggest that the greatest profit-making potential on the Internet centers on the development of these kinds of virtual communities, which provide consumers with the ability to develop relationships, exchange information on specific topics, and buy and sell products. The goal of this article is to provide an initial examination of how discussions within online communities (such as forums, bulletin boards, and listservs) impact consumer behavior.

As the example above suggests, there is substantial anecdotal evidence that participation in online forums, bulletin boards, listservs, and newsgroups can significantly impact consumer behavior. The Forum One Report (1997) differentiates “consumer” communities that focus on a specific topic (e.g., backpacking or gardening) from “idea” communities, where participants discuss broader issues (e.g., current events or parenting). Within consumer communities, discussion participants can obtain product information, learn general information about the activity, and develop relationships with others that share their interests. Thus, participation in an online consumer community is likely to lead to increased product purchases and facilitate participation in community-related activities.

We first describe the possible theoretical mechanisms underlying the motivating effects of viewing online discussions. We then present the results of an experiment illustrating the potential impact of exposure to online discussions (versus marketer-generated Web-based content) on consumer behavior. Finally, we discuss the implications of our findings and directions for future research.

**INTERNET-FORUM INFORMATION VERSUS MARKETER-GENERATED ONLINE INFORMATION**

There are several characteristics of Internet forum information that one might expect would enable it to have a greater influence on consumer behavior than marketer-generated Internet information. First, information presented on Internet forums may have greater credibility than marketer-generated information. There is considerable evidence that information from a source that is perceived to be more trustworthy can lead to a greater persuasiveness of that information (Hovland & Weiss, 1951; Wilson & Sherrell, 1993). It has also been found that the audience’s attributions of a source’s intentions are a key factor in the perception of trustworthiness (Eagly, Wood, & Chaiken, 1978). The opinions and accounts of personal product experiences found on an Internet forum are likely to be judged to be from trustworthy sources because their authors are fellow consumers, perceived to have no vested interest in the product and no intentions to manipulate the reader.
Second, information exchanged on Internet forums may be more relevant to consumers. Research on communication source effects has also found that the perception that a source is similar to the receiver can also lead to an increased persuasive influence (Hass, 1981; McGuire, 1969; Price, Feick, & Higie, 1989). This is particularly so when the dimensions of similarity are such that they are perceived to make the source’s information more relevant to the receiver (Bither & Wright, 1977; Mochis, 1976). Although the discussants in Internet forums may or may not have demographics and lifestyles that are similar to those of the reader, they are similar to readers in that they are fellow consumers. The information they provide can be expected to reflect typical product performance. This makes the information more relevant to the reader than most of what could be communicated by a marketer who might well have never used the product in a real-world setting.

Finally, Internet forums have a greater ability to generate empathy among readers. The stories and recounts of personal experiences make up the bulk of what a reader will find on an Internet forum. Participants in online discussions are in a sense “performing” for other forum members, and contributions to the forum are often assessed in terms of the participant’s ability to entertain and educate other members of the community (Baym, 1997). By contrast, one will rarely find personal stories in marketer-generated Internet information. As Deighton, Romer, and McQueen (1989) have pointed out, stories have an ability to draw in and cause the reader to empathize with the feelings of the writer, in effect, creating vicarious experience. Empathy could affect consumer behavior indirectly by making salient to the consumer the product benefits that are being enjoyed by other consumers. Or, it could affect consumers via a direct emotional “contagion,” as when one finds oneself laughing when put in a situation where others are laughing or feeling sad when those around you are distressed (Hatfield, Cacioppo, & Rapson, 1993). In this view, the enthusiasm of a forum author describing the joys of a particular product could directly generate some similar feelings in the minds of the readers.

OVERVIEW OF THE STUDY

The literature reviewed above suggests that content included in consumer-oriented online discussions may have greater credibility and relevance and may generate more empathy compared to marketer-generated Web content. Thus, we hypothesize that exposure to online discussions related to a specific topic should result in greater interest in the topic than exposure to marketer-generated Web-based information on the same topic. In addition, we hypothesize that Internet forum content may be more persuasive than marketer-generated Web content, thus resulting in increased purchase intentions for associated product categories.

To test these hypotheses, students in an introductory marketing class examined either corporate webpages or online discussions (i.e., forums or bulletin boards) related to specific topics over the course of the semester. At the end of this period, we examined their interest in the topic and purchase intentions, and we predicted that these measures would be enhanced for those that viewed the online discussions versus the corporate webpages. However, we did not expect Internet forum content to be more informative than marketer-generated Web content. Therefore, as a control we also measured perceived knowledge and thought about the topic. We did not expect that exposure to online discussions (versus marketer-generated content) would affect perceived knowledge or thought about the topic.

