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Electronic word-of-mouth: challenges and opportunities

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Abstract

Word-of-mouth (WOM) has been recognized as one of the most influential resources of information transmission. However, conventional WOM communication is only effective within limited social contact boundaries. The advances of information technology and the emergence of online social network sites have changed the way information is transmitted and have transcended the traditional limitations of WOM. This paper describes online interpersonal influence or electronic word of mouth (eWOM) because it plays a significant role in consumer purchase decisions.

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1. Introduction

Since the development of the World Wide Web (WWW) on the Internet in the early 1990s, an increasing number of companies have been trying to carry out electronic commerce (EC) [1]. Through EC, a close customer relationship can be formed, and much of the operating overhead including time and money can be saved. Recently, the WWW is used as a new marketing channel to show recommendations from previous consumers [2]. The Internet's global nature has created a medium for electronic word-of-mouth (eWOM) between consumers who have never met [3]. This paper first reviews related studies on interpersonal influence and WOM and how it works. It then provides a discussion of eWOM characteristics and how eWOM differs from the traditional WOM. The paper then outlines challenges and opportunities related to use of current communication technologies.

2. Interpersonal Influence and word-of-mouth

Consumers imitate each other following a social or vicarious learning paradigm, but perhaps more importantly, they also talk to each other. Described as WOM communication (WOM), the process allows consumers to share information and opinions that direct buyers towards and away from specific products, brands, and services [4]. There are a few general questions that should be answered: (1) Why do consumers spread WOM? The research reports that factors such as extreme satisfaction or dissatisfaction [5], commitment to the firm [6], length of the relationship with the firm [7], and novelty of the product [8] drive such behaviors. Other authors noted that a consumer's affective elements of satisfaction, pleasure, and sadness all motivated consumers to wish to share experiences with others [9]. (2) Where does WOM originate? The key WOM player is opinion leader. Opinion

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leaders are interested in particular product fields, make an effort to expose themselves to mass media sources, and are trusted by opinion seekers to provide knowledgeable advice [10]. (3) What are some variables that mediate WOM? Researchers have identified factors such as source expertise [11], tie strength [12], demographic similarity [13], and perceptual affinity [14] as important antecedents of WOM influence. (4) What are the expected outcomes from the dissemination of WOM? Reference [15] found that WOM could influence product evaluations. Reference [3] determined that online WOM impacted not only the receiver's perceived value of a company's products, but also their loyalty intentions, ultimately resulting in an acceleration or deceleration of product acceptance Reference [16].

3. How word-of-mouth (WOM) works

Researchers have demonstrated that personal conversations and informal exchange of information among acquaintances not only influence consumers' choices and purchase decisions, but also shape consumer expectations [17], pre-usage attitudes [18], and even post-usage perceptions of a product or service [8]. A unique aspect of the WOM effect that distinguishes it from more traditional marketing effects is the positive feedback mechanism between WOM and product sales. That is, WOM leads to more product sales, which in turn generate more WOM and then more product sales [19].

4. Electronic word-of-mouth (eWOM)

The Internet has enabled new forms of communication platforms that further empower both providers and consumers, allowing a vehicle for the sharing of information and opinions both from Business to Consumer, and from Consumer to Consumer. Electronic word-of-mouth (eWOM) communication refers to any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet [20].

5. Online consumer review

The online consumer review, one type of eWOM, involves positive or negative statements made by consumers about a product for sale in Internet shopping malls. This consumer-created information is helpful for decision-making on purchases because it provides consumers with indirect experiences [21]. An online consumer review as a route for social influence plays two roles (informant and recommender) [21]. As an informant, online consumer reviews deliver additional user-oriented information. As a recommender, they provide either a positive or negative signal of product popularity[21].

6. Effectiveness of eWOM and its activities

Since customers cannot always experience the true features of a product purchased via the Internet, there are difficulties in making the correct purchasing decision. A number of studies of eWOM-related effectiveness have been conducted. These may be classified into two research types: market- and individual-level. The difference between these two lies in how the information is viewed. EWOM research stems from complicated customer activities in the eWOM systems. As illustrated in Fig. 1, there are three major parts needed in explaining eWOM activities. From this model, prior eWOM research efforts fell into either: 1) Market-level, identifying the product information process by viewing eWOM as accumulated customer opinion, and its relationship with other market-level signals, or, 2) Individual-level, identifying the customer's decision-making process by viewing the eWOM as informational, focusing on how the information affects a customer's decision-making process[22].

