Weblogs: Credibility and Collaboration in an Online World

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ABSTRACT

Weblogs are altering knowledge work and practices among existing groups and creating new knowledge communities. In my work, I am examining knowledge practices, especially those of trust and credibility, in topical, issue-oriented weblogging. My interest is not in weblogs as much as in what blogging reveals about how loosely-connected, distributed groups solve the practical problems of establishing trust and credibility in a networked world. Here I report some preliminary observations about how bloggers assess one another's credibility and signal their credibility to one another that I think might contribute to a larger discussion of trust and information sharing in a distributed setting. Many of my observations are at this point preliminary but directly relevant to the workshop issues of disclosure, trust, and privacy. Three observations are examined. First, the norms of blogging promote a high degree of self-disclosure. Second, to whom a blogger links and what s/he says in the process reveals useful information about their evaluation criteria. Third, this kind of blogging is a kind of informal "publishing" of work-in-progress, not just preliminary conclusions but the process of investigation. What does blogging tell us about people's willingness to do this? In short, why does blogging promote (or reflect) a culture of free sharing of information?

INTRODUCTION

The call for participants for this workshop notes that trust is necessary for information disclosure, but that disclosure helps build trust. It then raises questions about what kind of information is necessary to establish trust, and the role of trust and information in successful work groups, and about privacy: how much information about ourselves are we willing to share with others?

Trust relationships have always been a major part of knowledge work. Sometimes we work directly with others, but, even when we don't, we use others' work in variety of ways, such as by relying on publications. Accepting others' testimony is, among other things, a strategy of cognitive efficiency. But beyond that, constructivist approaches to knowledge contend that knowledge is socially constructed: what we know and how we know it are social processes.

Information technology is altering the practices of collaborative, including knowledge work, in a variety of ways. I'm interested specifically in weblogs or blogs. The kind of blog I'm studying is what is called a topical blog, individually or (less often) collectively-authored blogs that track developments in a topic or set of topics. Many of these track important areas of academic or professional work. Some act primarily as clearinghouses or filters, consisting largely of links to resources. Others function more as commentaries. Yet others are what I would call "anthologies," where authors post their work, often work-in-progress, plus links to their other work, such as publications.

Weblogs are altering knowledge work and practices among existing groups and creating new knowledge communities. In my work, I am examining knowledge practices, especially those of trust and credibility, in topical, issue-oriented weblogging. My interest is not in weblogs as much as in what blogging reveals about how loosely-connected, distributed groups solve the practical problems of establishing trust and credibility in a networked world.

I'm interested in this topic for two reasons. The first is what this tells us about knowledge work: changes in technology often make visible taken-for-granted practices as people scramble to adjust to changed tools. The second is perhaps more relevant to this workshop: how can better knowledge of these practices help us to understand the how design may help or hinder these processes, and perhaps to design better collaborative tools, both for voluntary, emergent groups and for more formal workgroups?

One advantage of blogs for this kind of investigation is that they are, by definition, visible records of participants' presentations of self and their comments on and links to one another.

Networks of mutually referencing blogs/bloggers are usually voluntary, loose, malleable groups, not formal workgroups. Such groups seem to be increasingly typical

of today's distributed, collaborative work. Furthermore, even within formal workgroups, such informal assessments and collaborations remain important. Knorr Cetina [10], for example, showed how, in the large global experiments of high energy physics, many decisions were based on participants' informal assessments of one another's work and with whom they were willing to work.

My data at this point comes from (1) examination of blogs (2) reviewing the blog literature (most of which is not published but in the form of blog postings) and (3) discussions with bloggers.

Many of my observations are at this point preliminary but directly relevant to the workshop issues of disclosure, trust, and privacy. Three observations are particularly relevant. First, the norms of blogging promote a high degree of self-disclosure, at least among those who participate in blogging and conform to these expectations.

Second, blogs provide a lot of information about other people, those whom a blogger comments on, cites, or links to. By seeing not only whom a blogger links to but what s/he says in the process, we can infer something about their evaluation criteria.

Third, blogging (at least this kind of blogging) is primarily information sharing. Much of this kind of blogging is a kind of informal "publishing" of work-in-progress, not just preliminary conclusions but the process of investigation. The dialog that bloggers claim is key to blogging is a process of opening one's work to comments and critique. What does blogging tell us about people's willingness to do this? In short, why does blogging promote (or reflect) a culture of free sharing of information?

