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**Fascination, instrumental use, protection
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Abstract: This paper explores the connection between technically and financially unrestricted Internet access and its heavy usage. Earlier studies on heavy Internet use were mainly interested in a definition and identification of where and when use becomes 'too much'. Now, in a time in which Internet use as such is not any longer something special, neither as threat nor as promise, another approach appears more appropriate: the analysis of heavy Internet use as component of a certain configuration of daily life. It is argued that this kind of 'digital living' is daily practice of those individuals, which have sufficient reason to translate unrestricted access into heavy use. One group, which has such a sufficient reason, consists of migrant researchers. They live and work in international networks, which are created and maintained mainly through heavy Internet use and frequent travel. This paper presents the results of 20 in-depth interviews with migrant researchers in Norway and Germany. Three types of heavy use are described: fascination, instrumental use, and protection. Moreover, it was observed that in all three variants a variety of moral considerations are at work. These are used to regulate access and accessibility and are of central importance for an understanding of their if not any heavy Internet use.

Keywords: Internet use, knowledge work, migration, broadband, domestication, moral practice

1 Introduction

In the ‘first age of Internet’ (Haythornthwaite and Wellman 2002) the Internet was conceived as something coming from ‘outside’ influencing the everyday life of its users for good or for bad. Two connected concerns characterise this early stage of the technology’s diffusion into everyday life: While we observe massive and deliberate efforts of governments and other institutions to propagate as much Internet access and use as possible, there are also people raising the question whether access should be restricted at least for certain endangered groups, such as children or addicts. This latter concern about what the new technology may do to ‘us’ found its scientific counterpart in the establishment of a new medical fact: the disease called Internet addiction.

Today, after more than a decade of roaring diffusion of Internet access and use, this technology has become indispensable characteristics of the everyday life of large societal groups. An Internet, which is always there, with the diffusion of domestic broadband access increasingly within the domestic sphere as well, is welcomed with no concern at all, be it in public debates or as subject of medical attention. This shift mirrors the fact that the Internet has arrived in the mundane worlds of the everyday indeed. This is not Internet specific: public risk perception always blurs after technologies have got embedded in daily routines of a sufficient number of users – at least as long as they function properly.

This paper explores heavy Internet use in everyday life. The goal, however, is not to identify what too much use does to people as it would have been in the ‘first age of Internet’.

Normative concepts of heavy use from the ‘first age of Internet’ will be discussed only briefly in the next section. Instead, we ask how heavy use (defined in relation to the usage of an average user within a given society), is embedded into everyday life. In the third section factors, which make such an embedment more likely, are discussed.

This leads to the identification of a group of particularly heavy users: migrant researchers. They are dependent on the Internet both as internationally networked knowledge workers and in order to keep contact with family members and close friends living abroad. In Norway and Germany 20 of these migrant researchers were interviewed about their daily practices, to do with work, home, and media use. The result, which is presented in the remainder of this paper, consists mainly of a description of three types of heavy use – fascination, protection, and instrumental use. Moreover, it was observed that moral considerations about how much, where, and when Internet use should or should not take place, play an important role in the interviewees daily life.

2 The domestication of heavy Internet use

Typical points of departure for studies of heavy Internet use in the 1990s are popular images of the ‘computer nerd’: a shy young male teenager, pale, lonely, who is sitting in front of his PC instead of ‘having a life’ with his friends (Gansmo, Lagesen et al. 2003). This kind of research sought for connections between supposedly ‘nerdish’ personality traits and heavy use and did find them indeed, for instance loneliness (Morahan-Martin and Schumacher 2000) and low self-esteem (Armstrong, Phillips et al. 2000). In 1998 Robert Kraut and his colleagues conclude in a much discussed study that heavier Internet

use results in higher degrees of a combination of stress, depression and loneliness (Kraut, Lundmark et al. 1998). No matter whether Internet is described as result or cause of these ‘nerdish’ traits of its heavy users, the authors agree that these results are alarming. In a similar vein, heavy usage is conceived as disease, which deserves medication and therapy (Quinn 2001). In Young’s study on Internet addiction (1998), for instance, clinical criteria – usually applied to other forms of behavioural addiction like compulsive gambling – are used to define Internet usage that deserves therapy.

