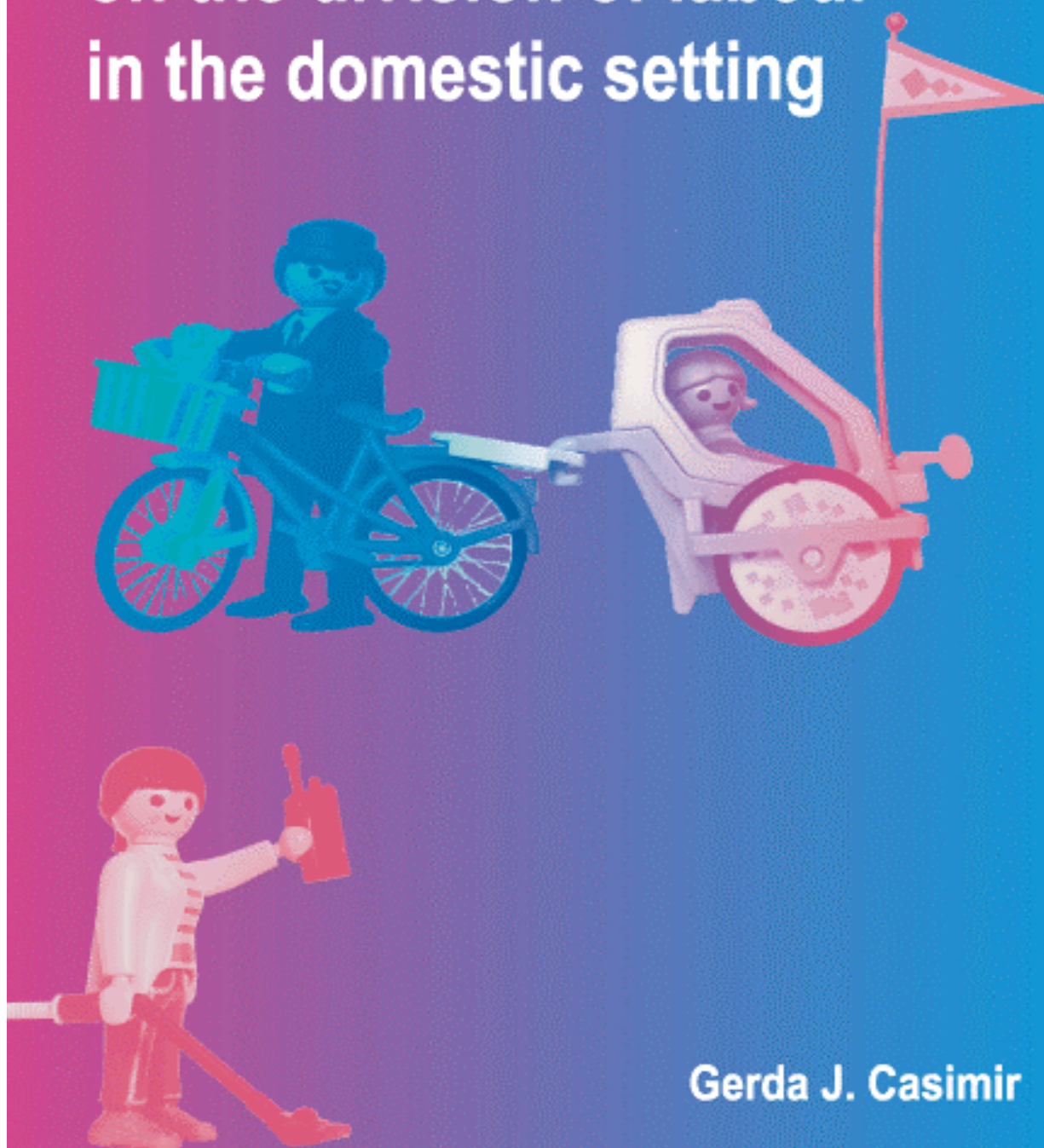


The impact of telecommuting on the division of labour in the domestic setting



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Foreword

"Do you know what you should do? You must get your PhD", said my colleague René Kapr somewhere in 1994. That was also the opinion of my neighbour Wim van den Berg, who talked with me about the subject once a year. I only wanted to do it if I had a subject that captivated me enough and that I thought to be of sufficient societal relevance. That subject had to combine the information and communication technology (ICT) and household studies. The first because I was working in that field on a daily basis at the School of Communication Systems (SvC) in Utrecht, the second because I was educated in it at Wageningen University.

' The changing of housekeeping under the influence of ICT' was such a theme, but my supervisor Paul Terpstra, holder of the chair of consumer technology and product use, said: "I do not know if you will become old enough to research all that." ICT was delimited to tele(home)work; housekeeping was narrowed to the division of labour within the home, in particular the division of labour between men and women. Since this was more a sociological than a technological study, Anke Niehof, professor in sociology of consumers and households, became my promoter.

Now I had a subject and two supervisors. The structure within which the project could be executed was offered by the project ' unpaid doctorate program for women' of Wageningen University. This project provides eight women with the fringe benefits of research assistants and the status of guest employee of the university. As a result of this I got an office at the department, and became part of the group of research assistants. The lunch and dinner discussions with Arianne Baanders, Iris Keasberry, Katrien Luijkx, Gerry van Nieuwenhoven, Danny Roozemon and Diana Uitdenbogerd helped me very much in the development of my ideas.

Although the subject of my research did not directly stem from the needs of the School of Communication Systems, those two areas did influence each other. First, the desk search increased my knowledge, which no doubt made me a better teacher. Lecturing research methodology, I could enliven the lessons with examples from my own experience. Second, during the different conferences on telework, I always came across people who could offer trainee posts, interesting assignments for projects or guest lectures for the School of Communication Systems. In this respect I want to mention Kitty de Bruin, Phil Lyon, Herman Leijdesdorff and Bert Alkemade. Third, it seemed a logical choice to let a student of the SvC transform my questionnaire to an Internet application. Martijn van Rooyen did this in an outstanding way. Officially, the school did

not offer more than an unpaid leave for one day per week for the duration of the project. Unofficially, my respective managers Ben Philipsen, Djujan Bijstra and Arnoud van de Vijver, supported me morally, and Cita Buitenhuis always reckoned with my second 'job' when making the teaching schedules.

The international conferences, both in the area of Home Economics (Dundee, Wageningen), and in the area of ICT and telework (Copenhagen, Rome, Turku, Tokyo and Amsterdam) not only brought me knowledge and contacts, but also served as a milestone to have some parts finished and as a check if I was doing the right things. The *Best Academic Paper Award* that I won in Finland, was the ultimate proof of this. Winning this prize was not only nice for myself, but felt as a compliment for home economics in its entirety. It meant that the household is worth to be studied and that the subject area contributes to the international discussion.

The empirical part of this study could only be executed with the help of interviewees and respondents. I would like to thank them all for their generous co-operation. Most of them I found via the Dutch Telewerkforum that provided the addresses of organisations with telework projects and sent a letter of recommendation for me. Dries van Wageningen, holder of the endowed chair Facility Management at Wageningen University, also helped finding respondents. In 1996, IDC-Benelux offered the opportunity to put some questions in their questionnaire on computer property and use in exchange for a contribution to their report on telework and mobile computing.

My promoter, Anke Niehof, contributed to a large extent to the quality of this dissertation. She read my concepts very thoroughly and her comments ranged from layout and editorial remarks to suggestions for literature or the structure of the dissertation. These remarks were always helpful and improved the work. The critical notes of Paul Terpstra were certainly as valuable. His strength was delimitation. Of inestimable value was the contribution of Phil Lyon. His comments far surpassed the English grammar, which he had offered to correct. With a polite "*You are Anke's student, but...*" or "*I realise that I am not your supervisor and I have only a UK perspective on PhD dissertations,*" he had a large influence on the order and content of the text. Besides that he kept encouraging me when I lost my self-confidence and he cheered me up with his Internet jokes. Phil, thank you so much for your tele-support. If you find any 'broken English' in this dissertation, I must have added it after you saw it. The appearance of this dissertation I owe to my Utrecht colleague Inge Schaareman, who proved to be able to capture the content of this thesis in one image. Her design makes you feel cheerful, and that is good, because at the end of the project I almost forgot with how much pleasure I worked on it.

In the final phase my friends, neighbours and the editors of the Icelandic Horse Magazine came to the aid, by cooking dinner for me or taking me out, by repairing my collapsed bookcase and my fences, by bringing up ideas for conclusions and listening to me, by calling me up in the middle of the night and talking me to sleep, by taking over tasks from me and spare me if necessary. They took care that I got some physical exercise when I started to grow fat, they encouraged me and reassured me. They made sure that I did not become a hermit, and, above all, they made me laugh at moments that the tears were very near the surface. I cannot name everybody in person and do not want to omit anyone. Therefore, I only mention here my two best friends: Roelie van Opijnen and Corrie Brussé. Your names are connected with relaxation, above all dur-

ing the many holidays I spent with both of you. Girls, thanks for your guidance and distraction.

It is regrettable that my father cannot be present. Shortly before his death he thoroughly searched his rather extensive collection of poetry to find '*The song of the shirt*'. He was determined to find it, because he was of the opinion that I neglected the similarities of telework and traditional home employment. His efforts were rewarded and the result surprised him: the poem appeared to be more than 50 years older than he remembered. It would have pleased him to see that this song obtained a prominent place in the telework chapter. My mother – with whom he was married over 66 years – will attend the public defence of my dissertation, I expect in good health. She never obtained a doctor' s degree herself, but she could have easily, if she had not chosen to be a mother and spouse in the first place. I want to dedicate this dissertation to her.

Rhenen,
September 2001

1. Introduction

1.1. Prologue: boundaries between work and leisure time

Since the industrial revolution most of the working population earns its money outside the home, being employed by a smaller or bigger company. Since that time an almost strict separation between public and private sphere is effective. Free time is a rather new phenomenon, especially meaningful as opposed to (paid) work. Even if one likes to go to his or her work and even if one has all kinds of freedom in the work, being free means being at home, or in any case being *not* at work. Hareven (1982) writes in *Family time & industrial time*:

' Family and work, the two most central commitments in most people' s lives, have emerged as themes in recent social history, but the relationship between these two areas has not been closely considered' (Hareven 1982: xi).

Lately, there is evidence that boundaries between work and leisure time are blurring again. Working time and leisure time are not inevitably excluding each other. Work and free time can have different connotations: people feel sometimes more free in their work or especially tied to their duties at home. One of the interviewees in this research, having two children who are often ill, is glad when she can close the door of her study. *'It is my turn now'*, she says. One of the others likes to go to the office of her employer: *'There I am Ellen again, a person; at home it is Mama, Mama, Mama.'* The graphical designer who works at home starts cooking or cleaning when his work does not progress. *'It seems that I am able to separate those two spheres, but that is not the case. While I am doing the dishes, the design advances in the background.'*

Technological innovations and changing managerial strategies, are opening up new possibilities for home-working. Bridging distance and time, the new technologies bring work and leisure time - public and private sphere –closer together, both physically and emotionally. As we shall see in this study, this situation both has its advantages and its drawbacks.

