Lurking as Participation：A Community Perspective on Lurkers' Identity and Negotiability

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Abstract：Lurking, a discursive phenomenon in online communities, is often underemphasized. We draw on Wenger's social theory of learning to explore particularly the characteristic of lurkers who are "online regularly" in order to scrutinize the active intentions of a group of seemingly passive participants. Using a mixture of methods, we identified 95 lurkers among 353 participants in a six-week inquiry learning community, and uncovered their process of negotiability and identification from a virtual ethnographic approach.

Keywords: lurking, participation, negotiability

1. Introduction

It is common that we examine the characteristics of members and the quality of their participation in order to evaluate whether an online community can evoke mature and productive COP behaviors in participants (Schwen & Hara, 2003) and frequently, participants involve themselves silently and surreptitiously in an online community (Katz, 1998; Mason, 1999; Burnett, 2000; Nonnecke, 2000). For example, Zhang & Storck (2001) find that almost half of all postings within a community are contributed by fewer than 8% of its members and that the remaining 92% of members practice only relatively light participation. Clearly, this large proportion of "peripheral members" cannot be neglected, but our understanding of lurking phenomena is severely limited due to the paucity of evidence. Consequently, it is difficult to capture and comprehend lurking behaviors in isolation with their tacit essences (Nonnecke & Preece, 2001; Rafaeli, Ravid & Soroka, 2004).

From a CMC approach, lurking is generally defined as a passive and negative behavior. Lurkers are described as engaging in participation but in a limited way -- preferring to be readers rather than writers (Sharf, 1999) -- and lurking members who never post are regarded as free-loaders (Kollock & Smith, 1996). According to The Online Jargon Dictionary, the term "lurker" is defined as: One of the "silent majority" in an electronic forum; one who posts occasionally or not at all but is known to read the group's postings regularly. This characterization of the 'lurker' is now in widespread use in research studies. For example, Taylor (2002) identifies "one who contributed less than the average number of postings to the Discussion Board, but at the same time participated regularly in the discussion in 'read only' mode" as a lurker. Furthermore, he classifies lurkers as belonging to "the Peripheral Participation Group." Similarly, Rafaeli et.al (2004) mark "regular visits to the community but reticence or very seldom posting" as lurking.

Conversely, findings drawn from a participation paradigm often reveal a very different interpretation of lurking behavior. Coined by Lave and Wenger (1991), the notion of "Legitimate Peripheral Participation" (LPP) yields significant insights into the meaning of lurking. Indeed, lurking behaviors are associated with some difficulty in becoming part of a community during early stages, in which cases some alignment and adjustment is required. Some suggest that the reason why lurkers decide not to post but only to read is that they are watching and learning the norms and the structure of the community; that is to say, lurking seems to be a necessary process for newcomers when becoming part of a community. Researchers even consider lurking to be a prevalent phenomenon, and suggest that, after observing and figuring out patterns of online interaction, lurkers may gain the necessary confidence to express themselves in public, as they learn when to expect positive response to postings or replies (de-lurking) (Correll, 1995; Lindlof, 1998). In this interpretation, lurking is a

valid way of accessing the community, and its effects are neutral -- even though lurkers are non-public participants, they never hinder the development of the community nor do they deprive active members of resources (Lindlof, 1998; Nonnecke, 2000). Some researchers, therefore, do not refer to their subjects as lurkers. They would rather call such lurking phenomena "peripheral participation"(Nichani, 2000; Zhang & Storck, 2001). Moreover, in educational settings, researchers consider lurking to be a fruitful form of participation. Lurkers may achieve levels of learning similar to those of posting students, and appear to demonstrate effective learning (Taylor, 2002; Nonnecke, 2004).

Taken as a whole, the majority of empirical research on lurking concerns itself with the characteristic and the significance of "fewer postings", while neglecting the other factor: "regular login". In the ICLS conference in 2004, we explored the question of "Are lurkers non-participation learners?" from a community perspective (Chen, 2004). This year, our intent is to answer the other part of the question: "Why do they login so often?"