METHOD

In this study, participants were asked to look at either corporate webpages or online discussions (excluding chats) related to one of five assigned topics as part of a class assignment. The topics were related to specific product categories that might be of interest to students. At the end of the semester, participants completed a survey asking purchase intentions, knowledge, thought, and interest concerning a number of different
activities, including the activity they had been assigned to find information about. We examined the extent to which responses to these questions were different for those who had looked at corporate websites versus online discussions for each of the topics.

**Participants**

Undergraduate business students enrolled in Principles of Marketing participated in this study in exchange for extra credit. Sixty-nine students completed the follow-up questionnaire. Eight of these students did not complete all of the dependent measures or covariates. The analyses reported below are based on the responses of the remaining 61 participants.

**Procedure**

At the beginning of the semester, each student received a handout describing an extra-credit assignment for the semester. For this assignment, students were asked to look at either a corporate web page or an online discussion related to one of five topics (bicycling, exercise equipment, nutritional supplements, photography, or stereo equipment). Students could turn in one assignment per week over a 12-week period. The amount of extra credit that they received was related to the number of assignments that were completed. Sixty-four percent of the participants completed at least one extra-credit assignment. Two students completed all twelve assignments. The average number of assignments completed was 3.21 (standard deviation = 3.53) and the median was 2.

Students were randomly assigned to either the corporate webpage condition or the forum condition. We attempted to keep the extra-credit assignments roughly equivalent across these two conditions. Students were given a handout describing the assignment. In both conditions, the handout first provided an overview of the type of website they were to examine as well as some guidance in finding this type of site. Students assigned to the corporate webpage condition were asked to “read about at least one [topic]-related product and hand in a description of what you learned.” Students assigned to the forum condition were asked to find an active forum on the assigned topic and then “read the discussion and hand in a description of something you learned from the forum about a [topic]-related product.” Participants could return to the same corporate website or forum or find a new one (on the same topic) each week. An example of the exact wording of each condition’s assignment for one topic is shown in the Appendix.

One concern is that participants might be more likely to complete the assignments in one of the two type-of-site conditions. The percentage of participants completing at least one assignment was somewhat higher for those assigned to the corporate webpage condition (71%) versus the forum condition (58%), but the difference is not significant \(p = .26\). The mean number of assignments completed does vary significantly across the two conditions (means: corporate webpage = 4.21 vs. forum = 2.36, \(t_{59} = 2.10, p = .04\)). We statistically control for the number of assignments completed in the analyses.

Participants were also randomly assigned to one of the five topics: bicycling, exercise equipment, nutritional supplements, photography, or stereo equipment. We selected topics that we felt would be of interest to students and for which we anticipated it would be easy to locate associated forums and corporate websites.

Crossing these two factors resulted in a 2 (type of site) \(\times\) 5 (topic) between-subjects design. Topic was simply a replication factor; we did not expect the results to vary across topics.

At the end of the semester, students were asked to complete a questionnaire, which included the study’s dependent measures. The survey included questions about the five topics above, plus five additional topics (gardening, golf, camping, cooking, and using a personal computer). For each of these topics, participants were asked the following five questions:

1. Likelihood of purchasing a product in this category in the next 12 months (7-
2. Expected spending in the category in the next 12 months (open-ended);
3. Knowledge about the product category (7-point scale, where 7 = very knowledgeable and 1 = not knowledgeable);
4. Extent to which they have thought about the product category in the recent past (7-point scale, where 7 = thought about frequently and 1 = have not thought about);
5. Interest in learning more about the product category (7-point scale, where 7 = very interested in learning more and 1 = not interested in learning more).

In addition, participants were asked the frequency with which they participate in activities related to each topic (5-point scale, where 5 = weekly or more often and 1 = never), how many hours per week they spend surfing the Web, how much they enjoy shopping (7-point scale, where 1 = do not enjoy and 7 = very much enjoy), their approximate monthly disposable income, and their age and gender. After completing these measures, the purpose of the study was described.

RESULTS

We expected that interest in a topic, purchase intentions, and planned purchase amount for the associated product category should be greater among those who were assigned to look at forums versus corporate websites. As controls, we included measures of knowledge and amount of thought about the product category. We did not expect these measures to vary across the two groups.

We tested the effect of topic and type of site on these variables by using MANOVA. We included participation in the activities, amount of time spent surfing the Web, enjoyment of shopping, approximate disposable income, and number of extra-credit assignments completed as covariates in this analysis.

