

AN EMPIRICAL INVESTIGATION OF SOCIAL NETWORKING SITE PATRONAGE AND THE PERCEIVED CREDIBILITY OF PRODUCT CLAIMS

Alexander Josiassen, Megan Willis, Jillian Hamill, Courtney Holmes, Luvna Munisamy,
Nella Ortisi, Melissa Popovski,
School of Hospitality, Tourism and Marketing, Victoria University

Albert Assaf,
Isenberg School of Management, University of Massachusetts
Alexander.Josiassen@vu.edu.au

ABSTRACT

Sites such as Twitter, Facebook and MySpace, have grown in popularity in recent years. They draw large numbers of users encouraging them to connect with others on the site, create and engage in social groups, share information and make available images, music and video footage. This study looks at the effects of on-line interaction through social networking sites (SNS) through investigating the relationships between the frequency of use of SNS and the users view on how credible the information presented on the site is as a source of product-related information. It further investigates whether the users level of education and age impact on this relationship. Finally, the impact of these constructs in the context of SNS is tested for their impact on consumers' propensity for recommending the product to their social network. This study reports the findings of an empirical study which sources data from 263 Australian respondents. Finally, the implications for marketing theory and practice are discussed.

INTRODUCTION

The online world provides many avenues for consumers to share their views, preferences and experiences with others. One of the fastest-growing areas of the internet is the phenomenon of social networking sites (Pfeil, Arjan, Zaphiris 2008). Sites such as Twitter, Facebook and MySpace, have grown in popularity in recent years. They draw large number of users (Bausch & Han, 2006) encouraging them to connect with others on the site, create and engage in social groups, share information and make available images, music and video footage (Pfeil, Arjan, Zaphiris 2008). Social networking sites (SNS) allow users to build and maintain a network of friends for social or professional interaction (Trusov, Bucklin et al. 2009). Through the exchange of quick and frequent questions and answers, users share ideas and resources, ask and answer questions and collaborate on problems of practice (Dunlap and Lowenthal 2009).

Researchers are becoming increasingly interested in the area of social networking sites and how they influence group building and community behaviours in on-line settings (Pfeil, Arjan, Zaphiris 2008). The growing popularity of the on-line world and SNS has

presented *marketers with new opportunities to develop and improve the effectiveness of their communication with their customers, allowing them the ability to take a new approach in acquiring and retaining customers* (Wind, Mahajan & Gunther, 2002). One aspect of on-line communication is the phenomenon of on-line interpersonal influence (Senecal & Nantel, 2004), this pursues the basic principle of consumer behaviour where consumers have the ability to exert power and influence over one another (Litvin, Goldsmith & Pan 2008).

This study looks at the effects of on-line SNS interaction by investigating the relationships between the frequency of use of SNS and the users view on how credible the information presented on the site is as a source of product-related information. It further investigates whether the users level of education and age impact on this relationship.

There has been little research completed within this area. Investigating the frequency of usage of SNS and their credibility as sources of product related information will assist managerial and academic understanding of how people use social networking sites. Are they used to build social capital? Are they used to gather product information that will eventually result in a purchase decision? Does the age or the level of education of the user impact on the frequency of use and the perceived credibility? Answers to these questions will identify the ways in which SNS are used and determine whether they are a reliable source of product information to consumers, which marketers can further capitalise on.

The article proceeds as follows: firstly, we present a review of the literature, and an elaboration of the proposition background will follow. Thirdly, we have formed the hypotheses that were empirically tested in this study. We then discuss the methodology that was employed to test the hypotheses and present our results. Finally, we discuss our results and their implications for marketing theory and practise.

THEORETICAL BACKGROUND

Our review of academic literature shows that social networking sites (SNS) are of significant importance and interest to the marketing fraternity due to their popularity, their ability to communicate quickly and widely and their apparent influence on users (Senecal & Nantel, 2004 and Litvin et al, 2008). SNS such as Twitter and Facebook are the latest trend in online communication (Pfeil et al, 2009) and the bulk of academic research has been conducted in the areas of how individuals represent themselves online (Dwyer et al, 2007), the social influence of SNS (Keller et al, 2003) and the reasons behind their extraordinary growth (Boyd & Ellison, 2007).