My primary questions are: What can we learn from blogging about (1) what kind of information people find useful to establish trust – what they reveal about themselves and they about others? (2) More difficult to examine, but equally intriguing, why people are willing to be so disclosing, in the very public context of blogs, about both themselves and their work in progress?

In the workshop, I think it would be useful to:

- Examine and question these preliminary observations.

- Ask what these observations, if they seem to be valid, imply for understanding and supporting the establishment of trust within groups of all kinds operating in a variety of collaborative environments, especially those engaged in computer-mediated collaboration.

WEBLOGS
In this section I summarize some of the key elements of blogs relevant to these questions. Topical blogs (as well as other kinds of blogs) usually form a loose network of mutually-referencing blogs that function as an on-going online discussion that anyone can read. Participants are generally a core of mutually-referencing bloggers and larger group of more or less regular readers who don't themselves blog.

While much blogging is a form of personal expression, when the bloggers in question are a community of mutually-reference topical bloggers who see their work as collaborative, however informally, the stakes are raised. Topical blogging is often highly distributed work, with collective ownership of the ideas expressed. Since a typical entry consists of links and references to and quotes from other blogs, and discussions often progress quickly, assessments of trust of credibility are made quickly, and get black-boxed as the discussion continues.

My contention – an argument made much more forcefully by the blogging community, but I think they are essentially right, if sometimes overly-optimistic – is that the technology and practices of blogging are transforming the work of knowledge communities. If so, this is an opportune time to study blogging and its implications for knowledge work.

Since relying on others' blogs is mostly about information, the form of trust at issue in blogging most often is credibility. In work groups, many forms of trust are relevant: e.g., reliability: will this person actually perform as promised? However, credibility is often a major component of trust within groups.

In my work, I begin from the premise that in blogs we are seeing the emergence of practical solutions to the problem of assessing others' trustworthiness, including credibility, and demonstrating one's own. Observing emerging norms and practices among bloggers, therefore, can be very useful for understanding current practices of trust and projecting future developments in many kinds of groups. My interest is not in blogging per se but in what blogging reveals about collaborative knowledge work and the uses of technology to support it. My primary interest is in knowledge work, and specifically the practices by which participants establish and demonstrate cognitive authority; and how blogging reveals and transforms these practices. In addition, we can ask how these practices can be translated to other domains of computer-supported collaborative work.

BLOGGING AND THE TRANSFORMATION OF COLLECTIVE KNOWLEDGE WORK
Avid topical bloggers claim that blogging has had a profound effect on their work. They see blogging as not simply a useful tool, but as a radically improved way of learning, thinking, conversing, and acting, jointly and individually. They express an enthusiasm for what they see as a transformative technology for building and maintaining an intellectual community, doing individual and collaborative work, and engaging in substantive, on-going discussions about topics of importance with valued colleagues.

In this section I review some of the factors that differentiate blogging from other forms of social software and computer-mediated communication, including email lists and other kinds of internet discussions and web pages. In the following sections I summarize some of my observations of blogs that are of concern to the workshop.

Blogs tend to be highly individual and personal [25]. And, of particular importance for this workshop, topical bloggers tend to use their real names, connecting their online and offline identities.

Bloggers see blogging as a highly expressive activity, an opportunity to write personally, for an audience. They speak of the importance of "voice"; a blog that is read tends to be one with a clear and unique voice [2]. Some bloggers [5] house their blogs on servers other than their employers' in order to keep the blog as their personal work.

Another characteristic is speed. Many bloggers post frequently, even daily. (One blogger got complaints from her readers when her blogging frequency declined.) And many report spending literally hours a day blogging. The result is that a conversation moves quickly, with multiple postings within days or even hours, and a need to move fast, which sometimes works against reflection and concern for accuracy. Ideas posted get black-boxed quickly as the conversation moves on.

Blogging is highly public. Most blogs can be read by anyone who finds them on the Internet. Blogs on blogging services like Typepad are easily found via the service provider. If other blogs link to a posting, an obscure blog may find its readership suddenly increased by orders of magnitude. Blog postings are persistent. The author's thinking and writing develop under public scrutiny.