The results are consistent with our hypotheses. In the MANOVA model, the main effects of topic ($F_{20,140} = 2.14, p = .006$) and type of site ($F_{5,42} = 3.96, p = .005$) are both significant, and the topic-by-site interaction is not significant ($p = .39$). These results indicate that while mean levels of the dependent measures vary across the different topics (which was to be expected), the effects of site type do not vary across topics. Therefore, we report the results aggregated across the topic conditions. Table 1 shows the mean ratings on each of the dependent measures by type-of-site condition.

Follow-up univariate tests on each of the dependent measures show that as expected, participants showed greater interest in learning more about their assigned topic when they viewed forums versus corporate webpages ($F_{1,46} = 10.28, p = .002$). Although the effects of type-of-site on purchase intentions and ex-

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Forum</th>
<th>Corporate Webpage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Likelihood</td>
<td>3.82 (2.30)</td>
<td>3.79 (2.45)</td>
</tr>
<tr>
<td>Expected Spending in Category</td>
<td>148.48 (199.02)</td>
<td>123.93 (187.84)</td>
</tr>
<tr>
<td>Knowledge about Product Category</td>
<td>4.55 (1.72)</td>
<td>4.43 (1.53)</td>
</tr>
<tr>
<td>Thought about Product Category</td>
<td>4.52 (2.12)</td>
<td>4.21 (2.10)</td>
</tr>
<tr>
<td>Interest in Product Category*</td>
<td>5.06 (2.08)</td>
<td>4.36 (2.36)</td>
</tr>
</tbody>
</table>

Note. Standard deviations are in parentheses.
* Difference is significant at $p < .01$. 

TABLE 1

Mean Ratings on Dependent Variables by Type of Site

INTERNET FORUMS AS INFLUENTIAL SOURCES OF CONSUMER INFORMATION

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pected spending in the category are in the predicted direction, the effects are not significant (Purchase Likelihood: $F_{1,46} = 0.02, p = 0.89$; Expected Spending: $F_{1,46} = 2.01; p = 0.16$). As expected, the knowledge and amount of thought measures are not significantly influenced by the type-of-site variable (Knowledge: $F_{1,46} = 1.94, p = 0.17$; Amount of Thought: $F_{1,46} = 0.16; p = 0.69$). Similar results are obtained when the analysis is limited to only those participants who completed at least one extra-credit assignment.

We suggest that it is the nature of information presented on forums—their greater credibility, relevance, and ability to generate empathy—that leads them to be more effective than marketer-provided information in generating product category interest. We note that these differences in the nature of information presented could lead to several outcomes that could mediate the effect on product interest, including increased knowledge about the product category and increased exposure to product category information. However, we suspect that these were not important factors in our study. As mentioned previously, self-perceived knowledge did not vary significantly between participants assigned to the forum and corporate website conditions. Although we do not have a direct measure of the degree of exposure across the two conditions, we did (as mentioned above) control for the number of assignments completed. We do not know if participants in one of the two conditions tended to spend more time on each individual assignment, but we think it is unlikely given the nature of the task (extra-credit assignments).

One possible mechanism underlying the persuasive effects of forums (versus corporate websites) is that forums generate empathy, which leads to greater persuasion. Because there is evidence that women are more susceptible to empathy than men (Eisenberg & Lennon, 1983), as an exploratory analysis we examined whether the effects of site type on interest varied by gender. There is a tendency for the effects of site type on interest to be stronger for females than for males, which would be indicated by a significant gender-by-type-of-site inter-

Discussion

In this study we find clear support for the hypothesis that exposure to online discussions, such as Internet forums, generates more product category interest than does exposure to marketer-generated sources of information available on the Internet. Online forums were distinctly more effective in generating product interest than were corporate websites for consumers who gathered information from one or the other of these two information sources over a 12-week period. This interest-generating effect was highly significant even though our sample was relatively small and not all of the members of the sample actually participated in gathering Web-based information. In fact, interest is greater among those in the forums even though participants in this condition completed fewer assignments than did those in the corporate website condition.

Moreover, the difference between discussion forums and corporate sites seems to be largely one of stimulating readers’ desire to learn more about a product rather than being a more general effect—forum readers did not get more product knowledge or think more about the product category. The Internet forums seemed simply more able to pique their readers’ interest in the product category. The effect also does not appear to be a consequence of longer exposure to information on the forums than on the corporate websites, though we lack a direct measure of this variable.