2. Theoretical framework

It is generally speculated that people define lurkers as passive learners because they generate fewer postings and therefore are less involved and contribute less to their community. However, when interpreting the two defining characteristics of lurkers ("fewer postings" but "regular login") from a participation perspective, we scrutinize this underlying assumption that less participation necessarily implies less reification. We therefore need to explore more thoroughly how the "regular login" behavior, certainly a type of active participation, is embodied in the lurking phenomenon. Particularly in our study, lurking has shown itself not to be temporary but was a sustained behavior throughout the six-week activity.

Viewing learning as social participation, Wenger (1998) proposes that participation refers to a form of belonging and of constructing individual identities in relationship to their communities. He uses identification and negotiability as analytical concepts in scrutinizing the texture of identity. To illustrate, identification is a process of belonging and it constitutes our identity by creating bonds or distinctions in which we become invested (p.191). Negotiability refers the ability, facility, and legitimacy to contribute to, take responsibility for, and shape the meanings that matter within a social configuration (p.197). In the case of our lurkers, how do they negotiate with their group members to find a way to establish individual identities given the infrequency of their postings? The processes of identification define which meanings matter to them, but do not in themselves determine their ability to negotiate these meanings. In what way does lurching in and taking on memberships become a confirmation of identification for them?

In what follows, we argue that the relationship between participation and reification in lurking behaviors can be clearly defined if we think within another set of dual processes: identification and negotiability. By revealing what little reification they produced, we explore in detail how they negotiate and align with their group in order to establish a local form of ownership, and then their identity is embodied in their "frequent login" participation.

3. Methods

In this study, we mix two approaches: we identify lurkers using participation quantity as our criterion, then we explore lurking behaviors from a participatory perspective. We draw on Wenger's social theory of learning to investigate how lurkers situated themselves in a community while contributing so few postings. The purpose of this study is to attempt to gain some new understanding by transferring our perspective on lurking behaviors from individual actions to socially collective ones.

3.1 The context

This online community is formed every year for a web-based science contest in an inquiry-based learning environment called Learning Atmospheric science via the Internet (Lain). Lain is constructed in order to allow high school students in Taiwan to participate during their summer vacation. The volunteers were sorted into a set of groups with 5-6 individuals per group according to

which of five topics they chose. Each group was assigned a secondary science teacher as their mentor. In practice, many groups shared a mentor due to the limited number of mentors available. Members in the same group did not know each other previously, nor did they engage in face-to-face communication throughout the activity.

This web-based science contest lasted for six weeks with one stage scheduled for each week. The six stages were: Individual claim formulating, Team hypothesis building, Detailed planning, Data locating, Data transforming, and Hypothesis justifying. Participants were to finish each of the above mentioned tasks to get a certificate. Lain was a voluntary learning activity. Each member was free to continue or discontinue participation at any point. Due to the challenging nature of the task -- evidence-based inquiry learning -- in the past years there had been a high drop-out rate (over 52%).

3.2 Identifying the lurkers

In this section, we introduce how we identify that specific proportion of participants whose online participation was consistent and sustained but whose postings were minimal. We then compare the characteristics of lurkers and non-lurkers in terms of online means, post means, and the nature of their postings.

The frequency of participants' postings was tallied and analyzed in order to identify potential lurkers. As participants could not post articles in the discussion forums of other groups, the extent of online postings per individual was calculated as a percentage of postings within each group. Three criteria were used to identify lurkers (Chen, 2004). First, each individual logged into the community every week throughout the six week span of the activity. Second, the Z score of postings per week was below the average for the group. Third, the Z score of postings divided by login frequency count was above the average of the group. The basic characteristics of these identified lurkers are displayed in relation to those of the community as a whole in terms of online frequency and the number of postings (see table 1).