Accounts warning about the perils of an ‘unhealthy’ amount of Internet use, have always been disputed. In a subsequent issue of the *American Psychologist*, the journal, where Kraut et al.’s findings were published first¹, a broad range of objections is uttered. There, besides methodological objections one psychologist refers to her own positive experiences with the new medium. The latter is typical for a host of contributions of researchers, who are early Internet adopters, and who never grow weary stressing the fact that there is a broad variety of ways to be affected by the Internet. The discovery of this variety, which is not as visible seen from the outside as it is from within, is one starting point for research interested in the Internet’s everyday life. Another common point of departure can also be traced back to reactions on early research on heavy usage. The disease called ‘Internet addiction’ has recently been described in cognitive-behavioural terms (Davis 2001). This means that the conceptions of the users themselves become an important part of what is resulting in the definition of ‘problematic’ Internet use. Applying this perspective, Caplan

¹ The authors of the study revoked their main findings later in (Kraut, Kiesler et al. 2002)

(2002) discovers that heavy usage is related to perceived social benefits of certain specific kinds of communication only provided by electronic networks.

The variety of ways to embed technologies into one's everyday life and the perceptions and interpretations, which are involved in these processes, were explored in numerous empirical studies. A theoretical framework to understand the relation of technology and everyday life was developed under the label 'domestication' (Silverstone, Hirsch et al. 1990; Hirsch and Silverstone 1992). This approach claims that a moral economy is at work within the domestic sphere, which is in constant exchange with capitalist modes to economise. This means that love, care, and the efforts to sustain ontological security (Giddens 1984) as aspects of the household's moral economy are constantly confronted and mediated with abstract exchange relations and vice versa. Later (Lie and Sørensen 1996), the approach was extended to spheres outside the domestic, showing that the adaptation of technologies into everyday life – now comprising the domestic as well as work and other spheres - bears the same characteristics as domestication in its narrower sense. Within this extended approach to domestication the whole everyday life is the arena in which technologies are accepted, rejected or negotiated by their users (Hall 1992), who become co-designers in these activities and take as such part in the struggle of what a technology is, can and should be. This process of the definition and redefinition of a technology comes never to an end. However, when the use of a technology is habitualised and embedded into the everyday life of a user, then the 'black box' only gets re-opened in moments of the artefact's malfunction. The eventual arrival of the artefact in daily routines, thus, is the closest we get to a closure of its design.

Heavy usage seen in this perspective represents a distinct type of everyday life as well as a special type of usage. It is a type of everyday life, which is heavily interwoven with Internet usage, as opposed to other kinds of everyday life, in which Internet usage may play only a marginal role. This leads to an approach to the study of heavy usage of the Internet as inquiry into what was called 'digital living' (Anderson and Tracey 2001).

There are without doubt cases, in which obsessive Internet use leads to severe disturbances and ruptures in everyday life. However, the approach sketched here focuses on the aspects of heavy usage that are part of a relatively stable and commonly accepted kind of everyday life. The underlying interest is to understand the *normality* of heavy usage, and how this normality is manufactured and sustained.

3 Translating access in heavy usage

What do we now about heavy use thus far? To begin with, every artefact has its heavy users. Wansink and Park (2000) refer to Twedt's (1964) rule of thumb - called the 'heavy half' - according to which 80 percent of the volume of an arbitrary product (they are studying soups) are consumed by 20 percent of its consumers. Other than with soups Internet *access* is often mixed up with its actual *usage*. We know that access is not necessarily leading to use (Abels, Liebscher et al. 1996), which means that there are other variables involved mediating access and use. Those factors were explored particularly in in-depth analyses of computer-supported collaboration, like for instance the comparison of a local and a transnational academic online-network conducted by Koku et al. (2001). Their main finding is that distance still matters; the authors found that the geographically dis-

persed networks rely even heavier on face-to-face interaction. Furthermore, they observed that those who work closer to each other make more use of email. Since email provides *access*, but not necessarily a *reason to communicate* with each other, peripheral nodes of the network did not experience a higher degree of inclusion. The study shows not only that frequent email communication is accompanied by frequent face-to-face encounters, moreover, the authors experienced that the use of any other means of communication is positively correlated to the rate of email use. Thus, the users under study maintain social relations choosing a broad range of means of communication including face-to-face encounters. In the same vein, Matzat (2001), studying the use of mailing lists and newsgroups, concludes that success or failure of electronic communication networks is highly dependent on their embeddedness into social networks.

