Abstract

This is a proposal to gather systematic data on blogging practices and policies in firms. Concurrently with collection of factual data, the study would, at two points in time, collect attitudinal, perceptual, and communication interaction data to test relationships between blogging and organizational climate, trust including individual propensity to trust and trusting environments, and communication behaviors.

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Introduction

Blogs have spread in cyberspace like a positive pandemic. Business publications talk as if blogs were the biggest development after the Internet itself. Businesses had better start paying attention to blogs, according to Business Week’s cover story of May 2, 2005. The theme is that customers are blogging about your firm and your competitors so you neglect blogs at your own peril. Other business publications give similar advice.

Blogs – short for weblogs -- are easy to use collaboration systems. In contrast, typical electronic group support systems (GSSs) of the past century, particularly dedicated special-purpose rooms and specialized software have often fallen into disuse. As objects of study some well-published scholars consider them passé, or not a productive research area. However research on forms of, and facilitation of, collaboration is a vital field because of globalization and changes society driven by the Internet. An illustrative is story is the evolution of the Electronic Meeting room in the University of Hawaii’s College of Business Administration. In 2004 the room was refurbished, according to a leading professor, to remove the GSS systems and turn the room over to a focus on simulation systems, a more productive research area. (Bui, Personal communication, 2005a). In the Fall of 2005 the room was used by the professor for a course on management of I.T.-supported globally distributed work (GDW). GDW is described “. . . As a concept-rich and potentially rewarding domain for empirical research and theory building . . .” Now that the technology is inexpensive and many software choices are available, more attention is returning to the social issues in collaboration between group members who may be geographically distributed in several ways.

In addition the center of gravity of collaborative work has shifted to Asia. Cultural heterogeneity has become a more important factor to be understood and used to best advantage. We agree with Bui (2005b) that there are Asian perspectives on group research that are under-appreciated in the Americas. Blog enthusiasts think that blogs are a key tool in refining collaborative work.

Groups are well-studied in the social science literature because of their importance in work and because they are easily assembled in the lab. The purposes and compositions of groups vary widely. Despite the huge volume of studies, groups and meetings continue to be a
subject of study due to the time and resources all enterprises invest in them. Group participation is, after all, the fundamental human activity, the pace and character of which has been accelerated and altered by the Internet.

These days groups gather more for the construction and sharing of knowledge rather than for the efficient production of physical goods. Necessarily social processes build intellectual capital to be used for competitive advantage. The study of these social processes goes on in many research streams which, while global, have some geographic focus. The collaboration engineering stream may be considered Euro-American. An exemplar paper would be Briggs, de Vreede, & Nunamaker (2003). The social intelligence design (SID) approach has a definite Asia focus in part driven by the speedy uptake of mobile ICT’s. See, for example, Fruchter, Nishida, & Rosenberg (2005).

While the pace of business activity has been accelerated and globalized by communication technology, new social technologies provide new forms of social and intellectual collaboration support. In particular, blogs and wikis are easy-to-use tools for structuring both knowledge and relationships. They interact with the nature of the personalities of the contributors and are seen as a way to nurture productive social behavior.

Blogs and wikis are exploding facilities on the Internet for both personal and corporate use (Dearstyne, 2005) in posting information. They have arrived as “the next big thing” or “killer app” on the ‘Net increasingly often discussed in newspapers and business magazines. They are a supplement to traditional news media (Dearstyne, 2005) uncovering facts and stories overlooked. Blood (2004) considered blogs as arguably a new medium, “participatory media.” It is plausible to go further than Blood and claim that the medium is the message in McLuhan fashion. The essential elements are overwhelmingly social, facilitated by technical innovation.

Blogs appear to serve both the culture and knowledge management (KM) – knowledge-focused blogs are called k-logs -- resources of organizations. Both culture and some aspects of

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1 The essential features of both types of posting systems are ease of use and linking – building social networks – to others. Users do not need to know html. The blog is a reverse chronological posting system. Each new posting goes on the front of the blog pushing the previous content down. Previous content cannot be changed except by the owner.

In contrast, wikis encourage commentary and editing of previous entries up to and including deletion. Software facilitates rollback by the owner as required in the case of inappropriate content or deletion. Thus the wiki may be more appropriate for building documentation or organizing new knowledge.
knowledge are hard to duplicate and thus are drivers of competitive advantage. Being both useful and easy to use, they help transform work into play.

In this research we focus consideration on the use of blogs and k-logs, while asking about wikis, for organizational purposes – see purposes 4 & 5 below. However companies that encourage blogging often (to what extent is an empirical question) encourage personal postings too. Estimating the extent of participation in customer-facing blogs is a survey goal of this research. Already some firms apparently believe that blogs are easy to use and benefit the organization. Are there predictors or important consequences of such a belief? The overall hypothesis is that features of blogs exploit known social science concepts. Contributing to a blog in a business setting has both cognitive and social functions. In the cognitive domain, the blog is a means of structuring information, making connections, and preventing cognitive overload. Contributing to a blog is an act of sharing and trusting which are social functions. Previous research concerning other collaboration technologies suggests that trust is an essential factor in use.

Evolving commercial software products blur the distinctions between blogs, wiki’s and other online communities by combining features while the basic systems are free services on the Internet. Share-ware, open source software is also available. Moderate cost hosting services provide more polished presentations, control and freedom from ads. Many systems provide for Really Simple Syndication (RSS) feeds thus eliminating the need to periodically check a blog to keep up to date. Companies such as Technorati and Google provide indexing as searching of the millions of -- many inactive too -- blogs. The systems are touted, including by this researcher, as alternatives to floods of email.

Dearstyne (2005) distinguished five classes of blogs. They are
1. Individual personal news and views. These are journals often to share views, experiences, photos, etc. with family, friends and associates.
2. News, Commentary and Journalism. Blogs are considered by many as legitimate news media.
3. Advertising, promotion, customer service and customer feedback. Tapping into customer views is a source of ideas and a way of building loyalty.
4. Business and professional insight. Dearstyne (2005) claimed these are the most influential business blogs, some being run by CEOs.

5. Internal information sharing and knowledge management (KM). Blogs are easily implemented on intranets most often inside the firewall. Variants may permit selective external access to key partners.

“Much of the value of a blog network is the social capital that is built from relationships. People read each others' blogs to see what their friends (and enemies) are up to, and then they add value by linking, commenting and elaborating what is being said. The implicit or explicit "swarmth" [online reputation] that individuals accumulate can be a vital indicator of their worth to the organization — who trusts whose recommendations, whose proposals seem to garner the most attention and who is a respected authority — which can be more effectively managed (if managed is the right word) in the social matrix than in the command-and-control hierarchies that still seem to form the architecture of most businesses. Non-social solutions — such as traditional content management solutions, portals and newsletters — cannot compensate for the missing social dimension that social tools engender.” (Cutter, 2004)

In terms of knowledge management, the firm can build its intellectual resources if members trust the company enough to explicitly contribute knowledge, or on the other hand to admit to desires and needs to fill in gaps in knowledge. In the social realm, self-disclosure about oneself such as family and hobbies, often builds useful familiarity and approachability. Companies can create impressions of desirable perceptions such as openness to suggestions by allowing blogging using company resources be they time and/or the information technology to support blogging.

**Research Question**

With all the attention to and alleged potential of blogs in business for social and knowledge management purposes, the proposed research raises the compound research question:
What are organizations actually doing with blogs, and why, as both social and knowledge management tools?

**Research Objectives:**

The proposed research would have two main objectives: First to collect descriptive data on the extent of corporate blogging; second, to test claims for beneficial social purposes concerning blogs in organizations. Compared to publicly accessible blogs, relatively little has been published about corporate organization-sponsored (or condoned) blogs. As a phenomenon in a condition of rapid trial and adoption, there is an opportunity to gather basic facts about blogging, and test theories of communication, trust and organizational climate.

**Descriptive Objectives**

Systematic data will be collected on

- the forms (blog, k-log or wiki or all),
- organizational purposes (e.g. specific task, evaluation and social forums),
- values concerning contribution,
- allowed contributors (internal, external (customers and/or partners), both, and separate),
- formal and informal policies, both pro and contra blogging
- perceived value, and
- future plans.

