COGNITIVE STYLE AND ACCEPTANCE OF ONLINE COMMUNITY WEBLOG SYSTEMS

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ABSTRACT

Weblogs ("blogs") are becoming increasingly important over time, with researchers asking why millions of Internet users are so eager to post their own diary on the web every day. This study collected data from 265 business school undergraduate students on their opinions concerning weblog usage and attitudes. The study then used cognitive style to analyze differences among various user types. Analysis of the respondents' cognitive styles placed them along a spectrum with two extremes: intuitive (with non-linear thinking) and analytic (using rational information processing). Group analysis found significant differences between the two cognitive groups: performance expectancy was significantly higher in the analytical group, while effort expectancy and social influence were higher in influencing intention to use within the intuitive group.

INTRODUCTION

It is no surprise that big businesses are becoming increasingly interested in blogs. An estimated 40,000 to 50,000 new blogs are created each day, according to Intelliseek, a technology company that tracks developments related to the Internet. At Sun Microsystems, about 2,000 employees blog on blogs.sun.com, including President and Chief Operating Officer Jonathan Schwartz.[2] Although the blog was initially a [reverse] chronological listing of links that the blogger thought were interesting, funny, or informative, with commentary,[3] the term can now mean anything from online journals and diaries to just links with commentary.[4] Anxious to get involved, more technologists, marketing managers, and other business people are becoming bloggers. For example, Randy Baseler, Boeing Commercial Airplanes' vice-president of marketing, started a blog on which he posted Boeing's opinions on Airbus's new A380 airplane, and Bob Lutz, the vice-chairman of General Motors, started the FastLane Blog to post his comments from the North American International Auto Show in Detroit.[5] Some organizations even require blogging as a function of an employee's job in order to share his or

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[2] Jonathan Schwartz, "Jonathan's Blog", http://blogs.sun.com/jonathan/; Martha Graybow, *As Blogging Grows, Companies Eye Legal Pitfalls*, http://www.ciol.com/content/news/2005/105082701.asp.

[3] REBECCA BLOOD, THE WEBLOG HANDBOOK: PRACTICAL ADVICE ON CREATING AND MAINTAINING YOUR BLOG (2002).

[4] Christian Wagner, *Wiki: A Technology for Conversational Knowledge Management and Group Collaboration*, 13 COMM. ASS'N INFO. SYS. 265 at 268, 284 (2004).

[5] John Foley, *The Weblog Question*, INFO. WK., Jan 31, 2005, at 39, *available at* http://www.informationweek.com/story/showArticle.jhtml?articleID=59100462&tid=5979. *See* Randy Baseler, *Randy's Journal*, *at* http://www.boeing.com/randy/; Bob Lutz, *FastLane Blog*, *at* http://fastlane.gmblogs.com/.

her knowledge within or outside of the organization.[6] Blogs are now attracting attention from big businesses looking for new ways to connect with customers. Sun Microsystems Inc., Microsoft Corporation and General Motors Corporation all have officially-sanctioned corporate blogs for employees to write about products and strategies.[7] Blogs thus change the way that employees communicate and share their knowledge. In order for organizations to fully utilize the potential of blogs for organizational growth and to gain a competitive advantage, they need to understand the conditions under which individual Internet users can become effective weblog system users.[8]

DEFINING BLOGS

As a medium, blogs have provided a way for people to make a personal connection with the world via the Internet. A blog has been defined as "a form of online diary or regularly updated journal which provides a personal viewpoint".[9] This online journal can be accessed on multiple levels, according the preference of the user. For example, Sony Records may have intra-company blogs accessible only to employees, but may encourage recording artists to keep blogs that can be accessed by any interested fan.

The underlying mechanism of a blog is similar to that of an Internet web page. Because the average blog user may not have the technical savvy to launch and maintain his or her own blog, a number of professionally maintained blog services exist. For example, Xanga, one such blog service, represents itself as a community of online diaries and journals by individuals, "maintained by a small group of dedicated Xangans who care passionately about this wonderful community."[11] According to Xanga's homepage, users can use the service to "start their own free journal, share thoughts with their friends and meet new friends." Like a number of e-mail providers, Xanga offers a free service as well as a premium service. The premium service offers enhanced features without advertising, while the free service gives only basic blog amenities. Ample opportunities exist on the Internet for people of any age, computer skill level, gender, or nationality. In addition to Xanga, which boasts millions of users, there are several popular blog services in existence, such as LiveJournal and Blogspot, in addition to blogs that do not use any of these services. As with the Internet, blogs are not confined to any geographical area, and thus communities formed by blogs can be truly global in nature.