Blogging can be highly interactive. Some journalists-turned-blogger (e.g., [11] cite the immediate response that their blogging work receives as one of blogging's advantages over journalism. In a current blog (http://www.kk.org/helpwanted/index.php), an author writing a book posts questions for readers to respond to – one posting got more than 90 responses in about three months. Advice to bloggers often focuses on how to get read and linked to (e.g., [2].

Another aspect of blogs particularly relevant for our discussion is the ease with which norms and expectations spread. The visibility of blogs, and the tendency of bloggers to read one another, means that people are highly aware of one another's work and practices.

Bloggers claim that blogging is highly democratic. Proponents claim that blogging offers a creative outlet for alternative voices and news sources [11]. Bloggers claim that blogging is highly merit-based (although this is disputed), and that their assessment of the quality of a blog is based largely on the quality of the work rather than the author's credentials or institutional affiliation. Linking is seen as a measure of popularity which is believed to be a measure of quality [12, 14] – the assumption is that the community is able to assess quality, and so more linking is a sign of more judgments that this item is worth reading – which ignores the problems of assessing quality in areas in which the assessor is not an expert, the possibilities of blogrolling (linking to one another as a favor), and the problem of an obscure but high-quality contribution that doesn't get seen and therefore not linked.

Some of the concerns expressed about blogging include: speed is preferred over substance and reflection; easily-understood, popular ideas push out substantive, complex ones; the most influential people may be the most prolific, not the best thinkers or iterators of ideas.

These emphases on democracy, meritocracy, and personal voice raise questions about how participants judge the quality of contributions and the competence of contributors, and how those seeking an audience demonstrate their credibility. One problem is simply volume: with so many writing, how to determine who's worth reading? One characteristic of the internet is that many of the contextual clues to the source's quality are either lost or not understood in a new context.

My concern is not with blogging but with how blogging helps us understand knowledge communities and knowledge work, and their relation to information and communication technology, especially issues of authority and credibility in networked information. Technology design continues in use, and this process of co-constitution is revealing. My interest is not whether blogging lives up to expectations, but what those expectations are, how blogging uncovers and shapes them, how blogging practice and technology are developing the technology used for collaborative work, and, in particular, the role of trust in all this.

CREDIBILITY
The organizers of this workshop wisely avoided defining trust. However, I want to focus on a particular kind of trust, credibility, which I discuss in this section.

A major form of trust in collective work, especially knowledge work, is credibility. My primary interest is how blogging reveals, supports, and alters the practices of assessing and demonstrating credibility within knowledge communities, especially the loose, boundary-crossing community of bloggers in an interdisciplinary topic area.

In questions of credibility, cognitive authority, or epistemic trust, the trustee is concerned with whether the information provided by a source is complete, accurate, unbiased, appropriate, and accurately understood; and with whether the source is honest and competent. While deception may be a problem, the more common problems are probably (unstated) bias and (in)competence or (lack of) capability or authority in the source. For example, in earlier work in environmental planning, my colleagues and I [16, 19, 20, 21, 22, 23] found that participants doubted information

from those with whom they held conflicting goals and values. Environmental organizations distrusted information from resource extraction industries, and sometimes both distrusted data from government agencies.

Competence is relative: we recognize degrees and spheres of competence [24]. The assessment of cognitive authority is often a two-stage decision: is the person capable? Is the domain relevant? I may trust that a person is an expert astrologer, but not that astrology is credible [24]. The point is that we are concerned with whether the source of information or knowledge is someone we can rely upon, someone whose information we are willing to accept and incorporate into our own decision-making.

Credibility or capability are particularly difficult to evaluate when we must rely on people with expertise other than our own. When we cannot evaluate competence or expertise based on direct evidence, we rely on such indicators as institutional affiliation, occupational or educational credentials, and reputation among people whom we judge to be knowledgeable [24] and other indicators in areas that we can assess.

Capability, however, is a potential. Good work is a combination of knowledge, capability, and propensity to appropriate behavior [1]. Some have called this "character" [1]. or "virtue" [4].

Of particular importance for our discussion is the relationship between information and trust. Tomkins [18] argues that trust and information often act as substitutes in uncertainty reduction: in areas where we decide to trust, don't need as much information because we are not monitoring the other's behavior as closely.

In sum, judgments of credibility are complex. The truster has to decide whether the other is competent in a relevant domain, and whether the other is performing up to his capability. One basis for such judgments is whether the participants are part of the same epistemic community, with known capabilities, a shared perspective, and a common understanding of appropriate methods or practices.