Research into social networking as a marketing vehicle has focused on Word-Of-Mouth marketing. The effects of Word-Of-Mouth marketing have been well documented in on-and off-line situations (Mitchell & Dacin, 1996). Litvin et al (2008) points out that “consumers imitate one another and talk to one another” and as advocated by Herr et al (1991), customers pay more attention to Word-Of-Mouth than traditional marketing because it is perceived as credible and generated by people having no apparent self interest in pushing a product. SNS’ capability of spreading information widely and rapidly makes it a powerful tool in Word-Of-Mouth. This effect is coupled with the inherent trust between SNS contacts, or ‘friends’. The rise of SNS’ indicates a shift in the organisation of online communities. Whilst websites dedicated to communities of interest still exist and prosper, SNS’ are primarily organized around people, not interests. As such, SNS’ have evolved into large communities of people that identify with one another. Carroll (2007) points out that “to the extent someone identifies with you, you can win that person's trust. It has to do with sharing a

perspective, priorities or even a common enemy.” In this sense, SNS’ become a powerful vehicle for Word-Of-Mouth marketing and information sharing.

Within online interaction, trust is not as necessary in the building of new relationships as it is in face-to-face encounters (Dwyer et al 2007). Research has also shown that in an online site, trust and the willingness to share information do not automatically translate into new social interaction (Dwyer et al, 2007). This demonstrates SNS ability to extend the product related information and word-of-mouth marketing phenomenon.

FIGURE 1: PRIVACY TRUST MODEL

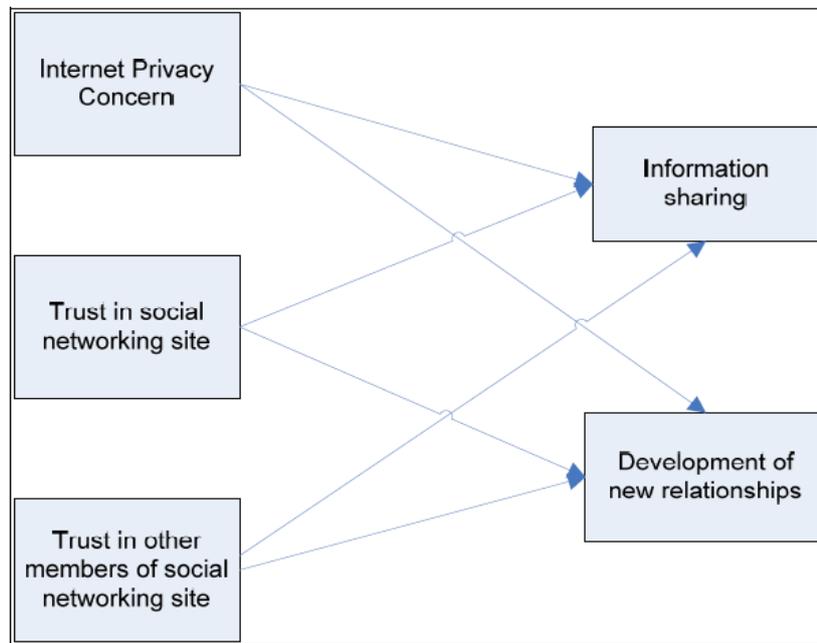


Figure 1: Privacy Trust Model

Adopted from Dwyer et al, 2007

Research into credibility finds that credibility is judged by a user’s trust of the source “[...] we tend to trust those we perceive as having nothing to hide” (Carroll, 2007). This is especially evident in SNS situations where Facebook members expressed significantly greater trust in both Facebook and its members, and were more willing to share identifying information.

Research has found that young people use SNS and online communities more often than older people (Pfeil et al, 2009) and that various other background characteristics like the level of experience with the web in general have been found to have an impact on the communication and behaviour in online settings (Zaphiris & Sarwar, 2006). There have not been direct studies on the impact of level of education and SNS, however, there have been studies on education affecting internet usage and it is determined as having a low significance among students. To date there is little research on how older people use and adopt SNS for social interaction and social capital.

