

## 15 Lurkers in Mailing Lists

Christian Stegbauer & Alexander Rausch

Numerous publications on the Internet and on Internet-based communication groups are based upon speculation, and do not refer to empirical data. When studies are based on data, then these are normally derived from surveys, or observations of particularly active users. Both methods, the use of reactive instruments<sup>1</sup>, but in particular selective awareness of individual users, can lead to biased results. Often, a small part of the entire usership's behavior spectrum is extracted and applied to all participants – sometimes even to an entire generation of actors. Such data is also frequently used when characterizing Internet-based social spaces as a whole (e.g., Turkle, 1995; Tapscott, 1998). In contrast, the study presented here uses neither a reactive instrument, nor does it generalize the analysis of a minority of active participants. Instead, passive users are the focus of attention. Hopefully, a more balanced overall view of Internet-based communication forums may be possible.

This contribution is based on data culled from a *series of participant registers* and text archives in mailing lists, in other words, from longitudinal data. The examination is aimed at finding out the role of passive users in mailing lists (i.e., passive participants). The survey thereby picks up on a phenomenon whose interpretation has already provoked a broad spectrum of opinions and conjecture. On the one hand, lurkers are reviled as freeriders since they collect information communicated by active users without making a contribution in return (e.g., Kollock & Smith, 1994). Other considerations state that lurkers are unnecessary for communication, if not an obstruction; they only exhaust bandwidth (Schoenberger, 1998).

Lurking is often thought of as spying, or even more seriously as voyeurism. Obviously, some participants find it unpleasant that their messages are distributed to a larger number of users without these being recognizable as an audience. Another view describes lurking as a fleeting phenomenon: in netiquettes one is requested to follow the discussion first for a while in order to become active later on, having gained more knowledge of the topic, the status of discussion, and the regulations within the communication space. In this manner, the communication space is pro-

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<sup>1</sup> If opinions are requested, the risk is great that known judgments on effects are reproduced. Schmutzer (1997) expresses an opinion on this topic.

tected against redundant and unqualified contributions, and fewer references need to be made to generally accepted rules of conduct. A third view is held by Stegbauer and Rausch (1999) who state that lurking is considered structurally necessary in order to avoid "information overload". Lurkers also contribute to guaranteeing the "conditions of the possibility of communication", and are thus indispensably necessary for enabling communication, in particular in larger user groups.

## 15.1 Problems in Defining Lurking

When authors write about lurking it is remarkable how vague the respective authors' conception of this phenomenon is. As a result, completely passive users are sometimes referred to as lurkers. Yet it can also be that those participants have not written a contribution within the last month but are still identified as lurkers (Sproull & Faraj, 1997). The only consensus is on the fact that there are numerous lurkers. Accordingly, Fassler (1997), for example, quotes a survey stating that 90% of participants remained passive.

Such numbers are based on estimations or speculation since so far no method has been found to determine the number or proportion of lurkers. Consequently, empirical analysis is necessary. First, though, a clear definition is required.

It is not even clear what lurking means. Is passivity a feature that is static, and remains that way? In other words, is it an individual characteristic of or an intention of a section of the participants? It would seem reasonable to assume that this is correct if one takes into account the insults or the above mentioned studies. Another facet is also possible: passive users only wait for topics of interest before becoming active<sup>2</sup>. Another hypothesis would be that a constant ebb and flow in users is to be found in discussion forums, and that many users behave similarly to zappers in front of a television set, or to aimless surfers in the World Wide Web (WWW) who visit the forum briefly and leave immediately.

In order to characterize the phenomenon, two levels must be isolated: the individual behavior level and the level of the respective communication space's structure. Irregardless of whether lurking is a static phenomenon on the individual level or only a transition phase from a passive to an active user, one can ask whether social space

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<sup>2</sup> Such a situation is described by Baym (1997, p.111) who examined an American newsgroup on soap operas: "A lurker alluded to this responsibility when she responded to a post that thanked her for unliking to post a New Yorker magazine article about AMC (AMC is the abbreviation for the television series concerned. It means: All My Children): I'm also glad for the chance to add something to this ongoing stimulating dialogue!! I've been lurking for several weeks now, but rarely post, since you all seem to already have so many fun things to say!"

requires such a position and what sort of function such a position, which can be occupied by completely different people, would have.