7. Moving from WOM to eWOM

Prior to the Internet era, consumers shared each others' product-related experiences through traditional WOM. Today, the Internet makes it possible for consumers to share experiences and opinions about a product via eWOM activity. Reference [19] show that eWOM can overcome the limitation of traditional WOM. In traditional WOM communication, the information is exchanged in private conversations, so direct observation has been difficult.

Electronic referrals differ from their “offline” counterparts in two significant ways [23]: 1) They are electronic by nature; there is no face-to-face communication, 2) Those referrals are usually unsolicited, that is, they are sent to recipients who are not looking for information, and hence are not necessarily willing to pay attention to them.

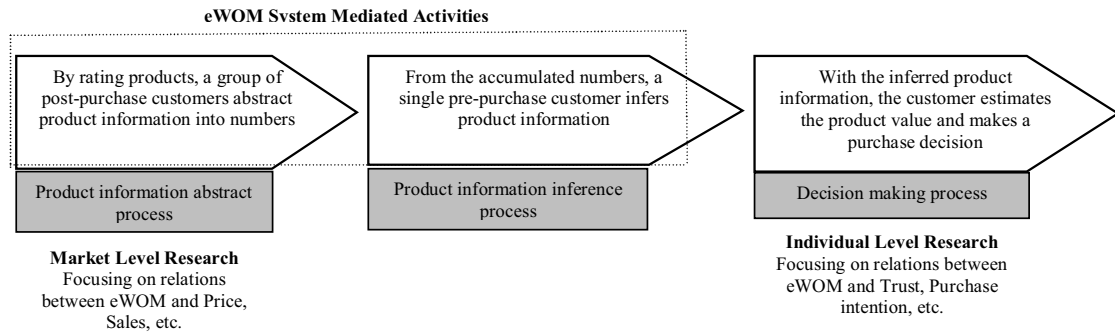


Fig 1. eWOM activities (Lee and Lee , 2009)

8. Information Adoption Model and eWOM ADOPTION (ELM) MODEL AND EWOM

The information adoption process is the internalization phase of knowledge transfer, in which explicit information is transformed into internalized knowledge and meaning [24]. Reference [25] adopted the elaboration likelihood model (ELM). ELM posits that a message can influence people’s attitudes and behaviors two ways: centrally and peripherally. The former refers to the nature of arguments in the message while the latter refers to issues or themes that are not directly related to the subject matter of the message [26]. When applied in a computer-mediated communication context, the information adoption model has two key propositions: The information adoption model considers argument quality (information quality) as the central influence and source credibility as the peripheral influence [25]. Figure 2 presents the information adoption model. Argument quality refers to the persuasive strength of arguments embedded in an informational message [27].

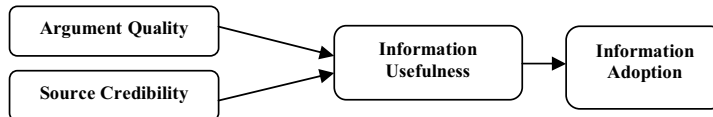


Fig 2. Information adoption model (Sussman and Siegal, 2003)

9. A typology of eWOM media

Several types of electronic media have an impact upon interpersonal relationships. Each possesses different characteristics [28]. Some are synchronous, such as Instant Messaging; while others are asynchronous, such as email and blogs. Some communications link one consumer with another, such as email, while others connect a single consumer with many others (web pages). Still others flow within a new marketing paradigm, the ‘many-to-many communications’ of Internet chat rooms [29]. Fig. 3 reflects this new typology.

10. Challenges and opportunities of eWOM

The web has created both challenges and opportunities for electronic word-of-mouth (eWOM) communication [30]. eWOM allows consumers to not only obtain information related to goods and services from the few people they know, but also from a vast, geographically dispersed group of people, who have experience with relevant products or services. A recent survey found that most consumers perceive online opinions to be as trustworthy as brand web sites [31]. These studies indicate how great of a potential impact eWOM can have on the consumer decision process. WOM provides an alternative source of information to consumers, thus reducing companies’ ability to influence these consumers through traditional marketing and advertising channels.