HYPOTHESES

According to recent research (Carroll, 2007), word-of-mouth plays an important role in enhancing both credibility and reliability of information gathered from SNS. One reason could be the people giving the information have no apparent self interest in the product.

Other studies conducted on the effect of education levels and internet usage, argue that education does not heavily influence the usage of SNS as far as students are concerned. Moreover, despite the fact that little research argues that young people use SNS and online communities more often than older people. Little research has been conducted on how older people use SNS for social interaction and social capital.

The following hypotheses were developed based upon research covered in the literature review and the aims of this study. As previously noted, the key purpose for this research is to determine relationships between frequency of use and the perceived credibility of social networking sites as a source of product related information, as well as the effect of education levels and age on this relationship.

Credibility refers to the objective and subjective components of the believability of a source or message. Research into online credibility found that “credibility is judged by user’s trust in the source [...] we tend to trust those we perceive as having nothing to hide” (Carroll, 2007). This is evident in SNS situations where Facebook members express their trust in both Facebook and its members by sharing identification information.

H1: Consumers with more frequent use of SNS, find the SNS more credible as a source of product-related information than do consumers with less frequent use of SNS.

Young people use SNS and online communities more often than older people (Pfeil et al, 2009). Existing research indicates that demographic consumer characteristics (e.g. experience with the Internet) have an impact on the communication and behaviour in online settings (Zaphiris & Sarwar, 2006). While we have not located any studies on the impact of level of education and SNS, research has examined how education affects internet usage.

H2: Level of education of the consumer impacts positively on the relationship between frequency and the credibility.

Currently, there is limited research into the role of age in relation to SNS for social interaction and social capital (Pfeil et al, 2009). Current literature tends to make generalisations about the age of Australian consumers using these SNS and the link to frequency and credibility. Thus, the following hypothesis is forwarded for testing.

H3: Age of the consumer impacts positively on the relationship between frequency and credibility.

METHODOLOGY

A questionnaire was developed to collect the data needed to test the hypotheses and determine the relationships between the stated variables as well as whether or not these variables had an effect on credibility of social networking sites.

The simple random sample method was used and included 263 respondents from a major Australian city. The questionnaires were distributed in person via mall-intercepts. The sample consisted of 39% men and 61% women.

The questionnaire consisted of two sections. One measured respondents’ familiarity with SNS and their frequency of use. This section relied on a seven-point Likert Scale with ‘1’ representing Strongly Disagree, ‘4’ representing Neutral and ‘7’ representing strongly agree. Credibility was also tested in this section through means of four-item scale testing

deceptiveness, believability, trustworthiness and credibility. Cronbach's Alpha tests the internal consistency of the four items comprising the scale. The measure of perceived credibility was found to be highly reliable in this study ($\alpha = 0.83$). The other section of the questionnaire collected demographic data including gender, age, income, education level and occupation. All constructs in this section were measured using single-item scales.

RESULTS

Hypothesis One predicted that consumers with more frequent use of SNS would find them more credible as a source of product related information than consumers with less frequent use of the SNS. The results of linear regression demonstrate that the relationship between frequency and credibility is significant and negative ($p < 0.01$; $\beta = -0.203$). Therefore it can be deduced that frequency does affect credibility in a negative manner, hence as frequency increases, the perceived credibility decreases. Hypothesis Two stated that the level of education of the consumer impacts positively on the relationship between SNS visitor frequency and perceived credibility. The linear regression results show that the relationship is not significant, however it is important to note that the results indicate a positive relationship ($\beta = 0.058$). This indicates that a study with a higher degree of power may find evidence to support the suggestion that a higher level of education strengthens the negative relationship between frequency and credibility.

The third hypothesis referred to the age of the consumer impacting positively on the relationship between SNS visitor frequency and perceived credibility. Moderated regression analysis shows weak signs of age being more significant than education ($p = 0.106$), however is still not at a level deemed statistically significant in this study. Contrary to education, age has a negative effect on the relationship ($\beta = -0.93$) which means that as age increases the negative relationship between frequency and credibility weakens.