1.2. Why study telecommuting

In the 1990s, telecommuting, mobile computing and other varieties of flexible work become more and more common. Felstead and Jewson (2000) give many reasons why this field should be explored. One reason is the world-wide increase of home-workers. The growth of different types of teleworking is part of a larger shift in the character of labour markets which has resulted in the proliferation of 'non-standard' employment. Working at home has sometimes been portrayed as a utopian solution to the principal ill of modern society, promising to restore work satisfaction and rejuvenate family relations. On the other hand some academic researchers have highlighted the poor terms and conditions, the relative disadvantage compared to workplace peers, and the stresses home-workers encounter in reconciling 'two worlds in one'. Juggling the demands of paid employment and domestic life in the same locale calls forth distinctive coping strategies that shape the emotional and psychological dispositions of home-located producers. This asks for more research as well.

Working at home poses problems for conventional modes of labour organisation, control and surveillance that are of interest to both trade unions and management. Although the attitudes of home-located producers have much in common with the personality types currently demanded by 'leading edge' managerial ideologies, employers often appear to regard working at home as problematic. The growth of home-located production raises a raft of social policy issues – including such matters as transportation, urban and rural planning, architectural design, electronic infrastructure, commercial property values, health and safety, and employment law (Felstead and Jewson 2000).

Despite the significance of these trends, home-located production and home-working remain under-researched. Researches on telecommuting have primarily been focused on productivity, traffic reduction or aspects of management. Fewer are orientated towards environmental planning and little is reported on consequences within the home. Literature suggests that telecommuting could lead to a shift in the division of caring tasks and paid labour. But the little research that is done in this respect shows no real changes in division of labour and roles (De Vries & Weijers 1998). Fothergill (1994) and V. Frissen (1999) wonder whether telecommuting does not even preserve the existing division.

This topic – the effect of telecommuting on the division of labour within the home – is the main subject of this study. The subject is approached from the angle of home economics or household studies, drawing very much on the discipline of sociology.

1.3. The research project

1.3.1. Organisation

As a teacher at the School of Communication Systems, a program for higher education at the Hogeschool van Utrecht, the Netherlands, I was involved in telecommunications and came into contact with telework projects. Being a trained home economist, the above-mentioned discussion about labour division was likely to emerge. The department of household and consumer studies of Wageningen University, where I graduated

in 1977, was interested too. After some preliminary discussion at the department, it was decided to set up the study as a PhD project under the supervision of the professors of Sociology of Consumers and Households and Consumer Technology and Product Use, acting as promoter and co-promoter respectively.

The research has been conducted within the Wageningen University project ' Unpaid doctorate program for women' , which provides eight women with the fringe benefits of research assistants: room, supervision, an account on the university network and printing facilities, funding for study, etceteras. The project ran from October 1995 through October 2001, spending three days a week on it.

1.3.2. Research questions and preliminary assumptions

When starting the research, telework was already an item on the agenda of policy makers and managers, but the actual diffusion of the phenomenon was not very large. Nevertheless, several research institutions – universities, public research institutes and institutes related to labour unions – conducted researches on telework. The focus was mainly on work conditions, productivity, environmental gains and savings on travel expenses. Few researches concentrated on the home of the teleworkers, their partners and on consequences for the division of labour. This research aimed at filling this gap.

It was assumed that household activities – including the division of labour within the household – would change as a consequence of telecommuting. The question was which activities would change to what extent, and what role gender and other telecommuters' characteristics would play in these changes.

1.3.3. Research method

On the basis of these first ideas interviews and a group discussion were carried out in the early spring of 1996. Both the interviews and the group discussion focused on household activities, childcare, time management and use of domestic space. Differences between men and women were also a topic. The interviews and discussion led to more specific questions on the division of labour and the content of household activities.

IDC-Benelux, a research institute on IT and communications markets, was willing to put some of these questions in its survey on computer property and computer use in the summer of 1996. This research was held among 1000 Dutch households. In exchange I wrote – together with Sonja Vernooij – their report on telework and mobile computers, in which expert interviews on telework were incorporated (Vernooij en Casimir 1996, Casimir 1997d).

In the years that followed the theoretical framework was developed, using the interviews and the outcome of the IDC-questions as a point of reference (Casimir 1998). This resulted in refined research questions and the hypothesis that telecommuting would reinforce the asymmetry of asymmetrical households, unless telecommuting explicitly is applied as a

strategy of men to undertake more household chores. Also a change in attitude towards paid and unpaid labour was hypothesised.

The research questions and the concepts in the hypotheses were operationalised in a survey. This survey was put on the Internet in October 1999 (Casimir 1999). The first data came in during the last months of 1999. In the course of 2000, in particular in the autumn, more respondents filled in the questionnaire. In January 2001 171 valid questionnaires were returned. The analysis presented in this thesis is based on those 171 cases.

1.4. Structure of the thesis

The above mentioned activities are documented and elaborated in the following chapters. Chapter 2 (*Telework*) gives an overview of the many definitions of telework and telecommuting. Home-working is not a new phenomenon, but tele-home-working is in many respects different from traditional home-working. The similarities and differences are described, as well as the developments in telecommuting since its introduction in the 1970s. The chapter concludes with the state of the art of telecommuting in the Netherlands: the kind of jobs telecommuters tend to have, the goals and motives of the different parties involved, the number of current telecommuters and the expected future growth.

In Chapter 3 (*Telecommuting in the context of societal change*) the interrelation between telecommuting and general societal changes is elaborated. First, the development of industrialisation and the separation of home and work is described. Then modernity is approached from four different perspectives: structural, cultural, individual and technological, all of which show paradoxes. For instance, increase of scale occurs simultaneously with scaling down; people are becoming more dependent of others and cherish their privacy at the same time.

Chapter 4 (*Theoretical framework of home economics*) contains the theoretical framework from the viewpoint of home economics. The elements of the home economics model of Zuidberg – household, standard of care, resources, level of care, well-being, and feed back – are worked out. Emphasis is put on attitudes towards paid and unpaid labour, and on the gendered division of labour within the household. The second part of this chapter describes actual trends in Dutch housekeeping, applying the concepts discussed in the first part.

In Chapter 5 (*Exploring the field*) the interrelation of telecommuting and household activities is discussed, based on literature, exploratory interviews and the results of the IDC survey questions. The concepts described in Chapter 4 (*Theoretical framework*), serve as the guiding principle for this chapter. The exploring investigations lead to a refinement of the research questions and the formulation of the main hypothesis, which is that telecommuting reinforces the asymmetry of asymmetrical households. This means that in households in which the wife performs most of the domestic labour, telecommuting entails more domestic labour for her, irrespective if she or he is the telecommuter. A second hypothesis concerns the attitudes towards paid and unpaid work. It is assumed that under the influence of telecommuting the attitude towards paid labour becomes more task-oriented, and the attitude towards unpaid, domestic labour becomes more time-oriented.

The operationalisation of the research questions is to be found in Chapter 6 (*Methodological aspects*). Each concept of the home economics model is translated into con-

crete terms, by attributing one or more elements to each concept. For every element several indicators are devised. The indicators lead to items or questions that subsequently lead to answer categories, constituting the actual questionnaire. The questionnaire has been put on the Internet, in such a way that respondents could complete it online, thus directly transmitting their answers to a database. The advantages and disadvantages of Internet-surveys – among other methodological considerations concerning the survey – are also part of this chapter.

The results of the survey are reviewed in Chapter 7 (*Results*). First, general characteristics of the responding telecommuters are described, such as education, income and their telework situation. Then the research questions are addressed. Household activities are related to respondents' characteristics as gender, earner type, composition of the household and normative context. The chapter concludes with the acceptance and rejection of the hypotheses.

The results of the survey lead to the identification of four household types, which are described in Chapter 8 (*Conclusions and discussion*): households of female telecommuters becoming more asymmetrical, households of both male and female telecommuters with no changes in symmetry, and households of male telecommuters becoming more symmetrical. In the discussion these four types are linked to the theoretical notions developed in former parts of the study. Thus the study ends how it began, with the relation between family and work, between paid and unpaid labour, and with the way these areas are interrelated by the introduction and application of information and communication technologies.

The Song of the Shirt

(Thomas Hood, 1843)

With fingers weary and worn,
With eyelids heavy and red,
A Woman sat, in unwomanly rags.
Plying her needle and thread –
Stitch ! stitch ! stitch !
In poverty, hunger, and dirt,
And still with a voice of dolorous pitch
She sang the ‘Song of the Shirt !’

‘Work ! work ! work !
While the cock is crowing aloof !
And work – work – work,
Till the stars shine through the roof !
It’s O ! to be a slave
Along with the barbarous Turk,
Where woman has never a soul to save,
If this is Christian work !

‘Work – work – work
Till the brain begins to swim,
Work – work – work
Till the eyes are heavy and dim !
Seam, and gusset, and band,
Band, and gusset, and seam,
Till over the buttons I fall asleep
And sew them on in a dream !

‘O, Men with Sisters dear !
O, Men ! with Mothers and Wives !
It is not linen you’re wearing out,
But human creatures’ lives !
Stitch – stitch – stitch,
In poverty, hunger, and dirt,
Sewing at once, with a double thread,
A Shroud as well as a Shirt.

‘But why do I talk of Death?
That Phantom of grisly bone,
I hardly fear his terrible shape,
It seems so like my own –
It seems so like my own,
Because of the fasts I keep;
O God ! that bread should be so dear,
And flesh and blood so cheap !

‘Work – work – work !
My labour never flags;
And what are its wages ? A bed of straw,
A crust of bread – and rags.
That shatter’d roof, – and this naked floor –
A table – a broken chair –
And a wall so blank, my shadow I thank
For sometimes falling there !

‘Work – work – work !
From weary chime to chime,
Work – work – work –
As prisoners work for crime !
Band, and gusset, and seam,
Seam, and gusset, and band,
Till the heart is sick, and the brain benumb’d,
As well as the weary hand.

‘Work – work – work,
In the dull December light,
And work – work – work,
When the weather is warm and bright –
While underneath the eaves
The brooding swallows cling,
As if to show me their sunny backs
And twit me with the spring.

‘O, but to breathe the breath
Of the cowslip and primrose sweet ! –
With the sky above my head,
And the grass beneath my feet;
For only one short hour
To feel as I used to feel,
Before I knew the woes of want
And the walk that costs a meal !