A definition and operationalization would also have to be aimed at the researcher's particular focus of interest.

Lurkers can hardly be tracked down by means of classical Internet research methods. Cross section surveys are not suitable for obtaining data on a phenomenon potentially dependent on progression. Passive, or practically invisible users cannot be observed either. Whilst lurkers seem completely inaccessible in newsgroups, the member register and text archives at least offer some sort of a reference point for a quantification of the proportion of lurkers. However, when counting the membership register, relatively high (to date indefinite) fluctuation must be taken into account with the result that a survey using this method seems just as doubtful.

The approach taken here combines archive data analysis with the analysis of a sufficiently long series of member registers. In mailing lists, normally all messages intended for the social space are archived. These files are normally accessible to all members, and sometimes to outsiders. As far as accessibility is concerned, the same also applies to member registers. These are not archived, but updated at each modification. The modifications are usually not logged. The basis of observations conducted in this survey were the member registers of a number of topically related mailing lists, which were accessed monthly over a period of two years. In this manner, by combining this information with the archives, each individual user's behavior patterns can be drawn up.

## 15.2 Database

The observation period ran from September 1996 until September 1998. The behavior of those people who subscribed to one of the lists (see Table 15.1) between September 1996 and September 1997 was tracked. However, that was not feasible for all of the included mailing lists: the "Popper" list has not published its register since December 1997.

Table 15.1: Different mailing lists were included in the survey

List name	E-mail address of the list server	List exists since
Critical-Café	Majordomo@mjmail.eeng.dcu.ie	November 1995
Descartes L	listserv@bucknell.edu	July 1995
Hegel L	listserv@bucknell.edu	April 1995
Kant L	listserv@bucknell.edu	January 1994
Logic L	listserv@bucknell.edu	March 1994
Phil-Logic	listserv@bucknell.edu	June 1995
Popper	listserv@maelstrom.stjohns.edu	October 1995

Lurking is defined in an operational sense of the term here: lurkers are those participants who did not make a contribution in the first 12 months after subscribing to the list. In this way, an individual time scale can be plotted for each participant. This scale determines the entrance time as month "0", the month of subscription. By combining these with archive data, one can determine which subscribers went active at which point in time during the observation period, and who remained passive. Apart from examining lurking, a chronological profile of activity can be created on the newly subscribed posters.

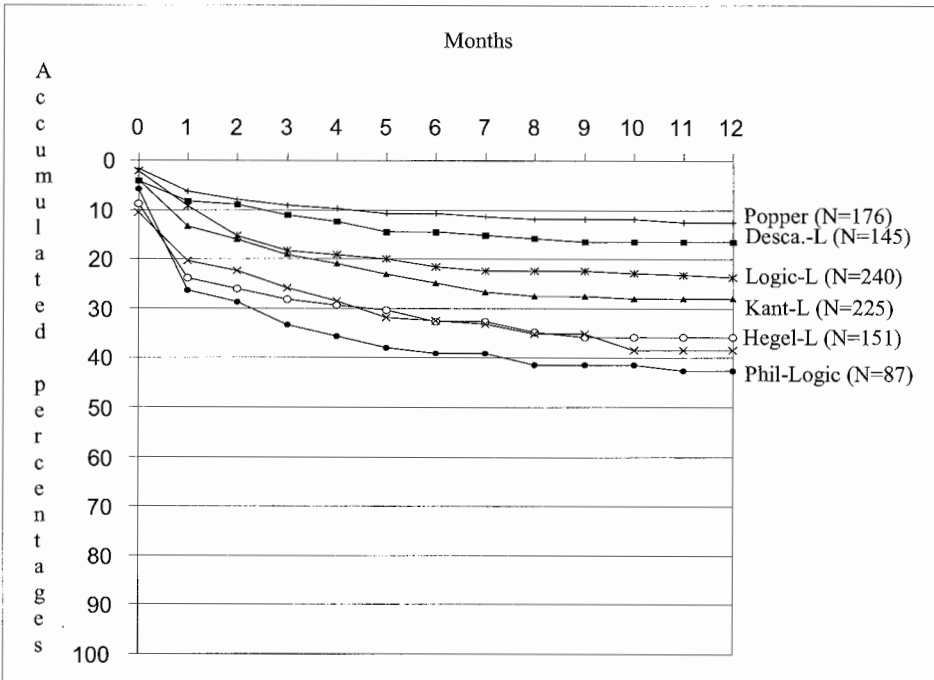


Figure 15.1: Time until the first contribution in months (participants who subscribed to the mailing list for less than twelve months were also included)