The first conclusion we can draw from these studies is that ties entertained outside the electronic encounters are indispensable for the success of computer-mediated communication (CMC). Secondly and similarly, to translate mere access into daily use, reasons that transcend the fact that there is access are needed. Howard, Rainee and Jones' (2001) describe in a quantitative study work-related uses as important part of heavy use. In fact, it is reasonable to assume that work-related uses are embedded in other ways of communication and thus are successful instances of Internet communication, which in turn leads to heavy usage. Furthermore, carrying out work tasks represents a sustainable reason to use the access. The kind of heavy user sketched here typically is working in a knowledge-intensive profession, and is as such highly dependent on a broad variety of communication

channels. Internet use in this case is thoroughly embedded into routines of communication in this person's daily *workday*.

This perspective on heavy use as embedded in and sustained by social networks can be extended to areas outside work. Social networks in these domains consist typically of friends and family. Internet usage surveys, for instance the one conducted by Howard, Rainee and Jones (2001), agree in the observation that Internet communication extensively is taking place between family members, relatives, and friends. From a people- instead of ICT-centred point of view the increasing degree of overall mobility, which leads to growing 'time-space distancing' (Giddens 1984), has to be considered as well. Modern air travel has reduced the costs of long distance travel as much as the advent of the Internet has enabled cheap long-distance communication. Again, we can expect the bonds of kinship and friendship to represent sufficient reasons for sustained Internet use. The typical heavy user in this respect uses the Internet to stay constantly in touch with present and absent family members and friends.

Taking these observations about the translation of access in (heavy) use into consideration, the concept of domestication as it was introduced above gains new relevance. In traditional configurations of everyday life – Nippert-Eng (1996) would rather call it a segmentor's configuration – the moralities of the home/family and work/colleagues are divided spheres in terms of space and time. Heavy Internet use as embedded in both, family and work is potentially involved in tensions and negotiations between those domains.

4 General observations

The findings presented here are based on 20 in depth interviews carried out in Trondheim, Norway and Darmstadt, Germany between October 2001 and January 2002. The thematic interview guide comprises an inventory of media use in everyday life, which is basically a description of temporal and spatial patterns of use, questions regarding social networks, and a section on knowledge transfer.²

Selection criteria for the Interviewees were based on the assumption that migrating researchers carry every trait of heavy use as it was described in the previous section. They are highly dependent on the Internet to carry out their work *and* they are members of transnational networks, both as members of distributed households, networks of friends and acquaintances and as members of their respective scientific community. Moreover, nowadays this group is one of the most privileged in society in terms of Internet access. Every migrant researcher studied here has largely unrestricted access to the Internet at least at work. A minority of the participants possesses some sort of cheap broadband access at home. The employer provides in some cases cheap access from home. This is the policy of some Norwegian research institutions allowing employees to call the institution's computer network, which then calls back, covering the entire cost. Already the first glance on the inventories of everyday life's media use, which were collected from migrant researchers, shows the paramount importance of the Internet. Every interviewee switches on

² For a more thorough description of results and methodology please refer to Berker (2003).

the PC and checks email first thing at work in the morning. Above all email and the Web are constant companions at work. Private and professional uses are inseparably mixed.

The indispensability of this kind of communication for the task to maintain and social networks is commonly appreciated. Marc, a 42 years old Luxembourgian, who is working as senior researcher in Norway, summarises this task regarding work:

You need connections, you must go to meetings, you must maintain connections. It is extremely important to have a network, extremely important. That is the only way you get a job basically unless you are extremely good. You get post docs, no problem, you get listing research, I've had that for ten years. Until I came here it was always two years, three years, one-year contracts, five years was the last one. So that is very easy, but to get a permanent job, where you can develop your research on your own and a research group is much more tricky and there you need network.