‘O but for one short hour !
A respite however brief !
No blessed leisure for Love and Hope,
But only time for Grief !
A little weeping would ease my heart,
But in their briny bed
My tears must stop, for every drop
Hinders needle and thread.

‘Seam, and gusset, and band,
Band, and gusset, and seam,
Work, work, work,
Like the Engine that works by Steam !
A mere machine of iron and wood
That toils for Mammon’s sake –
Without a brain to ponder and craze
Or a heart to feel – and break !’

– With fingers weary and worn,
With eyelids heavy and red,
A Woman sat, in unwomanly rags,
Plying her needle and thread –
Stitch ! stitch ! stitch !
In poverty, hunger, and dirt,
And still with a voice of dolorous pitch, –
Would that its tone could reach the Rich ! –
She sang this ‘Song of the Shirt !’

2. Telework: definitions and developments

The concept of telework – working from a distance with the use of information and communication technology – was launched in the 1970s and has received practical and academic attention since then. Discussions on telework can be approached from many different angles, depending on the priorities, perspectives and values of the different stakeholders in the process. The definition of telework is, itself, controversial and there is discussion on this in section 2.1. In section 2.2 a comparison of traditional home-working with telecommuting is made. Section 2.3 describes the development of telecommuting and the change in orientation of telecommuting projects since its introduction in the 1970s. The chapter concludes in section 2.4 with an account of the current extent of telework with particular reference to the Netherlands, including the characteristics of telework jobs and a review of some predictions of the future.

2.1. Definitions of telework

Definitions of telework are manifold, dependent on the perspective of the observer and the nature of the work involved. The word refers to work at a distance, but has additionally a technical connotation. In literature on telework, next to telework the term telecommuting is used. Nilles – generally regarded as the progenitor of the concept in 1976 – defines *teleworking* as *any* form of substitution of information technologies (such as telecommunications and computers) for work-related travel. He restricts the term *telecommuting* to a process moving the work to the workers instead of moving the workers to work. That can include periodic work out of the principal office, one or more days per week either at home or in a telework centre. The emphasis here is on reduction or elimination of the daily commuting to and from the workplace (Nilles 2000a).

According to Gordon, ‘telework’ tends to be used more in Europe and some other countries, while ‘telecommuting’ is used more in the United States. Gordon himself solves the problem by using both terms, but he remarks:

'Some people prefer the word 'telework' because it' s a more accurate description of the concept - the 'tele' prefix means 'distance' , so 'telework' means 'work at a distance' . The telework advocates also believe that 'telecommuting' has too strong a connotation about the commuting aspect, and that 'telework' is a broader and more inclusive term' (Gordon 2000).

Many authors (Toffler 1981; Weijers 1985; Huws 1993; European Commission 1996) have explored the implications of telework and formulated new descriptions of the term. Zegveld, one of the editors of a Dutch handbook on telework, compares the definition issue with discussions on theological and exegetic questions. In 1995 he thinks it too early to define a strict description. He argues that these kind of discussions does little good at this stage and that it is perhaps better to first see how the field develops (Zegveld 1995). This is also the opinion of the European Commission in 1996:

'No attempt has been made to impose a single definition of 'telework' (...). In such a rapidly developing area, innovation and experimentation must be given full reign.' (European Commission 1996: 11).

These views are reinforced by the fact that telework involves a variety of new ways of working, in which telecommunications is used as a tool, and which is performed, for at least part of the time, outside a traditional office environment. These new ways include a new division of working time between an office near a person's home, the home itself, clients' premises and the employer's offices. It also includes geographically dispersed groups, either within the same organisation, or bringing together people from different organisations for a particular project. Telecommuting increasingly involves the use of mobile telephony and data communications as an integral part of a person's work, rather than as a specialist function.

Moran and Tansey mention two critical components in the definition of telework: the use of information technology and work where the conventional constraints of spatial location are less rigid:

'A distinction can be made between a broad and narrow conception of telework. The narrow conception of telework involves the use of an electronic link between the worker and the employer or contractor. This electronic link is used for communication and transmission of work. In the broad conception of telework the teleworker is spatially separate from the employer/contractor and the work carried out on electronic equipment is stored on discs or cassettes and is delivered in the traditional manner - such as by mail or courier, etceteras. There is no electronic communication link for data transmission. This type of work is mainly carried out in the home. It is more accurately, but infrequently, called Electronic Home Work – EHW' (Moran and Tansey 1986).

In the same Dutch *Handboek Telewerken* in which Zegveld objects to strict definitions, Weijers advocates the usefulness of a clear definition, provided this definition does justice to the pluriformity of telework. She defines work as telework when, as a result of information and communication technology, at least twenty percent of the working

time is located outside the employer's or taskmaster's office (Weijers 1995). This definition includes freelancers and self-employed home-workers.

The Dutch Union of Middle and Higher Personnel (MHP), researching telework since 1991, explicitly excludes the self-employed from their definition. They define telecommuters as employees, who perform their work partly at home, using modern telecommunication technology for communication with their employer and colleagues. Examples of this technology are: telephone, fax, modem, telephonic meetings, e-mail, voice-mail and networking facilities, to download and send electronic documents, data files or agenda items from or to the office environment (Vloemans 1993). *'Don't make a telecommuter a home-worker'*, says Haket in a lecture at the Hogeschool van Utrecht (Haket 1996). In his opinion home-workers are people who perform mainly simple tasks on the basis of piecework wages. For those traditional home-workers the contact with employer and colleagues is no part of their work (De Vries 1991). Telecommuters, on the other hand, are mainly middle and higher trained employees, who perform complex tasks on the basis of a contract, while information processing plays an important role in their work.

In 1998 the European Commission sees telework as the potential for working where and when it is best to do so, as determined by all parties involved, whether the employer, employee, customer, the social partners, the family, the community, or wider society:

'Freed from constraints of place and time, work can thus fully respond to the radical changes affecting the economic, social and cultural life of Europe. (...) Thus, work in the Information Society, is in reality becoming 'what you do' not 'where you go' (European Commission 1998: 10).

In the 2000 Status Report – which is no longer called *Telework*, but *E-work 2000, Status report on new ways to work in the information society* – the Commission again avoids to define telework, because *'a clear-cut definition forces us to draw boundaries around a phenomenon (e.g. telework) which by their very nature tend to be arbitrary'* (Johnston and Nolan 2000). Instead, an overview of different categories of telework is given: home-based telework, mobile telework, telework by self-employed in SOHOs (small office home office), supplementary telework, telework in telework-centres or telecottages and combinations of different kinds of telework.

The Dutch Telewerkforum makes a distinction between tele-home-working, mobile work and work in a telecentre. A tele-home-worker is an employee, who performs (part of his or her) duties at home on the basis of a contract with his or her employer (Telewerkforum on <http://www.telewerkforum.nl>, visited 23 May 2000).

Felstead and Jewson (2000) try to avoid the term telework altogether. Telework relates to the use of some form of technology, and does not focus on the social relations of production. They are of the opinion that the concept of telework confuses rather than clarifies the understanding of home-located production: *'It is not derived from an analysis of social relations but rather from an implied or explicit technological determinism'* (Felstead and Jewson 2000: 19).

The research undertaken for this dissertation focuses on the effects of telework on the domestic domain, particularly domestic labour. Technology is one aspect of the

research question. Only working from the private home is considered. The term telecommuting, though often used as synonym for telework, seems most appropriate in this respect. The research seeks to explore the changes in domestic labour, when people start working from home. These changes can be observed best by people who have the alternative of working elsewhere, in particular in the office of their employer. Hence, employees are more interesting for this research than self-employed. Patterns of the division of domestic labour will probably not change when people take work home only now and then. Therefore, the target group for this research consists of people who work at home on a regular basis, for a considerable time. For the purpose of this research, the following operational definition is used:

Telecommuters are employees who work in their own domestic environment for at least one day per week, on a structural basis, using modern information and communication technology and having at his or her disposal the facilities that he or she also would have at the employer's office.

The term telework is used to indicate a wider concept, including mobile working, working in telecentres, work by self-employed or contract work in other countries.

2.2. Telecommuting in relation to traditional home-working

2.2.1. Home-located production

Telecommuting can be seen as a specific type of *home-located production*. Felstead and Jewson (2000) define home-located production as all production performed at home by different kind of people in a huge range of occupations and industries. They include lace makers in rural India, freelance architects in downtown Manhattan and lockstitchers in the back streets of Manchester. The term *home-working* is by them reserved for a more narrow definition, indicating work, performed at home, but organised as part of a capitalist venue. Home-working is conventionally thought of as involving manual jobs carried out in manufacturing industry and routine service occupations. This type of work is, with some exceptions, mainly unskilled work, and often paid by piece: peeling shrimps or onions, sewing lampshades or knitting pullovers, assembling, packing and sorting different products (De Jong 1981; Overdiep en Visser 1983; De Beer et al. 1984; Fruytier en Valkenburg 1984; De Vries 1998). However, there are many other occupations involved. Felstead and Jewson see a danger in reproducing long-standing stereotypes based on unexamined assumptions about previous forms of work. Research has shown that far from being an old-fashioned, declining form of employment, home-work is part of a dynamic and growing sector. In these newer patterns of production, flexibility is a key factor and the sub-contracting chains of small firms and home-workers provide a flexible workforce (De Vries 1998; Felstead and Jewson 2000).

2.2.2. Traditional home-working

The reputation of the unskilled, traditional home-work is not a good one. The British poet Thomas Hood (1799-1845) described this already in his *Song of the Shirt*, written in 1843, during the stark days of early industrialisation. Working conditions were bad, and simple technology used. *'With fingers, weary and worn, with eyelids heavy and red...'* the song relates to long working hours, low payment, and enslavement: *'O, Men, (...) it is not linen you' re wearing out, but human creature' s lives* And of repetitive, monotonous, machinelike work, done in social isolation: *'...my shadow I thank for sometimes falling there!'* .

A little more than half a century later, Howard and Wilson investigated – among other things – the situation of home-workers in West Ham, London, and found situations resembling those in the *Song of the Shirt*:

'The visitors noted that in several cases they had found clothing being made by dirty people in dirty houses; and some of the home workers were living in houses which had been allowed to fall into despair' (Howard and Wilson 1907: 258).

They characterised home-work as irregular, both in time and in other conditions. They mentioned the extremely low wages and often long working hours – if work was obtainable at all. Unwholesome conditions were common, which would be avoided in a factory or workshop, where the law provided for better standards of cleanliness and safety:

'Economy in light, which is likely to be practised by home workers who do needlework, is notoriously bad for the eye, and in all these things factory conditions are more favourable to health, and to the efficiency of the work' (Howard and Wilson 1907: 258).

