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Telehomework: On the temporal, spatial and social disembedding of work and its consequences – Inferences from the German case

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Abstract

Telehomework – information work carried out at home, away from the central office, based on information technologies – increasingly becomes a regular feature of office work organisation, particularly in highly qualified segments of the workforce. Most obviously, work undergoes a process of disembedding from the organisation in terms of its spatiality and temporality. Of particular interest here are the reasons for the emergence of telehomework as a form of work organisation as well as the question of how an individual re-embedding of work does take place.

A rather 'obvious' explanation for the evolution of telehomework as a new form of work is the emergence of its technological basis. However, this explanation is neither sufficient, nor does it offer a proper basis for assessing the logic or consequences of the new form of work organisation. Beyond technological changes, it is thus necessary to focus on the motives of the workers and on the corresponding interests of management to agree to a telehomework arrangement, in order to explain why people actually do telehomework. The premise is that there has to be some kind of consensus between the particular motivations and interests of both parties, and that the introduction of telehomework arrangements by force is unlikely because management depends on a certain degree of compliance on the side of the workers.

A central finding of a study of German telehomeworkers is that three significantly contrasting forms of telehomework – “family-centered”, “work effort-centered”, and “self-centered” telehomework – are to be distinguished, where workers' motivations and companies' interests match in particular ways. Thus, each type supports different personal relevances regarding the individuals' work-life balances and career orientations, as well as different functions for the company in order to use labour power and integrate it into the organisation.

Telehomework is thus to be interpreted as a means of work organisation for a highly qualified workforce whose individual motivations for telehomeworking, based on their particular biographical situation and both career and private life orientations, are compatible with managements' interests referring to these workers. Which points to the second question initially posed.

On a general level, a particular relevance of (different types of) telehomework lies in the fact that our industrial work culture's fundamental separation of employment and private daily life in terms of space and time is being lifted. Beyond all managerial and practical restrictions imposed on the telehomeworkers' decision how to shape one's workday, there is some scope for agency on the workers' side in order to lift the separation of daily life into two distinct time and activity zones. In a sociology of work perspective, then, new forms of an individual structuration of work (and private life) in the context of one's home are to be developed by the workers, and to be controlled by the organisation. Changing work practices are thus based on the workers' abilities (and willingness) for 'self-management' of their individual work process, as well as on the organisations' use of more 'indirect' means of control by objectives and work output rather than by surveilling the work process itself. The point in question, then, is whether the workers' subjectivity under these conditions has to be theorised as a "productivity factor" that is being instrumentalised by management in exchange for subjectively more favourable work arrangements and working conditions.

1. Introduction

With the development of (personal) computers and computer-related telecommunication devices, the technical basis for individual “remote work” away from central offices had emerged, and consequently, the idea of “tele(home)work” was born in public debates. Many debates on the future of work took up the idea of tele(home)working as form of work organisation that would allow for better work-life-balance, less work-related commuter traffic, and better individual working conditions for office workers at home. Particularly fascinating was the fact that virtually all office workers doing information work – whose proportion of the workforce of highly industrialised countries is yet to increase in the future (see, for example, Castells 1996: 201ff) – would be able to telework at home at least part time. Thus, the character of work for most people in Western societies would undergo a fundamental change. The 1994 “Bangemann-report” of the EU (High-Level Group 1994), depicting Europe’s way to the Information Society, put the creation of tele-worksites on the political agenda, aiming for a total of 10 million teleworkers in the EU by the year 2000 (ibid. Chapter 4, Application 1).

Meanwhile, the tele(home)work euphoria seems to be gone, and public interest has ceased. Instead of ‘revolutionary’ changes of the working life induced by tele(home)work and information technologies, a slow but steady, ‘evolutionary’ change continues to take place. Regarding telework, many obstacles to a mass distribution of this new form of work organisation have become visible. Yet for the first time in the debates on tele(home)work that were going on for the last two decades, there really seems to be a small but considerable number of tele(home)workers in the highly industrialised countries.

Despite little public interest, it is now worth investigating telework empirically in a sociology of work perspective as an exemplary new form of individual work organisation, as many more general tendencies of changes in the quality of work for information workers can be seen here very clearly. As there is an increasing demand of workers for a work organisation allowing for individual flexibility in terms of time and location, and as the technical means for remote cooperation are yet improving, it is reasonable to conclude that tele(home)work has the potential to become a regular feature of office work organisation, particularly in highly qualified segments of the workforce (cf. Dostal 1999). More specifically related to telehomeworking are questions of how the individual re-embedding of work in telehomework takes place, what the motivations of the individuals for telehomework are, and what this means for the individual’s work-life balance and quality of work.