Lea, 28 years old, doctoral student in food chemistry, who is a Lithuanian living in Norway, is answering the question what she would do without the Internet:

It really would be difficult. Because now I sometimes feel I know everything what's going on in my country with my friends and my family. I can solve problems, I can discuss a lot of things, just during one day.

With their statements Marc and Lea represent the majority of the interviewees. The desire or need to get access to professional networks in many cases is mentioned as one of the motivations to migrate. And once living abroad the interviewees make heavy use mainly of email to stay in touch with their family and friends.

If we distinguish *communication* from search for *information*, two additional observations stand out. Migrant researchers are extraordinarily versatile regarding their use of a broad

variety of different means of *communication*. Their parents in the homeland often have no Internet access at their disposal. Then the researcher switches to other means. Fax, the telephone, conventional mail, or the referral of email through other relatives are mentioned here. This also applies to work-related exchanges. In one case an oil company could not handle large graphics files sent via email. So, the migrant researcher burned a CD and sent it via conventional mail. Email is considered the most efficient, and in nearly every occasion also the most convenient way of communication. But every way to transmit the message is adapted, as long as it gets the job done reliably and efficiently.

Surprisingly, the mobile phone has a very bad reputation among migrant researchers. This has two main reasons. First, it is considered as unsuited for long-distance calls, because it is too expensive. Second, it is blamed for its obtrusiveness. With both characteristics it represents exactly the opposite of the interviewee's description of email, which is appraised as cheap and unobtrusive. Thus, the interviewees, without exception once early adopters with respect to the Internet, lag behind in mobile communication.

Regarding *information* seeking again variety and efficiency are the predominant criteria when comes to the choice of means. The Web is used heavily here. Particularly central repositories of references and publications, which are entertained typically by the respective US-American professional association, are mentioned here. The extensive travel activities, both private and professional, are organised using Web resources as well. As popular as the Web and in some cases the preferred way to get to information of all kinds is face-to-face encounters. Friends and colleagues are 'used' as filter. To look in on a colleague, having a chat and coffee together, and asking for a particular piece of information is wide-

spread practice. Overall, 'it depends', this is the usual answer given to the question of sources of information. As with the means of communication a broad range of sources is tapped if necessary.

These are the most important common characteristics regarding access and use. Migrant researchers are truly heavy *users* in the sense conceptualised in the previous section.

5 Three modes of heavy usage

The six cases presented in this section were chosen using the principle of greatest possible variety. They represent three very different ways to use heavily.

5.1 Fascinating media: Ares, Irina

Irina is Russian, 24 years old works as PhD student in economic theories in Germany. Her everyday life is weakly structured: "In my case every day is different, it depends how I feel like."³ Usually she tries not to work at the weekend, which is something, which happens nevertheless once in a while, when she feels she has been 'too lazy' the week before. She belongs to the group of users who has access to broadband Internet at home and at work. And she is using this access heavily. In the morning she scans the Web for news and throughout the day she uses it for every aspect of everyday life. She even downloads whole books, reading them on the screen ("When I print out the book then it takes as long as when I read it on the screen"). Her email is checked every five minutes, both at work

³ Translated from German. The interviews were conducted in English. Her case is an exception (Berker 2003).

and at home, and when email arrives, as she puts it, she 'has to' read it. The only activity she would not interrupt then is when she is at the phone. It fits into the overall picture of an advanced Internet user that she using a web cam once in a while and regularly listening to radio (mainly Russian stations) via the Internet.

There are some restrictions and spatial and temporal patterns in her daily media usage, though. They are all related to her self-description as easily distracted:

"I sit down and try to read something. Then something pops into my mind: I should look up something and then you are clicking around a little bit in the Internet or wherever and then you think: 'O my god! Actually I wanted to read!' And I can't read, lets say three hours, that's not possible at all. I cannot one hour. Then I have to make tea or: 'Well, now I go shopping.'"