In an examination of all of the included mailing lists, on average only 30% of all selected subscribers went active within 12 months. In other words, about 70% of the users can be defined as lurkers. All of the newly subscribed members of the various mailing lists are entered in the above diagram. First, one can observe that the proportion of lurkers varies according to the lists. In all lists, lurkers make up the majority of new members. In the list with the lowest lurker proportion, Phil-logic, their pro-

portion amounts to about 55%. The most lurkers amongst those newly subscribed during the test period could be found in the Popper list, about 85%.

Figure 15.1 indicates one disadvantage: those participants who left the communication forum again shortly after subscribing are also subtracted. Therefore, Figure 15.2 only shows those users who were members in their respective communication space for at least one year.

It can be noted that they made their first contribution relatively shortly after subscribing. After approximately four months the probability that a user who was inactive until then will contribute is very small.

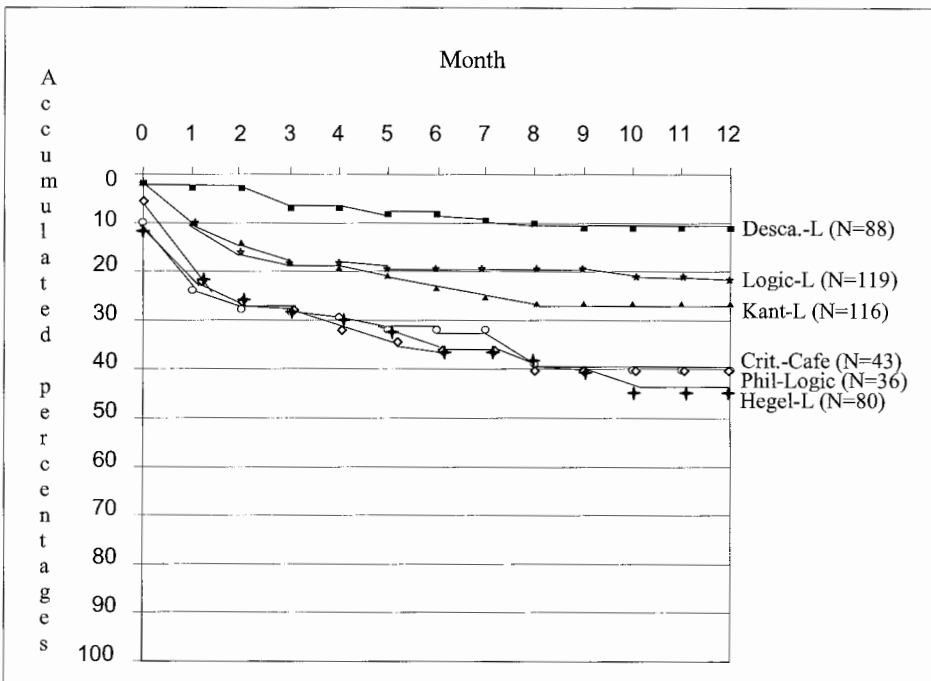


Figure 15.2: Time until the first contribution in months (participants who subscribed to the mailing list for less than twelve months were also included)

As a result, it can be stated: among the majority of users, lurking is not a transitional phenomenon but a fixed behavior pattern.

The very different proportion of lurkers is however not obviously related to the content or respective topics of the mailing list. Instead it depends heavily on the volume of messages in each individual social space. The next diagram (see Figure 15.3)

shows this relationship: the smaller the volume of postings, the higher the proportion of lurkers.