Table 1. Logging Comparisons between lurkers and non-lurkers

	Lurkers (N=95)	Non-Lurkers (N=258)	Total (N=353)
Post mean	32.83	71.13	60.82
Online mean	65.91	66.98	66.69
Post/online mean	0.5	0.94	0.91

In the present study, the community was composed of 353 individuals in 56 total groups. Of these, 271 participants logged in every single week throughout the entire activity, while 95 of these 271 steady participants (about 27%) were identified as lurkers. If we compare the basic characteristics of the lurkers with those of the non-lurkers, we find that there is no significant difference in their login frequency. Whereas in terms of the number of postings, lurkers' made only half that of non-lurkers. Though performance of the two groups in terms of weekly login frequency was similar (see figure 1), the number of lurkers' postings was significantly lower than that of non-lurkers throughout the six weeks (see figure 2).
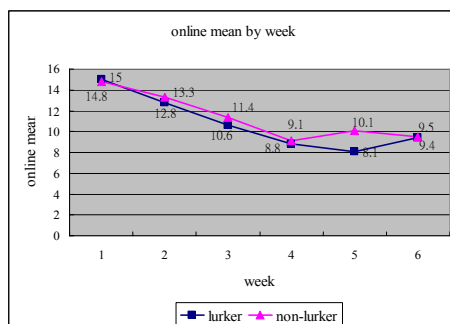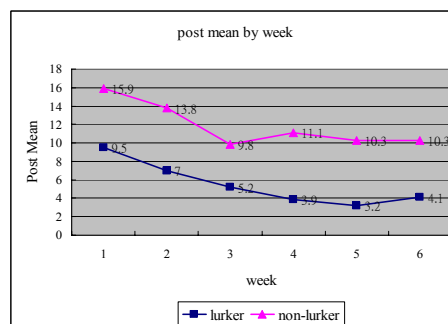

Figure 1 Comparisons of online frequency   Figure 2 Comparisons of postings

As one of the mentors in this activity, the first author chose postings from discussion forums from four groups involving lurkers and analyzed the nature of the posts. 1205 postings from 16

members were thus sorted into three categories (Dillenbourge, 2003). The results showed that for lurkers, 55% of postings fell into the category of "social talks", while for non-lurkers, 66% postings were in the category of "domain knowledge" (see Table 2).

Table 2. The nature of the posts of the lurkers

	N	Domain Knowledge		Coordination		Social talks	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Lurkers	4	35	27%	24	18%	72	**55%**
Non-lurkers	12	712	**66%**	156	15%	206	19%
Total	16	747		180		278	

3.3 The "online user list" and "online group member list" mechanism in the discussion forum

As synchronous communication was so popular among high school students, they were eager for their group members to be online as in MSN. To this end, Lain designers built two similar mechanisms for such social needs: one was "online user list" for the whole Lain community, and the other was "online group member list" for use solely by members of each group. It was observed that whenever they logged in, participants overwhelmingly tended to check the names on the "online group member list" first to learn about their group members online.

These two mechanisms were originally designed to permit participants to check if their group members were online so that they could establish synchronous communications if needed. However, as the lurkers did not post as frequently as did their non-lurking teammates, this mechanism emerged as a virtual "stage" upon which they could be seen. Without this feature, their behavior of frequent online presence but few postings would have made them simply become an "invisible man" to their group members. These two design mechanisms came to serve as very subtle communication channels, especially for the lurkers.

3.4 data collection and analysis

With the aim of exploring "Why do the lurkers login so often?", this study was conducted using the following three approaches. First, we utilized the log data, including postings in the forums, the weekly report, and other documents, to reconstruct their activities in the online community. Second, we applied the ethnographic method to immerse ourselves in the Lain community. We became participant observers throughout the whole six weeks of the activity in order to generate some thoughts that can be complementary to the "recordable" or "visible" log data. Third, after the activity, we interviewed selected team members – both lurking and non-lurking. The interviews proved to be the major documents used to answer our research questions – as they revealed the thoughts behind frequent online behaviors of participants.