WHY DO PEOPLE USE BLOGS?

The fundamental question motivating our research is, "What motivates people to reveal their thoughts and feelings on blogs?" In the same manner, *"Why do I blog?"* becomes an

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[6] *See, e.g.*, Microsoft Corporation, Microsoft Community Blog, *at* http://www.microsoft.com/communities/blogs/PortalHome.mspx.

[7] Graybow, *supra* note 2.

[8] *See generally* Paul Pedley, *International Phenomenon? Amateur Journalism? Legal Minefield?: Why Information Professionals Cannot Afford to Ignore Weblogs*, 22(2) Bus. Info. Rev. 95 (2005).

[9] *Id.*

[11] http://www.xanga.com/

[13] Foley, *supra* note 5.

interesting question to ask the individual users of these blogs, or "bloggers." Two issues can help to answer this question.

First, many early Internet users were toying with the idea of publishing in one form or another. At the beginning of the digital era of Internet use, there were already millions of people who had learned HTML (a standard programming language of the Internet) in order to develop their own websites and publish their own personalized webpages. Many Web-surfers also enjoy sharing public information, interesting links, or specific computer techniques. Therefore, Internet users initially created web pages. Now blogs provide another platform to express opinions and share personal thoughts that can be easily accessed.[13] Many users agree that blogs provide an efficient way not only to save links and jot down notes, but also to share information that had been gathered after extensive browsing or surfing. Brad Graham, the creator of a blog known as Bradlands, gave this as one of his reasons for blogging as follows: "Surfing the Internet was fun, learning new things and discovering new resources was cool, and sharing the wealth with the blog readers was a joy."[15] Although e-mail has become well-accepted, it has also in many ways has become overwhelming. Blogs provide a means to minimize forwarded e-mail from and to friends, co-workers, and family members. If one does not want to forward a lot of e-mail to a number of different people or to receive a large number of forwarded e-mails from friends, blogs provide a fast and efficient way to leave messages or links for more information that everyone interested could access. Anyone who has ever found herself or himself on an e-mail forwarding list understands that some well-meaning people love sharing what they find on the Internet, even though other people may not be interested at all or may even get annoyed that they cannot remove themselves from the forwarder's mailing list. Thankfully, blogs provide a healthy outlet for those who do like to share funny and interesting things that they may have found on the Internet.

Second, blogs seem to create a sense of community that otherwise is absent while exploring the World Wide Web. Surfing the Internet is largely a solitary experience. Therefore, some users subscribe to things like email lists, online communities, and usergroups. In this way, users can feel connected to communities to which they can contribute on a regular basis, for example, by posting new threads to discussion forums. Blogs provide a place for individuals to contribute experiences, knowledge, and information. Blog readers correspond to suggest links and give details of shared experiences. This gives rise to an online community that shares thoughts and individual experiences through the medium of discussion. Barriers are broken down and strangers become friends.

SPECIFIC RESEARCH QUESTIONS ADDRESSED

There are three specific questions that we set out to address in our research. While there are weblog systems designed for mass use, there are still windows of opportunity for improvement in the design of systems for different users. As a better understanding of the motivational beliefs regarding the use of blogs is achieved, better systems can be developed on all levels and for all bloggers. Therefore, the guiding research questions for this study are:
  (1)   What factors motivate individuals to use weblog systems?
  (2)   Do significant differences exist among different user types?

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[15] Brad Graham, *Why I Weblog*, http://www.bradlands.com/words/maybe/maybe02.html.

(3)   How do differing motivation levels affect each user type's use of weblog systems?

The next section identifies the hypotheses that we developed and seek to prove with our research. It also includes an interpretation of other research that relates to blog behavior. Part of our hypotheses will be an attempt to explain the effects that different variables have on each other to ultimately predict the intention that individuals will have to use weblog systems in the future. Other hypotheses are also developed to test the relationship between motivation and different blog user characteristics.