She does not possess a TV, because – as she describes it rather drastically: "When you start having a TV everything is over, I guess. Then there are movies at night and I start going to bed at 12 instead of 10 o'clock." And this is also the reason why she restricts her radio usage to the home. In turn she is not able to work at home because of media attracting her attention: "At home I can't work, it's impossible. There the phone is ringing, there is Russian [web] radio; there is a very comfortable bed where you can lay down."

It is conspicuous how strong the spatial and temporal patterns of her everyday life are defined by her media usage, its respective placements and vice versa. The email 'ping', which announces the arrival of new email, the web radio, and the TV, are experienced as something, which is attracting the attention magically and Irina does resist only partially. The outcome is an everyday life, which is weakly structured by spatial and temporal routines.

Ares is a 31 years old Iranian doctoral student in computational fluid dynamics living in Norway. His case is similar to Irina's. He is not able to work at home either:

So, I don't study at home. That's for sure. ... To me it's a kind of concentration. I'm afraid. I have got no concentration at home. Mostly the TV is on, and I watch TV and I, and I, watch TV, you know, to sleep.

We again encounter the magical attraction of media. In this respect Ares expresses his fascination:

It is very interesting that you can branch your searching for X and you get Y and Y is sometimes more interesting than X. So you get just that one. It's fascinating, you just send out and you are just bombarded with information.

Ares' everyday life is even less structured in terms of time than Irina's:

It also happens that I suddenly wake up at night at four o'clock in the morning, I can't really sleep again for some reasons, I don't know. Or sometimes I am really concentrating or thinking about a thing that I am doing: 'Oh, I found it! <snaps with his fingers> Lets do that!' Then I go immediately to work, I just go to work.

Comparing himself with his colleagues, who prefer to work at fixed times, he describes himself as just different, a 'crazy guy':

...some of the guys here, they really stick to their working hours. They come at half past eight or nine and they go at four, four thirty. And I don't really see them out of the working hours. But I don't know I'm kind of a crazy guy you can find me here maybe all the time.

Part of this 'craziness' is that he is even more mobile than other members of the group studied here. He uses literally every possibility to travel, both private and work-related,

because he enjoys meeting people and seeing new things. He describes himself as extraordinarily active in every respect during a usual week as well. He is member of several sport clubs and loves to socialise as often as possible. That he hardly structures his everyday life and his media usage, thus, appears as part of an overarching lifestyle, in which being active, avoiding repetition, and getting to know new things and people enjoy high priority.

Both, Irina and Ares represent the type of the heaviest imaginable usage. They are literally always online and they are using this access constantly throughout the day.

5.2 Too much: Joan, Grete

Two Geologists working in Norway represent a second distinctive type of how heavy usage is embedded in everyday life. Their most prominent common characteristic is the decisive rejection of any use of Internet use at home. In both cases this is strongly related to an appraisal that the use of technically mediated communication 'gets too much'. Grete, a 33 years old Danish senior researcher, puts it this way:

I think the perspective of time is a bit when it comes to Internet and communication, it's increased so much during the last five years mainly because of the Internet, and I think that's really stealing your time.

What is it stealing time for? Grete is mainly concerned about face-to-face encounters:

I think we are loosing the part where, when you talk to each other. That's it. We've been discussing this a bit, now and then. So last year we started a small group of us drinking coffee together, just to see each other...

What she is missing in technically mediated communication, is 'real interactivity', as she puts it. In line with this she is afraid of information-overload, that "just getting in passive information all of the time from the television, from the computer" is exceeding certain "limits".

In general she is very fond of communication of every kind. Despite her critique she praises email as real enhancement of her daily life. However, besides her concern about the impoverishment of social relations she gives two other reasons for her purposeful restriction of Internet use. We are already acquainted with the first one. Similar to Ares and Irina she gets distracted by the Internet:

I tend to be very defocused every time an email comes. When the screen is going black I just work, ... but when I work at the computer, every time an email pops in I tend to see, from whom or is this important and then I go back to work. So I feel that's a bit interrupting, much more than before email really became an important thing. And maybe it's me being not disciplined at all, but I don't tend to have hours where I don't look at the email.

