

Habits of Communication of Internet Users

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Abstract

This report is about a small scale study where habits of communication (in the use of the Internet and mobile phone systems) of frequent Internet users in Hungary were investigated with questionnaires that were made accessible via the Internet. The results show that among the frequent Internet users the 'dependent' and 'alienated' types of usage are not characteristic. The latter one can be markedly distinguished from other intense use of the net. Among the intense users of the Internet email has become the prevailing tool of communication compared to other means. The anxiety of people who thought the lack of authentication dangerous has not proved true: methods develop in the users that check the trustworthiness of the source. Concerns of employers seem to be supported, however, to the effect that employees, when they have the opportunity, do gladly resort to forms of communication by which they can discretely tend to their private matters.

The advent of new communication technologies like mobile phone or *Internet* raise some questions about the change of communication habits. On a higher level of abstraction we can ask if these technologies have any effect on personality, cognitive processes or social relationships.

One can distinguish three approaches regarding the psychological effects of new technologies. The first group is formed by social optimists. According to them new technologies make a radical and positive change in the way people communicate. We can reach our loved ones easily and work becomes more efficient with organizing the jobs more powerfully or seeking for new information easily (see [1]). New technologies are claimed to bring new possibilities in scientific research as well, e.g. by making communications freer [2].

The second group is that of social pessimists. They think that new communication possibilities bear many negative consequences: many people become addicted to the mobile phone or to the *Internet*; language faces the challenge of oversimplification; *Internet* isolates people leading to higher depression; SMS senders and keyboard users have pains in their joints; aggressive games make children even more aggressive.

The third camp is formed by people who believe in the stability of biological systems that can only be slightly modified by new technologies. Evolution built in some quite stable needs and possibilities into human beings that cannot be changed by cultural influence. The nightmare of Orwell cannot be realized, because human beings are unable to suffer loneliness or restriction of information spread for

longer periods of time. Dunbar [3] along these lines describes several examples of chat rooms that fit into long-established motivational and cognitive systems. This third group emphasizes that e.g. people who became addicted to mobile or *Internet* use would be addicted otherwise as well: the only difference would be the object of addiction. Language changes do appear without *Internet* and SMS. Reading styles didn't change, rather, the style of WEB pages has changed, partly to comply with traditional reading habits. Other results show that people stick to their identity even on the *Internet* [4].

In our research we intended to provide some empirical evidence for this otherwise strongly theoretical debate through a survey about the communication habits of *Internet* users.

1. Methods

People visiting two Hungarian psychological portals (www.pszichologia.hu and www.bura.hu) were asked to fill in a 10 minutes questionnaire on the *Internet*. 110 subjects filled in the form in August 2001. The sample is far to be representative. The participants were of a higher education background, and due to the mental health nature of the site women are overrepresented, too.

2. Results

Internet Use

Subjects use email very frequently: 70% of them use it at least once a day. Usually they are in touch in this way with people whom they had known personally before. 47% of users send emails to known persons at least once a day, and another 25% sends emails several times a week. It's rare to send email to persons whom they know only from the *Internet*. Only 11% of the participants send such emails at least once a day, and 18% of them several times a week. The difference between the frequency of emails to known and unknown persons is significant (Wilcoxon signed.rank test, $Z=-7.09$, $p<0.01$).

One argument against the *Internet* is that it alienates people, and relationships become artificial. These data show that this danger is not typical, though we cannot say from the results if there is any change in the style of communication. We can't state if the communication with unknown people has increased. Other studies suggest that the more intensive use of email doesn't decrease traditional communication forms. Wellman [5] reports that email doesn't change the amount of other communication, and part of fixed line phone communication moved to emails. Additionally, some of the "unknown persons" are in facts colleagues in this highly educated sample, and communications sent to them are of a professional-instrumental nature, and not emotional-social supportive talks.

The subjects use *Internet* for browsing as many times as for sending and receiving emails: 64% of the respondents use *Internet* for browsing at least daily (Wilcoxon test, n.s.). Browsing is used mainly to search for information (47% uses once or several times a day), and for entertainment (48% daily or more), though it's not typical to use it for administrative purposes (only 15%). The latter result is not surprising since there is hardly any service on the Hungarian net that could be used for administrative purposes.

Only a small subgroup (16%) chats at least daily, though they spend relatively long time with it.

It is worthy to compare our data with the normative Hungarian data of Tölgyesi [6] based on a 2001 Hungarian representative survey of 2000 subjects. 16 % of *Internet* users were using email every day,

12 % for browsing, and 3 % for chat. Thus, on the whole our sample certainly consists of very active communicative users.

We've made an explanatory factor analysis on these data to find underlying patterns of use. Table 1 shows results of the rotated factor matrix. Factor names are of an explanatory value. The numbers following the items are factor loadings.