This part of the research would perform the scientific function of documenting “what is” in the world and classifying the findings in useful ways.

**Objective 1.** Systematically document organizations’ blogging policies and how they relate to stated goals and objectives. Assess the processes and configurations that produce or are perceived to produce positive results?

**Objective 2.** Gather data on whether firms attach special importance to blogs because of the need for virtual teams, collaboration with remote partners, network organizations, and other modes of operation driven by the Internet and globalization.
In short, the use of blogs is widely reported in the business press although many organizations and firms have yet to adopt (Cayzer, 2004).

Explanatory Objectives

The role of trust in use of blogs as information sharing and communication tools has not been fully explored. The overall hypothesis is that the ease of use and the structure of blogs encourage social behaviors which facilitate collaboration. Social Intelligence Design (SID) (Azechi, 2005) would structure the interactions, perhaps assisted by software agents, to create affordances to promote both positive identities, knowledge sharing and knowledge creation.

Objective 3. Assess if and how blogs, k-logs, and wikis contribute to an organizational climate encouraging trusting behaviors, knowledge sharing, and knowledge creation. Test causal relationships of blogs & k-logs and trusting organizational climates and trusting behaviors.

Objective 4. Assess multi-dimensional trust and the levels of each. That is assessing trust as a personality variable, trust in fellow employees in the immediate department, and the organization as a whole.

Objective 5. Assess perceptions and changes in the character of debate and discourse within the organization attributed to, or coincident with, blog activity. For example, can changes in communication patterns and sociality be documented?

There is a need to critically evaluate the highly-touted social and knowledge-related benefits (and costs) of these powerful social, collaborative tools.

Literature Review

Applicable Theories

Several significant sources of theory are applicable to blogs. As a social phenomenon they can be analyzed on many levels, from the psychology of the individual blogger up to broad societal trends. The literature review starts with some important characteristics of blogs themselves. The discussion then shifts to organizational culture, an hypothesized reflexive enabler of blogging in organizations. Next, trust theory is reviewed in some detail because it is a significant part of organizational climate and theories of organizational communication. Trust is
a multi-dimensional concept and careful distinctions between levels of analysis must be made. Group theory is applicable because people generally work in groups rather than the firm at large. Blogs have potential as group support and feedback – e.g. monitoring of contributions -- technology. Employees experience organizational climate at the group level which has been well-studied in the social science literature. The discussion winds up with discourse and media theory which shed some light on how blogs might change dialogues.

**Blogs**

There are many newspaper and magazine articles about blogs and blogging. The academic literature is just catching up due to the traditional lags in such publications. Despite the millions of blogs, Herring, Scheidt, Bonus & Wright (2004) suggest that the blog is neither fundamentally neither new nor unique. They place the blog as new genre in the “ecology of the Internet.” This genre shares features with and between both media-rich web pages and the text-oriented computer-mediated communication systems in terms of frequency of updating, multi-media capability, and symmetry of exchange. Blogs can also be classified on the dimensions of personal vs. topical and individual vs. community. (Herring, et al. 2004, crediting Krishnamurthy.)

In their 2003 random sample of 203 blogs, Herring, et al. (2004) found that the personal journal type blog was the dominant type with over 70% of the sample. The filter type was second with 12.6 %. The filter type is one which primarily links to, and comments on, other sites.

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal journal</td>
<td>140</td>
<td>70.4</td>
</tr>
<tr>
<td>Filter</td>
<td>25</td>
<td>12.6</td>
</tr>
<tr>
<td>K-log</td>
<td>6</td>
<td>3.0</td>
</tr>
<tr>
<td>Mixed</td>
<td>19</td>
<td>9.5</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>199</td>
<td>100</td>
</tr>
</tbody>
</table>

Source:  Herring, et al. (2004, 6)

Overall, the Herring, et al. (2004) said that the popular impression of large-scale linking between blogs is unjustified. Finally however, they concede that ease of use and the interactive
character of blogs, what they saw as an incremental change has the potential to reshape the “genre ecology of the Internet.”

While blogs external to the firm are important, this research will focus mainly on internal blogs, both the social blogs, the knowledge-management blogs or k-logs (Herring, et al. 2004) and ones which mix the functions. Whether or not there is a strict separation of types of blogs behind or across corporate firewalls remains to be investigated by this research. There may be a high correlation between blogging at home and blogging at work.

While internal corporate blogs may be more likely to be k-logs, there is another fundamental difference in that contributors are likely to have had some history of interaction. Even though contributors may never have worked together, they may recognize that they might work together in the future.

Another application of blogs would be light weight replacements for group support systems mentioned in the introduction. The present-day communication and computation contexts are quite different than when GSS’s were introduced. The data compression technologies, software, and cheap bandwidth generally and over the Internet specifically have made video conferencing widely available. Furthermore, the researcher hypothesizes that there has been recognition of the model-driven view of group support (Morton, et al., 2003) which emphasizes decision processes rather than events. The appropriate GSS model now would be to post information to a blog, vet the issues, then meet (whether virtual or FTF) to make decisions, and finally to use the blog to facilitate implementation. Another factor has been the growth of globally distributed work with human knowledge resources more important than physical ones.

The favorable discussion of blogging above should imply that the author is unaware of negative aspects of blogging. Criticism of employers by employees can be constructive or malicious. A recent article entitled “Blogging: The New Computer "Virus" for Employers” outlines a number of the problems and difficulties in dealing with hostile blogs by disgruntled employees and others (Brody & Wheelin, 2005).

This research proposal calls for a survey of CIO-level or other individuals who set and/or enforce blogging policy. A separate survey of employees would be administered to answer research objectives and questions as described below. Data will be gathered for descriptive statistics – the extent and nature of the phenomenon -- and to test specific hypotheses. To restate:
Objective 1. Systematically document organizations’ blogging policies and how they relate to goals and objectives. Assess the actual processes and configurations that produce or are perceived to produce positive results.

How do firms encourage participation? Or do they discourage participation in blogs?

What are the specific policies?

This objective will be addressed by new questionnaires, drafts of which are in the Appendices.

Objective 2: Gather data on whether firms attach special importance to blogs because of the need for virtual teams, collaboration with remote partners, network organizations, and other modes of operation driven by the Internet.

This objective will be addressed with the draft surveys in the Appendices.

Are the corporate purposes more to provide aids to cognition or to focus on values and spirit to get people to interact?

Smith, Collins & Clark (2005) found that strong ties in knowledge worker teams were significant predictors of knowledge creation capability and new product introduction. This runs somewhat contrary to the findings on weak ties and may be a consequence of the nature of the tasks involved. The researcher believes the issue is open and elucidation of the conditions to be desirable.

H2.1: Business blogs on task-oriented groups will be perceived to be more successful if they build both weak and strong ties within the firm, i.e. they bring in people outside the primary task group. Blogging can facilitate such expansion of inputs by encouraging linking.

Organizational Climate Theory

Organizational climate is employees’ perception of company policies and social environment (Patterson, Warr & West, 2004). It is a reflection of how employees feel they are treated by the organization (Harris, 2002). Organizational culture is, in contrast, taken to be the high level, foundational values of the organization. Culture and climate will not match if, for example, one department does not faithfully translate the company culture into the reality of
everyday interaction. Measurements of climate tap into the values and processes as experienced by employees.

Patterson, et al. (2004) found eight aspects (out of 17) of company culture that predicted productivity in the following year, controlling for previous productivity, company size and industrial sector. The eight aspects were supervisory support, concern for employee welfare, skill development, effort, innovation and flexibility, quality, performance feedback and formalization. Some components of climate thought to be important were not significant, for examples involvement and integration. Another important finding was that job satisfaction was highly correlated with positive elements of organizational climate suggesting that employees make some overall assessment of the company values as they experience them in daily work. The study explicitly concerned economic productivity but noted that other researches had studied climate as predictors of technological innovation, gain in market share, and effects on customers. Organizational climate is a big factor in the winners of “best companies to work for” surveys but money is not (Harris, 2002).