Venkatesh, Morris, Davis and Davis developed a model for testing variables in technology-based systems that was extremely useful in our study's design[16]. They define several of the variables used in our study that we merely applied to blogs specifically. These variables include performance expectancy, effort expectancy, social influence and facilitating conditions.

The determining factor as to whether Internet users will consider using a weblog system depends on the ability of that system to satisfy their needs. The prime motivation for people to use blogs appears to be a need to publish and share personal experiences. Therefore, reason suggests that they would consider using a weblog system if it could help them achieve this end. Considering a construct helps measure the usability and usefulness of better performance. Performance expectancy is defined as the degree to which an individual believes that using the (blog) system would help him or her to attain gains in job performance. This leads to our first hypothesis:

H1a: Performance expectancy influences behavioral intention to use a weblog system, i.e., the higher the level of performance expectancy of an individual user toward a weblog system, the more likely it is that the individual intends to use the system.

A number of sites provide free blog services. These free services provide a weblog system designed to enable individuals to publish their own blogs quickly and easily. We expect, therefore, that, because these weblog systems are easy to use, individual users should have a high intention to continue using these systems. Thus, the following hypothesis is developed:

H2a: Effort expectancy would influence behavioral intention to the use of a weblog system. That is, the lower the level of effort expectancy of an individual user toward a weblog system, the more likely it is that the individual intends to use the system.

It appears that a sense of community is also a strong motivation that Internet users have to consider blog use. One of the original purposes for which Internet users developed blogs was to share experiences and information with friends and others surfing the Web. If many of your acquaintances are defined as bloggers, then the need to identify and join may be strong. This becomes a form of communication within the group and the tendency would be to follow the group norm. If some early adopters in a group begin blogging, the rest of the group may follow. We wanted to measure the effect that social influence had on causing a person to start blogging. Hence, the next hypothesis is developed:

H3a: Social influence is a direct determinant of behavioral intention to use a weblog system. That is, if an individual perceives that someone important to him or her thought he or she should use the system, he or she would be more likely to use the system.

On the other hand, not all individual Internet users are heavy Internet users. Light Internet users may be unaware of blogs in general, not to mention how easy to use and

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[16] Viswanath Venkatesh et al., *User Acceptance of Information Technology: Toward a Unified View*, 27 (3) M.I.S. Q. 425 (Sept. 2003).

effective blogs can be. In fact, light Internet users may have no idea how to start or join a blog, or even that blogs even exist. Those Internet users who may have heard about blogs may not fully understand what a blog is or the benefits it could offer. They may also not know whether a weblog system would be compatible to the way they work.

In the computer world, the vast range of available software applications is constantly evolving. Although some software may claim to be easy to use, that may not necessarily be the case. It is possible that more time is spent trying to figure out how to use a software than is actually supposed to be saved in the process. Problems in applications exist because of hardware, software, or support (both technically and psychologically). Sometimes it is not the actual functionality of a software application that is the problem, but the wrong perception of need by the user. Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exist to support use of the system. It is the way that, in the perception of an individual, blog services and developers provide for users. Therefore, the following hypothesis is proposed:

H4a: Facilitating conditions influence intention to use a weblog system, i.e., if an individual perceives that a blog provides all of the infrastructure and support needed for his or her use of the weblog system, he or she would be more likely to use the system.

On the other hand, given the number of users of this digital world, there are bound to be discrepancies. Some users are more prone to browse the Internet freely, while some may be more cautious in searching through their own keywords for what they want. It is interesting to test empirically if there are any differences among blog users and specifically, what those differences are. Allinson and Hayes suggest a generic intuition-analysis dimension of cognitive style.[17] They further suggest that intuition would be a basis for decision-making and problem-solving in organizations. Hayes and Allinson cite evidence of the value of cognitive style in relation to personnel selection, careers guidance, task design, team composition, conflict management and training and development.[18] Others have demonstrated the appropriateness of certain styles to cope with particular tasks.[19] In the work context, an analytic person tends to be compliant, prefers a structured approach to decision making, applies systematic methods of investigation, and is especially comfortable when handling problems requiring a step by step solution. An intuitive individual, on the other hand, tends to be relatively nonconformist, prefers a rapid, open-ended approach to decision making, relies on random methods of exploration, and works best on problems favoring a holistic approach[20].