Table 1. Functions of *Internet* use

1. Browsing-information	2. Mail-communication	3. Entertain-dependency
Browsing in general 0.85	Email – known person 0.91	Chat 0.81
Browsing information 0.81	Email 0.88	Email – unknown person 0.76
Browsing entertainment 0.71		

The factors show a likely classification based on motivations or functions of use, rather than technical possibilities. E.g. email with known and unknown persons is technically equivalent, but they do cluster differently on motivational bases. One main function is browsing on the net. This function is dominated by information seeking opposed to entertainment. The two other typical functions are communication and pastimes. The latter one is typical for people showing tendencies for dependency like chatting and sending email to persons not known before. Other studies revealed that dependency correlates with some very special ways of *Internet* use rather than the time spent on the net (for a Hungarian example see [7]). The results reveal that dependent persons use chat rooms more frequently compared to non-dependent people.

It is interesting that the factoranalytic data of Tölgyesi [6] showed the following seven factors of *Internet* use. The more important ones were: information (browsing), political interest, entertainment and communication. Thus, in his factors, chat and email go together. However, his data come from much less dense *Internet* use. We claim that even in a country with low network density like Hungary, in the case of 'heavier use' instrumental, communication and entertainment decouple.

Habits of communication

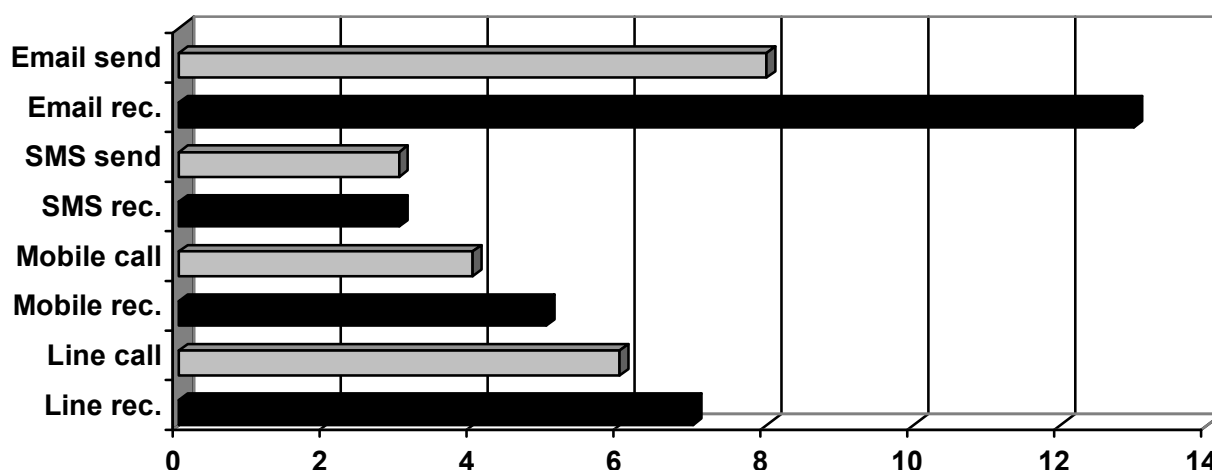


Figure 1. How often do you use these media on working days?

As Figure 1 summarizes the daily use patterns, not surprisingly the most frequently used communication tool in this computer minded group is email, receiving even there being more important than sending. The prevalence of email can show some trends for the future when *Internet* will be more widespread. The price can be an important factor having effect on frequency patterns: the cheaper the usage of the device, the more frequently it is used. We made a factor analysis again on the data above, rotating the coordinates again. Table 2. shows along the provisional names for the factors given by us, the factor items and the corresponding factor loads as well.

Table 2. Characteristic uses of communication

<p>1. Mobile (talk and SMS) Rec. SMS workday 0.91 Send SMS workday 0.86 Send SMS weekend 0.82 Rec. SMS weekend 0.82 Call mobile weekend 0.74 Rec. mobile weekend 0.74 Call mobile work day 0.71 Rec. mobile workday 0.68</p>	<p>2. Line work day Call line workday 0.93 Receive line workday 0.91</p>
<p>3. Email Get email weekend 0.89 Get email workday 0.77 Send email weekend 0.63 Send email workday 0.56</p>	<p>4. Line weekend Call line weekend 0.82 Receive line weekend 0.81</p>

All uses of mobile systems belong to a single factor, independently of the work structure and of mode of use. This might in fact be interpreted as a (constant) private accessibility factor in our subjects. Line phone usage is divided into two factors. Other data suggest that this reflects the official and private spheres. Here again: it's not the technical possibilities that shape the factors but psychological needs.