As comprehensive and valid as the Patterson, et al. (2005) climate survey was, it did not cover certain concepts directly related to blogging. Communication climate – defensive vs. supportive – is an important element (Harris, 2002) of climate only tangentially addressed by Patterson, et al. (2005). Other concepts under studied by Patterson, et al. were trust and tolerance of risk. The discussion of climate resumes below in the topic of the “spirit” of technology in relation to adaptive structuration theory in groups.

Zárraga & Bonache (2003) found that teams with involved leaders or coordinators, rewards for sharing, training for teamwork, and social events were associated with higher levels of active empathy, lenience in judgment, mutual trust, courage to express opinions and access to help. The study looked at 363 members of 12 teams in medium to large Spanish firms. The constructs listed accounted for significant variance but the total variance accounted for was only 20%.

Similarly, Janz & Prasarnphanich (2003) examined 27 software development teams involving 231 IS professionals in 13 firms. Positive associations for climate variables were found for support of risk-taking, rewards for achievement, warmth, and general supportive environment. Organizational climate plus group autonomy were associated with a group
learning concept which in turn was linked to positive evaluations by stakeholders (an independent measure) and work satisfaction.

In a more recent study in Korea, Bock, Zmud, Kim, & Lee (2005) found that organizational climate conditions of fairness, affiliation and innovativeness were positively associated with a subjective norm favoring knowledge sharing and intention to share knowledge, both implicit and explicit. Note the positive contribution of affiliation, a social identity construct. Their theoretical base was the theory of reasoned action (TRA) the progenitor of the technology acceptance model (TAM). Other positive factors were a sense of self-worth and anticipated reciprocal relationships. Anticipated extrinsic rewards were negatively, but not significantly, related to an attitude of knowledge sharing.

Knowledge creation is an on-going process rather than something that is primarily event driven. Lee & Choi (2003) examined perceptions in 147 Korean firms by surveying 1425 managers concerning knowledge creation processes. Those processes included socialization, externalization, combination and intermediation. The enabler concepts – organizational climate in the purview of this proposal --statistically significant as an aggregate but not individually, were collaboration, trust, learning and centralization.

Organizational climate is defined in several ways as noted above. That body of research provided a number of plausible alternatives for measurement scales. Specific choices are discussed below.

A whole host of interesting research questions flow from organizational climate such as: What are the company culture variation and variations in the use of blogs vs. wikis? What is the company climate on contributing to blogs? Do firms perceive that blogs & wikis work because of the formal content or social considerations? To what extent are blogs used for building common ground? For agenda setting? Thus the following key objective is stated:

Objective 3: Assess the organizational climate of firms. Assess if and how blogs and wikis contribute to (or at least correlate with) an organizational climate encouraging trusting behaviors, knowledge sharing, and knowledge creation. Assess the direction of causality of blogs and trusting organizational climates and trusting behaviors. Test the idea that certain organizational climates are associated with use of blogs for important or strategic purposes.
H3.1 Organizational climate significantly affects adoption and use of blogs.

H3.2 Contributors’ evaluations of their leaders’ leadership styles will affect blog usage – quantity and quality.

From the above discussion, the proposed research can reasonably predict that blogs contribute to a positive organizational climate. However it appears that climate is a necessary but not sufficient condition. The necessary condition is trust, the subject of the next section.
Trust Theory

Open virtually any popular business magazine, whether general or specific to say CIO’s and you will find trust discussed. Trust is clearly important to dealings internally and externally to the firm. We read about trusting employees, building trust with departments or executives and suppliers. We must not forget customers. Everybody knows what trust is but when it comes to research, the investigator quickly discovers that there is a deep structure to trust.

Trust has many definitions. Fukuyama (1995) considered trust, a form of social capital, to be more important than physical or financial capital and defined it as “. . . the expectation that arises within a community of regular, honest and cooperative behavior based on commonly shared norms on the part of members of the community” (26).

The complexity and importance of the trust concept were illustrated by the following study which noted both the trustworthiness of others (potential trustees) and trustor attitudes and behaviors. Employing interviews in 20 organizations (13 for profit, 7 non-profit), Abrams, Cross, Lesser & Levin (2003), summarized their findings and advice on successful knowledge-sharing networks this way.

“From our interviews, we learned that those who are seen as trustworthy sources of knowledge tend to: (1) act with discretion; (2) be consistent between word and deed; (3) ensure frequent and rich communication; (4) engage in collaborative communication; and (5) ensure that decisions are fair and transparent. Under organizational factors, we identified two ways to promote interpersonal trust: (6) establish and ensure shared vision and language; and (7) hold people accountable for trust. Under relational factors, there is some overlap with the trustworthy behaviors mentioned above, but we also identified two new behaviors: (8) create personal connections; and (9) give away something of value. Finally, under individual factors, a person’s own judgment of his or her abilities (self efficacy) also matters, a trust-promoting behavior identified in our interviews which we characterize as (10) disclose your expertise and limitations.” (Abrams, Cross, Lesser & Levin, 2003, pp. 65-66, [footnotes omitted])

This study of blogging proposes that trust is mediated by the technology and by the corporate environment. The close connection of trust and knowledge is illustrated by a relatively
simple trust model in a telemedicine research project. Paul & McDaniel (2004) conceptualized and looked for four kinds of interpersonal trust namely, calculative, competence, relational, and integrated. Trust is particularly important in medicine because of the risks to the patients and providers’ reputations.

Briefly, calculative or rational trust is trust based on ‘cost-benefit’ considerations, i.e. am I better off by collaborating? Competence trust is the evaluation that the collaborator has the knowledge and experience to provide good advice. Relational trust, also called benevolent trust or normative trust, is the feeling that the parties want to do help each other. Relational trust is based on personal goodwill. Finally, integrated trust is a general summation of the three previously-mentioned types of trust. See the model below.

**Interpersonal Trust**

<table>
<thead>
<tr>
<th>Self-Interest</th>
<th>Ability</th>
<th>Empathy</th>
<th>Integrated</th>
</tr>
</thead>
</table>

Virtual Collaborative Relationship

Figure 1. Adapted from Paul & McDaniel (2004, Fig. 1, p. 187)

They examined the association of interpersonal trust with virtual collaborative relationship (VCR) performance. Trust enabled collaboration as a means of complexity reduction, and virtual collaboration extends face-to-face collaborative relationships by substituting technology for collocation (Paul & McDaniel, 2004). Their study consisted of 74 interviews in 3 health centers concerning 10 specific projects and thus 20 relationships 10 each way. (That is remote practitioners’ perceptions of the health center experts were gathered with health center experts’ perceptions of the remote practitioners.)

Through qualitative analysis of interview data, and by a complicated facet analysis, Paul & McDaniel (2004) found that the impact on remote site health care delivery of VCRs was monotonically associated with each of the individual types of trust and integrated trust.

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2 They were forced to tease out explanatory classifications because of their small sample size.
Significantly, however, they discovered that without the competency trust, the overall trust was negative.

For future research Paul & McDaniel suggest, *inter alia*, determination of whether integrative trust is a new kind of trust or just a mixture of the other types of trust. Additionally, they recommended addressing how the different types of interpersonal trust interact and the temporal relationships between these types of trust. Thus there could be trust-building activities before formal collaboration. In other words the social functions of blogs would be promoted before use for specific projects. That is there would be building of trust; social networks; and social exchange. (“I know remote colleagues better because of the blog.”) Note that Paul & McDaniel studied trust between individuals embedded in organizations. We should look for organizational effects (nurture) and individual effects (nature).

In less life-critical settings employees often choose to seek advice from less competent but more likeable (and therefore trustworthy – less vulnerability) colleagues (Casciaro & Lobo, 2005). They conducted surveys of social networks and interviews in a Silicon Valley firm, an IT multinational, a U.S. university and a Spanish office of a global luxury goods manufacturer. They pointed out that sometimes facts alone are not sufficient to accomplish a task. Brainstorming and follow-up with a competent jerk might be difficult. They wrote, “...[I]n order to learn, you often have to reveal your vulnerabilities, which may be difficult with the competent jerk – especially if you are afraid of how this might affect your reputation in his eyes or in the eyes of others to whom he may reveal your limitations” (Casciaro & Lobo, 2005, p. 95). These issues concern one individual trusting in another, risking being vulnerable.