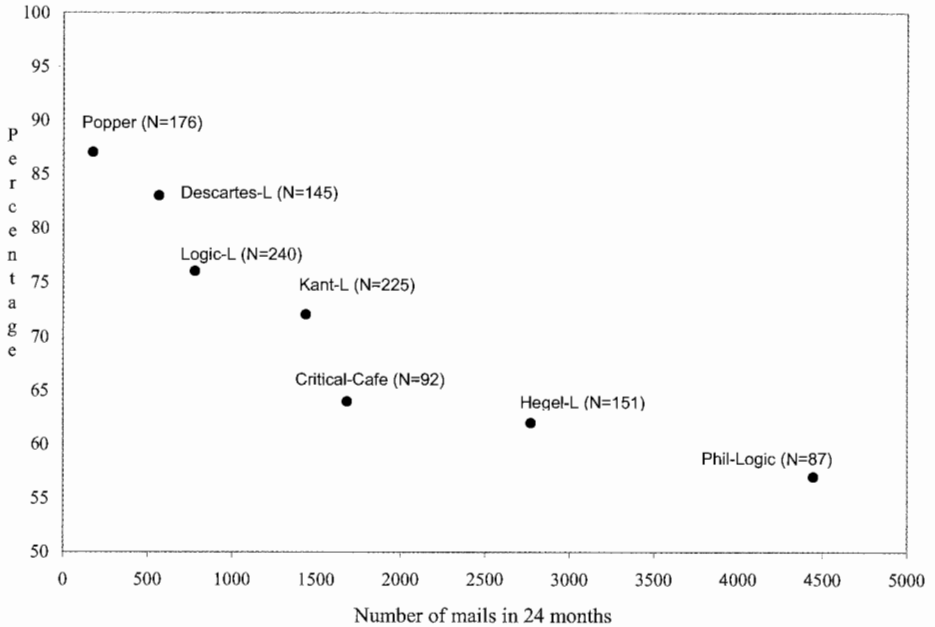


Figure 15.3: Proportion of lurkers versus mail volume (on the basis of all newly subscribed participants)

This relation can be explained as a result of the differences between the individual effort, the time spent reading all of the detailed messages and dealing with them, and the user's individual interest. To sum up, this means that the costs of participation in various mailing lists increases with the number of the dispatched mails. In this fashion, selection amongst users sets in fairly rapidly – only those really interested stay, the rest shy away from the excessive number of messages in their mailboxes and withdraw again fairly quickly. In a list with a small volume of messages, however, occasional postings are accepted, and are considered less of a nuisance. Furthermore, the possible deletion of a posting causes less effort than looking up the mail server address and unsubscribing. In addition: the less messages on a certain mailing list are received, the longer it takes for a user to be in the picture on the respective list. What is possible in larger lists within a few days can take months in a rarely frequented list. For example, the Popper-List has a volume of 7 mails per month whilst Phil-logic has 185. A participant on the Popper list would need to spend more than two years to

read exactly the same amount of messages a Phil-logic subscriber receives in one month.

In this respect, the procedure presented here is somewhat vague. Since the member registers were only retrieved once a month, a documentation gap arises for those participants who were "passagers" (i.e., those who simply took a brief look into the list and disappeared again quickly).

### 15.2.1 Characterization of Passive Users

With the help of information supplied by the e-mail address, lurkers can be described more exactly in comparison to the active users. The users come from all over the world, whereby North America, with approximately 65% of all users, and Europe, with about 22%, are clearly dominant. Due to the language problems and behavior patterns specific to different nationalities in mailing lists, as found in another context (Stegbauer & Rausch, 1999), one must assume that the proportion of lurkers is larger in peripheral areas than in the hubs in North America and Europe. This assumption could not be confirmed, at least not with the help of the relatively inaccurate top level domain analysis<sup>3</sup>. Only a weak, and insignificant indication of our hypothesis was found when top level domains were arranged according to the language sets "English" and "not English"<sup>4</sup>.