Bloggers can be divided into two categories. One category of bloggers feels the need to publish and share information with others. This intuitive-oriented personality type of blogger would most likely use a weblog system to help publish his or her journal in an effective and efficient way. The other category of blogger, however, would be more critical and would want to see if the weblog system could really help improve efficiency. This analytical-oriented personality type of blogger seeks ways to use blogs to gain advantages from their usage.

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[17] Christopher W. Allinson & John Hayes, *The Cognitive Style Index: A Measure of Intuition-Analysis for Organizational Research*, 33 JOURNAL OF MANAGEMENT STUDIES 119 (Jan. 1996).

[18] *See generally* John Hayes & Christopher W. Allinson, *Cognitive Style and Its Relevance for Management Practice*, 5 (1) BRIT. J. OF MGMT. 53 (Mar. 1994).

[19] *See generally* Henry Mintzberg, *Planning on the Left Side and Managing on the Right*, 54 HARV. BUS. REV. 49 (Jul.-Aug. 1976).

[20] Christopher W. Allinson et al., *The Effects of Cognitive Style on Leader-Member Exchange: A Study of Manager-Subordinate Dyads*, 74 (2) J. OF OCCUPATIONAL & ORGANIZATIONAL PSYCHOL. 201 (Jun. 2001).

Therefore, we would expect that the influence of *performance expectancy* would be moderated by cognitive style. Hence, we develop the next hypothesis:

H1b: Cognitive style moderates performance expectancy influence on behavioral intention, with stronger expected effects for analytic individuals.

On the other hand, once an analytic individual finds better performance through using a weblog system in critical functions, they are likely to be more determined to continue to use that system. They probably pay less attention to the effort they really need to invest in the blog in the future. Even though the process might be complicated and require more effort, they would be able to follow the step-by-step process to complete the blogging task in the end. Therefore, we hypothesize the following:

H2b: The influence of effort expectancy on behavioral intention would be moderated by cognitive style such that the effect would be stronger for intuitive individuals.

If an individual becomes a blogger partly due to a shared sense of community, then he or she might want to share his or her knowledge and experience with a group of people, whether in the same community or with strangers. Intuitive individuals tend to be relatively nonconformist and prefer rapid, open-ended approaches and random exploration. Therefore, an intuitive individual may be more affected by his/her peers instead of insisting on his/her own stands. Hence, we posit as follows:

H3b: The strength of social influence on behavioral intention is moderated by cognitive style such that the effect is stronger for intuitive individuals.

On the other hand, considering the fact that an intuitive individual may prefer a more open-ended approach and may prefer the exploration process, we expect this hypothesis to be supported thus:

H4b: The influence of facilitating conditions on behavioral intention is moderated by cognitive style such that the effect is weaker for intuitive individuals.

RESEARCH METHODS AND APPROACH

To test the hypotheses, a survey instrument was introduced to year one undergraduate students in the business school of a local university in Hong Kong. The students were asked to complete the questionnaire after an introductory information system laboratory session. The students were told that answering the questionnaire was on a voluntary basis; however, the response rate was still extremely high (265 completed of 280 questionnaires issued). Table 1 shows the characteristics of our sample. Note the large percentage of respondents who have never used blogs. Also note the percentage of our sample that uses the Internet at least once a day.

The survey instrument was divided into three parts. Part A collected demographic data and usage patterns of respondents. Part B consisted of 19 statements asking for opinions about weblog systems in a seven-point Likert's scale, where 1 represented 'strongly disagree' and 7 represented 'strongly agree'. The 19 statements included four items for each of the four constructs, including *performance expectancy*, *effort expectancy*, *social influence* and *facilitating conditions*, and three items for *behavioral intention* - adapted from Venkatesh, et al.[21]

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[21] Venkatesh, *supra* note 16.