Both individual and organizational forces are at work with trust concepts. Trust is treated in the literature as an environmental (sociological perspective) variable as in organizational climate, as a cognition about a trustee (social psychological perspective), and as an individual personality variable (psychological perspective) (Mayer, Davis & Schoorman, 1995; McKnight, Choudhury & Kacmar, 2002). The many types of trust may not be comparable from one piece of research to the next. Although Mayer, et al. (1995) entitled their article “An integrative model of organizational trust,” and convincingly sorted out the three levels of analysis, they limited their applicability claim to dyadic relationships as for example between a junior employee and mentor. (The model has since been extended to teams as discussed below.) Particularly appealing about
the Mayer and colleagues model are the feedback loop and risk construct shown in the figure below. It lacks the organizational climate construct hypothesized in this proposal.

Figure 2. Source: Mayer, Davis & Schoorman, 1995, Fig. 1, page 715

Trust is a well-studied concept in social science. However many of the studies mix definitions and levels of analysis. Some have dubious reliability in my opinion – because of short scales, for example -- but are published. Early work has been replaced by much more solid research. Several types of trust have been distinguished. McKnight, et al. (2002) found 15 trust types in their literature review in preparation to build new scales. In addition to trust in collaboration methods, there is a great deal of research interest in trust and e-commerce because of e-commerce’s expanding share of business transactions. In this study, we concentrate on conceptualizations of trust more related to collaboration while taking advantage of refinements in the conceptualization and operationalization of trust.

3 Mandelli (2002) has some very interesting observations about trust but her short scale addressed trust only indirectly.
McKnight & Chervany (2001-2002) provided another of several influential, frequently-cited trust models bringing together the concepts of trust at different levels of analysis and built in large part on Mayer, Davis & Schoorman (1995). They explicitly extended the model for e-commerce but the general principles apply. A subsequent article McKnight, Choudhury & Kacmar (2002) presented the details of the validity of the concepts. At the individual level, disposition to trust included faith in humanity -- competence, benevolence, and integrity -- as well as trusting stance and personal innovativeness.

At the institutional (sociological) level, the measures were related to the institutions of e-commerce and situational normality of benevolence, integrity and competence plus a general perception. For example, in the organization a question might be “I am comfortable relying on the company to meet its obligations.” There can also be structural assurances of safeguards. Thrusting beliefs (social psychological effects) in the context, economic factors, and institutions contribute to trusting intentions which the correlate with behaviors.

Trust involves the creation of interdependencies as well as vulnerabilities. In learning communities, Suthers (2005) asserted that their effectiveness is improved by deliberate exposure of weaknesses in order to move forward. He said that knowledge-building communities expand their boundaries by collectively, that is by social interaction, reflecting on the “limits of their
understanding and choosing actions that address these limitations. . .“ (Suthers, 2005, p. 663). He called it “meaning-making.” This blogging research would test or elaborate on Suthers’ symbolic interactionist view of the process.

In other words, collaborators must trust each other enough to reveal weaknesses and make explicit the need and resources to improve conditions, e.g. knowledge sharing. The affordances of blogs and their asynchronous use could facilitate discussion of matters before they became urgent while raising questions without explicit impressions of ignorance. We must ask if there can be trust in a group – a sort of halo effect – beyond trust between individuals.

To address the question, Serva, Fuller & Mayer (2005) conducted a field experiment and demonstrated an effect for reciprocal trust among interacting teams. In doing so they extended the theoretical model of Mayer, Davis & Schoorman (1995) from dyads to teams. Senior undergraduate college business students took roles of software developers for one team and were the managers for a third team. They interacted over semester in a setting fairly comparable to a business setting. Serva, et al. also explicated the feedback loop shown by Mayer, et al. (1995) finding evidence for reciprocal trust. Their measures are good candidates for this study.

Trust thus involves both giving and receiving. Blogs often involve both. Some people share what they know while others ask for help. As noted above, organizational climate can promote sharing. The addition of trust constructs to organizational climate would an extension of the model and perhaps would prove to be parsimonious. Another informative extension beyond intention would be actual behavior in contributing to blogs and replication in another culture. We must ask if there were some cultural or industry-specific dimensions that would affect generalizability.

Wasko and Faraj (2005) applied theories of collective action and social capital to study knowledge contribution in electronic networks of practice. They evaluated the frequency and helpfulness of postings. The significant constructs predicting knowledge contribution were reputation (perceived enhancement of), centrality (dense strong ties) and tenure in the field (a law specialty). Non-significant constructs were enjoyment of helping, self-rated expertise, commitment (to the network) and, to the authors’ surprise, reciprocity norms. Trust was not studied. Their findings do not contradict aspirations for blogs because the inter-organizational
context and technical focus minimized the social aspects. It appears that trust is less important when working relationships are well-structured (Jarvenpaa, Shaw & Staples 2004).

Experiments have also shown that trust can be increased before and during an online series of tasks by the exchange of personal information, and by specific behaviors. Jarvenpaa & Leidner (1999) provided one of the first and most frequently cited studies of trust-building in virtual teams. Teams of globally dispersed students worked on projects and were compared on level of trust initially and at the end of the project. The researchers examined communication and relationship behaviors that seemed to distinguish the groups early and later in the projects. Positive associations with trust were found early for social communication and enthusiastic communication. In addition, the groups with high initial trust tended to cope well with uncertainty and show individual initiative. Later in the projects, substantial, frequent and predictable communication was associated higher levels of trust. On the relationship side, high trust was associated with transition to focusing on the work, positive leadership, and “phlegmatic response to crises” -- i.e. they did not panic.

Experimental designs produced the same general results. Zheng, Veinott, Bos, Olson & Olson (2002) created five conditions of social activity before engaging in a social dilemma task in which cooperative bidding produced bigger rewards. The five conditions were face to face, social chat (text messaging), posting of a picture, posting of a personal information sheet (similar to a resume), and nothing. The task was a multi-trial version of the prisoner’s dilemma task involving simulated day-trading on the stock market. The paid player pairs were rewarded for cooperatively investing but did not know the exact amount the other invested due to simulated stock market fluctuations. Trust was measured by the amount of money cooperatively invested. After every five trials the pairs were the pairs of participants were allowed to communicate via an internet chat program. The trust was between (or relatively not) the partners of a pair.

Photo, chat and face to face conditions produced statistically significant, and socially meaningful, higher payoff scores than the nothing condition. The questionnaire evaluations of trust produced similar results. By the end of the 30th simulated day, all groups produced more cooperation.

Open questions remain about the importance of visual personal information (media effects), how the trust would be created in non-laboratory tasks, and temporal effects (Zheng, et al., 2002). In the experiment the participants did not know each other. In an organization, the
participants would often be at least acquaintances and would understand that they might work together in future tasks. Thus the details of the form and amount of social online exchange in organizational blogs are of both theoretical and practical value.

Beranek (2005) experimented with relational and trust training on 48 virtual student teams of 3 – 4 students over eight weeks of work on three tasks. Trust training (communication protocols, timely and substantial communication) and relationship training (social information and enthusiasm) proved to be virtually interchangeable in terms of trust in other members as measured at three times. Both were significantly better than the no-training condition and a “double dose” of both was not significantly better.

Some weblog technologies include comments facilities that permit readers to engage easily in a discussion about particular blog entries (Efimova & de Moor, 2005). The socio-technical system affordances matter. They create flexibility in the way people interact and leave varying traces of those interactions, including say notes on phone calls. (Interestingly, blogger.com, for one example allows phone calls to be attached – and of course podcasts.) For example, Efimova & de Moor studied two socio-technical context elements of blog conversations. “(1) Rhythm and media choices: activity levels over time, uses of posts vs. comments to add a contribution, indications of other media used. (2) Linking practices: linking and quoting, linking in summaries, links to one's own weblog. (pp. 3) As suggested below, contributors could rate and be rated on, the dimensions of Habermas’ theory of communicative action (TCA). E.g., “So and so was only trying to make the point that we follow our norms for discussion . . .” Sarbanes-Oxley financial accountability legislation requires preserving instant messages in some firms. Could that be an impediment to blogging by preserving off-the-cuff remarks?