Most home-workers in the West Ham research had to provide or pay for their machines and other utensils. *'Must have clear, good fires for pressing'*, was one of the demands for getting tailoring work. Heating and light were always at the expense of the home-worker. The researchers found only a few instances where work was sufficient and continuous:

'This is the case where skill is required and possessed by the home worker, as in the costume trade; or where organising power and other fortunate circumstances enable a woman to get into a sort of sub-contractor' s position, working all the year round herself, and employing others during the busy season' (Howard and Wilson 1907: 261).

Around the same period, 1902, Roland Holst described the labour situation in the Netherlands, and gave attention to home-work as well. The leading industry in the nineteenth century could only develop and maintain itself by the combination of industrial production and home-working. Thus the textile industry flourished in areas where centuries long weaving existed as home employment, and the cigar industry

used adults, often helped by young children, everywhere in the country, allowing them to earn some money, which was '*too much to die and too little to live*' (Roland Holst 1902/1973: 167-170). Here men and women, young and old, were exploited by the up-coming industrial organisations.

Circumstances might have changed since then, but in the 1980s – and even later – home-workers still think they perform dreary, miserable work, low in status, irregular and uncertain, earning low wages. Traditional home-workers are presented as among the most downtrodden and exploited members of the labour force, with minimal autonomy, suffering from low wages, an absence of benefits, intense work pressures, occupational dangers and poor-quality working conditions. They are seen as exploited by suppliers of work and further oppressed by the burdens of domestic work and family care (Felstead and Jewson 2000). Houses of home-workers are probably not as dirty as in the eighteenth century, but in the 1980s, home-workers still complain about the mess in their houses, caused by the often bulky amounts of materials that go with the work (De Beer et al. 1984). Standards and regulations concerning hygiene were the reason for the abolition of home-peeling of shrimps in the Netherlands (Francken en Beer 1993). Most home-workers in the twentieth century also do not receive any restitution or allowances for the room they use at home, the extra heating or the furniture purchased (De Beer et al. 1984; Schop 1998).

2.2.3. Similarities and differences

As relevant now as at the time of the West Ham research, De Beer et al. (1984) make the point, basic to the labour market, that work that requires more skill tends to be better valued. This applies in particular to telework jobs. Information and communication technology require the skill to use these technologies and, vice versa, make more skilled jobs suitable to execute from home. Even highly trained professionals can – and actually do – perform their work from home, bridging time and distance through telecommunication connections. Felstead and Jewson (2000) observe that teleworkers are – in contrast to the 'traditional' home-workers – often portrayed as a peculiarly advantaged group who have freely chosen a lifestyle that maximises flexibility and independence, autonomously constructing their own work schedules, integrating domesticity and employment, and shaking off workplace controls. In spite of that, some of the characteristics of traditional home-work – such as exploitation, isolation, piece rates and gender bias – can be true for telework as well, as will be clarified below.

Johnston and Nolan (2000) mention employee exploitation as one of the examples of bad telework practice, although they also observe a substantial decrease over the past years. Some organisations still impose teleworking on their workers ('semi-voluntary' telework). Others use the admission to telework to extort overtime from employees or disregard the employee's right to off-duty time. Teleworkers can be used as work peak buffers and sometimes telework is used as a first step towards enforced self-employment (Johnston and Nolan 2000). But other authors stress the opposite of exploitation. They regard the diffusion of new technology into the home as one of the potentially liberating developments of post-industrial society (Phizacklea and Wolko-witz 1995).

Another topic touched upon in the song, and in home-work literature, is the isolation of the home-workers (De Beer et al. 1984; Fruytier en Valkenburg 1984; Fothergill 1994; Phizacklea and Wolkowitz 1995; De Vries 1998). *'You don't see anybody'*, says a home-worker to De Beer et al. in 1984. Isolation is commonly cited as a main disadvantage of home-located production of all kinds (Felstead and Jewson 2000). According to the European Commission, this disadvantage can be a deterrent to adopting telework. However, good practice in teleworking supplies opportunities for social contact in the form of a minimum number of days spent in the office, strong identification with the organisation, a supportive company culture, networks etceteras (European Commission 1998). Weekly or monthly social gatherings and the exploitation of a *grand café* on a central location with facilities for meetings and telework are reported in the 2000s (De Wit 2000). These gatherings are of importance for both employees and employers. A lack of informal contact does not only have a negative effect on the wellbeing of the employees, it can also affect the quality of their work. Many good ideas and the outset of fruitful co-operation sprout around the coffee machine. The negative attitude of unions towards telework (and home-work in general) has always centred around the isolation of the workers, which supposedly diminishes their organisational power. Isolated home-workers are difficult to reach for unions. Paradoxically, the Los Angeles telework project in 1974 was abandoned out of fear for union take-over. The insurance company that ran the project was by that time not at all unionised. The management was afraid that teleworkers could be reached more easily by the unions when not in the office (Nilles 2000b). Felstead and Jewson point out another paradox. Home-located producers have a dilemma:

'On the one hand, they seek to combat the effects of isolation. On the other, they seek to maintain the integrity of the home against outside encroachments'
(Felstead and Jewson 2000: 134).

Telecommunication connections can be of help to overcome this dilemma. They make it possible to keep in contact with superiors and colleagues, and they can regulate outside communications as well in order to prevent encroachments. E-mail, faxes, answering machines and separated telephone lines are devices in this respect.

Typical for traditional home-work are piecework wages. This has for a long time been a thorn in the flesh of the labour unions, especially in Europe. Their activities to abolish this system have been successful. From the early 1970s through the late 1990s wages were, in three quarter of the Dutch collective agreements, dependent on the complexity of the job and the experience of the worker. But lately this situation is changing. Since 1997 Dutch newspapers repeatedly give an account of discussions on, and the growth in, flexible rewarding. In July 1998, Dutch governing parties suggest the introduction of merit pay in the field of education (*Volkscrant* 3 July 1998). Since spring 2000, the increase of wages of the 38,000 employees of the Philips company is – despite protests of the unions – dependent on their performance. Philips was preceded by companies in the IT-branch and for instance Carglass, a company that replaces car windows. Employers spoke of a major breakthrough, employees agreed reluctantly (*Volkscrant* 25 April, 5 June and 7 September 2000).

Thierry, expert in human resource management, cited in *de Volkskrant* (21 August 1997), argues that labour unions will have little choice but to accept this trend. Bonuses, options and other extras are already very common for higher personnel and in the field of information technology. Union members, in particular the younger ones, wish to extend comparable rewarding systems to all workers. The *Federatie Nederlandse Vakbeweging* (FNV) – Netherlands' biggest labour union – concurs with this opinion and, in January 2000, held a conference on the theme of flexible wages. At this time, already 81 percent of employees with a collective labour agreement had experience with some kind of 'motivating rewarding policy' (*Volkskrant* 31 January 2000).

Merit pay can be seen as an expression of appreciation of the performed labour and can lead to an increase of productivity. But the negative aspects – especially when it takes the form of piece rates – are arbitrariness, driving up levels of output, jealousy and decreased mutual co-operation. In the Netherlands – more than in the Anglo-Saxon countries – dedication is valued as an important aspect of performance, next to realised output. That complicates a system that rewards productivity (*Volkskrant* 3 November 2000). But for home-workers, output control seems an obvious way of control, since controlling on the basis of presence is not feasible. Payment based on output is then only one step away.

The *Song of the Shirt* is about women. In West Ham, the home-workers were also women. Accounts of traditional home-work agree that most home-workers are – or were – women (De Jong 1981; Overdiep en Visser 1983; De Beer et al. 1984; Fruytier en Valkenburg 1984; Adam et al. 1994; Fothergill 1995; De Vries 1998). However, as Felstead and Jewson note, home-working is sometimes discussed as if it were solely the preserve of women. Also among traditional home-workers, a sizeable minority are male (Felstead and Jewson 2000). Modern home-workers are both men and women, reflecting the general distribution on the labour market. In unskilled jobs women seem to be over-represented, in high skilled jobs more men are working. At least, that is the opinion of Zegveld et al. (1995) and Tailieu and Van der Wielen (1995). Mallon takes a different view in an article in *The Scotsman* of 31 October 2000, citing a UK government research: '*Home working is a privilege extended almost exclusively to managers and professionals, and the majority are male.*' According to the cited survey, women are being left behind compared to men when it comes to having permission from their bosses to work from home (Mallon 2000). This is also the conclusion of the European Status Report 2000:

'Telework is a male domain. Surprisingly for many and in contrast to the 'normal working life', 75% of all teleworkers are male and only 25% female. This stands in sharp contrast to the widespread opinion that telework is a predominantly female domain. The image of the female caseworker who via telework manages to combine work and family more satisfactorily, as is publicised in the media, thus only represents a minority of teleworkers in Europe' (Johnston and Nolan 2000: 30).

Whatever the division between men and women may be, it is clear that the gender issue cannot be ignored:

'Although all employment relations may be said to entail issues concerning male and female identities, home-located production is gendered in ways that are distinctive' (Felstead and Jewson 2000: 20).

Some authors compare modern home-working with the pre-industrial family production unit. Terreehorst (1994) sees similarities of the modern home-working family with a farming household. That is why she called her book *Het Boerderijmodel*, the farm model. This comparison falls short in a few aspects. De Rooij (1992) points out that in a self-employed agrarian business, ownership and labour, work and living are not separated. Means of production, management and control are mainly in the hands of the producers themselves, as becomes clear in the following citation of Gasson and Errington:

'Most of the land and capital is provided by the family, although additional land may be rented for expansion of the operation and capital may be borrowed for supplies, machinery and improvements. Most of the labour is provided by members of the family living on the farm, but additional labour may be hired, most often on a seasonal basis' (Galeski and Wilkening, cited by Gasson and Errington 1993: 11).

Because there is one unity of working and living, members of the agrarian family perform different tasks at the farm. Family relationships characterise the labour relations. The labour of the farmer and the farmer's wife is a 'non-wage' relationship. The sale of goods produces an income. This income is not divided into wage and profit, but between family and business, and among the participants involved. A clear separation between household production and production for the market, can often not be made, even though not all farmer's wives do farm work in addition to domestic work. By emphasising that the income is produced by the total labour on the farm, it becomes clear that not only business labour, but also domestic labour is involved (De Rooij 1992). As Gasson and Errington put it:

'Any boundary between productive and reproductive work in the farm household is artificial. Women's work in 'reproducing' labour force – that is to say doing all that is necessary to service the productive workers and keep them in a fit state to work by feeding, housing and clothing them, caring for them in sickness and old age and raising replacements – is just as much an economic contribution to the farm family business as rearing calves or drilling wheat' (Gasson and Errington 1993: 22).