1.1 Definitions

First of all, however, it is crucial to get rid of the brackets in the term tele(home)work by defining the concept more exactly and thus, to distinguish telehomework, from another form of work often labelled telework. The term telework generally denotes information work based on computer and communication technologies that is located in the cooperative context of an organisation and that is, at least partly, carried out away from a central office on a regular basis. *Telehomework* then denotes such forms of telework that are carried out from a workplace at home. If the workplace is partly (but at least one full workday per week) at home and partly in a central office, we talk about *alternating* Telehomework. If the regular workplace is only at home, we call it *complete* telehomework.

Mobile telework, on the other hand, has little in common with telehomework. With the distribution of mobile computers and mobile phones, many sales representatives at their sites have become computerised and thus can also be called teleworkers in the general sense, and for them and other business travellers, new options have emerged to work while travelling. Mobile telework is probably more widespread than home-centred forms of telework. However, it refers to a special group of white-collar workers and not to the majority of information workers, as home-centred forms potentially do.¹ Therefore, the focus

¹ To complete the picture, two other ‘irrelevant’ forms of “telework” often referred to in the literature should at least be mentioned: One is “collective telework”, i.e. work in ‘centres’ close to the workers’ home where several employees of different organisations work together in the same office building(cf. Büssing 1998: 145f); the other is “virtual organisations” where persons cooperate together on a long-term basis, each of them working at a different location (cf. Harris 1998).

of the following will be on forms of *telehomework* (on the basis of at least one full workday per week at home, in order to exclude occasional cases of homeworking).

In principle, both employees and self-employed persons can be considered as telehomeworkers. Self-employed telehomework displays a lot of ‘unconventional’ patterns of daily work in comparison to the ‘regular’ practices of both office work *and* (alternating) telehomework of employed persons. Thus, telehomework of self-employed is of particular interest in terms of changing individual work (and daily life) practices. Yet the inclusion of self-employed persons as telehomeworkers would make the following considerations even more complex, as a direct and persistent integration into a cooperative organisational context is not necessarily given. The self-employed will therefore be bracketed out from further considerations.

1.2 What’s new about telehomework?

It is not at all a new phenomenon that people work at home and not at a central office or plant. Both home-workers on a piecework basis and self-employed craftsmen, artisans and tradesmen who work and live in the same household have existed all throughout the industrial age or even before. Other groups of the labour force have always worked at home part of the time; e.g. freelancers, academics, or school-teachers. Yet throughout the industrial age, home-work has always had the status of an exception on two counts: The ‘normal’ workplace of industrial society is located away from the home of the worker in a centralised location that is exclusively designed for working – all ‘private’ matters of the workers are supposed to be ‘left at home’ (and only sheer labour power is supposed to be left). And the quality of work is such that many single workers cooperate in order to produce goods or services (while in traditional home-work, there is little or no permanent division of labour that affords complex formal organisation).

This is exactly why telehomework can be viewed as a *new* form of work as compared both to traditional homework and to traditional office work. Telehomework breaks up the fundamental division of time and space between ‘public’ workplace and private home while keeping up the division of labour and cooperative character of work in large organisations for the individual worker.

In fact, telehomework is in most cases organised on an *alternating* basis: Depending on the needs of the work to be done, telehomeworkers regularly change their workplace between a central office and their home, most commonly on a day-to-day basis. Still, the individual work organisation as well as the modes of cooperation in the organisation change significantly. This paper aims to explore the qualitative changes of work induced by telehomeworking both for the workers and their private life and for the organisation, based on research about German telehomeworkers.

The paper focuses on telehomework in Germany, but aims to draw general inferences on changes in the *quality* of work that should hold true for telehomework of highly qualified information workers in other countries as well. The paper starts with a brief overview of statistics of home-work and computerised home-work in Germany, supplemented by a discussion of the difficulties of tracing the number of home-based teleworkers in a narrow sense of the term, and a more detailed definition of the term “telework”. In section 3, then, the population of existing telehomeworkers in Germany in terms of their social and occupational characteristics, their motivations for telehomeworking and corresponding interests of the companies), and typical patterns in which telehomework is being exerted by different groups of telehomeworkers are being discussed. Section 4 then focuses on consequences of a “disembedding” of work from the central collective workplace fostered by telehomework.

2. Home work, computerised home work and telehomework in Germany

While most surveys particularly designed for estimating the number of teleworkers in countries of the EU suffer from a sample size way to small in relation to the small proportion of teleworkers in the working population (the probably most prominent example is the “European Commerce and Telework Trends” survey commissioned by the EU –see EcaTT 2000) official statistics based on large, statistically representative samples are a means to get a rough idea on the amount of home-workers and the proportions in which these persons use computers and ICT.