Mandelli (2004) pointed out several important considerations concerning online communities. Using a transaction cost approach, she provided justification for recognition that maintaining social connections is not “free.” That is it requires resources. We propose to survey the degree to which firms recognize this and as one measure, commit resources to blogging. Azechi (2005) provided an informational humidity model claiming that “wet” systems provide personal specification (which could include trust) and personal identification elements and are suited to tacit to formal knowledge creation. That would correspond to the organizational blog. “Dry” systems with no personal information, he asserts, are suited for community members to
convert formal knowledge to their own tacit knowledge. Azechi recommended that dry and wet systems be isolated to reduce (unproductive) “flaming.” This claim could be tested by looking at the ratings of blogs that mixed personal and business matters compared to blogs that kept the matters separate – pure k-logs.

Azechi stated that a pilot study showed that the “dry” community enhanced the motivation of community members to present and obtain information. This runs counter to the research discussed above in which conditions for “wetness” may improve collaboration – as contrasted with the transfer of “facts.” Of course in practical business problems neat divisions of type of community may be difficult to realize. However Azechi’s higher goal is point out such concerns for the discipline of social intelligence design (SID). “... SID is defined as a design that clarifies what features are needed for systems that mediate communities and improve their knowledge-creating activities.” (Azechi, 2005, pp. 110-111).

Another important function of trust is to facilitate delegation (Mandelli, 2004). People delegate more substantial or significant projects to other people they trust. This promotes efficiency.

A combined blog & wiki service provider noted that services like his (See SocialText.com) promote “letting go” or delegation:

“... We spent a lot of time developing physical infrastructure, and now we have to develop the social infrastructure on top of it. The earliest adopters of the Internet were the geeks and hackers who were using the web for social purposes. Out of all that social interaction they realized that if they could find a way to let go of a tiny bit of control, they could invent whole new models of production. They could encourage common-goal production, rather than production driven by markets or companies.” (Mayfield, 2005).

Note however that some employees may see “over trust” or excessive delegation as abdication of responsibility (Jarvenpaa, Shaw & Staples 2004). Sutanto, Phang, Kuan, Kankanhalli, & Tan (2005) independently reinforced Jarvenpaa, Shaw & Staples’ findings of the importance of structure, assignment of roles, coordination and shared mental models in virtual teams. Otherwise they said, a virtuous circle can turn into a vicious circle. An example of
vicious circle behavior would be status-driven vertical communication between two members and not shared with the group.

Trust is an important component of social capital, in fact the basis of networks within organizations. Social capital is said to have relational, cognitive and structural dimensions -- all of which help or hinder knowledge creation (Huotari & Iivonen, 2004). We are not proposing studying trust in general – for example online trust in e-commerce – but rather trust within organizations and groups as promoted (or not) by blogs. Social capital, while interesting, is too broad a concept to include.

Personality Theory of Trust

Brown, Poole & Rodgers (2004) proposed that for online collaboration, propensity to trust is most usefully considered as a relatively stable part of personality rather than consequences of social characteristics, interaction processes and institutional processes. They apply the interpersonal circumplex model (ICM) as the theoretical basis. In that model respondents are classified on the basis of location relative to orthogonal dimensions of dominance vs. submissiveness and affiliation vs. hostility. For example, the model predicts that persons high on dominance and hostility will be mistrusting while those moderate on dominance and affiliation will provoke trust. They illustrated their propositions with the work of Jarvenpaa & Leidner (1999) in which virtual collaborative groups with low initial trust did not make an effort to get to know each other before tackling the tasks. Such behavior would be explained by personality variables and could be overcome or at least mitigated by actions structured by the affordances of the technology.

Objective 4: Assess the relationship of psychological, sociological, and social psychological trust in individuals in organizations to blogging behavior and other knowledge sharing activities.

Trust levels and type will be assessed with instruments from one or more of the validated instruments in the articles cited above. See the concept definitions below for some more validated measures. A representative partial list of representative candidate items is in the Appendices. A final set of measures will be determined in pilot testing in conjunction with the final sampling population.

The key general hypothesis of this proposed research is:
H4.1 Organizational trust significantly affects and is affected by adoption and use of blogs.

**D. Modes of Interaction**

**Group Theory**

Progress in Internet technology has not only made more options available for group support but it has also changed the way firms are organized and do business. Globalization and increased outsourcing are prima facie evidence that the network society has changed the way we all work and live (Castells, 2000). Fulk and Collins-Jarvis (2001) cited studies that showed managers spending 25 to 60% of their time in meetings which are increasingly virtual. Improving the efficiency and quality of meetings by appropriation of technology offers a challenge and an opportunity. Blogs may reduce the need for formal meetings whether face-to-face (FTF) and/or on-line.

Meetings automatically signal group behavior. As a much-researched field of sociological study, group theories may provide insights on where to look for prior conditions and effects of blogs. Waldeck, et al. (2002) in introducing new areas for group research, classified the field into four major perspectives, functional theory, symbolic convergence theory, group structuration theory, and the bona fide group perspective. We briefly outline the key elements of each according to Waldeck, et al. (2002) and the research opportunities suggested by the authors that may be viewed as being significant for GSS research generally, and blog research specifically.

“The basic premise of functional theory is that group performance depends on how well communication functions within the context of a group to satisfy requisite conditions for successful group problems solving and decision making.” (Waldeck, et al, 2002, 4) The elements of the theory include critical **requirements** of a task, **enablement** of group members in terms of interests, resources, processes, obstacles, interventions etc. in the context of certain **assumptions**. Blog research may help contribute functional theory by studying natural groups, clarification of central constructs such as trust, and isolating specific communication processes and group member communicator characteristics that predict the effectiveness of group decision making and problem solving.
Symbolic convergence theory (SCT) was developed in the 1970’s with roots in work by Bales in group communication (Waldeck, et al, 2002). They stated, “The basic assumption of SCT is that humans, by nature, interpret and give meaning to the signs, objects, and people they encounter. SCT scholars argue that when groups of people share and interpret human symbols, or messages, they create a common consciousness, or shared reality” (9). SCT talks of rhetorical vision “. . . or a composite drama that draws people into a common symbolic reality . . . . Three primary master analogues drive rhetorical visions: righteous analogues (“right and wrong, proper and improper, superior and inferior, moral and immoral, and just and unjust . . . social analogues (containing relational factors such as “friendship, trust, caring comradeship, compatibility, family ties, brotherhood, sisterhood, and humaneness . . . or pragmatic analogues (stressing “expediency, utility, efficiency, parsimony, simplicity, practicality, cost effectiveness, and minimal emotional involvement“ (Waldeck, et al, 2002, 9-10). SCT researchers use methodological tools such as Q-sort analysis and content analysis in addition to observation. Some of the constructs are useful in describing the changes observed by structuration. Blogs are hypothesized to contribute to the identities of contributors and strengthen identification with the analogues of the firm – the stories, mission, vision, etc.

Giddens’ structuration theory explains why the actions of a group (or other social entity) influence each other recursively. According to Waldeck, et al. (2002) structuration theory has been useful for explaining processes and changes but not so for predicting specific outcomes. Thus there are research opportunities in demonstrating the recursive action and structure changes and coupling documentation of the initial conditions with structural changes, stabilizing activities, etc.

Waldeck, et al. (2002) also point out that there is an opportunity to integrate structuration theory with functional theory by taking a process view. For example, changes in structure can reinforce the functional requirement of appropriate rules for interaction. This is exactly the kind off research applicable to GSS, or blog: process improvement in theory and practice.