Living on the premises of the farm – which most farm families do – the majority of farmers' wives are involved in the running of the farm business in some capacity. Many undertake the greater part of paperwork, virtually all are expected to answer the telephone, take messages and run errands for the farm. The woman's social and psychological support for her partner is crucial in enterprise decision-making and management. Often, the farm woman provides the active link with members of the wider

kin network, the local community and the general public (De Rooij 1992; Gasson and Errington 1993).

In most telecommuter's families, not the family but an individual is hired for a wage. The employer, and not the employee, is the owner of the means of production. Labour relationships are clearly defined. The income is only produced by the work that is done within the employer-employee relation. Handing on the job to a member of the family in the next generation is out of the question. And because the telecommuter him- or herself has an employer outside the home, he or she does not need a partner to establish or maintain the contact with the outside world.

Of course there are some similarities with the farm family business. The work is performed in the domestic environment, and it may involve other members of the family. Sometimes partners and other members of the family are expected to answer business telephone calls and serve coffee to clients or colleagues (Fitzgerald and Winter 2001). Another similarity is that the outside world invades the domestic sphere, which makes this sphere less private than in households where the employee works outside the home. Thus the telecommuter is, like the farm family, faced with balancing the boundaries between private and public spheres.

2.3. Development of telework

Though telework is relatively new, a shift in emphasis and orientation can already be observed. In the middle of the 1970s Nilles introduced the concept of telework as an answer to energy consumption and commuting demands (Nilles 1976, cited in Jackson and Van der Wielen 1998). The first test was held in 1973-1974 in the Los Angeles area by a major national insurance company (Nilles 2000b). It has since developed in many different ways.

In the 1980s some organisations emphasised flexible working arrangements to address skill shortages; to integrate economic peripheries with core regions or urban centres; and to permit balancing of job and family demands (Jackson and Van der Wielen 1998). IDC (2000) calls this the first stage of teleworking, the *Dark Days of Downsizing*. In this stage corporate restructuring prompted many to start their own home-based businesses as an alternative to traditional employment. While many of these home-workers served as contractors to their previous employers, those still on the corporate payroll had even more work to do. A natural response by corporate survivors was to use an 'after hours' home office to catch up on paperwork and keep pace with the increased work load.

In the 1990s, telework projects paid more attention to issues of workplace design, facility management and the need to manage work time and work space to encourage productivity and effectiveness (Jackson and Van der Wielen 1998). Compared to the mid-1980s, cost-related reasons became much more important as a reason for introducing telework. Organisations emphasised the need to reduce costs and restructure organisations in order to become more competitive. At the same time, there is increasing recognition of the importance of employee motivations, needs, attitudes and responses than in the 1980s. And though the emphasis of 'reasons for teleworking' is firmly on costs, the *experience* of teleworking brings out very strongly improvements in quality of work (Korte 1996). IDC qualifies this period as the second stage: *Business*

Building with PCs. The decrease of PC prices caused a growth in home offices and a variety of home businesses were able to use technology as a leverage. As IDC vice president Raymond Boggs notes, ‘*Having a PC and advanced telephone services allowed the home business builders of the ‘90s to look like big companies to their customers and prospects*’ (IDC 2000).

Stage three – the 2000s – is characterised by the phrase *Work Everywhere*. Online access to advanced facilities is expected to change the lives of both corporate homeworkers (daytime telecommuters and after hours workers) and those running a business from home on a full- or part-time basis. Remote capabilities and networking will be increasingly important as home office workers seek the same levels of mobile support enjoyed by their corporate cousins. The focus shifts from technology and control to binding (IDC 2000).

The transition from stage two to stage three is illustrated by De Wit (2000), reporting a year of attention from press and colleague companies, after having received the Dutch telework-prize 1999. The first half year most questions related to technique and control. The second half year questioners were more interested in coherence and connection, not in a technical sense, but in a social sense. ‘*How do you keep personnel involved with your company?*’ and: ‘*How do colleagues keep in touch with each other?*’ In these terms, concern has moved from the question of productivity to those of maintenance of worker morale and corporate identity.

Since 1996, the European Commission has issued an annual Status Report on telework. The name change in 2000 (from *Telework* to *E-work*) is significant. It marks the beginning of a new phase. The emphasis is now on substantial structural changes. Keywords are productivity, non-inflationary growth, the transition to a stable but older population, and greater environmental and social sustainability in a global information society (Johnston and Nolan 2000). The fate of the Dutch magazine *Telewerken* is illustrative as well. In 1999 the subtitle of the magazine became ‘*magazine for modern forms of organisation*’. In 2001, the magazine became part of a specialist journal for office technology. First, *Telewerken* was still on the title page. Two issues later, it was only to be found within the magazine. Some consultancy firms report that special telework-projects are decreasing, since telework is an aspect of almost all organisational assignments (Geerdink et al. 2000). Telework is not so much a separate issue anymore, but has become a general aspect of social change. These changes will be the subject of Chapter 3 (*Telecommuting in the context of societal change*).

2.4. Telecommuting in practice: findings and statistics

Who are the telecommuters, what kind of jobs do they have, why are they working at home, and how many of them are there? How many of them will there be in the next decades? In this section, an attempt is made to address these questions, though the author realises that the information is out-of-date, the minute it is written down.

2.4.1. Telecommuters’ jobs

All activities generating or processing data are eligible for being performed at a distance, especially when the information can be transported through data communication

connections using computers. In particular, jobs in the administrative and financial field, in policy making, management, marketing, sales, consultancy, automation, research, education, training and journalism are suitable for telework. Telecommuting jobs may involve quasi-autonomous work by highly trained specialists but also supervised work in secretarial support, accounting and data entry activities. The business sectors most involved, are those with a high information content in high added-value up-stream activities such as research, software development, product design; and business management activities (European Commission 1996; Telewerkforum 2000).

Telecommuting is possible in most sectors of society, except in those functions where face-to-face contact or hands-on labour is needed, such as retail or material production. Most telecommuters do not currently work at home full-time. Vloemans (1993) found that telecommuters regard an average of one-and-a-half days per week as being ideal, others (Vernooij en Casimir 1996; Gordon 2000) speak of one to three days per week.

Felstead and Jewson (2000) found that the odds of working at home rise with age. This is also the opinion of Forsebäck (1995). We will come back to that in Chapter 5 (*Exploring the field*). The presence of children, particularly pre-schoolers, has the expected effect of raising the probability of women working at home, but makes little difference as far as men are concerned. However, the findings of Felstead and Jewson do not support the popular view that poorly educated women are more likely to work at home. Their results suggest that working at home – either fully or partly – is more likely among better qualified women, holding all other things constant. These studies also question the suggestion that ethnic minorities are more likely to participate in this type of work. Indeed, the findings suggest the complete opposite (Felstead & Jewson 2000).

2.4.2. Goals and motives

Without being exhaustive, the goals and motives of different stakeholders are summarised in the following paragraphs (see also: European Commission 1998; De Vries and Weijers 1998). Some of these have already been discussed in the preceding sections. Others will be elaborated in following chapters. Therefore, only some of the hitherto under-exposed aspects will be explicated here.

From a business point of view, teleworking is promoted to raise productivity, to improve business efficiency, to meet changes in business culture, to enable easier recruitment and retention of valued personnel, to meet employees demands and to save on buildings, heating and travel expenses. When many employees work at home, their desks in the office are often unoccupied. This leads to the development of new office concepts, with desks used by different persons. Personal belongings can be kept in mobile filing cabinets. Interpolis, one of the Netherlands' biggest insurance companies, combines telecommuting and office innovation and expects that office innovation will encourage telecommuting. Following this assumption, their new office building became much smaller than originally planned. In a comparable pilot project of ABN Amro Effecten Services savings on accommodations costs of 20 percent were realised (*Telewerken* nr.7, 1997). Thus telecommuting leads to fewer or smaller office buildings and saves money on office heating and cooling as well. Of course in addition a work-

place at home has to be created, houses have to be heated during the day, and more space is needed within those houses, but these costs are lower than the institutional costs of office workplaces and heating. The Thermie Project Haarlemmermeer (1995) expects that the savings on offices and office heating yield more profit than savings on cars (see also European Commission 1998).

Environmental considerations are the main reasons for governments to promote telecommuting, resulting in diminished traffic congestion, air pollution and energy consumption, and a reduction of space, needed for roads. Model calculations of the Dutch research institute TNO show that telecommuting seems to be a successful instrument to fight traffic jams in the urban agglomeration of Western Netherlands, rather than diminish the total car use (Martens en Korver 2000). It is clear that telecommuting can reduce the time and costs of commuting, especially because commuters over long distances seem to be more inclined to work at home than people who work nearby. The few empirical researches in this respect reckon with an increase of commuting distance of 6 to 15 percent in the long run (Martens en Korver 2000). A second result of these calculations is the decreasing growth of second car property. Telecommuting eases the combination of one car per family. Saving commuting time and costs is not only a straightforward economical advantage, it also reduces stress, traffic and traffic congestion, which has a positive influence on health and environment. A study of Arthur D. Little Inc., cited in Thermie Project Haarlemmermeer (1995), predicted in the 1990s a 10 million decrease in passengers at Logan International Airport near Boston in 2010, due to the growth of telecommunication connections. These connections would diminish the need for physical transportation.

However, the effect of telecommuting on mobility should not be overestimated. Optimists are of the opinion that telecommuting can reduce commuter traffic by a half, pessimists estimate the reduction not more than 10 or 15 percent (Spittje 1995). The possibility of telecommuting can influence the decision to buy or keep a desired house in a nice surrounding. This could lead to longer journeys to work on days that the office is visited, and might also involve longer journeys for other purposes (such as shopping, taking children to school, social travel, etceteras). Oppositely, the possibility of telecommuting affects the choice of office location. Employees can live further from their work (Martens en Korver 2000). Next to that there may be a shift towards travel by more energy-consuming private cars and away from more environmentally-friendly mass transit systems (European Commission 1998; Spittje 1999). And opposed to the expectations of Logan airport, scenario's for Schiphol Airport show an increase of passengers. One of the reasons is the improvement of wireless connections that enable mobile working. When people can spend their waiting time in a useful way, their inclination to travel might increase (Thermie Project Haarlemmermeer 1995).

Telework can play a role in the development of remote regions (European Commission 1998). In this respect the outsourcing of data typing and programming work to underdeveloped countries like Mexico, Jamaica, Korea or less developed regions within a country can be mentioned. This development might be beneficial for the employees in those countries and regions, but is on the other hand dubious because working conditions verge on the old customs of the traditional home-work, with low piecework wages and far-reaching exploitation.

Individuals take up telecommuting for a variety of reasons. Personal flexibility and responsibility, balancing work and home, but also taking advantage of employment opportunities, are some of the examples, that will be further explored in following chapters. For people who are tied to their home – due to a handicap or sickness of themselves or of a child or dependant adult – it might be the only possibility for paid work. Telework is not restricted to work in the private home. It can also be performed in telework centres. This is especially fruitful when these centres are equipped with facilities for disabled persons.