Part C of the survey used a self-report format for a cognitive style index,[22] consisting of 38 items asking respondents to identify the way they think - for example, "Formal plans are more of a hindrance than a help in my work"; "I am most effective when my work involves a clear sequence of tasks to be performed"; "My philosophy is that it is better to be safe than risk being sorry"; "I am inclined to scan through reports rather than read them in detail". A trichotomous true-uncertain-false response mode was used throughout. Twenty-one of the items were worded in such a way that a response of 'true' indicated an analysis orientation. The scoring of the remaining 17 was reversed so that the nearer the total cognitive style index scores were to the theoretical maximum of 76, the more analytical the respondent was, and the nearer the total score was to the theoretical minimum of zero, the more intuitive the respondent was. Items were placed in random order. While distinguishing high (analytic) and low (intuitive) scores by splitting groups according to their cognitive style index median would have been arbitrary, it was decided that it would be more valid to adopt as the criterion the result of splitting the median score (median = 43) previously obtained from a relatively large sample.[23] Therefore, cognitive style index scores were designated low (intuitive) if less than 43 and analytic if greater than or equal to 43. Out of a total of 265 respondents, results indicated that 121 respondents were designated as analytic while 144 as intuitive.

Table 1. Background of Respondents

Gender	Male: 89 (33.5%); Female: 176 (66.5%)
Age	Below 18: 5 (1.9%); 18-22: 260 (98.1%)
Blog Experience	Never: 118 (44.5%); Less than 1 year: 61(23%); 1-2 years: 62 (23.4%); 3-4 years: 19 (7.2%); More than 4 years: 5 (1.9%)
Login frequency	Seldom: 133 (50.1%); At least once a month: 14 (5.3%); At least once a week: 46 (17.4%); Once a day: 72 (27.2%)
Familiarity with blogs	Not at all: 99 (37.4%); A little bit: 96 (36.2%); Familiar: 52 (19.6%); Very familiar: 18 (6.8%)
Access to Internet after class	Yes: 259 (97.7%); No: 6 (2.3%)

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[22] *See generally* Hayes and Allinson, *supra* note 18. The Cognitive Style Index could not be reproduced in full here as fully stated by Hayes & Allinson. Anyone wishing to use the index for research should contact the authors directly.

[23] Allinson et al., *supra* note 20.

Internet usage	Seldom: 3 (1.1%); At least once a month: 2 (0.8%); At least once a week: 11 (4.2%); At least once a day: 249 (93.9%)
Computer knowledge	Very little: 49 (18.5%); Fair: 172 (64.9%); Good: 42 (15.8%); Expert: 2 (0.8%)

We analyzed our research model using a statistical program common to academic research. Our model was found to be statistically acceptable by measures standard to research in our field of study. The results were of the statistical analysis were enlightening. Table 2 below summarizes the results of our analysis.

Table 2. Group Model Testing Results

Constructs	Path Coefficients		Hypotheses
	Analytic	Intuitive	
PE→BI	0.53***	0.31***	H1, H1a *supported*
EE→BI	0.37*	0.54*	H2, H2a *supported*
SI→BI	0.21***	0.43***	H3, H3a *supported*
FC→BI	0.69***	0.70***	H4 *supported* H4a *not supported*
R^2	0.67	0.61	

*$p<0.1$; **$p<0.05$; ***$p<0.01$

Nearly half of the sample (44.5%) in our data collected were non-bloggers. Bloggers and non-bloggers may view the system differently and may have an interaction effect on the model. Moreover, although a majority of the sample had a fair to good computer knowledge (a subtotal of 80.7%); the differences in computer knowledge may also affect their views on using a particular form of technology. Further analysis found that computer knowledge and blog experience did have significant interaction effects on the constructs, though not strong. It was found that (1) performance expectancy had a stronger effect for individuals with higher computer knowledge and longer blog experience; (2) effort expectancy had a stronger effect for individuals with lower computer knowledge and short or no blog experience; (3) social influence had a stronger effect for individuals with lower computer knowledge and limited blog experience; and (4) there were no significant differences for facilitating conditions.

We also noticed that we had significantly more female participants in our survey than male participants. We also tested to see if females were more likely to be future users based solely on gender, but our results were inconclusive.