In particular, the Adaptive Structuration Theory (AST) looks at how the “appropriation” of technology restructures the group using a GSS. Researchers look at a number of dimensions on three levels of analysis such as the micro, ‘global’ and institutional corresponding to individual speech acts, the meeting, and multiple groups in the organization (DeSanctis & Poole, 1994). AST has been proposed as a bridge between the European-centered model-driven
Organizational Climate, Trust & Group Theories for Blogs, K-logs & Wikis  DCS
Draft for Comment – Not for Quotation

perspective and the U.S.-centered technology-driven group support research described by Morton, et al. (2003). “AST can also enhance our understanding of groups in general, not just those using technology. The major concepts of AST . . . cover the entire input --> process --> output sequence that [2 papers cited] advocate as an organizing paradigm for group research. AST provides a general approach to the study of how groups organize themselves, a process that plays a crucial role in group outcomes and organizational change.” (DeSanctis & Poole, 1994, 143). Their paper invoked the multi-dimensional concept of “spirit” to characterize a GSS. Their dimensions of spirit are

“Decision process  The type of decision process that is being promoted, for example consensus, empirical, rational, political, or individualistic …,

“Leadership  The likeliho od of leadership emerging when the technology is used, whether a leader is more likely or less likely to emerge, or whether there will be equal participation versus domination by some members ….  

“Efficiency  The emphasis on time compression, whether the interaction periods will be shorter or longer than interactions where the technology is not used . . .

“Conflict management  Whether the interaction will be orderly or chaotic, lead to shifts in viewpoints or not, or emphasize conflict awareness or conflict resolution . . .

“Atmosphere  The relative formality or informal nature of interaction, whether the interaction is structured or unstructured” (DeSanctis & Poole, 1994, 127, references omitted).

Spirit appears to be similar to organizational climate. The “spirit” of organizations promoting blogging is hypothesized to be different than those not blogging. Blogging is inherently reflexive in accordance with structuration theory through processes of appropriation and adaptation of this new technology.

The fourth major theory described by Waldeck, et al. (2002) was the bona fide group perspective (BFGP). The key concepts are permeable and fluid boundaries of the group, and interdependence with context. This view of the group recognizes the real nature of mostly stable groups embedded in organizations. BGFP offers rich opportunities for understanding group
processes by capturing references to outside groups. Blogs certainly facilitate permeable and fluid boundaries if they are open. Many have a closed membership.

While Waldeck, et al. (2002) make a brief reference to network theory of groups in their theoretical overview, many including this researcher believe that the social network perspective is a rich research area deserving specific attention. It fits with the BFGP. Analysis of blog links could, for example, document the need for a group to improve (alter, etc.) its members’ network connections. Blogging is social networking tool.

**Argument and Communication Interaction in Groups**

Regardless of the theoretical perspective used to analyze group functions, the injection of new social technology should induce changes in patterns of interaction. One of this research proposal’s approach to argument concerns speculations on the application of Habermas’ communicative action to collaborative systems. Meyers and Brashers (2002) report that the argument approach has a tradition focusing on argument as rational, convergence producing, decorous and verbal. Both activist groups and governments use some non-traditional argumentation approaches such as slogans and chants, vilification of opponents, expressions of anger and visual argument (Meyers and Brashers, 2002). One would expect that organizational groups would overwhelmingly use traditional argumentation conforming to Habermas’ theory of communicative action in trusting environments, but multi-media elements are increasingly used. Constructive disagreement may be facilitated by blogs but perhaps grandstanding and flaming may be reduced compared to email exchanges.

Barge (2002) made a case for a new “language game” of group deliberation that he called dialogue rather than the traditional functional group theory of discussion or debate. He claimed that traditional debate concentrates too much on shortcomings and deficits. The alternative language game of dialogue – “what should be” -- would focus identifying and creating positive resources for change.

A few GSS projects, practical and research, used the general concept of Habermasian ‘ideal speech’ according to Sheffield (2004). He designed GSS interactions for a large regional planning effort based on the validity claims (plus intelligibility) of Habermas’ theory of communicative action.  

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4 A Wittgenstein language game is a form of specialized discourse among members of a community that reflects their underlying view of reality and shared understanding.
communicative action (TCA). In brief, the three claims are sincerity or truthfulness of a speaker, (social) rightness or consistency with norms, and objective truth. Communicative action is complex. As Habermas noted, “... [An] actor who is oriented to understanding in this sense [rationality potential] must raise at least three validity claims with his utterance, namely:

1. That the statement made is true (or that the existential presuppositions of the propositional content mentioned are in fact satisfied);
2. That the speech act is right with respect to the existing normative context (or that the normative context that is supposed to satisfy is itself legitimate); and
3. That the manifest intention of the speaker is meant as it is expressed.”
   (Habermas, 1984)

Blogs, via their reflective nature should create a trusting social climate. They encourage challenges to validity claims.

While accepting the richness claim of an interpretivist approach to blogs, it should be possible to validate the claims of interpretivist and critical theory – e.g. Habermas’ TCA -- approaches using empirical techniques. Specifically, the degree of compliance with validity claims could give a reliable measure of GSS or blog success when compared to output measures and structural changes. Sheffield (2005) spent a lot of energy over years of effort to conclude that his GSS processes based on a Habermasian perspective produced insights into the effectiveness of some regional planning concepts. Such efforts are economically justified for billion-dollar public works projects and important issues in large corporations. However, “everyday” decision processes have to be much more efficient, cost effective, easy to implement, and “good enough.” Hence collaboration engineering has emerged as an applied, practical social science discipline (Briggs, et al., 2003). Internet-hosted solutions are likely to be affordable and better than “good enough.” Organizational blog policies are hypothesized to predict how communication changes from TCA mode to Discourse mode.

Sheffield first designed the regional planning process using TCA concepts and then evaluated it using observation and interviews with participants. If TCA is more than just philosophy, it should be confirmable in by blog-collected (example, on-line commenting tools) survey data from participants. As a practical matter, the TCA/validity claims theory, if it is valid, should be translatable into more rapid decision making and collaboration than a complicated urban planning consultation and decision.
Shortcomings and inconsistencies in Sheffield’s (2005) evaluation – agreement on certain facts but voting for another solution – illustrate a possible limitation of TCA in that Habermas projects TCA’s applicability to situations where the parties are focused on reaching understanding. In contrast, strategic actions are social actions but are success-oriented and not dependent on mutual understanding but rather “exerting influence” or power claims. (Habermas, 1998).

The underlying goal of, or reason for, communicative action is rationality. While examination of the validity of a rationality concept is debated by critical philosophers, few would challenge the idea that rationality is desirable in organizations. As Habermas (1979, 97) says, “In these validity claims communication theory can locate a gentle but obstinate, a never silent although seldom redeemed claim to reason, a claim that must be recognized de facto whenever and wherever there is to be consensual action.”

The importance of studying interactions in groups was emphasized by Suthers (2005) who called for creating interpretations as well as knowledge-sharing through interaction in learning communities. That interaction would also involve disagreements from time to time. Part of the knowledge, an “interactional epistemology,” would be those interactions. That social view of knowledge is entirely consistent with the idea popularized by Senge that modern, successful companies are learning organizations (Harris, 2002).

Organizations may benefit from healthy disagreements (the concept needs definition) by attracting more people into debates and refinement of the ideas expressed. Pascale & Sternin (2005) promote the positive deviance model in which the community is the guru. “Only when people feel safe enough to discuss a taboo and when the community is sufficiently invested in finding solutions can the prospect of an alternative reality appear.” (77). Blogs may help positive deviants to emerge.

Systems of collaboration are the heart of network organization. But technology is not the key element – it is necessary but not sufficient. The key element is “mentality” – networking inside and outside the firm (Castells, 2000). Fukuyama (1995) claimed that the most important interaction concept is “spontaneous sociability” because it provides a capacity to form new associations and work within the rules of a new group.
Field Theories and Group Processes

An older view of the network was the concept of positive interdependence among group members as the basis of achieving group goals (Johnson & Johnson, 1997). They went on to observe that social interdependence theory originated from Kurt Lewin’s field theory that was formalized by Lewin’s student Morton Deutsch. Field theory is an approach to adding up psychological and social forces (tensions) acting on individuals in a “phase space.” Lewin may be credited with breaking down sharp divisions between the proponents of psychological and social theories. Socially constructed tensions can move the individual to satisfy needs thus reducing tensions (Lewin, 1951).