The “*Mikrozensus*” of the *Statistisches Bundesamt* (Germany’s national census bureau), a random 1% sample (i.e. a total of approx. 800,000 persons) of the German population drawn every year, shows for the year 2000 a projected total of 643,000 employees (271,000 males and 372,000 females), or 2.1% [own calculation] of the dependent working population work “mainly” (i.e. 50% or more of their working hours) at home, and 1,758,000 employees, or 5.7% [own calculation] work “sometimes” (i.e. less than half of their working hours, and on a regular basis [without a defined minimum of hours per week]) (Statistisches Bundesamt 2001: 42f). 423,000, or 65.7% [own calculation], of those working mainly at home do use computer and telephone while working at home. That makes for a total of 1.4% of the total dependent working population [own calculation]. Of those working partly at home, 1,561,000, or 88.6% [own calculation], use information technologies (ibid.). This implies that 5.1% of all employees [own calculation] work sometimes at home using computer and telephone.²

The *Mikrozensus* also provides data for self-employed persons in Germany: 808,000 of them, or 30.6% [own calculation] work “mainly” at home, and another 944,000, or 35.8% [own calculation], “sometimes”. 488,000, or 60.4% [own calculation], of those working “mainly” at home do use computer and telephone. That makes for 18.5% of all self-employed [own calculation]. Of those self-employed working “partly” at home, 732,000, or 77.5% [own calculation], use information technologies (ibid.). This implies that 27.7% of all employees [own calculation] work sometimes at home using computer and telephone (ibid.).

However, macro-level data do not exactly grasp the phenomenon of “telework” if telework is understood as such forms of “remote”, out-of-office work that have emerged during the last few decades because new information technologies have opened up new options for decentralised cooperative office work.

For Germany, a more appropriate (but less comprehensive sample) survey of “teleworkers” in this narrower sense of the term has been done by the *Fraunhofer-Institut Arbeitswirtschaft und Organisation* (1997). Based on a representative sample of organisations (weighted for size), tele-workplaces as defined by the management were surveyed. The study distinguished different forms of both home-centred and mobile (i.e., at varying sites away from a central office) computerised work (ibid.: 35f): Only an estimated 22,000 persons are completely home-based teleworkers, while *alternating* telehomework, partially in the central office and partially at home, counts some 350,000 persons.³

The following considerations are, however, not dealing with the quantitative dimension or formal characteristics of telehomework, but rather with its qualitative aspects. The main question is how individual practices of every day work and life change in telehomework (or not), and for what reasons

2 A (partial) comparison of the German and British cases is possible due to the analyses of Felstead et al. (2000) of the Labour Force Survey of Spring 1998, an unweighted random sample of approximately 150,000 individuals in the U.K. aged 16 and over, 65,000 of which are in work (see ibid.: 11f). The data show that in 1998, 2.5% the dependent working population (or a projected total of 680,612 out of 26,947,448 employees) work “mainly” (i.e., 50% or more of their working hours) at home, and 3.5% (or a projected total of 932,364 employees) “partially” (i.e. at least one workday per week, but less than half), and 21.2% “sometimes” (i.e. less than a workday per week, not necessarily every week, including “unpaid work”) (ibid.: 14, 32). Out of those working mainly at home, 39.3% (\approx 1% of all employees in the U.K. [own calculation of the author]) claim that it would be impossible for them to work at home without the use of a computer and telephone, and 49.5% (\approx 1.25% of all employees) actually do use computer and telephone while working at home. Out of those working partly at home, 46.8% (\approx 1.65% of all employees) claim that it would be impossible for them to work at home without computer and telephone, and 61.2% (\approx 2.1% of all employees) actually do use information technologies while working at home (ibid.: 15, 32). (For the “sometimes” category, no data for the use of information technologies are reported.) – The “partially” category of the U.K. survey and the “sometimes” category of the German survey seem difficult to deal with. Therefore, and due to the differing categorisations, the U.K. and German data can hardly be combined below the “mainly at home” level. Still, the macro-level data show that working at home using computer and communication technologies has become a regular feature of gainful employment for a decent number of individuals in both countries.

3 The number of *mobile* teleworkers is approximately 500,000, while collective telework and telework in virtual organisations hardly exist in reality: the estimate is for 3,500 employees working in these two forms (Fraunhofer Institute 1997: 35f).

practices of every day work and life change in telehomework (or not), and for what reasons this is the case. Also, the repercussions on collective features of work will be focussed upon.

3. Telehomework arrangements and the conditions for its emergence – the German Case

The following account is, unless indicated otherwise, based upon a qualitative empirical research project, building on 35 semi-structured in-depth interviews with German teleworkers in varying organisational and occupational contexts in the years 1997 and 1998. The empirical focus was on the everyday work and life of the interviewees who gave accounts of both typical individual practices of their daily work and organisation of their private lives as well as of the 'holistic' structure and logics of their "everyday life conduct" (*Alltägliche Lebensführung* – cf. Jurczyk/ Rerrich (eds.) 1993; Kudera/ Voß (eds.) 2000; Projektgruppe (ed.) 1995; Voß 1991, Voß/ Wehrich 2001; Wehrich/ Voß 2002), i.e. the ways in which the individuals actively combine and integrate the different spheres of their daily lives with their differentiated functional (temporal, spatial, social, affective) logics and relevancies into a whole of one's living. The interviews were conducted consequently according to the principles of theoretical sampling (Glaser/ Strauss 1967). The interviewing technique of "implicit contrasting" aimed at the generation of comparative accounts and evaluations of the interviewees with regard to their situation before and after the telehomeworking arrangement began. Thus, individual changes and differences between arrangements of work in a central office and of (partial) work at home could be grasped. The interviews have been recorded, and transcribed literally. The data have been interpreted by the standards of the reconstructive procedures of "documentary method" (*Dokumentarische Methode*) as developed by Ralf Bohnsack (cf. 1997, 1999) with reference to Karl Mannheim.⁴