Although we also anticipated that online forums would exert some effect on purchase likelihood and the amount of money the consumer expected to spend in the product category, we regard the failure to observe these behavioral effects as inconclusive. It may take considerable time for interest in learning more about a product to translate into such behavioral consequences, and we were not able to interview our respondents beyond the end of the 12-week duration of the study. However, it seems that
the online forum effect that we did observe constitutes a substantial finding in itself. For example, in the context of the AIDA hierarchy-of-effects model (Strong, 1925, pp. 348–354), the use of online discussion groups could be considered to increase the consumer’s likelihood of passing from attention to interest in the steps toward product purchase.

**Theoretical Implications**

Although the results of this study are of limited scope, they do suggest a number of theoretical connections and practical implications. In particular, it should be no surprise that online discussion information is more powerful than marketer-generated information in stimulating product category interest. It is a form of word-of-mouth communication, a source of information that has long been recognized as particularly powerful in affecting consumer behavior (e.g., Katz & Lazarsfeld, 1955, pp. 175-182; Whyte, 1954). Each of the three characteristics that we expected would make online forums more influential than corporate websites—greater credibility, greater relevance, and a greater ability to evoke empathy—are all characteristics that forums share with the other, traditional forms of word-of-mouth communication.

A key difference between online discussions and traditional forms of word-of-mouth communication is one that may facilitate consumer information search. Typically, word-of-mouth communication involves the spoken word, one friend or relative in a face-to-face situation sharing product information with another. By contrast, online discussions involve personal experiences and opinions transmitted by the written word. Although the spoken word may have the ability to exert a more powerful immediate impact (Herr, Kardes, & Kim, 1991), the written word has a permanence that carries its own advantages. First, it offers the consumer the ability to acquire the information at his/her own pace. The ability to refer back to online discussions might enable the consumer to absorb a greater amount of personal information and to acquire this information in more detail than might be possible from exposure to only the spoken word.

A second advantage of written word-of-mouth communication is that it has the potential to facilitate our attempts to understand how personal information is able to exert its powerful influence. Of the three characteristics expected to make forums influential, two of them—credibility and relevance—are widely recognized as important factors in word-of-mouth effects (e.g., Schiffman & Kanuk, 1997, p. 501). However, the third characteristic, empathy, has received much less consideration in the word-of-mouth information literature. Our finding of an effect on interest, but not on amount of knowledge or thought, and our finding of a tendency toward females showing a greater Internet-forum effect than males are suggestive of an important role for empathy. By being a written form of word-of-mouth communication, online forums offer a means of further exploring this role of empathy. For example, the drama scale of Deighton et al. (1989) could be systematically applied to assess the degree of dramatization in both discussion forums and other online content. An effect of the degree of dramatization on the interest-generating ability of an Internet site could provide further evidence for the role of empathy in word-of-mouth communication.

**Practical Implications**

Armstrong and Hagel (1996) suggest that in designing websites, marketers need to focus on both “transactional” elements and “relational” elements. In other words, they suggest that allowing consumers to interact with each other via a firm’s webpage can help develop and foster important relationships that will actually lead to increased sales. Likewise, Sproull and Faraj (1997) suggest the importance of the social functions of the Internet, relative to the informational functions. Our findings offer some additional support for the importance of the relational or social element of website design. The results of this study suggest that by supporting the development of online communities within their websites, businesses may gen-
erate additional interest in the product category. Online communities that offer consumers the ability to directly exchange product information and product experiences and to develop relationships with others sharing similar interests may have the potential to effectively generate product interest in large numbers of people.

A business could accomplish this support by including on its website links to discussion forums related to the company’s products. A business could also sponsor discussion forums on the corporate website itself. However, given the likely importance of credibility in the influence of discussion forums, it would be very important that a corporate-sponsored discussion forum be left unmanipulated by the business. The challenge to the business would be to allow negative product information to appear. It would certainly be possible, and even desirable, for the business to respond to negative information that is submitted to the forum. But affecting a discussion forum in any way other than that of being a participant may risk destroying the forum’s credibility and may impair the marketer’s ability to encourage the consumer’s use of this important interest-generating source of information.

Some companies are developing independent websites that allow consumers to exchange information on a variety of products (Tedeschi, 1999). For example, www.Epinions.com provides reviews of products in a number of categories (e.g., electronics, home and garden). To help “personalize” the reviewers, Epinions provides a webpage for each reviewer, which includes pictures and personal information. Further, reviews and reviewers are rated as to their usefulness. Providing personal information about reviewers and review ratings helps to ensure the credibility of the reviews. In addition, providing such information may increase relevance (by highlighting the similarity between reviewers and the reader) and the readers’ level of empathy with the reviewer. While not strictly an online discussion, sites like Epinions provide a source of “balanced” word-of-mouth information that may be particularly persuasive.