ADDITIONAL FINDINGS

In order to provide further value for practical application of the research, the questionnaire included questions regarding a respondent's willingness to use SNS for recommending products that they had been satisfied with. The level of willingness to recommend was tested with demographic data to determine the segments of the sample most likely to use SNS as a tool for recommendation.

Among the demographic variables information which was tested (education, age, income and gender) only one were found to be significant. The one demographic indicating a relationship was age ($p = 0.043$; $\beta = -0.258$). This demonstrates that younger consumers may be more likely to use SNS to recommend products than are older consumers. Respondents with the highest levels of perceived credibility were also very likely to use SNS for recommendations ($p = 0.001$, $\beta = 0.396$).

DISCUSSION

An individual's perceived credibility of product related information on SNS is negatively affected by their increased frequency of use. This has been empirically proven as described in the previous section of this report. Hypothesis One suggested that frequency of use positively affected perceived credibility, a statement that has been proven incorrect. This implies that

individuals may become more discerning due to increased familiarity and being more adept at filtering out non-social related information.

Rao, Gao & Ding (2008) suggest that individuals use SNS to meet socio-emotional needs rather than informational needs. This goes some way to explaining why product-related information credibility may be reduced by frequent users. It suggests that whilst individuals do trust the sites for emotional needs they do not for informational purposes. The second hypothesis tested relates to education levels. It was hypothesised that higher levels of education would positively impact upon the relationship between frequency and credibility. Statistical analysis found that as education increases, it strengthens the negative relationship between frequency of use and perceived credibility. Reasons include that highly educated individuals are more likely to be sceptical of an opinion based forum and that they are more likely to conduct their own research into products and purchases.

Hypothesis three suggested that the age of the consumer would positively affect the relationship between frequency and credibility. Upon analysis of hypothesis three, the research shows that age does impact positively on the relationship between frequency and credibility. Rao, Gao and Ding (2008) suggests that younger users are connected to acquaintances whereas older users generally have online contacts that are based on real-world relationships. This may indicate higher levels of trust for older users due to closer and more grounded online relationships.

Social Networking Sites have been identified in academia as a useful tool for online marketing strategies due to their popularity; their ability to communicate quickly and widely and their apparent influence on users (see Pfeil et al 2009, Dwyer et al 2007 and Keller et al 2003). The research has shown that individuals who use SNS more frequently, are relatively young and are highly educated are less likely to perceive product related information on SNS as credible. Given that individuals use SNS to meet socio-emotional needs rather than informational needs as described by Rao, Gao & Ding (2008), it is the authors' advice that future research should focus on the perceived credibility of online industry-specific forums such as tripadvisor.com (Litvin, Goldsmith & Pana, 2008). The results of further research in to this area may result in significant learnings for marketing management.

Limitations of the study provide the basis to recommendations for future research in relation to the effects of SNS and the relationships between variables such as credibility and frequency of use. Arguably the biggest limitation of the study was the collection method. Simple random sampling was used, instead of complete random sampling; therefore findings of the survey data cannot be considered a perfect representation of the population. Additionally, the survey was conducted in Melbourne and only a small sample of 135 respondents was used. In order to gain more accurate measures of attitudes in relation to SNS, larger samples, over a broader geographic area may be used in conducting future research.

This research is of particular relevance to practitioners using viral marketing techniques. Viral marketing, which is described as an explosive “spread of product information through customer contact” (Businessdictionary.com 2009), relies on recommendations in order to maintain momentum. This research shows that a willingness to recommend is present in SNS users when they demonstrate a high level of perceived credibility. Marketing managers need to carefully consider what drives perceived credibility when adopting a viral marketing strategy.