As we already know, she avoids Internet use at home and once in a while she is just switching off the computer to be able to work uninterrupted.

Joan, 35 years old and from the United States, describes her efforts to restrict the distraction though email at the workplace in very similar terms. Once she even tried to check email only twice a day at the morning and at the evening, but without success: as she says, it is always possible that only one of the emails coming in requires immediate reaction. She now keeps the email window hidden and is checking only periodically and "actually I don't have a 'ping' on mine [my machine], because I didn't want it to interrupt me. So it

just makes a little - I can tell when it's coming because my hard drive makes a little grunting <laughing> noise."

The concern about too much information is also present in Joan's interview⁴. However, it is stronger motivated by her struggles getting to grips with her whole workday, which she describes as "a lot of juggling of schedule". Email distractions add to other distractions she has to deal with throughout the day. The outcome is very long working hours and sometimes she even hides in the research laboratory, because:

... for some reason more people are afraid to go into the lab because it makes loud noises and has flashing lights and things. So people are less likely <laughs> to go into the lab, so sometimes I go in the lab and just stay there even if I have no work there.

Not to use her Internet access from home is motivated similarly: Her home is a hideout like the laboratory.

Both, Grete and Joan, create spaces, in which they are not accessible. Both are explicitly separating home from work, which is connected to the refusal of Internet use at home, since Internet at home would equal to work at home. They appraise the usefulness of the Internet and they agree on finding the Web less useful than email.

⁴ "And sometimes I get overloaded with news because in this day and age we get everything visual, we have sound, we have TV. And sometimes I just I need to take a step back. At least for myself I find it difficult to process all of that information because there is a lot of it. And my filtering mechanism gets a little bit overloaded sometimes."

5.3 Useful media: Marc, Bart

Marc, the geologist, who was already quoted above, has access to the Internet at home *and* work. However, he refuses to use it in the same manner as the cases presented in the beginning. For him there is nothing interesting or even magic about media. An utilitarian perspective characterises his usage:

[The Internet is] a tool, it's just a tool like another one. I don't give it any thoughts. I have no personal attachment to it. ... I try for everything the least effort curve and then the Web, the Internet and all this is just one tool among many others. The library is a very good tool, you just go there and you say you want this and they order it. They are very well organised. If you try and do the same thing via the Web it will take you days.

Marc stresses throughout the whole interview his instrumental relation to these 'tools'. There is even a slight annoyance in his attitude, which is directed against the public, which expects too much from the Internet.

The same reservation is expressed by Bart, a 38 years old Dutch geologist, living in Norway as well:

There is so much that is very valuable to read and people are to my opinion too much concentrating on the new flashy media, on the Internet. It makes sound and noise and a lot of flashy pictures. But actually what does it say and I have found several times very, very, very valuable work which nobody ever found. Nobody knows how.

He refers for instance to a couple of articles from 1968, which he considers as valuable contributions in his particular field. They do not appear in any database and he is afraid that they are already forgotten. Besides this, there are other traits, shared by Marc and

Bart. They have access from the home, sponsored by their employer, and when it is necessary, then they use it. Both are using the Internet since the 1980s. Then - they say - they have been trying out many different things, today they stick with the uses, which are enabling efficient work. And necessary efficiency is, for both are also the most devoted 'networkers' of the sample. The creation and maintenance of networks is performed, however, in a much more instrumental manner as for instance in Ares' case. Ares 'loves' to travel and to get to know new people. Marc has cut down his travel activities recently, but as he says: "I think it's important to go at least once a year", for networking purposes.

Full control and efficiency are the central terms to describe how these two interviewees try to convey the image of their media usage. However, even within their interviews we find statements, which are telling another story. Bart mentions that he sometimes makes it a 'sport' to use the search engines of the Web and Marc confesses to "visit all these silly sites", but only "sometimes" when he is "not in the right mood to work". Still, in both cases the 'sport' is related to efficient use or as in Marc's case very restricted.

