Shedding Light on Lurkers in Online Communities

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Abstract

Lurkers are reported to make up a sizable proportion of many online communities, yet little is known about their reasons for lurking, who they are, and how they lurk. In this study, interviews with online community members provided a formative understanding of these and other issues. We discovered that lurking is a systematic and idiosyncratic process, with well-developed rationales and strategies. All interviewees lurked, but not all the time, and several developed a sense of community through their lurking.

Introduction

Recent research in electronic discussion groups has focused on a number of areas, including the nature of online communities (Wellman, 1997), the development of friendship (Park & Floyd, 1996), the role of empathy in group discussions (Preece, 1998), and the differences between men and women (Roberts, 1998). Additional work has been done on specific kinds of online communities, e.g., therapy (King, 1994), education (Hiltz, 1993), business (Sproull, 1986), and health support (Preece & Ghozati, 1998). In most of these studies, the primary source of information was participants who actively conversed in the discussion groups or other online forums, and who were therefore readily observable. While our knowledge is growing, it is nevertheless a selective knowledge based on observations of those who post.

In contrast, little has been published on the so-called lurkers, those who do not participate in public dialogue. Given that estimates of lurkers-to-posters ratios run as high as 100:1 (Carroll & Rosson, 1996) — possibly higher in some electronic discussion groups — a knowledge of lurkers would be a valuable addition to our understanding of "participation" and the design of electronic discussion groups. Our interest in this area originated in our research into online health support groups, where the number of lurkers tends to be very high. These unseen, but needful users deserve special attention from designers interested in supporting these groups.

To put our discussion of lurkers in context, the following definitions may be helpful. The Jargon Dictionary (http://www.netmeg.net/jargon) defines lurker as:

One of the 'silent majority' in a electronic forum; one who posts occasionally or not at all but is known to read the group's postings regularly. This term is not pejorative and indeed is casually used reflexively: "Oh, I'm just lurking." When a lurker speaks up for the first time, this is called 'delurking'.

In contrast, Merriam-Webster OnLine (http://www.m-w.com) provides a strongly pejorative definition:

Lurker ... mean[s] to behave so as to escape attention. LURK implies a lying in wait in a place of concealment and often suggests an evil intent, e.g., suspicious men *lurking* in alleyways.

These definitions provide contrasting perspectives, and reflect our inadequate understanding of the lurker. In the online context, lurker evokes the image of a benevolent yet responsible net citizen, while the traditional definition implies something much more sinister. Evidence for the former definition is anecdotal, and

without appreciating the nature of online lurking, the latter definition may be inappropriate. An improved definition, based on empirical evidence, will have practical value in defining how we view lurkers, and how electronic discussion groups can better serve the lurker.

We have identified four major areas of investigation: lurker demographics (who and where), lurker strategies and tactics (how), the effect of context (community variables), and lurker activities (why and what).

Demographics: If the estimated 100:1 ratio of lurkers to posters is accurate – and many researchers believe it may be higher – the sheer volume of lurkers makes them an important group. Unfortunately, we have neither a good count of how many lurkers are out there, nor clear reasons why lurking levels may vary from community to community. To clarify this, we are concurrently examining lurking levels based on community type (Nonnecke & Preece, 1999). Understanding lurkers and lurking offers us the opportunity to develop measuring techniques and metrics that include them, rather than treat them simply as the silent-insignificant majority. Metrics will be invaluable in measuring the success of a community, whether that be social, economic or whatever. This has already become a financially important topic as more and more commerce comes to the Net. (Hagel & Armstrong, 1997)

Strategies and Tactics: Viewing lurking as a valid form of participation in online communities suggests that we should understand the usability of the community, i.e., how communities function on lurkers' behalf. If we understand the strategies and tactics of the lurker, e.g., browsing, reading practices, side posting (if any), and mechanisms for archiving or saving information, then we have the opportunity to positively influence the tool makers and designers of these communities. We are in the process of examining strategies and tactics in detail.

Context: The communities in which lurking occurs affect participation. Factors include topic, software, size of community, number of posts, moderation (Collins & Berge, 1997), and joining policy. Coming to understand at least some of these, if not exactly knowing their generalized effect, will help us perceive lurking as a situated action, and not just an isolated phenomenon.