2.4.3. Numbers

With the reduction of traditional home-working, new forms of home-working emerge. According to Felstead and Jewson (2000) world-wide the numbers of homeworkers and home-located production appear to have sharply increased in recent decades – although the rate of increase has not always matched the heroic expectations of futurologists, management gurus and some academics (Felstead and Jewson 2000). Different research institutions find different results, which can be ascribed to different definitions and different methods of data collecting. *‘Counting teleworkers is like measuring a rubber band’* (Qvortrup 1998: 21). Next to that, the numbers are changing rapidly.

Table 2-1: Estimations of numbers of telecommuters

	Ovum 1994	TNO 1994	IDC 1994	IDC 1995	IDC 1996	Heliview 1999	Telewerk- forum 2000
Netherlands	57,000	80,000	95,000	115,000	137,500	200,000	400,000
Benelux			130,000	146,000	163,000		
Europe (EU)	1,200,000		606,000	691,000	786,000		

Derived from: Zegveld et al. (1995); Vernooij en Casimir (1996); De Vries en Weijers (1998); Heliview (2000); Telewerkforum (2000).

The figures in Table 2-1 refer to formal telecommuters, i.e. people who work at home on a structural basis. The number of informal telecommuters is manifold. IDC estimates in 1996 that over one million Dutch workers work at home occasionally. Additionally, there are 366,000 mobile workers, working en route, at client's offices or where ever (Vernooij en Casimir 1996).

2.4.4. Future growth

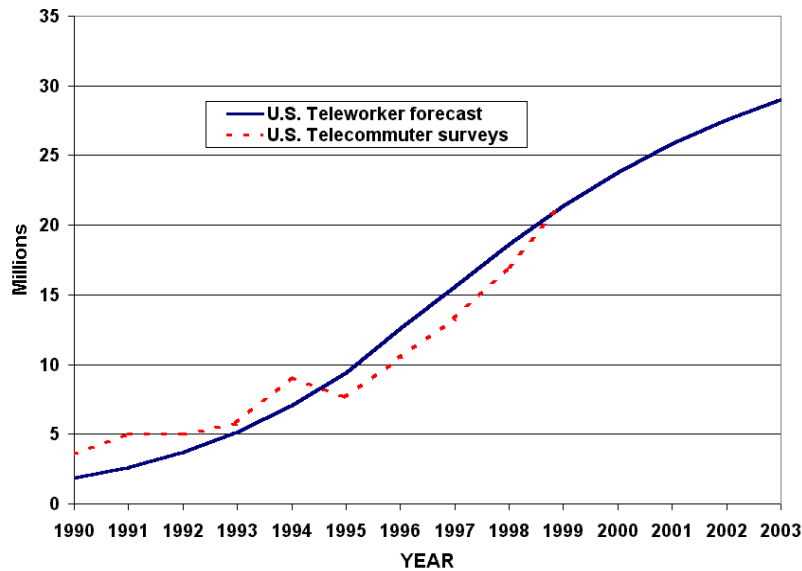
Estimates of future growth of telework are even more difficult. Gordon has been involved in the telework field since 1982, and he is asked to make those estimates at least two times a month:

‘So, that is 24 times a year for 17 years, or a total of at least 408 estimates I have made about the future number of teleworkers. If I have been lucky, I think

that perhaps 10 of those estimates were correct - but I don't know which ones they were (Gordon 1999).

A 10-15 percent annual growth in the number of telecommuters and an increasing diversity in the types of employers and job types involved sounds reasonable, but the development is to a high degree dependent on other changes in society. In 1996, IDC prognoses that there will be 252,000 to 650,000 telecommuters in the year 2000. The first figure stands for a scenario with little cultural and structural change. The last figure belongs to a scenario in which major disasters – total traffic congestion, environmental calamities – force governments and companies to intervene (Vernooij en Casimir 1996). Nilles (2000a) expects a constant growth of telecommuters in the US. In Figure 2-1, the dashed line represents the findings of annual household surveys made by Miller of Cyber Dialogue and Pratt (with some extrapolation by Nilles of the trend past the last survey in June 1999).

Figure 2-1: Telecommuters in the USA



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However, the more teleworking becomes an integrated aspect of all work, the more difficult it is to define and detect teleworkers, and the harder it is to discover exact numbers. Chapter 3 (*Telecommuting in the context of societal change*) will show that the structural and cultural changes involved are as interesting – and probably more interesting – as figures.

3. Telecommuting in the context of societal change

Telework is not an isolated phenomenon, but is part of broader change patterns in post-industrial western societies. The societal changes, with an emphasis on changes in labour market and production structure, are described in section 3.1, to better demonstrate the context of telework development. The interrelation of those changes and telework are addressed in the subsequent section 3.2.

3.1. *Societal change*

3.1.1. From industrial to information society

Western industrial societies are generally referred to in terms of the 'modern world' or 'modernity', though since the 1960s some authors speak of a post-modern or post-industrial society (Van der Loo en Van Reijen 1993; Terreehorst 1994; Braidotti 1994; Te Kloeze et al. 1996; Giddens 1997; McGrath and Houlihan 1998). Van der Loo and Van Reijen indicate modernity as a development, starting slowly in the late Middle Ages, and continuing in accelerated speed in the last two centuries. It is a complex of related changes, comprising industrialisation, urbanisation, democratisation, rationality, individualisation. Giddens (1997) equates the modern world with industrial society, of which the main characteristic is the concentration of production in factories. Post-modernity stands for a phase of development beyond the industrial era, named information society, service society, knowledge society, post-industrial society, electronic age, space age; scientific-technological era, global village or the *Third Wave* (Toffler 1983; Giddens 1997). Giddens (1991) also specifies modernity as a post-traditional order, characterised by profound processes of the reorganisation of time and space.

The development of the industrial society is the result of a complex set of technological changes, including the invention of new machines, the harnessing of power resources to production, and the use of science to improve production methods. The pace of technological innovation in industrial societies is extremely rapid compared with traditional social systems. In contrast to all societies that have gone before – and from many current Third World societies – the large majority of the working popula-

tion is not employed in the primary sector of economic activity. Rather many people work in factories and construction – the secondary sector of economic activity – and increasingly even these are eclipsed by those working in the service sector with jobs in shops and offices predominating. Next to industrialisation, capitalist organisation is a dimension of modern society. That means a system of commodity production involving both competitive markets and the commodification of labour power. Individuals – and no longer families, although this still was the case in the beginning of the industrialisation – are contracted by employers, the owners of the means of production. As a result of that, people move to towns and cities, where most jobs are to be found and job opportunities are created. The separation of work and home, of production and consumption becomes a fact for the majority of the workforce in the industrialised countries (Toffler 1983; Giddens 1991; Giddens 1997; Van der Loo en Van Reijen 1993).

The diversity of names for the post-industrial society is an indication for its variety of forms, but information or knowledge appears to be a significant theme:

'Our way of life, based on the manufacture of material goods, centred on the power machine and the factory, is being displaced by one in which information is the basis of the productive system' (Giddens 1997: 526).

Although the concept of the information society has existed for more than 25 years – Bell (cited by Giddens 1997) introduced it in 1973 – the European Commission writes in 2000 that we are *at the beginning* of a new phase of European co-operation in the shift to a digital, knowledge-based economy. This new phase is marked by the broader scope of 'e-work' development for a substantial proportion of the European workforce (Johnston and Nolan 2000). However, even while information supply is growing dramatically (especially in electronic media) the actual consumption of information has hardly changed over the past years: a smaller and smaller fraction of what is produced is actually consumed. Table 3-1 shows how many hours US households actually spend on media.

A variety of phenomena and processes can be classified under the concept of modernity. Following Van der Loo and Van Reijen (1993) the following sections will describe recent changes from four different, interrelated, angles: structure, culture, individual and nature. Seen from a structural angle, people fulfil societal roles and are interacting with others. The cultural reality is a reality of opinions, ideas, symbols, values, norms and denotations that direct behaviour and give meaning to life. This behaviour and human interactions may be determined by restraints and possibilities of surrounding structures and cultural systems, the personality of the individual has effect on his or her behaviour as well. The fourth and last angle is nature, or, more precisely, the extent to which individuals can escape from their biological and natural limitations. Here technology is the main issue.

Table 3-1: Yearly media use of US households

Item	1992 Hours	2000 Hours	2000 Mbytes	% Change
TV	1,510	1,571	3,142,000	4
Radio	1,150	1,056	57,800	-8
Recorded Music	233	269	13,450	15
Newspaper	172	154	1	-10
Books	100	96		-4
Magazines	85	80		-6
Home video	42	55	110,000	30
Video games	19	43	21,500	126
Internet	2	43		2,050
Total:	3,324	3,380	3,344,780	1.7

Summary of yearly media use by US households in hours per year, with estimated megabyte equivalent. (Hours from Statistical Abstract of the United States, 1999). © 2000 Regents of the University of California (Lyman and Varian 2000).

3.1.2. Structural changes

Industrialisation changed the patterns of production and consumption, concentrating production in factories and facilitating a specialised division of labour. In the course of the industrial development, the term 'work' obtained significance as paid labour in the employ of the owners of the means of production and on their premises. At home, labour devoted to the care of individuals – so that they are as healthy and well-fed as circumstances will allow – was not generally accorded the same status. Domestic labour was in industrialised settings no longer an organic part of the productive labour on the farm or in the workshop, and took on a separate and secondary existence. In these circumstances it became mainly, if not exclusively the province of women (Daru 1993; De Rooij 1992; Mandel 1970). Since the family was no longer a working community, and no longer producing market value, it had value chiefly as a unit of consumption. Only the socialisation of children as future employees was generally interpreted as productive (Engels 1973; Terreehorst 1994). Increasingly, members of a household were approached as consumers who engage in separate labour market activity to acquire an income to purchase goods and services to fulfil their needs (Van Dongen 1993).

Since the 1960s the depiction of household and work as inherently separate has come under some criticism. Becker (1965) – often regarded as the founder of 'The New Home Economics' – has argued that much 'free time' is in fact spent productively and must be regarded as 'productive consumption'. Time is an economic factor, because it has opportunity costs. One is free to spend the hours of free time on paid labour thus acquiring more income. The choice between leisure time and time spent on paid labour is fundamental for time budgeting and income acquisition. As such, it is important to the wellbeing of the individual (Broekman 1983/1984).