4. Results and Discussions
4.1 Lurking behaviors: an expression of tension

From a participation perspective, "fewer postings" but "regular participation" is regarded as the tension between lurkers' engagement and their postings. By sorting their postings, we found that 55% of them categorized as "social talks", 27% of them as "domain knowledge", and 18% as "coordination". Clearly, lurkers felt more comfortable posting articles related to soft talks rather than to serious discussion on domain knowledge. One lurker mentioned "*When I discussed with my teammates, I felt that they were so competent, they knew a lot…Superman integrated our work and maintained the webpage…Ihil was good at earth science* (a7_Poison_interview)." Another lurker experienced deep frustration. "*In fact, I had never known about how to do the work…It's even hard for me to describe it…*(a7_Purple_74-2)" Although joining the discussion forum every night gave rise to a sense of joint enterprise and cohesion in the whole group, social comparisons which emerged also gave the lurkers' the feeling of being excluded.

Lurkers are indeed deficient in their domain knowledge and post less than non-lurkers, but their social logged-in presence was vividly shown by our "online group member list" mechanism.

One non-lurker Ihil expressed how she felt when seeing that she had company in the form of her lurking colleague on the online list: "*Even though he did not reply anything, and you just found out that his online record increased, he did give our group a way of supporting. Because…he had been nothing to say, but still showed in our forum. It means he still cared, concerned about what happened here…In any case, we group members knew that he was still watching us* (a7_Ihil_email)." Another non-lurker Sg023113 commented on her lurking companion Juan: "*Her showing in the forum was indeed my support in the spirit. I think her cracking jokes all the time was fine because she made me happier… Being together… Not doing the work by myself all the time…My friend suffered such bitter situation in which her group members all went away and left her alone* (d10_Sg023113_interview)." It seems that team members regarded Juan as having played a positive role in the team, rather than that of a so-called freeloader.

Interestingly, while "being seen" can serve as consolation to others, it also acts as invisible pressure for lurkers. Aquarius, remarked in her weekly self-statements, "*I feel guilty little by little…even if I login, I would login when everybody are offline…, I used GUEST instead of my id to login.*" It seems that the "online group member list" functioned as a dual-oriented virtual stage for lurkers. On the one hand, lurkers could appear without any post; on the other hand, this virtual stage simultaneously made them worried about logging in without making a contribution and therefore reluctant to use their own IDs to login. In order to hide themselves they wore a mask and participated clandestinely. In this case, a point of great interest is: There is no earthly reason for lurkers go out of their way to sneak in, concealing their identity, but this is indeed what they do. Why do they do it? It is the "sense of co-existence" that makes them care so much. **Their** joint enterprise was composed of anything going on in their discussion forum and in the inquiry work.

Given that they found it difficult to generate the necessary confidence to discuss scientific topics with their group members, lurkers opted to engage in social talks instead. Here is how Juan describes her choice: "*I found I couldn't get what my teammates said and felt incompetent. It made me lose a little bit of confidence. However, we never said something discouraged; we always inspired each other and say something to cheer up each other. I think it's the key point in group learning* (e6_Juan_self-statements)." Lurkers considered formal discussion together with informal association with each other to be impartible, and a combination essential for holding the group together. If one were simply to rely upon the former, it would be hard to infuse into the group the necessary intensity to accomplish the task. This opinion was held and supported not only by lurkers but by their non-lurking colleagues as well. What can be considered to be a good team-work group? Each member doing his/her allocated task well and standing beside one another; this is what members need, the group cohesion – extremely important when a big challenge looms in front of them. Based upon this study we suggest that when lurkers participated in such a rigorous inquiry-learning activity, they figured out that domain knowledge was not all that was needed, that the ability to make everybody's life easier was just as crucial. Tension was resolved through the process of their engaged participation, which in turn, resulted in the necessary competence as defined by their community.

4.2 Lurking repertoire: many kinds of alignment involved

Although, in comparison with their teammates, lurkers feel some embarrassment, they still log into Lain and treat this as part of their daily routine. Our analysis concluded that lurkers did attempt to align with their teammates in order to participate in an adequate way. We identified at least three kinds of alignment involved in lurking.