This research also bears on the question of the social implications of the Internet. Kraut and colleagues suggest that with increased Internet use people tend to replace strong social ties with weaker ones, thus making the Internet a harmful social influence (Kraut et al., 1998). In contrast, our findings suggest the potential for the positive social effects of Internet use. Future research should examine the extent to which reading online forum discussions of products helps people connect with other people with whom they would never have otherwise made contact. This contact could enrich the social experience of those with Internet access, as well as enable even those who are less socially connected to gain many of the benefits of word-of-mouth product communication.

**Limitations and Conclusions**

As mentioned earlier, despite its interesting potential implications, it should be kept in mind that this is an exploratory study of limited scope and with numerous limitations. The results are based on a small convenience sample of respondents who are probably more computer literate than the average consumer. Also, it should be noted that the participants in this study were assigned the product category about which to gather Internet information. The interest-generating ability of Internet forums might be lower in a real-world situation because consumers might be unlikely to read a product’s discussion forum unless they already were feeling some interest in the product. On the other hand, because the participants in our study were just “lurkers” rather than contributors to the Internet discussion sites they visited, the study’s results may underestimate the real-world interest-generating effect. Contributing to, in addition to reading, a discussion forum would create something closer to two-way communication, which may enhance comprehension (Schober & Clark, 1989) and possibly persuasion.

Our research provides some indication of the potential persuasive impact of online discussions on consumer behavior. Future research could be directed toward gaining a better understanding of the mechanisms underlying the persuasive effects of online discussion. In par-
ticular, it would be interesting to examine the roles of empathy, relevance, and credibility in creating and sustaining interest in an online discussion. Examining these processes may help to explain the difference in the popularity of various online discussions and may help provide guidelines for moderators to create more successful (i.e., long and meaningful) exchanges among consumers.

APPENDIX: EXAMPLE OF THE WORDING OF THE ASSIGNMENT FOR EACH CONDITION

**Corporate Webpage Condition**

Your extra-credit assignment is to find and report on product information available in a corporate website related to bicycling. This site could be one of a manufacturer of bicycles or bicycle-related products or it could be the website of a bicycle-products retailer.

First, find a corporate website related to bicycling. You might begin by using a search site, such as Yahoo, Alta Vista, HotBot, etc. When you have found one, read about at least one bicycling-related product and hand in a description of what you learned. After a week has passed, access the site again and read about another bicycling-related product. Then hand in a description of what you learned from the site about this second bicycling-related product. After another week has passed, you can hand in another description, and so on each week until the last week of classes. Each description that you hand in should be typed and no longer than one page.

You may keep reading the same corporate website, or you may find a new corporate website and begin reporting on that one. However, each description that you hand in should include the address (i.e., the URL) of the corporate website you are reporting on that week.

For each weekly description that you hand in, you will receive extra credit toward the class participation component of your grade. Please note that this extra credit is in addition to whatever you earn through constructive contributions to in-class discussions.

**Forum Condition**

Your extra-credit assignment is to find and report on product information available on an active Internet discussion forum on the topic of bicycling. A forum is a website containing people’s comments, questions, answers, etc. on a particular topic. Forums are sometimes called bulletin boards. However, forums differ from chat rooms because forums are not “live” conversations.

First, find an active forum on the topic of bicycling. You might begin by using a search site, such as Yahoo, Alta Vista, HotBot, etc. Some forums are not very active; it is important that you choose one with plenty of recent comments. Also, note that you do not have to log in to a forum. You can view most forums as a guest, and thus avoid giving any information about yourself.

When you have found an active forum on the topic of bicycling, read the discussion and hand in a description of something you learned from the forum about a bicycling-related product. After a week has passed, access the forum again and read the comments that have been added during the week. Then hand in a description of something you learned from these new comments about a bicycling-related product. After another week has passed, you can hand in another description, and so on each week until the last week of classes. Each description that you hand in should be typed and no longer than one page.

You may keep reading the same forum, or you may find a new forum and begin reporting on that one. However, each description that you hand in should include the address (i.e., the URL) of the discussion forum you are reporting on that week.

For each weekly description that you hand in, you will receive extra credit toward the class participation component of your grade. Please note that this extra credit is in addition to whatever you earn through constructive contributions to in-class discussions.
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