From the 1970s, academic literature increasingly pays attention to gender-related aspects of work. Some notable authors in this respect are Betty Friedan (1972), Ann Oakley (1975) and Lilian Rubin (1976). Earlier studies of Simone de Beauvoir (1965, originally published in 1949) and Virginia Woolf (1979, originally published in 1929)

became popular. The similarity of these publications is their observation that differences in the experiences of men and women are not coincidental. Historic and socio-economic structures, power relationships between men and women, role perception, ideology and socialisation, contribute – next to biological preconditions – to these differences.¹ Initially, the gender discussion focussed on the disadvantaged, deprived situation of women, relating to their position on the labour market. Emancipation policy was directed to diminishing differences and emphasised equality. The practical consequence of this vision was that women were supposed to equalise with men, rather than men equalising with women. In later years there is more attention for the value of differences. Care in the domestic domain has a positive value, and the poor role of men in this respect can be problematised as well (Scott 1989; Tronto 1993; Sevenhuijsen 1995/96; Haraway 1994; V. Frissen 1999). The value of domestic labour will be elaborated in Chapter 4 (*Theoretical framework*).

Due to the increased importance of information and communication technology, in the 1990s and later, work and space could be disconnected. 'Work' is no longer identified in terms of location – as a place to go – but as a method in which activities are conducted, as something that you do (European Commission 1998; Mirchandani 1998). Since the physical distance between 'work' and 'non-work' can be eliminated, the distinction between work and non-work has to be recreated.

Industrialisation is not limited to a single society and, to maintain the diversity of goods on sale, economic interdependence increasingly means that production and distribution activities are global rather than national. In this *globalisation* one of the paradoxes of modern society can be observed (Giddens 1997). Small, specialised production units are counterbalanced with an increased span of co-operation over great distances. Mass production, mass communication and mass consumption are characteristics of modern industrial societies, but the subdivision of firms into small business units – returning to core activities –, or outsourcing of tasks to self-employed or small and medium-sized businesses is also typical. The latter is to be found especially in innovative sectors, for instance multimedia and internet firms. This is not a new phenomenon. Roland Holst (1902) describes already the start of the innovative, small 'artificial butter' firms in the 1870s and the concentration of these into a few capitalist firms around 1900 (Casimir 1982b).

Information and communication technology (ICT) plays an important, though paradoxical role in recent structural changes. Since the 1970s, and exponentially in the 1990s, computers are introduced in almost every factory and office. The developments in telecommunication and computer technology meant that vast quantities of data could be recorded, processed and stored in fractions of a second and transmitted world-wide. This led to a diminishing of jobs and even of functions (like composers in the graphical industry) in some sectors. On the other hand, the introduction of these technologies meant a sustained growth of information-related occupations as a sub-set of 'white-collar' work. Nilles (2000b) estimates that 60 percent of the workforce is involved in these kind of occupations. Next to that, ICT can be defined as a new range of products and services. Analysing the changes in economic activity, Freeman (1994) shows the multi-factoral nature of the transformation (Table 3-2).

¹ Daru (1993) gives an elaborate overview of the different theories and models that try to explain the differences between men and women.

Table 3-2: Change of techno-economic paradigm

Old (' Fordist ²)	New (ICT)
Energy intensive	Information intensive
Design and engineering in ' drawing' offices	Computer-aided design
Sequential design and production	Concurrent engineering
Standardised	Customised
Rather stable product mix	Rapid changes in product mix
Dedicated plant and equipment	Flexible production systems
Automation	Systemation
Single firm	Networks
Hierarchical structures	Flat horizontal structures
Departmental	Integrated
Product with service	Service with product
Centralisation	Distributed intelligence
Specialised skills	Multi-skilling
Government control and sometimes ownership	Government information, co-ordination and regulation
' Planning'	' Vision'

Source: Freeman 1994: 15.

Keywords in Freeman' s scheme are networks, distributed intelligence and integration. ICT facilitates those developments, directed to both centralisation and decentralisation. Communication technology makes centralised control of remote parts of companies all over the world possible. On the other But because of the minor investment costs of computer systems and the distribution possibilities of networks, decentralised data entry and data processing is also practicable, including local decision making. These developments have a far-reaching effect on organisational aspects of society, leading to less hierarchic organisations and even enabling marginalised groups to participate more fully (V. Frissen 1999), though other authors exactly warn for a cleavage in society between the computer lettered and illiterates (Nowotny 1982). Competitive pressure, market volatility and uncertainty, and the above mentioned technological changes make demands, to which the Tayloristic ways of organisation of labour and old organisational structures cannot respond (Mok 1990). Modern methods of controlling costs and regulating labour have been introduced, characterised by outsourcing, subcontracting, just-in-time supply and enhanced use of all forms of ' non-standard' employment (Felstead and Jewson 2000).

Flexibility has become one of the characteristic qualities of modern society (Atkinson 1991; V. Frissen 1992; Gunter 1994; Forseback 1995; Niphuis-Nell 1996; CBS 1996; V. Frissen 1999). Atkinson (1991), for example, identifies four types of flexibility, derived from the model developed at the United Kingdom Institute of Manpower Studies: numerical flexibility, functional flexibility, distancing strategies and pay flexibility.

The first, the *numerical flexibility* is concerned with the firm' s ability to adjust the level of labour inputs to meet fluctuations in output. This includes: the use of part-time, temporary and short-term contracts, and casual workers; and the alteration of the

² The energy-intensive assembly-line way of production, also indicated as ' Tayloristic' .

working time patterns of existing labour resources in the form of varied shift patterns, overtime, 'annual hours' and flexitime. In the case of annual hours contracts, the work load can be divided unevenly over the year. Weijers en Weijers (1986) mention this type of flexibility as a strategy of workers to meet peaks. Many authors (Atkinson 1991; Greenbaum 1994; Gunter 1994; Felstead and Jewson 2000) perceive an increase of flexible contracts, especially for women. The labour market in the Netherlands shows differences in comparison with other European countries. In 1996 still 90 percent of the employees had a permanent employment contract and liked to keep it that way (Niphuis-Nell 1996; *Volkskrant* 9 October 1997). The participation rate of women increased greatly, from 29 percent in 1979, to 41 percent in 1992 and 51 percent in 1998. In 1998, 56 percent of couples had two incomes. However, in two third of those double-income households, the woman has a part-time job (Sociaal en Cultureel Planbureau 2000). Different authors adduce different reasons for this fact. Lack of childcare facilities and labour market situation is one reason; a self-chosen alternative in which the best of both worlds (home and work) can be combined is another (Keuzenkamp et al. 2000; Pessers 2000; van Gelder 2000).

Functional flexibility relates to changes in what workers do. It consists of the firm's ability to adjust and deploy the skills of its employees to match tasks required by its changing workload, changing production methods and the advanced application of technology. It is concerned with the versatility of employees and their working flexibility within and between jobs. Atkinson's description does not mention flexibility in place of work. Perhaps in 1991, telework was not such an obvious alternative as it is now. Diversity in place of work and working hours can be seen as a form of functional flexibility. It applies for instance to the extension of office hours, depending partly on home-workers. In the words of a spokesperson of a large Dutch insurance company:

'An increasing number of customers wants to report an insurance claim in the evening. Teleworkers are willing to work at different times than the traditional office hours' (Eindhovens Dagblad 5 October 2000).

The third type – *distancing strategies* –, is actually an alternative to flexibility rather than another form of flexibility. It is defined as the displacement of employment relationships by commercial ones: outsourcing and subcontracting. Since this applies primarily to self-employment, this is not considered further for present purposes.

The final category, *pay flexibility*, involves the extent to which a company's pay and reward structure supports and reinforces the various types of numerical and/or functional flexibility which are being sought. In Chapter 2 (*Telework definitions*), payment structures have been treated.

Greenbaum (1994) introduces the word *temporization*, which represents the fact that office jobs are being dispersed over time and place. She argues that in the United States in the 1990s three patterns of change can be summarised. First, the time period of work changed, moving from a full-time employment status to a part-time and temporary status. Second, job ladders are collapsing – integrating several tasks and sometimes several jobs into one. Third, the location of work is changing – spreading from cities, to rural work sites, to homes, and, of course, beyond national boundaries. These developments are not reserved for women, nor typical for women's jobs. They are

coming more common in professional, technical and managerial occupations that had been predominately jobs held by men.

In an environment of rapid change, requiring constant innovation, a more 'organic' or 'integrative' organisation is needed (Jackson and Van der Wielen 1998). With the use of information and communication technology, social relations can exist across wide spans of time-space, up to and including global systems. Chains of interdependencies through which people are linked together – especially within the production process, but also in the way they care for each other and are cared for – became longer, more complex and more differentiated. De Swaan (1982) calls this process *unfolding*, or the 'generalization of interdependency'. Long ago, people were, in smaller numbers, more involved with each other and less with outsiders. They formed small, manifold, closed and interwoven networks. The unfolding of dependencies implies that relationships outside the initially closed network became more important and increased numerically. For every set of activities individuals became related to different networks of people and organisations (De Swaan 1982; 1988). These relationships of dependence have become more abstract and distant, whereas technical equipment (including media) enables people to perform increasingly more tasks without the direct mediation or presence of others. Thus – though related to many others all over the world – individual consumers have a degree of flexibility and personal freedom in their private life like never before. This freedom is limited again: the possession of cars, mobile phones and television makes the modern western consumer less dependent on public services as public transport, telephone booths and the local theatre. However, the dependence on energy supply and a network of supporting services makes individual survival impossible (De Hart 1995). Changing organisational structures, a knowledge-based global economy and flexibility are features of work modernisation that are favourable for telework. We will come back to that in section 3.2 below.

3.1.3. Cultural changes

Changes on a structural level exert influence on culture. The diversification and globalisation of production processes implies contact with and dependence on people all over the world. Expansion of the means of transport and the use of communication technology – telegraph, telephone, radio, television, electronic mail – support the exchange of goods and ideas between different continents, leaving only few people without any contact with the outside world. This global communication inevitably affects culture, especially material goods and media, but also ideas and opinions.

Culture can be described as the values, norms and material goods characteristic of a given group. Culture is one of the most distinctive properties of human social association (Giddens 1997). Without culture, we would have no language to express ourselves, no sense of self-consciousness, and our ability to think or reason would be severely limited (Giddens 1997). Hofstede (1998) describes culture as the collective mental programming of the members of one group or category of human beings. In *Culture's consequences* (1980) he found four dimensions by which one half of the country-to-country differences can be explained: large versus small power distance, strong versus weak uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. In later publications he adds long-term versus short-term orientation

(Hofstede 1994). At the level of everyday interactions, culture pervades every aspect of life:

'Culture is how we talk and dress, the food we eat and how we prepare and consume it, the gods we invent and the ways we worship them, how we divide up time and space, how we dance, the values to which we socialise our children, and all the other details that make up everyday life' (Lull 1995: 66).