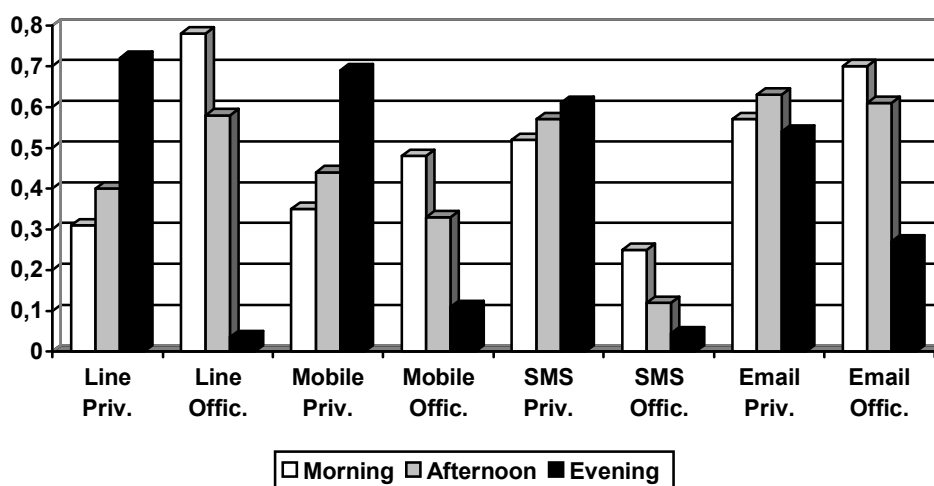


Figure 2. How often do you use these media for private and official matters?

In figure 2 a more detailed look at the temporal patterns indicates that morning is the time for arranging official matters and evening for private interactions. There are two exceptions: any time of the day we are likely to send SMS and email for private matters. Thus, some worries of employers are justified: we do use the *Internet* for private goals. The criterion for using a technical tool for private matters can be discretion. Speaking on the phone can be overheard by colleagues, while the written SMS and email are discreet: typing on the keyboard even looks like working.

Estimated characteristics of communicative instruments

Six communicative possibilities were to be ranked by our subjects as to their speed, reliability, degree of personalization and the potential to express individuality with the given instrument. Email, fixed phone, mobile and SMS received similar rates. Personal channels and chatting differed from the others most of the time. Face-to-face personal communication was positively ranked while chatting had a low rating. These data question the common worries about the dehumanizing effects of new technologies. Figure 3 summarizes the 1 to 5 rankings for all channels compared.

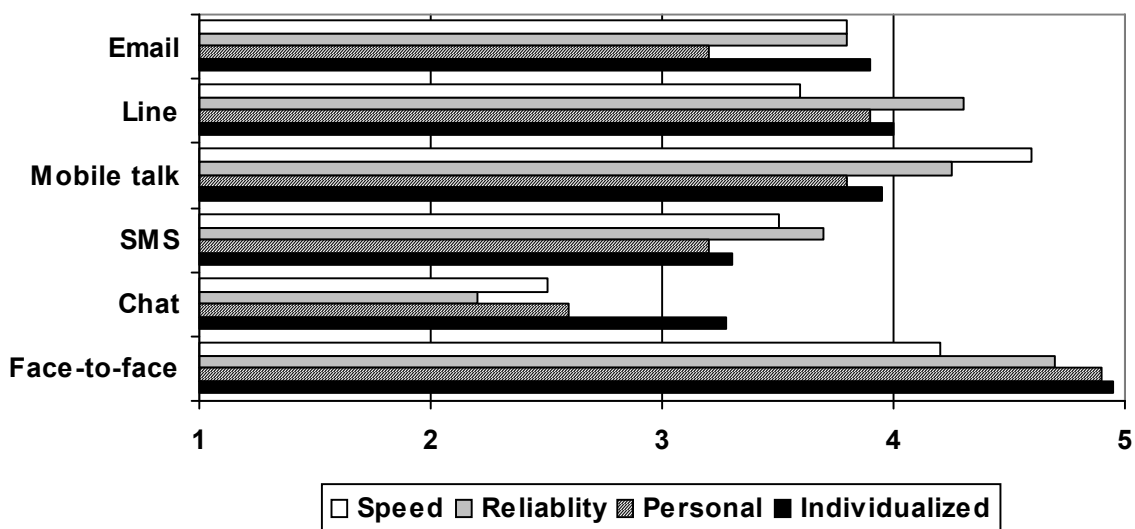


Figure 3. Relative ranking of different communication channels on different scales

The usual pattern can be seen in the evaluation of speed. The only exception is mobile phone that is faster than other tools and that is its distinctive feature. It is worth to note that chat is interpreted to be extremely unreliable. Many pessimist voices are raised regarding the issue of authenticity on the *Internet*. Our data suggest that we learn the reliability of these new media just like we have learnt it in the case of newspapers, television channels, radio stations, books, publishers, etc. In general, those channels that are based on voice have better ratings in reliability. This implies that in our naïve vision of communication, voice that used to be an exclusive feature of face-to-face communication even a decade ago seems to be an imprint of authenticity. Along the same line, voice seems to be an imprint of personality and individualization as well.

Discussion

One interpretation of our data is that we're neither merely the object of technological influences nor indifferent to these effects. Rather, evolution built in some stable motivation and cognitive architecture with a limited flexibility. With new technology we use new tools to satisfy ancient needs and learn to use them with our limited cognitive capabilities. Examples of these can be the information seeking, communicating and dependency/ addiction functions of Internet use or the differentiated use of different media. Further empirical research could reveal more details about how our 'ancestral minds' can adapt to modern environment, and how the architecture of the mind limits what devices can be successful on the market.

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