DISCUSSION

The model testing results found that all the direct effect hypotheses were supported. Performance expectancy was found to significantly influence behavioral intention (H1a). The moderating effect was also found significant where performance expectancy toward behavioral intention was stronger among analytic individuals (H1b). This could be explained by the fact that analytic individuals were more evaluative and were more conscious about the ability of the weblog system to perform well in helping them in a more effective and efficient way to publish their journals and to share their knowledge and experience over the online community. Through a simple check of the user type through the cognitive style index instrument, system developers would be able to provide a better interface and system design to cater to the needs of these individuals. To take a practical example, blog services could provide not just the publishing function, but also ways to build the online community. The tighter the relationships among the bloggers, the more likely they would be to contribute in the community activities. Blog communities thus worked only if people wrote and shared.

Effort expectancy was found to significantly influence behavioral intention (H2a). Therefore, users would probably consider effort as one of the variables when accepting weblog systems. On the other hand, effort expectancy-influenced behavioral intention was found to be moderated by cognitive style, where the effect was stronger among intuitive individuals (H2b). While analytic individuals were more cautious about the performance and outcomes, one would expect them to be more determined to use weblog systems, even if they were required to put in more effort. However, the results were just the opposite: intuitive individuals would be more concerned about the effort they needed to put in to use the weblog systems. Personalizing the weblog system to suit these individual differences would make a good (or satisfactory) user experience for all. For example, after a simple check of the cognitive style type of new users, the system might provide two interface templates for the two different types of users. A simple and easy-to-start-with system interface, without even any preference-setting options, would be a good match for the intuitive type. Traditionally, system designers had little information about the types, so they attempted to satisfy everybody. They designed a simple interface but provided additional options for expert users to manipulate the settings, which seemed to be an all-round safe option. However, they could not restrict users from enabling the "additional options", and since some users would be very confused by all the options and choices, this would probably create a very bad user experience that affected all the perceptions of such users with regard to the system and their processes in using the system.

Social influence was found to significantly influence behavioral intention (H3a). Most people who experience the need to write personal thoughts and experiences would not feel the need to publish on the web. It was a fundamental social need that triggered Internet users to publish their diaries on blogs - a sense of community to share experiences with friends and make new friends. For example, the concept of 'blogging' someone - adding someone's blog link to one's own in order to keep track of all that person's blog updates, was linked to this sense of community. If an Internet user perceived that the people who were most important to him or her thought he or she should use a blog, that user would most probably consider using a blog. Thus the sense of community made individuals want to follow the group norm. On the other hand, social influence affected behavioral intention, which was found moderated by cognitive style such that it was stronger among intuitive individuals (H3b). Although blogs started with small technical expert groups, users could use blogs alone without joining any community activities. It was found that the effect of social influence on behavioral intention

was significantly lower among analytic individuals. While this group of individuals appreciated the use of blogs, they might have perceived the group norm in a different way. A simple practical suggestion would be to adopt a 'push' strategy, continuously sending frequent information updates about the community, which would be more appropriate for intuitive individuals.

Facilitating conditions were found to have significantly influenced behavioral intention (H4a). In fact, it was the strongest effect among all the variables. However, there was no significant difference among the groups and the hypothesis that cognitive style would be a moderator toward facilitating conditions was not supported (H4b). Therefore, both types viewed facilitating conditions, such as knowledge, resources, infrastructures and compatibility of systems toward work practice, as important enough to them to consider using blogs. This had many implications for system designers with regard to catering to these needs. For example, how could a blog design be more compatible to work practices? Organizations were starting to require employees to have blogs to keep journal updates for collaborative work purposes.

RESEARCH STUDY CONCLUSIONS AND LIMITATIONS

This study aimed at finding the motivational variables for individuals to use weblog systems. A survey-based questionnaire was introduced to a local university in Hong Kong. Data analysis found that all the variables in the model significantly affected the behavioral intention to use weblog systems, namely performance expectancy, effort expectancy, social influence, and facilitating conditions. With the cognitive style index instrument, this study successfully identified the two important cognitive style types of individuals - analytic and intuitive. Through group analysis of model testing, significant differences were found among the variables such that cognitive style was a significant moderator affecting the level of influence toward the final behavioral intention to use weblog systems.