Activities: Do lurkers, as the Jargon Dictionary suggests, regularly read messages? Why don't they post, and what are the benefits of participating without posting? Are they a homogeneous group, i.e., do they use the same strategies and techniques, or is there a range of lurking activities and rationales? How do they view themselves: as lurkers in the evil sense, as members of a community, or somewhere in between? The research described in the remainder of this paper focuses on lurker activities.

While data from our other research efforts will provide us with a good understanding of lurker demographics, it will tell us little about lurker activities. Rather than view lurking in the pejorative, we have taken a neutral position, and view it as a form of participation. This raises the question of exactly what is lurking. While it could be assumed that someone is lurking any time they are not posting, we have temporarily defined lurking as follows:

'prolonged periods of receiving communications without posting. For many people this may mean never posting in some communities'.

Indeed, in discussing posting habits with lurkers, we discovered it was common for people to post in some communities and never in others. Our initial goal was to gain a formative understanding of lurking, to identify some of the factors that influence lurkers, to identify potentially important variables and to develop tentative hypotheses to drive further studies. To understand the life of lurkers, we looked to members of online communities to describe their own participation.

Methodology

Lurkers have received very little attention, and as this was our first study of lurking, we assumed, rightly or wrongly, that lurkers would not respond to either email or Web-based surveys. We also surmised that if lurkers did respond we would get a biased response without easily understanding the nature of the bias.

More importantly, we were interested in a richer understanding of lurking than could be derived from surveys. However, email and Web-based surveys have shown potential in other studies (Smith, 1997), and will likely be employed in our follow-up work.

Given the relatively high incidence of lurkers, we felt comfortable selecting participants at random from physical communities in which members were known to be Internet users. Ten interviewees were drawn from two universities, 5 men and 5 women, ranging in ages from early 20s to early 50s. Due to the small sample size, our intention was to balance for age and gender, rather than examine age or gender issues. All participants were members of at least one online group, and were not pre-selected for lurking or for their level of experience with online communities. All persons asked participated in the study; 3 were well known to the researchers, and 7 were not.

Face-to-face or phone-based, open-ended interviews lasted between 45 minutes and 2 hours, and focused on the interviewee's participation in online groups (see the following Interview Outline). Prompting was minimal, and the interviewer did not validate whether a group or topic was worth discussing.

Interview Outline:

- 1. Introduction
- 2. Name and describe online groups to which they belong(ed)
- 3. For each group, determine the following:
 - reasons for joining
 - activities and action they took (in posting or non-posting)
 - reasons for not-posting (if this occurred)
 - reasons for posting (if this occurred)
 - reasons for side posting in non-public spaces (if this occurred)
 - reasons for leaving the group (if this occurred)
- 4. Ask for comments on Jargon Dictionary definition
- 5. Ask for any additional comments
- 6. Thank them for participating

Results & Discussion

Our ten interviewees described 41 communities, including 25 discussion lists, 7 BBSs, 5 newsgroups, 3 chat rooms, and 1 MOO. Only one community was common to two interviewees. Two interviewees described only one community, while the maximum number of communities mentioned by an individual was 6.

All interviewees belonged to or had belonged to communities in which they never posted, or posted rarely (i.e., once or twice), or posted so infrequently that they considered themselves to be lurkers. All interviewees had posted in at least one of their online communities.

Despite the small sample size, it is clear that lurking is not a simple single behaviour, but a complex set of behaviours, rationales, and activities situated in a rich space of possibilities. Using Affinity Diagrams (Holtzblatt & Beyer, 1995), two sets of related factors emerged from the interviews: factors that lead people to join a community, and those that affect their participation. We use these observed factors as a starting point for our discussion.

i) Interviewees described the following major reasons for joining:

- personality (e.g., curiosity, boredom, need for interaction)
- social (e.g., parallel with physical community, search for like-minded people, desire to broaden beyond local geographic community)
- professional (e.g., relationship to job)
- information (e.g., access to experts, timely information, exposure to breadth and depth of ideas)
- pleasure (e.g., entertainment, controversy and debate, humour)

ii) The following reasons were provided for not posting:

- understanding the community (e.g., audience unknown, comfort level, topic area, individuals)
- personal factors (e.g., culture of origin, motivation, time)
- no personal or practical need (e.g., able to gather information without posting, just reading, no reason to respond)
- no community requirement (e.g., no expectation or requirement by community)
- structure of community (e.g., posting not possible, part of community is non-posting: FAQ, moderation)
- information seeking (e.g., more interested in information than interaction, reading with a specific goal in mind)
- privacy (e.g., sensitivity of employer, fear of archiving, fear of spamming, i.e., junk mail)
- safety (e.g., can't offend if don't post, curiosity without exposure)
- involvement (e.g., maintain emotional detachment, makes leaving easier, shy)
- community responsiveness (e.g., delay between posting and response, non-response to posts)
- value of posting (e.g., no response required, nothing to offer, unable to add value)
- interaction mechanisms (e.g., volume of posting, user interface, anonymity)
- efficiency (e.g., not posting takes less time, others will respond, value received without cost of posting)

A simple goal satisfaction model can be used to interpret and integrate the above sets: interviewees attempted to satisfy their goals in joining a community, and these goals were variable and context dependent (e.g., style of community, need for anonymity, and many other factors affect decision to join, and remain in the community). How they satisfied their goals was also context dependent; however, in many instances it was possible to satisfy goals without posting. It became clear that this was not a simple process of reading every posting, but a complex, idiosyncratic process influenced by the individual's goals, experience, and the specific community.

In one example, an interviewee belonged to a broad range of discussion lists, having joined them for both personal and business reasons. While the motivations for joining each list was different (e.g., want to know vs. need to know), participation in the lists was, for the most part, limited to lurking. Lurking was comfortable and enabled him to attain his goals given the nature of the lists, each list having high volumes of quality postings representing both depth and breadth of knowledge. In neither group was the interviewee motivated to post for information, but took a more general wait-and-see approach.

Each of the interviewees was able to describe a method for dealing with postings. Nobody read every posting, and depending on the experience within the community interviewees might not read any of the postings. Subject headings were used as a primary means of determining what to read, and the poster's name was used, if at all, as a secondary guide. Several users deleted or ignored whole threads based on a heading, well aware that heading information was often a poor indicator of content. One interviewee said this was a reasonable strategy because information tended to get recycled over a period of time.

It would be convenient (for designers, community builders, etc.) if we could cite specific reasons for non-posting as more important than others, but that does not appear to be the case with this group of interviewees. It is clear that non-posting activities are carried out methodically and that individuals are capable of explaining not only their methods, but also the strategies they employ. Several very interesting aspects of non-posting arose, but it is too early to tell, if at all, how these fit non-posters in general:

- Users have a need to understand the community, and actively work at doing so (whether they post or not).
- Time is an important determinant of how people participate.
- Privacy and safety are important issues.
- The mechanics (user-interface, administration, etc.) of a community have an impact on participation.
- A strong sense of community can be developed without posting.

Knowing the community and the individuals in the community was so important to the interviewees that many were able to describe their tactics in detail. These included looking at previous posts by an author (using archives or other means), examining email addresses for personal or corporate information, following threads to understand the nature of the discussion and participants, and using signatures and related Web sites to find out more about posters.

The fact that a strong sense of community can be developed without posting is perhaps the most interesting in that it goes against the preconceived notion that you must be an active poster to be part of a community. A number of interviewees mentioned experiencing a sense of community while lurking.

For one interviewee, a sense of community was extremely strong. This came about through a number of avenues: the interviewee's need to find community within a self help group, the stories related within the community's Web space, private postings and responses to members of the community, and the character and nature of the dialogue within the community, which engendered a sense of trust and care. The fit between the interviewee and the community was good, and in this case the outcome was a very strong sense of community, a sense that was developed without posting. Even though this interviewee has not actively lurked in the community for over a year, there is still a sense of belonging to this community.