### 15.2.2 Affiliation to the Community

Homans (1961) was of the opinion that one could measure relationships between humans or between humans and groups with the help of communication frequency. If one follows this, not at all undisputed, view<sup>5</sup>, less community affiliation is to be expected amongst passive users than amongst the active users. Less affiliation would be measured by a higher proportion of users who had unsubscribed. In the operation-

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<sup>3</sup> Top level domains are the letter combinations at the end of e-mail addresses. This analysis is inaccurate because the origin cannot always be indicated precisely, as is the case with "de". The "com" ending, for example, is used internationally by some providers.

<sup>4</sup> It is possible that the effect assumed by us is covered by an interaction. Whilst specialists are occupied with the lists in the peripheral areas, further classes, with access to the center, then operate as lurkers more so than the highly interested participants in the peripheral areas. Otherwise, maybe those communication forums that are apparently boundless play a stronger role in the peripheral areas since the informal channels are absent in the scientific audience due to a lack of mass.

<sup>5</sup> For a critical review see Neidhardt (1983).

alization, users who only contributed one message were differentiated to those who wrote more than one message.

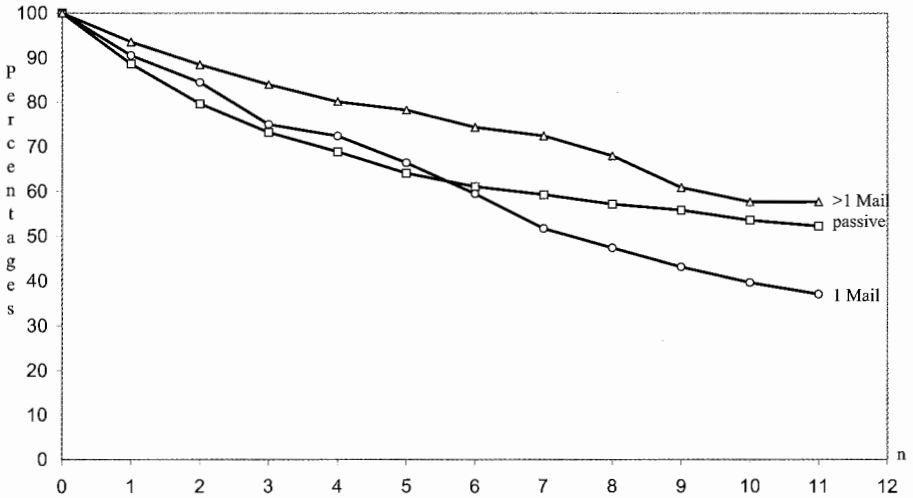


Figure 15.4: Proportion participants still subscribed after n months (Critical-Cafe, Descartes-L, Hegel-L, Kant-L, Logic-L, Phil-Logic; passive: 668 participants, active: 272 participants; of these: 1 mail 116 participants; and: >1 mail 156 participants)

This hypothesis is partly confirmed by the data: of those who contributed more than one message, scarcely 60% were still subscribed to the list after 12 months; of those who only wrote one message, fewer than 40% were still enlisted after one year (see Figure 15.4). Those that participate more frequently are less inclined to give up their membership than lurkers. A far larger proportion of those who only write one message is liable to give up their membership. It seems as if the users classified in this category are more likely to engage in an instrumental relationship with the mailing list. In other words, the one message written is instrumental in discovering information (for instance, on literature for a thesis (diploma) or the likes). After receiving the answer, their interest in the contents of the mailing list also fades.

### 15.2.3 Intersections in Social Spaces

The question was asked above whether lurkers represent a fixed social position that might be necessary to ensure communication at all in view of the threat of “informa-



tion overload". This question cannot be answered with the help of this data. One can however explore whether it is always the same people who behave passively in different lists. If lurkers really were necessary as a social position this does not mean that this position is always occupied by the same people. Therefore, one must distinguish between the social position as such which always exists even if divergent participants fall into this category, and the position an individual user earns in a certain social space<sup>6</sup>. It seems evident that such a social position exists (Stegbauer & Rausch, 1999), but that this position is always occupied by the same persons is not evident. If individual people are subscribed to several mailing lists, they could be active in one, yet listening passively in another.