Using undergraduate students as study subjects might have limitations in terms of generalizing the results to other settings. However, blog use was truly voluntary behavior among young adults - they were not required by their employers to do so, but they were also major users of blog services. Demographic data showed that undergraduate students were heavy users of the Internet, more than half of the subjects had blog experience and about thirty percent of the subjects used blog services at least once a day. Therefore, this target group served as a good representation of blog users. However, on the other hand, 44 percent of participants never wrote blogs, 50 percent seldom read blogs and 73 percent were not familiar with weblog systems, which could raise questions about the generality of our research conclusions. It was found that, although only at a weak significance level of $p<0.1$, the control variables of blog experience and computer knowledge did have significant interaction effects on the constructs. These confounding effects should be considered together in the interpretation of the results. Moreover, this one-shot survey study provided us with only limited information about the process of blogging. It would be better to examine the phenomenon at the scene, *i.e.*, the blog platform, in order to understand more about why and how users use blogs.

POLICY ISSUES AND IMPLICATIONS

In addition to the findings and conclusions addressed in this research framework and analysis presented in this paper, there are also a number of policy issues and implications which should be considered both from a public governance perspective of society and from a business incentive and governance perspective, such as the following:

Privacy and Security

Blogging is by definition designed to share information with others, but the breadth and extent of sharing may be much greater than initially expected or reasonably anticipated by individuals providing the blogging inputs. For example, should a company using blogs to share useful business experiences and insights have any reasonable expectation of privacy or security for information which is shared in this way via the Internet, and what recourse might a company have for such internally shared corporate information if the blogged data were either shared by insiders within the company or accessed by external agents without permission (potentially including hacking, but more likely due to poor security management, such as broad publication of easy-to-remember passwords for the data within the organization)? At an individual blogger level, information may be intended to be shared (e.g., published) within a small closed community (e.g. a family newsletter), but expected protections or security may be much weaker than expected or even non-existent. What recourse would users of a free blog service have if private blogs shared within only a small closed community were made available through poor security management to the entire Internet user community? This represents for both businesses and individuals a potential example of public disclosure of private information, but there are clear questions regarding what level of privacy or security both business and individual users of such systems might reasonably expect from blog service providers and blog sharing of information across a theoretically closed community of viewers.

Restrictions and Voluntary Participation

Blogging is by its very nature a personal activity, which appeals greatly to some people much more than others. In this research, it became clear that personal attitudes and attributes have a strong influence on willingness to begin blogging. At the same time, we also noted that some companies require employees to use blogs as part of their job requirements, which is likely to result in a change in performance obligations and expectations for existing employees, who may be required to participate in a degree of personal sharing of experiences and information that is uncomfortable for them. To what extent should companies be able to require sharing of personal insights and experiences within their working environment for their employees, especially when such requirements are new expectations of existing employees and positions, not just of new positions? On the other hand, can employees be punished or even fired for sharing of information that companies might consider confidential on their personal blogs? What rights do employees have versus companies regarding requiring or prohibiting participation in blogging?

Community Standards versus Free Speech

Blogging often involves sharing of personal information and feelings in a close community of blogging participants. Within traditional communities in the physical world, zoning and other ordinances are often enacted to maintain or establish acceptable standards of the community (e.g., no pornography in this district or area, or senior citizens only in this

building, or all yards in this neighborhood must be fenced as established by deed covenants). For blogging communities, what legal or social mechanisms can or should be developed and enforced to preserve the nature of the community? If harmful "neighbors" move into a blogging community (e.g., multilevel marketing advocates, posters of sexually explicit blogs, spammers of some products or services, etc.), what rights might the community have to enforce the equivalent of zoning restrictions on a blogging community? In contrast, what rights, if any, might individuals or businesses have for freedom of speech within a blog community? If the rights of the blogging community are the exclusive domain of the service provider through which blogs are stored and distributed, does this service provider have the right to change the community norms under which a blog community has been established, with no recourse for the community at large against such changes in policy? It may seem obvious that blog providers are businesses that have rights to change policy and restrict publications and users, but they may also be defined as publication media that might be subject to some of the same standards applicable to a common carrier of information, such as a telephone company, or to a broadcaster of information, such as a newspaper or TV station.

Thus, the breadth of issues described here from a policy perspective illustrates the challenges associated with this communications innovation, which has the potential to have as large a social impact as have other Internet communications media, such as World Wide Web standards or e-mail.