PRELIMINARY OBSERVATIONS FROM BLOGS

How do bloggers signal credibility to one another? How do bloggers assess one another's credibility? Here I report some preliminary observations that I think would be worth further examination in the workshop, and that might contribute to a larger discussion of trust in a distributed setting.

One reason some bloggers argue for the superiority of blogging as a form of collective work is that they claim their assessments are based directly on the others' work, not on secondary and possibly misleading criteria such as credentials and employment. People who might not otherwise have been able to publish their work, the argument goes, can post online and others can view their work directly, unimpeded by gatekeepers.

This is a potent and often legitimate argument. However, when we ourselves are not expert in a person's area of expertise, we have to ask how well we can assess their work even when we can read it ourselves.

A major component of the establishment of trust in blogs is disclosure of information by and about potential trusted others. In blogs, this means both self-disclosure on the part of the blogger, and the blogger's references to trusted others. the Examining what kind of information *about the blogger* is disclosed, how it is disclosed and by whom, and how it is used, and the reverse questions of what kind of information is not disclosed and why not, is potentially useful for understanding and supporting such disclosure in a range of circumstances

Blogger Self-Disclosure

Bloggers engage in a high degree of self-disclosure (or seem to – questions of honesty, self-presentation, deception, and role-playing always underlie descriptions and assessments of blogs and bloggers). A notable characteristic of the "blogosphere" is that self-presentation tends to be holistic – even authors of topical blogs tend talk about their work, their private lives, their opinions on a variety of matters, as well as the topic at hand. In sum, the blogger is presenting not just her/his work, but her/his self and life. The emphasis on a personal voice adds to the informality and self-disclosure of the blog. Finally, the blog form encourages reflexivity. Blog entries often include comments on one's own feelings and uncertainties, and reflections on the work and on oneself.

There are two possible reasons for this high degree of self-disclosure. Some critics see blogs as narcissistic (as no doubt many are). But bloggers tend to describe this informal, personal approach as one of the strengths of blogging.

Research that shows that self-disclosure and informal interaction result in more trust in workgroups [3, 26]. This suggests that more personal relationships are valuable for building trust.

Research on the conditions of trust reports that people use a variety of criteria, including personal characteristics as well as professional [1, 4]. People think that they can better judge those whom they meet face to face [15]. From this we can infer that people use many different types and sources of information to assess one another, so the holistic self-presentation of blogs may be helpful. Furthermore, trust is in many ways a *personal* interaction: although we trust institutions, we mainly trust individuals. Giddens [8] argues that face-to-face relations and expert systems come together at what he calls "access points,'" the people who are our contacts with expert systems, such as doctors.

Our earlier research on environmental planning REFS revealed the importance of shared values, however, suggests another way in which readers use the blogger's work: reading one's postings and seeing the links made –

and the more holistic, personal information and added blog content such as photos, lists of books read, in sum, the "personality" conveyed by a blog -- may reveals useful information about the source's values, orientation, and biases. People generally believe that they can better assess another in face-to-face interaction, that the myriad of non-verbal and involuntary clues – in Goffman's [9] terms, information "given off" as well as "given" -- provide a basis for determining "who this person really is." Similarly, blogs provide more information, increasing the chance of significant information being either "given" or "given off."

Frequent readers, even those who do not post themselves, often seem to feel that they have a personal relationship with the blogger. One widely-read blogger of my acquaintance complained that people she doesn't know, but regular readers, feel free to chastise her for writing about topics in which they are not interested or not writing often enough – as if they have a personal relationship with her.

An interesting question in the context of this workshop is how it is that people come to be willing to engage in the high degree of self-disclosure – and very public self-disclosure – evident in many, though of course not all, blogs. I would argue that the concept of genre helps us to understand the emergence of these norms of self-disclosure. A genre is a recognizable, stable kind of communicative artifact that is recognized by members of a community and carries a set of implicit meanings and expectations [13]. I would argue that the blog a genre (or set of genres) strongly associated with a distinctive personal "voice," a rich self-representation, and personal relationships. The expectations of self-disclosure, and the public examples of it, create a sense of both expectation and safety: if everyone is doing this, it must be safe. Furthermore, self-disclosure tends to encourage self-disclosure on the part of others, so the example of self-disclosing blogs encourages more of the same.