5.4 Attraction, protection, use

Grete and Joan share with the first group that they experience the magically distracting quality of the Internet among other media. With the group of instrumental users they have in common that they restrict their usage, which largely works out well in all of the cases. However, Grete and Joan's attitude is defensive; they perceive Internet and media in general as attacking and themselves as threatened to protect themselves. Marc and Bart's relation to media is instrumental. The only reason not to use the Internet is when it is not effi-

cient to use it – and both assess it as unsuited in many respects. Internet communication, finally, has an effect on both Ares and Irina, which is best described by fascination and attraction.

Defensive protection, instrumental use, and fascinated immersion are present within all three groups, but to different degrees. Together they describe three different aspects of the appropriation of heavy Internet usage into everyday life as it was observed in this study.

6 The meaning of heavy use

On the grounds of a ‘people-focussed’ approach to the domestication of the Internet, which is conceived as embedded in everyday life, an analysis of other domains of everyday life has to be included into the exploration. All kinds of work and leisure related activities could be considered as candidates here as well as social relations with family, colleagues, and friends. The interviews contain a host of observations in this respect. Now we will focus on the respective household and the work conditions and how they relate to media usage.

6.1 Flaw or virtue?

Both, Ares and Irina are ‘grass widowers’: Ares’ partner is Scottish living in Scotland, Irina came to Germany to live with her German partner, but he is living in the US now. With this mix of nationalities and places they are typical for the sample of migrant researchers interviewed here. The transnational structure of their household has obvious influences on everyday life, for instance resulting in regular travel activity. However, the

daily life's microstructure is basically one of a single household, which allows maximal flexibility in daily practices. The only structure restricting their 'promiscuity' concerning media use stems from the work domain. That they both mention the incompatibility of TV and work is a clear similarity, at least at first glance. Obviously even in these extreme cases there are boundaries of heavy and ubiquitous media usage. They do not concern Internet use, though, but the TV.

A closer look reveals an important difference between the two cases to do with their respective reasoning about their media use and how it relates to their work: As was indicated already above, Irina presents it as following from her 'easy distractedness', as something like a personal flaw. She conceives her heavy Internet usage as potentially harmful when it comes to the question whether she will be able to complete her PhD. Ares, however, is focussing on his 'crazy' lifestyle, and seems not to worry at all. When he is working at the office because there is no TV, then this is accepted reality for him and does work out well for him. Throughout the interview he stresses how useful the Internet always has been to carry out work-related tasks. He presents the 'flaw' to be easily distracted by media of all sorts as part of his active, successful and exciting lifestyle.

6.2 Protection from what?

A closer look reveals an important difference in Joan's and Grete's activities protecting specific places from specific kinds of communication as well. Grete is willing to allow non-mediated communication to enter these protected places, whereas Joan is literally hiding from other people and their wishes to communicate with her, no matter through which

kind of channel. This difference is presented in the interviews as difference of context, mainly regarding work. Joan is leading a project and has more responsibilities within the institution she is working than Grete. Grete - as described above - is even actively searching for more 'real' contact with her local colleagues. Thus, in Joan's case the protection against access is motivated as a general and pragmatic protection against an overwhelming workload.

Grete's argumentation is different. It is moral in a sense that she distinguishes between 'real' and mediated communication. Her high appreciation of every activity, which is close to nature (e.g. working in the garden, hiking), fits into the picture of someone rejecting technical communication.

This also sheds light on their common appreciation of email as means of communication. It is noteworthy that it serves both kinds of protective efforts as well. Grete stresses the interactive strength of email opposed to one-way communication, which makes it more similar to 'real', i.e. non-mediated communication. Joan, however, stresses the pragmatic qualities of email, above all that it is asynchronous communication, which leaves the option open not to react immediately.

Finally the meaning of information overload – that 'it gets too much' – the phrase used by both interviewees reveals a double meaning. In Joan's case it is to be taken literally, overloading the time budget, whereas Grete means that there is too much *mediated* communication because it gets on the expense of 'real' communication.