3.1 Why telehomework (and why not)?

A rather 'obvious' explanation for the evolution of telehomework as a new form of work is the emergence of its technological basis. However, this explanation is neither sufficient, nor does it offer a proper basis for assessing the logic or consequences of that new form of work organisation. Beyond technological changes, it is thus necessary to focus on the motives of the workers and on the corresponding interests of management to agree to a telehomework arrangement, in order to explain why people actually do telehomework. The premise is that the introduction of telehomework arrangements by sheer force is unlikely because management depends on a certain degree of compliance on the side of the workers because control has to be exerted by indirect means and to a high degree depends on an active self-organisation of the telehomeworkers, and that there has to be some kind of agreement between both parties in terms of the particular interests to establish an individual telehomeworking arrangement.

During the last decade, (alternating) telehomework in Germany has mainly been practiced in the context of pilot projects in which one or a few employees of a company were allowed to work at home part of the time (under varying conditions, in most cases for a limited amount of time). The main interest of the companies was to gain experience with that new form of individual work organisation. The projects were announced to be aiming at an improvement of the working conditions and work satisfaction of (highly qualified) employees and the integration of employed work and family work (in particular, childcare).

The majority of telehomeworkers in Germany today have middle to very high formal qualification. They do information work either as clerical workers, technical or administrative specialists, as managers, or in

4 The interpretation procedure begins with a division of the interview into thematic sequences and the selection of the sequences that are thematically relevant according to one's research focus. Each sequence of the transcribed oral language text is being reformulated into a written language description of its manifest content (*formulierende Interpretation*). This is followed by an interpretation of the latent content of each sequence by reference to established sociological concepts (*reflektierende Interpretation*). For the (reactive) data type of semi-structured interviews, the interpretation has to be complemented by the step of interaction control (*Interaktionskontrolle* – see Matuschek 1999), i.e. an analysis of the interviewer's influences on the interviewee's accounts. The next step is a comparative interpretation of the selected sequences both within the same case and across cases within the sample on the basis of minimum and maximum contrasts (*komparative Analyse*). This aims both at a coherent interpretation of the particularities of the case (*Fallbeschreibung*) and at a generalization of a typology of the field in question or the development of a grounded theory of the subject of research (*Typenbildung*).

project groups. Most of them have been employed in their company for a long time and accumulated specialised skills (cf. Jäckel/ Rövekamp 2001: 105ff).

The following types of motivations for telehomework can be distinguished on the employees' side: 1) family-centred, 2) effort-centred, 3) self-centred, and 4) pragmatic motivations.

The first type aims primarily at integrating employment and family work (in particular, infant care) in an individual arrangement. In Germany, the normal mode for female employees after the birth of a child is a parental leave extended over up to three years (due to a lack of appropriate childcare facilities), or to return to work soon on a part-time basis in the central workplace, while the child is taken care for by relatives or a private caretaker. Thus, telehomework poses a positive alternative both to an interruption of continuous employment (and consequent loss of practical work skills) and to the less comfortable work at a central office.

The second type of motivation aims at an improvement of the individual working conditions. Collective office workplaces can be an obstacle particularly for the conceptual work and problem solving activities of highly qualified employees. Options to work at home part of the time thus improve their working conditions. Characteristically, this group of employees shows a strong intrinsic motivation for work. Telehomework is considered either in the context of improving one's individual productivity (with the deeper motive of an upward career mobility) or of balancing out the high work stress by working in a more 'relaxed' atmosphere (while keeping up one's productivity standard of working in the office). Telehomework is thus considered a convenient additional element for the organisation of one's employed work, the sphere central in the life of this particular group of employees.

The third type, self-centred motivations, aims at personal self-development based on a realisation of 'unconventional' arrangements of both work and life and a rejection of the common industrial culture of work.

Pragmatic motivations, as the last type to be discussed here, refer to commuters who aim at reducing their long times spend to and from work by working at home.

However, neither the third nor the fourth motivation of employees is sufficient for companies to allow for a telehomework arrangement. Restrictions on the side of the organisation apply for the first two types of motivations, too. In most companies, there is a general reluctance on the management's side to introduce telehomework due to the imponderability of that new form of work organisation. Even with 'open-minded' managers, only a few individual arrangements will be introduced, and certain preconditions have to be matched. Crucial is that employees are considered both willing and able to self-organise their work in a way that the interests of the organisation are realised.