However, I wonder about the potential for erroneous assessments based on liking or sympathy when the issue is expertise or capability. This is something worth discussing and pursuing in the literature and empirically: when are the criteria that are used in blogging for assessing credibility inappropriate? Research on trust in websites has shown that while people may cite the "appropriate" criteria, such as institutional source, they often rely on such factors as site design [6, 7, 17]. Similarly, I suspect that the appearance of credibility often incites unjustified trust.

In sum, I'm interested in what bloggers reveal about themselves, and how they seek to establish their credibility with their audiences, as indicators of how people are solving the practical problems of demonstrating credibility in loose, distributed knowledge communities.

Information about Others

A key element of blogs is links to others: links to postings, blogrolls that cite the author's favorite other blogs, and so forth. This reliance on recommendations is not unique to blogs, of course. Social networks have always played a major role in the creation of trust. But these networks are much more prominent in blogs, where the formal credentialing processes of institutions and publishing are often deliberately downplayed or even avoided, and where often the only interaction between people is via their blogs and related functions such as commenting.

One way that blogs provide this kind of information is through direct discussions of others' work. A major form of blog posting comments on or reacts to another's work: to events, publications, blog entries, and so on.

In addition, much of this evaluation of others is provided less directly by means of various forms of electronic linking: links embedded in posts, blogrolls, the commenting function, and the like. Blogs are designed to make such links easy – which both reflects and promotes the use of such linking.

Unlike person-to-person communication, blogs make this process visible and impersonal. They make the process of seeking out others' assessments easy. I can find out what my friend says, and what my friend's friend says, without ever talking to either of them, via their blogs. The downsides of this visibility are at least two: lack of confidentiality, and lack of nuancing.

Since others can see my assessments of them, I am likely to be careful of what I post (although many bloggers seem to be quite blunt in their postings). The lack of a mention or a link may be the only indication of, say, a poor evaluation, but such a lack could be due to many other causes.

However, the blogger's assessment of another is necessarily somewhat general, without the context and situatedness of conversation. If someone were to ask me directly about another, I might provide an evaluation targeted to the particular relationship between the two of them: e.g., I might say that the person in question is knowledgeable about this but not that; has certain biases that need to be taken into account; or should be approached in a particular way, all things that (1) I'm not likely to post to the world at large, and (2) may be specific to a particular situation.

I suggest that it would be useful to study these practices in more detail: how do people talk about one another and their work? What are the criteria, implicit or explicit, underlying evaluations? What forms of linking gets used for what purposes?

These questions also tie into the questions about blogger self-disclosure: is there evidence that bloggers' self-disclosure and the personal information that they reveal contribute to others' evaluations of them?

Blogging as Sharing Work in Progress

A topic that I have examined less thoroughly, but that is highly relevant to the workshop focus, is that of disclosure of information in blogging: not about the blogger, but related to the topic area or the blogger's work. Topical blogs are often used as a way of floating ideas within a knowledge community.

The ensuing discussion may take the form of collaborative development of ideas. This form of information sharing can be very productive. However, credit and intellectual ownership can become very fuzzy. This has implications for people whose careers depend on getting credit for their intellectual work, such as academics, as well as fields where attribution of origins and ownership are important.

This openness can also leave the blogger open to criticism, misunderstanding, and even the poaching of ideas. Presumably bloggers find the benefits of this form of collaboration worth the risks.

Again, the publicness of blogs offers a window onto these processes of information disclosure. Studying particular blogging knowledge communities may help us to see how people handle these issues – again, visible evidence of how groups solve the practical problems of knowledge work in a networked world.

BLOGS AND THE WORKSHOP

In summary, the publicness and visibility of blogs offers a window into some groups' practices of assessing others' credibility and representing their own, and a form of collaborative, distributed, computer-mediated knowledge construction. I have found that bloggers tend to be highly-self revealing, not only about their work but about their whole self. As a consequence of the technology of linking, the way that they assess others' work is made public – at least in part. And, finally, some part of topical blogging consists of public work-in-progress, a form of information-sharing that can leave the author highly vulnerable.

In this workshop, I think it will be useful to consider what these aspects of blogging can contribute to our discussions about distributed work, disclosure, trust, and privacy.

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