Robert Bales (1999) is one of the important expanders of the field theory with a system for rating group effectiveness. Bales’ system has a “vector” of 26 dimensions which correspond approximately to the 27 cells in a three dimensional cube. (The center of the volume is neutral.) The dimensions are U-D, values on dominance (Up) and values on submissiveness (Down); P-N, values on friendly behavior (Positive) and values on unfriendly behavior (Negative); and F-B, values on accepting task-orientation of established authority (Forward) and values opposing task-orientation of established authority (Backward). The optimum locations in the 3-dimensional space for groups, according to Bales, is moderately in the U, P, and F directions. Interactions on the corporate blogs could be analyzed according to Bales’ system. That is probably impractical and unnecessary on frequent basis.

Bales and associates have a commercial consulting firm, SYMLOG, which helps organizations improve the interactional values of their members by rating themselves and each other on the 26 scales and comparing them to the “ideal.” “Trust in the goodness of others” is one example and such individuals would be high on the D (Down) and P (Positive) rating scales. “Ideal” is a scale rating near the average of previous groups evaluated to have preformed well. Firms and individuals receive counseling following the evaluations. The firms hope to improve their group practices and individual performances.

Media Theory and Interactions

The Internet collaborative technologies including blogs can be considered mass as well as personal media. A major theoretical perspective on media is uses and gratifications. As media blogs have uses and gratifications. Matsumura, et al. (2005) found three factors or constructs in
on-line exchanges in Japan’s 2channel, the largest on-line community. The first factor consisted of two types of discussion. The one called chitchat type consisted of people who joined a community to just chitchat, i.e., they did not have a specific topic to discuss. The chitchat discussion was conducted for the sake of interpersonal communication. The other discussion type was conducted by people who join a community to discuss a specific topic they share with each other. This discussion type was threaded and goal-oriented.

The second factor was type of anonymity which could be nameless anonymity (the most prevalent), or handle anonymity using screen names. The existence of corporate anonymous blogging is doubtful except in whistleblower and customer feedback applications.

Finally, there was the relative use of jargon, emoticons. ASCII character combinations [:‐)], deliberate misspelling and other forms of expression.

A clever use of clues in the text allowed machine encoding of eight indices. Of those content length and interaction predicted discussion type communication while speed and activity in a thread predicted chitchat communication.

Managing the flow of information to reduce overload on the one hand, or boredom on the other are important technology goals. To increase the possibility of creative emergence and enhance group creativity are important goals for social intelligence software. Specifically, the idea is to provide cognitive and intelligent stimuli while minimizing distractions in the process of communication among group members. Evaluating exactly what is optimal remains a topic for future research. (Miura & Shinohara, 2005).

Blogs are not usually real-time chat tools. As such they definitely control the rate of information flow in discussions. Various commercial variants incorporate instant message functions. Brigss, et al. (2003) claimed a multidimensional benefit to managing cognitive load in collaboration systems.

Stafford, Stafford & Schkade (2004) found a social gratification for the Internet that adds to process and content gratifications many researchers have found for television and other mass media. In this research respondents indicated their perceived level of importance on 45 descriptive traits that described potential uses and gratifications for the Internet. The scale was a seven-point semantic differential anchored by “very important” and “very unimportant.” They found three factors, process gratifications, content gratifications and social gratifications. The concepts or traits in the social category were chatting, friends, interaction, and people.
As technology made possible by Internet technology, blogs appear to constructively add a desirable social dimension to content and process functions. Purveyors of blog software make the claim! Both content and process are important to, i.e. provide competitive advantage, organizations.

The voluntary nature of most blogs leads us to believe that the uses and gratifications perspective can also be employed. And in particular, we hypothesize that organizational culture and organizational climate influence, if not determine, blogging behavior. Blogs raise fundamental issues of self-presentation in accordance with the theories of Goffman (1959).

To review, group theories, interaction theories and media theories provide guidance on changes to look for as new technologies are introduced. A host of related questions emerges concerning the practical application of those theories. How to the communicative traits of a person carry over from the blog to a physical or virtual meeting? Do blogs make up for language or cultural barriers? Many researchers believe that there must be challenges and disagreement to facilitate innovation. -- degrees of dissatisfaction. In Lewin’s perspective that would be a force or a need. To what extent are these present, or facilitated by, organizational blogs? What are the communication situations, or conditions or affordances in which a group structures itself so expand its knowledge? Will increasing the effectiveness of online collaboration be rated as a crucial objective for organizations to remain competitive in the Internet era? Is there more creativity when group discussions are guided by TCA (consensus) or discourse – challenging assumptions, facts? How do trust relationships differ in TCA as compared with discourse mode? Blog role in relation to meetings? Blog behavior should provide validation and extension of the theories of knowledge management and knowledge sharing. Do blogs get participants into a flow state, such as losing track of time? Do people in the flow state share knowledge more readily? Many informal hypotheses may be raised. To state a few:

H5.1 Employees in organizations using blogs will report less stress from email overload. They will rate the amount of project or task-related email as less.

H5.2 Organizations with higher levels of trust will be more likely to favor blogs over email for project coordination.

H5.3 Use of blogs will stimulate the use of phone contacts.

See the Appendices for possible items related to modes of interaction. This would be a new set of scales and/or adaptation of existing measures of group interaction.
Objective 5: Assess perceptions and changes in the nature debate, patterns of interaction, and discourse within the organization attributed to, or coincident with, blog activity.

**Design**

Looking at blogs from several theoretical perspectives, this proposal is to examine the proposition that blogs will build trusting environments in the firms and encourage dispositions to trust in contributors. Cross-sectional and longitudinal data collection is proposed but undoubtedly some compromises will be required to make this study practical. Longitudinal design has a chance of supporting practical and theoretical claims of causality.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Time 1</th>
<th>Time 2 -- 6 to 9 months after Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection of blogging policies including written policies and survey of policy makers.</td>
<td>Survey and collection of written policies when available.</td>
<td>Follow up survey on changes in policy and perception.</td>
</tr>
<tr>
<td>Blogging practices of individuals</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Organizational climate survey</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Trust survey</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Group interaction survey</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

In this study we propose to collect data on the extent and purposes of blogs in firms at two times and test if whether the theoretical and practical claims are supported. The basic, simplified research design is illustrated in the model below.
It is important to note that blogging behavior at T1 is not the only intervening variable but may only be a moderator. That reality is symbolized by the dashed arrow. *Alternative models may give better fit to the observed data. Such models will be proposed and tested based on theory and the first round of data collection.* (See the data analysis section below.) At T1, in addition to leader blog policy surveys – CIO’s and/or other blog policy makers --, survey data will be collected from blog contributors (potential and actual) on general organizational climate, individual trust attitudes, perceptions of blogging policies, attitudes toward knowledge sharing, and reports of blogging behavior. In other words, data will be gathered on the state of blogging in the organization and attitudes and perceptions that are predicted to influence attitudes and behaviors related to blogging.
At T2, at least six months later, similar data will be collected from the same organizations – or a random subset -- and individuals. The operationalizations of the concepts are discussed below.

**Review and Summary of Key Concepts**

**A. Trust**

Disposition to trust is a psychological trait of individuals. We labeled it “Individual characteristics” in our model. Sub-concepts include

- faith in humanity
- trusting stance.
- Faith in competence of others
- Faith in the integrity of others

Similarly there are concepts reflecting institutional structural assurances of trust (sociological trust) including

- Benevolence
- Normality
- Fairness
- Competence – i.e. the organization can deliver what it promised
- Encouragement of reasonable risk-taking

Finally, social psychological variables similar to the above apply to the specific context. That context could include participating in blogging. Surveys will be made of samples of the organization members on their trust characteristics and their perceptions of the corporate trust environment generally and specifically in relation to blogging.