Therefore, two mechanisms of control of the workers are central in telehomeworking arrangements. One is management by objectives, in which the sheer hours worked are of secondary importance, but certain results have to be accomplished by the worker in an agreed time period.⁵ This mode of control has always been common in certain highly qualified positions. It is based on the assumption that employees are both motivated and able to work in a self-organised way. However, in the context of telehomeworking, this control mode is extended to certain higher and middle segments of the (white collar) workforce. Management by objectives is indispensable because a remote worker cannot be efficiently controlled by direct personal control of the work performance (cf. Godehardt 1994: 132ff). The other central mechanism of control, complementing the first one, is management by confidence. Virtually all interviewees of my sample are reporting a high degree of mutual personal trust between employee and immediate supe-

5 Although my research shows that this is still theory. In practice, teleworking employee and manager do renegotiate the duration of time necessary (as well as the results to be accomplished) several times, because it becomes clear in the progress of working that the objectives cannot be realistically reached in the time period set by the initial agreement (or not at all). This points to the fact that the establishment of new forms of work organisation requires long-term collective learning processes of the organisation and its members.

rior. The high level of mutual confidence has been built during a long period of cooperation.⁶ Management by confidence is not a *necessary* condition for telehomeworking; in practice, however, it seems to be a central means of control (cf. Jäckel/ Rövekamp 2001, 128f; Kleemann 1999).

In addition to these general conditions, management also has to perceive a relative advantage of a telehomework arrangement in order to introduce it. In other words, the interests of the organisation have to be congruent with the employees' motivations. This is generally the case for highly qualified employees with effort-centred motivations for telehomework. However, many highly qualified employees are strongly integrated into cooperative work contexts, and their permanent presence at the central office is considered indispensable. Thus, the total number of effort-centred telehomeworkers remains limited for the time being (which is also due to the fact that there are several [good] reasons for employees reject the idea of a telehomework arrangement at all). For persons with family-centred motivations for telehomework, a further condition on the managements' side is that the employees are 'valuable' for the company in terms of a relative scarcity of their qualifications on the labour market and/or in terms of their work-related skills and accumulated practical knowledge.

To sum it up: Telehomework is a means of individual work organisation for a highly qualified workforce whose individual motivations, based on their particular biographical situation and both career and private life orientations, are compatible with managements' interests referring to these workers.

3.2 Everyday patterns of telehomeworking

The question that follows is what the existing telehomeworking arrangements look like in terms of typical individual patterns and practices of working and every day living. My research on German telehomeworkers shows that three significantly contrasting forms – “family-centred” and “work effort-centred” telehomework of both office and mobile workers – are to be distinguished,⁷ where workers' motivations and companies' interests match in particular ways. Thus, each form of telehomework supports particular functions for the company in order to employ labour power and integrate it into the organisation, as well as particular personal orientations regarding the individuals' work-life balances and careers. The groups of telehomeworkers vary in terms of their job characteristics and labour market conditions, their situation in the life course, their motivations for telehomework and their patterns of everyday life. Thus, a very brief ‘sociology of telehomework’ can be sketched out.

1) *Family-centred telehomeworkers:*

This group almost exclusively consists of females with little children, working in a part-time arrangement (most of which circa half-time) in the context of the German federal law on parental leave („*Elternzeit-Gesetz*“, until the year 2000: "*Erziehungsurlaubsgesetz*") that allows parents during the first seven (until 2000: three) years after the birth of a child to take a leave from work of up to three years or to reduce the working hours to a part time arrangement of up to 30 (until 2000: 20) hours per week. Within this legal frame, arrangements for telehomework are individually being negotiated between employee and management. Persons of this group work predominantly at home, while management insist that they work at least one (full or half) workday per week in the central office. The workdays at home are predominantly shaped after the needs of the family work (though in coordination with the employer), and employment is being exerted in time zones ‘in between’ or in the evenings or weekends. These persons have a partner who in most cases works on a full-time basis. To be distinguished from the patterns just described are single parents with little children who mostly work full-time due to financial needs. The most common workday pattern in this group consists a ‘long’ half workday in the central office, while the child is in a crèche/ nursery school or in school, then spending the afternoon/ evening with the child, and work at home for another couple of hours once the child is asleep.

2) *Effort-centred telehomeworkers:*

⁶ This explains why, as mentioned above, most of the telehomeworkers in Germany have a long employment history in their companies.

⁷ Leaving out here, as mentioned above, the case of self-employed homeworkers which makes up yet another distinguishable type (with a number of subtypes) of telehomework

This group consists of full-time employees (mostly males) doing specialised or expert work who with the explicit permission of their employer withdraw part-time from the rather turbulent atmosphere of their central office workplace in order to do (conceptual or problem-solving) work at home in an undisturbed setting (and thus, work more productively). Thus, their proportion of homework is in most cases less than half of the working hours, i.e. on average one to two days per week. When working at home, gainful employment has priority over private matters (though many effort-centred telehomeworkers wilfully take a break from work and change to family activities in order to recreate for work), and the rest of the family has to stay away from the home office. These persons are normally the main breadwinners of their family (if they have family) and have certainly not the main responsibility for childcare and household tasks.