6.3 Efficiency in order to achieve what?

Apart from the similarities concerning their instrumental Internet usage, Bart and Marc live under very different conditions, both at work and at home. Bart has no children and is living in a long-distance relationship, whereas Marc is married and has two children of two and four years. Their respective career paths vary as well, and although they are working at the same institution, their working conditions are as different as can be. This has consequences for the structure of their respective workday. Bart, who is practically living a single-life, does not mind, when his working hours exceed 10 hours a day. Marc, however, mentions his family several times, when it comes to structures of his everyday life. Since his wife is working part-time, he shares domestic chores with her, as well as the upbringing of their children. His need for efficiency in the management of his work-related responsibilities is closely related to his desire for having a family life. In Bart's case efficiency is much more directed towards his career. He is involved in the establishment of a new scientific discipline and works decidedly towards a leading position in this network.

6.4 Negative and positive appraisals

The closer exploration of the position of heavy use between daily work and the domestic sphere reveals six different conceptions of what heavy use means in relation to work and the domestic. The two strongest users, Ares and Irina, disagree in the interpretation of the relation of heavy use and its impact on their work. The two users, who try to protect themselves from too much use, Joan and Grete, have different reasons for their defensive efforts. And finally the two, who stress their instrumental relation to Internet use, Bart and

Marc, have different goals, which they try to achieve with their heavy usage. Still, new categories emerge, when we group the cases anew with respect to their respective valuation of heavy use. On the side of prevailing negative assessments Irina, Grete, and Joan represent three different ways to assess heavy use critically: as distracting from the actual work, as replacing 'real' communication, and as aggravating problems related with a high workload. The three men⁵, who assess their heavy use as positive, stress its enabling qualities, referring to an active lifestyle (Ares), to the possibility to combine profession and family life (Marc), and to get ahead professionally (Bart).

7 The domestication of access in moral practices

The closer description of six cases from the study on migrant researchers is not meant to result in typologies or taxonomies of heavy use. Neither, these descriptions are descriptions of mutually exclusive types, nor the list is exhaustive. Still, there is an important issue, which is touched upon by this exploration into heavy use. It is mainly of methodological nature. When the cases were grouped in the section, which was about the where and when of the individual's Internet use, a picture of three types of usage (immersion, protection, use) emerged. Even though this first approach is aware of 'the whole of everyday life' and therefore is inquiring into media use, when- and wherever the interviewee may situate these and whichever meaning s/he may connect to these, there are still impor-

⁵ Taking into account the rest of the interviewees then a slight gender bias in evaluative assessments of the Internet is visible. This is of course an important lead, which will not be explored further here.

tant pieces of the picture missing. Only the closer examination of the interviewee's interpretations of work and the household, the values, fears, wishes and dreams connected to these crucial domains of everyday life revealed important material, which showed crucial differences within the at first glance rather homogeneous groups. In turn this additional material on moral valuations can be used to group the interviewees in a different way, now focussing on the interpretative and evaluative dimension.

The methodological point here is that both approaches complement each other. The two dimensions of the individual's negotiation with the technology, the evaluations ("Is it good, is it bad?") and the practices ("When, where do I use it?") are inextricably linked to each other in the *moral practices* of everyday life. Either analysis, focussing on negative or positive assessments neglecting the actual use or vice versa, would miss this close connection. The approach used here enables exactly to point out this linkage between both domains focussing on daily practices as well as on the moralities connected to these practices and its objects.

Finally we can ask what have we learnt about broadband access and its use applying a perspective like this. The main finding here is that additionally to the practices to do with

- immersion,
- protection, and
- instrumental use,

which are playing an important role we can expect that appraisals of

- 'good' individual characteristics (e.g. the 'weakness' to stay concentrated),

- 'good' technology (e.g. that it is 'unnatural'),
- 'good' work (e.g. career), and
- 'good' family life (e.g. spending enough time together)

will be involved in the moral practices to do with heavy Internet use, hence also with the heavy use of broadband access. Again this list is not mutually exclusive. On the contrary, as we have seen, the four different layers are present in every interview and are related to each other in various ways.

All these different practices and evaluations are interwoven and matter in the translation of unrestricted access to heavy usage. Without an awareness of these factors the mere diffusion of access and the count of online hours will not be able to provide insights into the reality of broadband access, its use, its meaning for the user and its social implications.

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