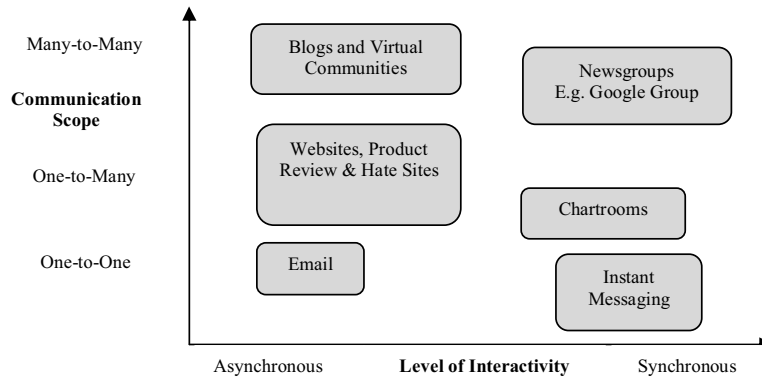


Fig 3. A typology of electronic word of mouth (eWOM) channels (Litvin et al., 2008)

eWOM provides a new venue for companies to reach consumers and to influence consumer opinions. Per reference [32]: (1) with the low cost of access and information exchange, eWOM can appear in an unprecedented large scale, potentially creating new dynamics in the market; (2) new problems may arise given the anonymity of communicators, potentially leading to intentionally misleading and out-of-context messages. In addition, the digitalization of WOM challenges the existence of geographical markets, and hence the ability to conduct local marketing strategies. In light of the media's low cost, broader scope, and increased anonymity, it seems likely, as time progresses, that consumers in increasingly larger numbers will either seek or simply be exposed to the advice of online opinion leaders [20].

11. Conclusion

This paper has provided a theoretical framework of eWOM. Companies should actively get involved in some online consumer communities and provide all the relevant and complete information about the companies. Getting the most relevant and comprehensive information to customers will result in higher information adoption. Marketers must understand that their customers are going online in increasing numbers and that in their electronic universe these consumers are exposed to and are likely influenced by the many sites devoted to the selling or discussion of product or service. The new breed of electronic intermediaries does not provide the face-to-face contact of old, and as such have little power as opinion leaders. Perhaps to compensate for the inherent weakness of a lack of personal relationship, virtually all electronic company sites now offer web pages that feature customer reviews of the products they distribute. It would seem that eWOM sources play an important role in the consumer decision-making process.

References

1. P.Y.K., Chau, P.J.H., Hu, B.L.P. Lee, and A.K.K. Au, Examining customers' trust in online vendors and their dropout decisions: an empirical study, *Electronic Commerce Research and Applications*, Vol. 6, No. 2, pp. 171–182. (2007).
2. T. R. Lee, and J. M. Li, "Key factors in forming an e-marketplace: an empirical analysis", *Electronic Commerce Research and Applications*, Vol. 5, No. 2, pp. 105–116. (2006).
3. T. W., Gruen, T., Osmonbekov, and A. J. Czaplewski, eWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, Vol. 59, No. 4, pp. 449–456. (2005).
4. D. I., Hawkins, R., Best, and K. A. Coney, *Consumer behavior: Building marketing strategy* (9th ed). McGraw-Hill, Boston. 2004.
5. J. G., Maxham, and R. G. Netemeyer, A longitudinal study of complaining customers' evaluations of multiple service failures and recovery efforts. *Journal of Marketing*, Vol. 66, No. 4, pp. 57–71. (2002).
6. A. S., Dick, and K. Basu, Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, Vol. 22, No. Spring, pp. 99–113. (1994).
7. F., Wangenheim, and T. Bayon, Satisfaction, loyalty and word of mouth within the customer base of a utility provider:

- Differences between stayers, switchers and referral switchers. *Journal of Consumer Behavior*, Vol. 3, No. 3, pp. 211–220. (2004).
8. P. F. Bone, Word-of-mouth effects on short-term and long-term product judgments. *Journal of Business Research*, Vol. 32, pp. 213–223. (1995).
 9. R., Neelamegham, and D. Jain, Consumer choice process for experience goods: An econometric model and analysis. *Journal of Marketing Research*, Vol. 36, No. 3, pp. 373–386. (1999).
 10. C. Walker, Word of mouth. *American Demographics*, Vol. 17, No. 7, pp. 38–45. (1995).
 11. H. S., Bansal, and P. A. Voyer, Word-of-mouth processes within a services purchase decision context. *Journal of Service Research*, Vol. 3, No.2, pp. 166–177. (2000).
 12. J. K., Frenzen, and K. Nakamoto, Structure, cooperation, and the flow of market information. *Journal of Consumer Research*, Vol. 20, No. December, pp. 360–375. (1993).
 13. J. J. Brown, and P. H. Reingen, Social ties and word-of-mouth referral behavior. *Journal of Consumer Research*, Vol.14, No. 3, pp. 350–362. (1987).
 14. M. C., Gilly, J. L., Graham, Wolfinbarger, M. F., & Yale, L. J. A dyadic study of interpersonal information search. *Journal of the Academy of Marketing Science*, Vol. 26, No. 2, pp. 83–100. (1998).
 15. V., Mahajan, E., Muller, and F. M. Bass. New product diffusion models in marketing: A review and directions for research. *Journal of Marketing*, Vol. 54, pp. 1–26. (1990).
 16. F. M. Bass, New product growth for model consumer durables. *Management Science Series a Theory*, Vol. 15, No. 5, pp. 215–227. (1969).
 17. E. W. Anderson., and L. C. Salisbury. The formation of market level expectations and its covariates. *Journal of Consumer Research*, Vol. 30, No. June, pp.115–124. (2003).
 18. P. M., Herr, F. R., Kardes, and J. Kim, Effects of word-of-mouth and product attribute information on persuasion: An accessibility–diagnosticity perspective. *Journal of Consumer Research*, Vol. 17, No. 4, pp. 454–462. (1991).
 19. D. Godes, and D. Mayzlin, Using Online Conversations to Study Word of Mouth Communication, *Marketing Science*, Vol. 23, No. Fall (4), pp. 545–60. (2004).
 20. T., Hennig-Thurau, K.P., Gwinner, G. Walsh, and D.D. Gremler, Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the Internet?, *Journal of Interactive Marketing*, Vol. 18 No. 1, pp. 38-52. (2004).
 21. D. H., Park, J. Lee, and I. Han, The effects of on-line consumer reviews on consumer purchasing intention: the moderating role of involvement, *International Journal of Electronic Commerce*, Vol. 11, No. 4, pp. 125–148. (2007).
 22. J. Lee, & J. N. Lee, Understanding the product information inference process in electronic word-of-mouth: An objectivity–subjectivity dichotomy perspective, *Journal of Information & Management*, Vol. 46, pp. 302–311. (2009).
 23. D. H. Park, and S. Kim, The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews, *Electronic Commerce Research and Applications*, Vol. 7, pp. 399–410. (2008).
 24. I. Nonaka, A dynamic theory of knowledge creation, *Organization Science*, Vol. 5 No. 1, pp. 14-37. (1994).
 25. S.W. Sussman, and W.S. Siegal, Informational influence in organizations: an integrated approach to knowledge adoption, *Information Systems Research*, Vol. 14, No. 1, pp. 47-65. (2003).
 26. R. E. Petty, and J. T. Cacioppo, *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*, Springer-Verlag, New York, NY. 1986.
 27. A. Bhattacharjee, and C. Sanford, Influence processes for information technology acceptance: an elaboration likelihood model, *MIS Quarterly*, Vol. 30 No. 4, pp. 805-25. (2006).
 28. S. W., Litvin, R. E. Goldsmith, & B. Pan, Electronic word-of-mouth in hospitality and tourism management, *Tourism Management*, Vol. 29, 458–468. (2008).
 29. D., Hoffman, and T. Novak, Marketing in hypermedia computer mediated environments: Conceptual foundations. *Journal of Marketing*, Vol. 60, pp. 50–68. (1996).
 30. R. E. Goldsmith, Electronic word-of-mouth, in Khosrow-Pour, M. (Ed.), *Encyclopedia of E-Commerce, E-Government and Mobile Commerce*, Idea Group Publishing, Hershey, PA, pp. 408-12. 2006.
 31. ACNielsen. Trust in Advertising: A Global Nielsen Consumer Report, October. 2007.
 32. C. Dellarocas, The digitization of word of mouth: Promise and challenges of online feedback mechanisms. *Management Science*, Vol. 49, No. 10, pp. 1407–1424. (2003).