These first two types are the ones the German literature on tele(home)work is focusing on – although in most cases, no explicit distinction between different types is drawn at all. Both forms of telehomework are based on a voluntary participation of the employees – in opposition to a third, numerically significant group that in terms of its homeworking practice is quite similar to the second group.

3) effort-centred telehomework of mobile workers:

This particular group consists of (employed) sales representatives who can no longer rely on a central office in their region of work because these have been closed in order to lower the company's costs for office facilities⁸ (alternatively, the persons of this group are at their first job and haven't encountered a regional office yet). Instead, these persons receive technical equipment and furniture for a home office where they are supposed to do their paper work.⁹ These persons work an average one to two days per week at home, while travelling for three to five days, depending on their customers' demands. – This implies that in busy times, these persons work six days per week, doing their paper work at least partly at weekends. Note that the average working hours per week for this group, including times of travelling, regularly exceeds a 'regular' 40 hours workweek. The schedules of the customers determine the days left for homeworking. Workdays at home are shaped in the same logic as the other effort-centred telehomeworkers (see group 2, above).

4. Telehomework and the disembedding of work

In telehomework, workers can rearrange their individual workday and correspondingly, their private daily life according to their own orientations and preferences, in a fashion that goes beyond the 'traditional' rhythms, habits and collective practices of the industrial work culture (cf. Kleemann 2003, Kleemann/ Voß 1999). Thus, the division of the day into two monolithic blocks of work and non-work can be lifted, and shifts between the two spheres are possible in more flexible ways. What kinds of everyday life patterns and work practices emerge, is an empirical question that cannot be inferred from the technical or organisational conditions of the telehomework arrangement, but depend on the personal dispositions of the workers, and their orientations toward both work and private life. From the point of view of the organisation, on the other side, individual work undergoes a process of disembedding from the organisation and its contexts in terms of its sociality, temporality, and spatiality. The consequences of that process of disembedding from the centralised workplace shall be analysed in more detail below.

The centralised collective workplace is one of the key institutions of the industrial age. The main function of such spatial entities is to integrate means of production and human labour power into a planned cooperative production process organised by economic criteria of effectiveness and efficiency. Another function of this institution is the exclusion of all 'private' aspects of the individuals from work, i.e. a

⁸ This implies a relative degradation, and an augmentation of their work load, for the sales reps as they have to do all the typing on their own now, while at the central office, they could refer to a typist. However, the closure of regional offices by the companies takes place in the context of a general restructuring of the sales representatives system, accompanied by considerable layoffs. Thus, the only 'alternative' for this group of employees to working at home would be a layoff.

⁹ Note that this group is considered only in their property as (alternating) telehomeworkers, not as „mobile teleworkers“ (see above, section 1).

separation of the two spheres of (employed) work and private life. The main effect of that separation historically lay in the disciplining and control of the workers.

4.1 Social disembedding: Toward a “privatisation” of the public working life

Formally, telehomework means that the clear-cut spatial boundaries of the centralised workplace are being loosened, though not dissolved: the use of computer and telecommunication allows for a ‘virtual’ (non-physical) integration of homeworking individuals into the organisation. A permanent cooperation between members of the organisation remains possible because telehomeworkers have access to the organisation’s data (i.e., the central means of production in information work) and can cooperate with other members of the organisation via communication media. Face-to-face cooperation is being replaced by mediated communication.

In contrast to the *private* life of an individual, employed work has got a *public* character in the sense that it normally takes place in the public social context of a collective workplace.¹⁰ Sustained interaction of the workers at the collective workplace leads to social cohesion and a common local work culture. This includes informal collective standards and procedures apart from, or counter to management’s formal guidelines. These informal standards are socially binding for the way one does his or her work.

The public character of (centralised) work is being reduced with the introduction of telehomework in an organisation. A focus on the loosening of social coherence between the workers shall substantiate this thesis. This is due to the reduction of face-to-face contacts in combination with a perception of telehomeworkers by their colleagues in the central office as ‘different’. Even if the proportion of homework of an alternating telehomeworker is relatively low, they are labelled as ‘out of reach’ due to the fact that they are not permanently in the office – they are perceived as visitors in the office rather than regular co-workers. Thus, colleagues are more hesitant to contact telehomeworkers in person at the central office. With homeworking colleagues, the degree of communication is lower as compared to situations of co-presence due to the higher barriers for contacting someone that communication media set (cf. Höflich 1996).¹¹ In addition, mediated communication is more focused and consequently contains less context information. Thus, communication in organisations with telehomeworkers becomes more limited to *formal* communication, i.e. a predominantly ‘instrumental’ exchange, with an immediate reference to one’s work tasks.