Validated measures:


B. Organizational Climate

Organizational climate is a multi-dimensional concept. Climates exist for various desirable behaviors and may be considered as the manifestation of higher organization cultural values – including of course management theories. As Patterson, et al. (2005, 381) pointed out, “These climates represent employees’ perceptions of organizational policies, practices, and procedures, and subsequent patterns of interactions and behaviors that support creativity, innovation, safety, or service in the organization.” These concepts are frequently described as “structural assurances.” Somewhat surprisingly, Patterson, et al. (2005) lack an organizational trust environment measure beyond one item but there are other scales as noted. Bock, et al. (2005, 89) said, “Climate refers to a contextual situation at a point in time and its link to the thoughts, feelings, and behaviors of organizational members.”

Several recent and well-validated measures are available. Selection must involve careful choices. Likely ones will be the ones accounting for the most variance while being consistent with the theoretical perspective.


- Autonomy
- Integration
- Involvement
- Supervisory support
- Training
- Welfare
- Formalization
- Tradition
- Innovation & flexibility
- Outward focus
- Reflexivity
- Clarity of organizational goals
- Efficiency
- Effort
- Performance feedback
- Pressure to produce
- Quality

- Fairness
- Affiliation
- Innovativeness
- Attitude toward knowledge sharing
- Anticipated reciprocal relationships
- Subjective norm – on sharing
- Sense of self-worth


- Reward
- Warmth
- Support
- Risk (tolerance)
- Autonomy

C. Blogging, Interaction and Communication Environment

The practices, policies and perceptions thereof will be collected in new survey instruments as shown in preliminary drafts in the Appendices, particularly Appendix 6. The proposed surveys of firms & organizations concern the existence and uses of blogs and the levels of organizational support for blogging. An essential part of this research will be surveys or possibly interviews of key policy-making individuals concerning the use and trust in blogs. New questionnaires will be pilot-tested before the main surveys. Subscales may range from operationalizations of Habermas’ TCA to Fukuyama’s spontaneous sociability.

Potential Populations and Sampling

The first distinct key unit of analysis is the individual member of the firm or organization. The second unit of analysis, the organizational, is more uncertain because the firm could be quite a large organization with different climates depending on the division or department. The organizational unit must be that for which a blogging policy maker provides information. Ideally all units of analysis must be sampled randomly. That is individuals, divisions and firms should be randomly sampled unless 100% samples could be obtained. There may be some practical compromises but random or stratified random samples must be the goal.
N.B.: Sampling of firms, particularly ones with a hundred or more employees, that do not blog is important too. The research aims to find out their attitudes toward blogging as well. Obviously there will be some considerations as to the type of industry.

Selection Criteria

An ambitious study has been outlined. However, its practicality depends on access to firms in an unbiased manner. Several approaches to access come to mind. These include

- Contacts through professional organizations and associations such as chambers of commerce, IT professionals, etc. The Pacific Telecommunications Council is one example. Another could be the Hawaii Telecommunications Association or the local chapter of the Association of Information Technology Professionals would be other examples. Such organizations are likely to provide sympathetic introductions however there is an element of self-selection.

- Selection from lists or directories of businesses. For example in Hawaii basic contact information on each registered business is available from the State in digital form for five cents per listing. Selection criteria facilitate elimination of useless contacts such as inactive firms. A related approach would be culling of websites from digital versions of telephone directories. National listings are also available, for example publicly listed firms. Stratified random sample can be done from lists of businesses. A criterion could be those that have public web sites based on the idea that if there is a public web site there is a better chance of having a blog than if no public web site.

- Automated searching of Internet sites. Sorting the “wheat from the chaff” in such an approach is non-trivial but may be practical.

- Some geographical – and business -- diversity beyond Hawaii is highly desirable. Large U.S. West Coast cities are candidates The San Francisco Bay Area is a geographically accessible areas.

Choices would be made in parallel with other research requirements, such as human subjects clearances and finalization of more precise research questions. Time and money are practical considerations. A sample from which generalizations could be made would be an
important contribution as much of the past blog research has been ethnographic in nature based on small “representative” samples. Resource people within UH Manoa will be consulted on ways to approach firms or possible cooperation with existing research projects.

A rough estimate of the number of firms desirable is about 100 with a sample of 20 to 50 persons in each firm. Clearly the numbers suggest a lower bound on the firm size which is reasonable considering that in small firms the climate may be highly personalized.

Other Potential Populations

The concepts of organizational climate and trust are applicable to organizations beyond businesses. Blogs could be a method of parental involvement in schools or civic organizations.

Data Collection

Primary data collection would be by web survey for general employees. In the case of policy makers, rather than a survey on the ‘Net, interviews, by phone or in person are likely to produce better response rates and easy the approval of employee participation.

Reward

It is proposed that chances at meaningful lottery prizes be used to encourage good response rates.

Data Analysis

Descriptive Data

This analysis of the descriptive data requires two basic types. The first is simple tables and cross tabs such as

Industry vs. blog type
Firm size by number of internal and external blogs (if any).
Etc.

The second type consists of analysis and classification of blogging policies according to industry, firm size, etc. based on survey (or interview) data and content analysis of written blogging policies. In all cases each of the distributions will be examined for defects such as skewness or coder bias.
Relational and Potentially Predictive Data

Reliability and Validity

Each of the scales will be subjected to scrutiny of the distribution for skewness, outliers and other defects. Transformations to more nearly normal distributions will be made where such transformations are consistent with retaining validity. Reliability and confirmatory factor analysis results must be examined for consistency with the variable definitions.

Correlation data will be presented with scatter plots where that will aid interpretation and understanding.

Summary statistics:

- Distributions and plots. Near normal distributions are particularly important to support the assumptions of structural equation modeling.
- Reliabilities – Cronbach alpha
- Correlation matrix – for each scale and sub-scale.
- Factor loadings. Each scale such as trust, and organizational climate are multi-dimensional concepts and each will be dissected to determine if the results are consistent with previous research.
- Testing for covariance.

Model Testing

Finally the data analysis would reach the prime questions related to the mutual influences of trust, organizational climate, and blogging. As expressed in the simple summary model, multiple regression and path analysis are satisfactory for testing the predictive power of variables at T1 for outcomes at T2.

However for comparison of competing models, especially where some variables may be considered latent, structural equation modeling (SEM) is more mathematically complex but produces more intuitive output. Technically SEM is the analysis of covariance structures. Covariance structure modeling is a combination of confirmatory factor analysis and multiple regression but if not used with care and with theoretical justification, many alternative models
can appear to be satisfactory (Breckler, 1990). For this research which is somewhat exploratory, modeling would be based on further examination of the theory combined with tentative hypotheses developed from data collected at T1. Additional specific models would be tested when T2 data became available.

Results
TBD

Discussion
To be based on the results

Potential Contributions to Research
This research could contribute to knowledge of an important social phenomenon by

- documenting the extent and purposes of blogging in organizations
- collecting and categorizing blogging policies
- examining the use of blogging in relation to organizational climate
- examining the perceived and desired relationship of blogging to knowledge management
- examining the role of trust in organizational climate
- examining a potential temporal link between a trusting organizational climate and actual contribution to blogs
- examining personal dispositions to trust and their relationship to blogging behavior.

Practical contributions
The research may provide some guidance to firms on making the best use of blogs to build and reinforce company values and increase performance by mobilizing people, building relationships, and increase knowledge building and sharing.

Limitations and Suggestions for Future Research
Depends on the conduct of the research, the results and the adequacy of the sample.
Proposed Schedule

2006
January  Recruit faculty advisors, refine proposal
February Submit draft instruments and design to IRB (human subjects authority)
February Approach possible grant agencies
March Construct sample and seek firm approvals
April Open web questionnaires; possible interviews with those in firms responsible for blogging policy.
May More data collection
June Input data; propose conference paper
July Analyze data
August Write up T1 findings while working on additions and changes for T2
September Continue with analysis & writing

2007
January Circulate questionnaires for T2
February Input data
March Analyze data
April, May, June Write up data; submit paper proposal to a conference
July, August Submit paper for publication in a journal

Budget

Surveys on the web and phone interviews are very inexpensive. Some duplicating budget for any respondent want a paper survey would be a prudent contingency. Letters of introduction may require some mailing expense.

The major expense would be raffle prizes for participants. Estimate $1,000 for iPods, cameras, or the like.
References