Interviewees were asked to describe both current and past communities. As a result, we were able to get a glimpse into why they left communities. Many indicated that a lack of time was an important element in their leaving a community. However, communities cited as largely information interchange communities (e.g., software application help groups) were frequently left because they no longer supplied information in sufficient quantity or quality. This was largely a result of communities repeating topics, and the interviewees becoming more expert in their knowledge.

We were interested in understanding how interviewees viewed lurking in general and their own lurking behaviour in particular. An initial abstract for this paper was distributed to some of the interviewees. One interviewee responded with the following comment:

Maybe it's a sign of my own mild discomfort around being a lurker, but I found it reassuring to recognize myself and my behaviour within the continuum you describe, and to see lurking treated seriously, with both acceptance and respect. As a lurker, I'm used to observing from the sidelines and participating vicariously, and it's strangely gratifying to read an article that speaks directly to that experience. It's almost like suddenly feeling part of an (until-now) invisible community of lurkers.

This interviewee was not alone in feeling there is a stigma associated with lurking, although the degree of stigmatization varied from individual to individual. Giving lurkers recognition as valid participants (beyond the current Jargon Dictionary) will benefit both lurkers and the community as a whole. Simple math indicates that if lurkers delurked, communities in their present form would become a chaotic message ground, perhaps mimicking many newsgroups in their level of disorder.

Conclusion

Our initial assumption that lurkers could be found by polling a physical community proved to be a good one, with all interviewees being experienced lurkers, but not necessarily all of the time, nor in all communities. Further work on the demographics should provide us with a better understanding of just how wide spread lurking is on a community-by-community basis.

While we found no anecdotal evidence of gender playing a role in lurking behaviour, this does not preclude the possibility. Our ongoing work in examining lurking demographics should provide us with at least a starting point.

With the small numbers interviewed, it is premature to create a set of guidelines for tool and community builders, but we do know that lurking is a highly active, methodical, and goal-driven process. At our current level of investigation, it appears to be idiosyncratic, however, with further studies we may be able to understand it well enough to inform tool and community builders with either guidelines or a set of evaluation heuristics aimed at creating better communities for lurking.

Our refinement of the lurker definition appears to be sound: prolonged periods of receiving communications without posting, which for many may mean never posting in some communities. We will need to incorporate into this definition some elements about the sense of community, but this will have to wait until we have a better understanding of how this sense of community is achieved, and how frequently. No longer can we assume a lack of a community in cases where the majority of members do not post.

So far, we've viewed lurking as a means of satisfying a set of user-defined goals related to joining an online community. We also need to understand the circumstances under which members of online communities post publicly and privately within the community. And we need to understand why such participation ends. In a sense, we are looking at understanding the life cycle of participation in an online community, with an emphasis on lurking as being a natural and valuable part of that life cycle. Understanding why someone delurks, and its value to the community, is equally interesting as why they lurk. Understanding why someone leaves a community will be as interesting and useful as understanding why they became members in the first place.

Lurkers and lurking will continue to be an important area of study as more and more communities go online. Our next step will be to develop better tools for the lurker, thereby creating better communities for all participants. To achieve this, we need to broaden our definition of participation and take up the challenge of studying participation in all its forms through combined ethnographic and large scale sampling approaches.

Future Work

This formative study is continuing to spawn work within our group. A demographic study of online discussion groups is now being completed and will provide us with a knowledge of lurking levels. Further ethnographic studies are proposed to discern how current tools, specifically email clients, affect lurking. These studies will tell us more about the strategies and tactics employed by users, with an eye towards understanding how current tools have shaped use, and how to improve them.

The role of moderation is currently being examined with a focus on providing a better suite of tools for moderators. In particular, we are developing a technique for automatically identifying inappropriate messages (e.g., flames, spam, abusive or obscene language). This technique will eventually form the basis for developing a tool for moderators of large communities and discussion groups. It will flag messages that are potentially inappropriate, so that the moderator need read only those messages and decide how to handle them, instead of reading every message. It is likely that the idea can be adapted and made more generic, so that moderators who, for example, wish to keep a particular discussion on track by discouraging messages that wander from the theme, can use the tool to identify those messages too.

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