Management does realise that private communication among co-workers has a positive impact on social cohesion within the organisation. In order to avoid a limitation of communication to its formal aspects, management intentionally tries to provide occasions for ‘private’ as well as for formal exchange with colleagues when telehomeworkers are present in the central office. Quite often, weekly business meetings are scheduled in a way that they followed by a collective lunch break. Thus, telehomeworkers have the opportunity to talk about private, not work-related matters with their colleagues. In other words: management implicitly aims to keep up the old communication structures as much as possible. Whether this strategy is feasible at all in the context of work groups with telehomeworkers, is rarely being reflected.

My research implies that the differentiation just referred to in ‘formal’ versus ‘private’ communication is insufficient in order to grasp the changes in the communication structure of organisational units with telehomeworkers. While “formal” communication denotes exchange directly related to one’s work tasks, the “non-formal” cannot be limited to merely private, “informal” communication that has nothing to do with work. Yet another form is “semi-formal” communication, which is related to the wider organisa-

10 This is by far not the only public aspect of employed work. However, a comprehensive discussion of other “public” aspects (e.g., the allocation of holders of certain occupation to corresponding social positions) cannot be provided here.

11 A corresponding factor in this context is that the telehomeworkers themselves deem social interaction as such relatively low. Rather, they focus on the functional aspects of their work. This is due to personal dispositions of that particular group of workers whose relevances are either focussed on the family sphere (thus they try to reduce all work-related activities that are not directly helpful to get the work done) or on efficient work output.

tional work context but not to one's work tasks in a narrow sense. This level of communication often occurs casually in the context of or after formal exchange or in situations of coincidental co-presence (for example, at the coffee machine). Possible topics range from apparent recent changes in the personnel policy of the company and their assessment in terms of employees' interests to the exchange of individual solutions how to get around an insufficient software tool (cf. Kleemann 1999).

The data strongly point to the fact that especially this intermediary form of semi-formal communication is considerably reduced for telehomeworkers because opportunities for exchange are diminished. This is on the one hand due to the fact that formal communication is being focused more strictly to directly task-related aspects, and on the one hand that co-presence of the workers is reduced for telehomeworkers. This leads to a reduction of social coherence in the organisation with many consequences, some of which shall be sketched out here: The basis for a mobilisation of the workers in terms of collective (micro-)political actions is vanishing; when informal collective norms (e.g. with regard to actual work effort) can only insufficiently be negotiated, an implicitly competitive situation emerges in which each worker individually has to define his or her standard of work performance, while at the same time being confronted with management's demands for permanent improvements (ibid.)

While remote work and media-based exchange make a reduction of semi-formal communication likely 'in principle', one could assume that telehomeworkers try to take countermeasures in order to balance reduced opportunities for communication. My research shows, however, that to the contrary, most telehomeworkers do appreciate that reduction (with an exception for persons with a strong orientation toward upward career mobility who depend on organisational context information). The main reasons for this fact are: a perception that the telehomeworking arrangement is a personal reward for reliable work and offers new individual degrees of freedom for shaping one's private and work life and thus 'frees' the individual from the oppressive system of employed work; a long-term work experience in the organisation (which in Germany almost seems to be a prerequisite to enter a telehomeworking arrangement) leading to a routine mode of working allowing for a reduction of the level of interaction within the organisation; and a perception of the organisation mainly as an abstract functional (and perhaps a personal social) context, but not as a collective local public that can be co-determined by collective action of the employees.

Thus, the dispositions of persons selected for a telehomeworking arrangement further support the process of a 'privatisation' of employed work in the sense that the public, and collective character of the workplace is being reduced. In this sense, we encounter in telehomeworking a negative form of 'individualisation'.¹²

4.2 Changing practices of work due to the spatial and temporal disembedding of work

In telehomework, the separation between work and non-work in terms of two separated, coherent time blocks and locations that is constitutive for industrial work culture, is being dissolved.

Focussing on the adaptation of the individual worker to the particular conditions of work and private life at home, it becomes clear on the level of everyday practices that many taken-for-granted collective habits and regularities that structure the workday in centralised workplaces, become dysfunctional at home. Consequently, the workers have to structure their workday on their own and with reference to the context of private life as present at the workplace at home. There are, however, no models for functional action at hand for the telehomeworker – they individually have to design their own ways (cf. Kleemann/ Voß 1999). At the same time, the homeworker has to achieve an efficient work output. This demand can only be fulfilled if the worker succeeds in keeping the private sphere away from work, and if the motivation for continuous productive working can be maintained even though external controls no longer exist (cf. Kleemann 1999).

¹² A question that cannot be answered on the basis of my data is whether on a long-term basis with an increasing normalisation of remote forms of computerised work, different structures of a 'virtual' publicity within the organisations with new modes of semi-formal communication will emerge.