First, frequent login without posting was a better choice than the alternatives. Most of the lurkers experienced LPP in the early stage. For example, Juan mentioned in her self-statements of the first week: "*I know I haven't picked and chosen any article to share with people. It was not because I didn't want to do it. The fact was that I had no confidence on this. It may be awful if I did it improperly.*" Lurkers worried about their performance; therefore, they adopted a conscious strategy of not posting anything – a choice made through negotiation. They believed that it was much more important to join in (login) this community than to post great comments; that is, what matters is being together rather than being smart.

A second strategy discovered by the lurkers was that of remaining on standby. Lurkers are often regarded as passive members; this passivity is in fact calculated, though it seems reluctant. One lurker, Aquarius, mentioned that: "*I often read those postings rather than posting articles. I would reply if my teammates remind me to do so…I do help them doing some search on the web because someone tells me to do so…and I feel better when I really being helpful* (c8_Aquarius_interview). Having read postings but remaining at a loss to know how to reply or contribute, or having contributed a posting which went unanswered or worse, was refuted or ridiculed, some participants decided henceforth to remain passive – to lurk. Doing what was assigned to them became a conservative but safe course in this community. This alignment is also the result of negotiation. This line of thinking echoes de Certeau's (1984) idea of the "tactics" of everyday life (in opposition to the "strategies" of the powerful): superiors exercise their power and strategy to control and dominate while inferiors use tactics to transform, respond to, and even take a stand against superiors with methods much like a guerilla force.

A third strategy developed by the lurkers was that of posting collected information in order to eliminate the fear of posting something in error. Juan recalled that, "*I didn't know what I could post at first. If I proposed something and got turned down, I would felt…depressed…Yeah…So I dare not post anything at the beginning. But later on, I thought maybe they need some background information about the issue being studied…maybe they would read it for reference.*" Eventually lurkers figured out a way to align with their teammates, took the initiative, and made a few postings in the category of "domain knowledge". This was also evidenced by the 27% of lurkers' postings classified as "domain knowledge".

"Posting/replying" is a required competence while participating in an online community. This competence, however, is reexamined and acquired through an investment by lurkers of hundreds of online observations. Their frequent logins provide an opportunity for them to negotiate and become familiar with the practice. One lurker recalled that: "*I have asked them what to do. They said nothing but suggested that I login as often as I could. Then I would be home free.*" (c8_Aquarius_interview). Login is a minimum for participation; the rift between being willing to login and being able to post is the "zone of lurking". Lurkers are certainly eager to promote interaction. Although their explicit behaviors were: limited postings, adoption of a passive position, copying and pasting background information, etc…, the lurkers' repertoire is indeed a product of shared negotiation.

6. Concluding remarks

In this study we have argued that lurking need not necessarily be viewed as passive participation but, instead, as sets of tension and negotiation that are encountered by these less confident learners. Given this participation perspective, their frequent online presence bespeaks their group identity. Their seemingly silent participation conveys even deeper engagement than that of the non-lurkers.

From our findings, the aspect of mutual engagement does not involve competence in domain knowledge, but a responsibility and thirst for engagement and contribution. The domain knowledge deficiencies of lurkers neither impede efforts to participate nor influence their contribution toward the group. Members achieve shared understanding on what the enterprise looks like and then develop the competence the community requires to work together and foster group cohesion. Even though the large number of postings in the social-talks category may distract and blur the focus of discussion, social talks still function as an accelerator of cohesion: knowing when to cheer up fellow members, when to accompany, and when to talk (or not talk) properly. This is a certain kind of competence which is produced as a lived experience through participation in specific communities (Wenger, 1998, p.151) and as a way of situating oneself in a difficult situation. Group members always strive to grasp chances to avoid dropping out of interaction even though they are at the edge of alienation. Though "posting an article" may have been highly challenging for them, the lurkers' behavior leading to sustaining a relationship within the community for the whole six-weeks is neither passive nor freeloading, but an overwhelmingly skillful form of participation!

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