The results of the research indicate that as frequency of use increases, the perceived trustworthiness of product related information decreases. Customers pay more attention to Word-Of-Mouth than traditional marketing because it is perceived as credible and generated by people apparently having no self interest in pushing a product (Herr et al, 1991). Existing WOM theory may be inappropriate to describe online WOM and its influence on evaluation and purchase (Brown, Broderick & Lee, 2007). As such it is recommended that future research should measure the existing trust of the relationships users have specifically with other members of SNS, rather than with the sites themselves. Further to this, future research should quantify whether or not high-frequency users consider the sites purely a social forum and whether or not they consider the sites to have any informational value. This could lead to a marketing opportunity to use SNS specifically for products or messaging that are more aligned with socio-emotional decision making.

REFERENCES

- Bausch, S. & Han, L. (2006). Social networking sites grow 47 percent, year over year, reaching 45 percent of web users. Available from: <http://www.nielsenratings.com/pr/pr_060511.pdf> Retrieved 17.12.07.
- Brown, J., Broderick, A.J., Lee, N., (2007) Word-Of-Mouth communication within online communities: conceptualizing the online social network. *Journal of Interactive Marketing* (John Wiley & Sons)
- Business Dictionary.com <http://www.businessdictionary.com/definition/viral-marketing.html#> accessed 21 October 2009
- Dunlap, J. C. and P. R. Lowenthal (2009). "Tweeting the Night Away: Using Twitter to Enhance Social Presence." *Journal of Information Systems Education* 20(2): 129-135.
- Dwyer, C , Hiltz, S & Passerini, K (2007) "Trust and Privacy Concern within social networking sites: a comparison with Facebook and MySpace" *Thirteenth Americas Conference on Information Systems* Colorado, USA
- Gilroy, F. D., & Desai, H. B. (1986). Computer anxiety: Sex, race and age. *International Journal of Man-Machine Studies*, 25(6), 711–719.
- Haythornthwaite, C., & Wellman, B. (1998). Work, friendship, and media use for information exchange in a networked organization. *Journal of the American Society for Information Science*, 49(12), 1101–1114.
- Herr, P.M., Kardes, F.R. & Kim, J. (1991). Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: an Accessibility-Diagnosticity Perspective. *Journal of Consumer research*, 17, 454-462.
- Litvin, S.W., Goldsmith, R. E., Pana, B., (2008) Electronic word-of-mouth in hospitality and tourism management. *Tourism Management* 29 (458-468).
- Mitchell, A. A., & Dacin, P.A. (1996). The Assessment of Alternative Measures of Consumer Expertise. *Journal of Consumer Research*, 23, 219-239.
- Odum, S. (2006). The dangers of MySpace.com for teens. CBN News. Available from: <<http://www.cbn.com/cbnnews/usnews/060510s.aspx>> Retrieved 17.12.07.
- Online credibility: [Pulling back the veil](#)**. By: Carroll, Brian. *Furniture/Today*, 9/17/2007, Vol. 32 Issue 3, p64-64.
- Pfeil, U., Arjan, R., Zaphiris, P., (2009) Age differences in online social networking – A study of user profiles and the social capital divide among teenagers and older users in MySpace. *Computers in Human Behaviour* 25 643-654.

Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of Retailing*, 80, 159–169.

Trusov, M., R. E. Bucklin, et al. (2009). "Effects of Word-of-Mouth Versus Traditional Marketing: Findings from an Internet Social Networking Site." *Journal of Marketing* 73(5): 90-102.

Wind, Y., Mahajan, V., & Gunther, R. E. (2002). *Convergence marketing: Strategies for reaching the new hybrid consumer*. Upper Saddle River, NJ: Prentice-Hall.

Zaphiris, P., Kurniawan, S., & Ghiawadwala, M. (2007). A systematic approach to the development of research-based web design guidelines for older people. *Universal Access in the Information Society Journal*, 6(1), 59–76.

Zaphiris, P., & Sarwar, R. (2006). Trends, similarities and differences in the usage of teen and senior public online newsgroups. *ACM Transactions on Computer– Human Interaction (TOCHI)*, 13(3), 403–422 [ACM press].

Zikmund, W. (2003) *Business Research Methods* (7th Ed.), Thomson/South-Western.