In terms of the temporal organisation of the workday, the working time is no longer limited to certain defined, and coherent hours of the day, and telehomework allows for flexible shifts between work and private life within a workday. In order to coordinate work and private life at home, either the strategy of segmentation or integration of the two spheres can be followed. *Segmentation* means that in analogy to working in a central office, the workday is being divided into two coherent time blocks of work and non-work (though it may well be that breaks during the workday are extended as compared to work in a central office, according to the individual needs for recreation – possibly even including a nap after noon). *Integration* means, that both spheres become intertwined according to the demands of one's private and work life.

Integration strategies, as common in family-centred telehomework, in practice lead to a workday with 'patch worked' working hours: The workday is either being interrupted once or more often every day in order to fulfil private duties, or the 'workday' is placed in between the times required for private obligations (e.g. when a person works as long as the baby takes a nap). In both cases, work in the early morning, late night or at weekends is common. In segmentation strategies, a fragmentation of working time into several clusters is prohibited. However, the spatial dis-separation between work and private life can lead to an extension of working hours, since segmentation strategies are followed by effort-centred telehomeworkers with a high motivation to work who now have the possibility to return to work all throughout one's 'private' hours, whenever one is motivated to or suddenly has a 'good idea' for some unresolved issue. Thus, the sphere of work can begin to 'colonise' the private time even for those telehomeworkers who try to separate the spheres of work and private life.

Thus, there is no more clear-cut separation of regular (cyclical) working and non-working times (with working overtime as the only transgression) like in traditional work in centralised workplaces. Instead, "potential working times" emerge as a third quality: those are cyclical time zones during the week in which the individuals regularly work *sometimes* (as opposed to the permanent working time zones). Potential working times cannot be attributed unambiguously either to the working or non-working times (what could be determined, however, is the probability of work/ non-work in a particular time zone). From the point of view of the private life, this development seems quite ambivalent, as time zones formerly protected from the sphere of work now become open for work again. It is worth remembering that one protective function of the centralised collective workplace as an institution in the industrial area was the guarantee that employers had no disposition over the workers outside the workplace (and working times). With the introduction of more 'self-organised' forms of work organisation such as telehomework, this kind of protection of the employees seems to be revoked. If workers shall not undergo a process of a gradual colonisation of their private lives, the old institution has to be replaced by (yet to be established, institutionalised) means of self-protection.

5. Conclusion

At first sight, the 'special' character of telehomework lies in the fact that the categorical separation of the spheres of employed work and private life, as established by industrial work organisation, is apparently being revoked. Obviously, a re-integration of both spheres takes place in telehomework: In terms of space, employed work 'comes back home'; in terms of time, working and private/ leisure times intertwine, and in practical terms, the activities in the two spheres of work and non-work are being planned and carried out integrally.

Yet, an interpretation that we face a return to a pre-industrial order of work and life would be mistaken. The two spheres remain functionally differentiated, and there is at best a gradual convergence. This differentiation of everyday life in several spheres with diverging functional logics can be viewed as the truly irreversible product of industrialisation.

However, telehomework does imply fundamental changes in the relationship between employed work and private life. In order to grasp these changes, it is necessary to break down the perspective from a macro-sociological view on 'functionally differentiated social spheres' or 'structures of everyday life' to a micro-perspective focussing on the concrete everyday life of the telehomeworkers: An 'intertwining' of the spheres does not take place on the level of abstract 'structures' and 'logics' (they largely remain

intact) but on the individual, practical level, and that the intertwining is only due to the fact that the individuals permanently (re-)produce it in their daily practice.

The options for an *individual*, local re-integration of employed work and private life, and thus for shaping one's (work and private) life according to one's personal orientations and preferences, increase. At the same time, however, this does not at all imply a reduction but an increase of complexity for the individuals, as the basic functional differences in the respective requirements for action of the spheres remain intact and have to be bridged by the agents. And this is exactly the price the individuals pay for their increased options. Such arrangements are necessarily *individual* accomplishments that cannot be institutionalised on a societal level – as opposed to the 'old', institutionalised order of industrial work culture in which, for example, the institution of the collective centralised workplace freed the workers from the task of actively separating private life from employed work in terms of time and space.

In a historical perspective, the institution(alisation) of the centralised workplace, by differentiating the work sphere from private life, functioned as a means to discipline the workers and to increase economic productivity. In early industrialisation, the workers collectively went through a process of mastering and internalising the new, more efficient way of 'pure' working. Once this new mode of working had been established, the centralised workplace served as a means of protection for the workers from the private life posing requirements simultaneously to employed work and as a means of intensifying one's specialised skills. We may now be at a point where the "civilising process" (Elias 1994) has proceeded in a way that on average, skilled workers, due to an increased societal level of self-discipline are able to successfully deal with an increased level of complexity as posed by the simultaneity of employed work and private life (and to meet the demands of both spheres).

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