Since the lists included are all forums concerned with a similar topic, this suggests a synoptic outlook. Are lurkers on one list also passive in others? Of the 823 participants who subscribed to one of the observed mailing lists between September 1996 and September 1997, 25 participants can be found who count to the lurkers in one or more mailing lists, yet are simultaneously active in one or two other lists. This is not a high proportion, however. Altogether, there are only 89 intersections.

When the synoptic view is expanded to active participation in the Usenet the picture changes<sup>7</sup>. Nevertheless, 28% of those who behaved passively in the examined mailing lists sent postings to newsgroups during the test period. The proportion of posters amongst the active mailing list members is only barely higher at 34%.

Not all lurkers are also passive in other discussion forums. This suggests that the social status of passive membership is not always occupied by the same participants. With this important realization, the attitude towards lurkers, as quoted above, can be brought into relation (Kollock & Smith, 1994; Schoenberger, 1998). Even if they remain passive in some mailing lists, a not so small proportion of lurkers can be active in other social spaces. Lurkers, just like active members, could thereby fulfill a function by connecting otherwise isolated social spaces. They possibly contribute to the passing on of contents between mailing lists and from mailing lists into the Usenet. Precisely this sort of slight group affiliation, or so-called "weak ties" (Granovetter, 1973; 1982; Feldman, 1987) as Burt (1992) demonstrated in his contemplation on structural holes, is essential for the transfer of knowledge between social spaces otherwise separated from each other. Such a function thereby helps to hinder repeatedly feared fragmentation (e.g., Wehner, 1997) or to reduce it, and make content available beyond the subscriber base of a mailing list.

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<sup>6</sup> Nadel (1957) offers the initiating theory on roles and status for the later development of empirical surveys with the aid of the block model analysis (White et al., 1976).

<sup>7</sup> On one of the news search engines, in this case Dejanews, everybody's activities in the Usenet can be traced (with a few exceptions).

### 15.3 Discussion

We introduced a method for analysis of a class of participants, which had hitherto been classed as unable to investigate. One can draw on the data traces left behind in the data networks by individuals invisible elsewhere. On the one hand, it was proven that those participants who do not become active soon after subscription would hardly change this behavior. On the other hand, there are those participants among lurkers who can be quite active in other contexts.

When talking about passive users are we dealing with freeloaders, or can the role of the lurker be otherwise reassessed? On the basis of the studies conducted for this contribution, several arguments can be derived which are of importance for the role of the lurker in mailing lists.

If one were to argue that lurkers really are just freeloaders, then one would have to assume that their proportions are largest in those lists with large messaging volumes because these are the most rewarding. However, these lists exhibited the smallest proportion of passive members, at least amongst those who were newly subscribed during the survey period. Obviously, a type of "law of inertia" can be applied instead, which turns curious passers-by into lurkers. If only a few messages emanate from a communication space the decision of what function to attribute to membership is hardly forced upon the participant, since it only costs little attention.

One can see in broad sections that lurkers basically do not remain equally passive in all social spaces. For example, many contribute to the exchange of ideas in newsgroups. Via weak ties they might even occupy a function in stuffing so-called structural holes (Burt, 1992). In light of strict segregation between individual communication spaces, this function is particularly important in order to avoid too great a degree of fragmentation.

Those who contribute actively to a mailing list obtain the possibility of forming an identity and attaining prestige on account of this. Even passive users form an audience and, in so doing, partake in the formation and distribution of prestige.

In those lists where participants can reap the most benefits by listening in (i.e., in lists with high message volumes), lurkers contribute to the preservation of the requirements for potential communication. These lists would probably be threatened by a further increase in communication sequences.

Lurkers do not actually disturb communication; as an active participant one does not acknowledge them. The actual community is only created by those participants who are perceptible to others via an identity. Amongst active participants these only form a small minority.

Numerous messages, in mailing lists too, which actually serve as scientific communication, only wish to inform members about certain things. It should nevertheless

be legitimate not to want to miss such information without having to contribute actively.

The question remains why lurkers are nonetheless frequently harangued as free-loaders. Despite the fact that the results of this analysis are not accessible to everyone, one could interpret such conduct as a sign of social bonding – even though this is paradox since participation is welcomed. For lack of any other easily recognizable features in the type of segregation, a simple substitute explanation could be found in the general condemnation of a user caste.

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