Douglas and Isherwood (1979) see consumption as the vital source of the culture of the moment. They define consumption as a use of material possessions that is beyond commerce and free within the law. The choices made by the housewife – what she reserves for her household, what for guests, whom she invites into her house, what parts of the house she makes available to outsiders, and, what she offers them for music, food, drink, and conversation – express and generate culture in its general sense:

'Instead of supposing that goods are primarily needed for subsistence plus competitive display, let us assume that they are needed for making visible and stable the categories of culture' (Douglas and Isherwood 1979: 59).

The concept of competitive display or conspicuous consumption stems from Veblen, who formulated this in 1899. In Veblen's model, consumption of goods by the lower classes is supposed to be merely for their continued reproduction, while only the upper classes can consume for reasons that go far beyond subsistence, consuming conspicuously in order to indicate their qualities to the world. Certain sorts of activities, foods, clothes or drink are reserved for the conspicuously consuming classes (Corrigan 1997). Following this line of argument, post-modern society is defined as a consumption society in which people *are what they buy*. They distinguish themselves from others by consuming differently, but through mass production, mass media and mass communication they buy eventually roughly the same. In the consumption-information society, working time seems to be more often an interlude between leisure time and vacations. Material goods are increasingly substituted by services. Information itself became a consumer good. The visual image gains importance (Bertels 1992). According to Lull (1995) the flood of symbolic imagery ushered in, especially by telecommunications technology in the late twentieth century, has led to radical changes world-wide in the cultural syntheses people make. More than ever before, constructing and organising everyday life is a quintessential interpretative activity (Lull 1995).

Consumption in (post-)modern societies shows paradoxes comparable with those concerning structural changes (Toffler 1981; Van der Loo en Van Reijen 1993; Freeman 1994; Handy 1995; De Hart 1995). Although societies develop unevenly and though developments reflect divisions between developed and developing societies, a general increase of scale can be observed. That means mass consumption of similar products all over the world. CNN (Cable News Network) can be received almost everywhere, Coca-Cola is consumed in hundreds of countries, various supermarkets in distant countries offer almost the same products and the whole world listens to the same pop music. On the other hand, the number of options increases exponentially.

Every year 30,000 new consumer products make their appearance on a market of 300,000 different products.

Consumption patterns – and social life in general – change much faster than in pre-industrial society. According to Giddens (1991) one of the explanatory elements of the peculiarly dynamic character of modern social life is the separation of time and space. *'In pre-modern settings, time and space were connected through the situatedness of place'* (Giddens 1991: 16). Industrialisation also depended largely upon a unity of time and space. It is characterised by a concentration of people, tools and resources in a common setting, co-ordinating activities by synchronising them in time and space. These spatial and temporal structures are reflected in the culture of organisations. Mass-production industry relied on punctuality, discipline, obedience and conscientiousness to support time-space concentration and maintain coherence of the collectivity. Co-ordinates of space and time have served as surrogates of performance and discipline: time-span and presence are used as indicators for performance. The spatial-temporal concentration of workers in conventional work practices is therefore not simply a product of technical decisions and requirements, but is a highly social and political phenomenon (Jackson and Van der Wielen 1998). According to Felstead and Jewson (2000) it is even argued that the rise of factory-located production was not simply dictated by technological considerations, but reflected the determination of employers to exert greater external managerial control over unruly and unpredictable workers.

Structural changes – as described in the preceding subsection – are reflected in culture. A new generation of adults has grown up in a world of individualised technology and has become used to individualised consumption patterns and time budgets. One can observe the erosion in the power of over-arching norms, values and consumption patterns, that derived from the subcultures of social class, occupation or place of residence. Traditional institutes like school, work, church and family, decreasingly determine the program of the day by fixed working hours and mealtimes (*Volkskrant* 1 July 2000; Van den Broek et al. 1999). Van der Poel (1993), citing Blair, speaks of the *modularisation* of daily life. Blair is of the opinion that in traditional Europe the whole has been emphasised at the expense of its parts: buildings had their overall conception, musical compositions their sequential logic of development, craftsmanship its one-work-at-a-time sense of coherent design and decoration. Social and political systems are cultural artefacts as well, and here too Europe traditionally cultivated a world in which everyone knew his or her place in a hierarchy and was encouraged not to stray far from it. *'The American emphasis shifted from whole to part, or more precisely, from a predictable whole sanctioned by tradition to an assemblage of parts'* (Blair 1988, cited by Van der Poel 1993: 213). Blair describes the nineteenth century modularisation of education, production systems, sky scrapers, poetry, music, American football, landownership and religion. Van der Poel adds examples of the twentieth century: the jukebox, container transportation, nursery rooms, the colonial Indonesian rice table, children's toys, etceteras. He continues to describe daily life as a modular system. De Hart (1995) takes the same direction, mentioning that people can make their own choices out of a rich range of possibilities, including different social structures, styles of consumption, hobbies, recreational activities, educational systems and political or religious convictions. The freedom to choose means that actors can realise

their own life story. However, it has to be said that modern western people are not only *free* to choose, but are also *forced* to choose, and not everybody is capable in handling the richness of choices well (Van der Poel 1993; Casimir 1987). Kohnstamm (2000) argues that total personal freedom does not lead to more, but even to fewer choices, because people can only choose from the things they already know. This reduces the risks, but also the chance of discoveries and surprises. Exclusively independent, self-made choices can easily lead to one-sidedness, which is the shortest route to the flat mediocrity. Therefore she wonders if freedom makes people happier.

Another key characteristic of modern culture – also related to the development of science and technology – is the emphasis on rationality and accompanying quantification. Rationality indicates the ordering and systematising of reality, in order to make it predictable and controllable. Starting in the Middle Ages, modern western humanity developed from a world controlled by demons or mysterious forces to a rational, controllable and malleable society. People are no longer part of nature, but try to understand and dominate nature (Jan Romein, cited in Van der Loo en Van Reijen 1993). According to Van der Loo and Van Reijen rationalisation – calculation, reasoning and control – imposes itself upon our thoughts and behaviour. It has a theoretical and a practical side. Increasing knowledge and a more scientific worldview on one hand, a systematic aiming for goals and a meticulous calculation of the applied means on the other hand. This leads to measurable output and examinable targets, combined in a culture of negotiation, as the key issues in the eighties and nineties.

However, this is but one side of the coin. On the other side, people seem to attach more and more significance to family and leisure time – although the family itself seems to loose significance (Sociaal en Cultureel Planbureau 1998). Also a growing interest in the environment can be perceived, and in alternative medicine, mysticism and religion (Toffler 1983; Bertels 1992; Van der Loo en van Reijen 1993). The Sociaal en Cultureel Planbureau (2000) describes the Dutch norms and values – in comparison with other European countries – as relatively liberal and tolerant. A 'traditional way of life' has the lowest reputation in the Netherlands and Denmark. Divorce and homosexuality are widely accepted. Dutch people support an equal division of tasks between men and women. Only 19 percent of the Dutch see the traditional division – in which the man works outside the home and the woman does the housekeeping – as the only correct possibility. Only in Sweden and Denmark are these percentages lower: respectively 15 and 13 percent. However, norms and beliefs differ from actual practice. Figures of division of labour – both on the labour market and within the household – show little differences with the United Kingdom or Germany (Sociaal en Cultureel Planbureau 2000). This will be further explored in Chapter 4 (*Theoretical framework*)

3.1.4. Changes on an individual level

Researchers in different countries and continents, starting from different theoretical concepts, agree on the fact that ever more people give preference to self-development, autonomy and privacy, abandoning an existence dominated by traditions (Toffler 1971, 1983; Giddens 1991; Kim et al. 1994). Educated people in the industrialised countries aspire to decide independently, to live an exiting life, to reach something in life, to develop themselves, and to enjoy life as long as possible. This society is described with

terms like *individualistic age*, *permissive society* or *narcissism culture* (Van der Loo en Van Reijen 1993: 162).

Individualism – though existing in some form in all cultures – is predominantly a modern concept, and vice versa, it can be called a core characteristic of modern society (Sociaal en Cultureel Planbureau 1998). The idea that each person has a unique character and special potentialities that may or may not be fulfilled, is typical for modern culture. In medieval Europe the individual's role was relatively passive and individuality was not prized. With the emergence of modern societies and, more particularly, with the differentiation of the division of labour, the separate individual became a focus of attention (Durkheim 1895, cited by Giddens 1991). At the same time, characteristic for the industrial society was – as we have seen in former sections – a far-reaching standardisation, mass consumption and mass communication, which leaves only limited room for individual choices. Toffler (1983) argues, that in the *third wave* a process of demassification takes place. Inventive solutions are found to individualise products and services, ranging from variable contracts to personalised consumption patterns. The demassification of the media also influences our thoughts and the symbols that describe our worldview. Society will have to face a variety of philosophies of life, ideas, symbols and values. This cultural demassification results in an individualised mind (Toffler 1983).

Hofstede (1991) describes individualism as pertaining to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. He tries to quantify the extent of individualism, referring to a research among IBM-employees in fifty countries and three groups of countries. Societies are considered to be individualistic when they attach relatively more importance to leisure time (time for private life and family), freedom in the execution of paid labour, and challenge in work. These three attributes underline the employee's independence of his or her employer. Conversely a more collective society is a society that emphasises the opportunity for training, good working conditions and the use of knowledge and skills, which the organisation provides for its employees. The United States of America received the highest score on the individualism scale, followed by Australia and Great-Britain, Canada and the Netherlands sharing the fourth position. Brazil and the Arab countries are in the middle, while the end of the line is taken by Panama, Ecuador and Guatamala (Hofstede 1998). A correlation between wealth and individualism is found: richer countries score higher on the individualism-index, collectively-oriented countries are often poorer.

The appreciation of the process of individualisation differs. Some authors are positive, because modern individuals are very well capable to make intentional choices and to plan their own life independently and in a rational way. Others are convinced that individualism leads to 'hyper-individualism', egotism and hedonism. Breaking away from traditional values and institutions – like religion and church – might bring about feelings of powerlessness, loneliness and relativism (Van der Loo en Van Reijen 1993). De Tocqueville (1805-1859) and Durkheim (1858-1917) are of the opinion that the individual has freed himself or herself from the oppression of traditional social associations. The tone of their work is optimistic, but they discuss the fact that the almost infinite wants of the individual could conflict with socially accepted behaviour. Toffler (1971) is unmistakably optimistic, when he argues that the super-industrial

society will not overwhelm the individual in a grey, painful uniformity, but on the contrary will radiate possibilities for personal growth, adventure and joy. This society will be colourful and open to individuality. Already in 1970 – long before the mass introduction of the World Wide Web – he demonstrates that new technologies enable personalised applications, for instance a different newspaper for every reader. Mass communication looses under those circumstances the notion 'mass' *We are on the way from homogeneity to heterogeneity*, he says in *Future shock* (Toffler 1971). In 1983 he is, in *the Third Wave*, even more optimistic, labelling the transition from the industrial world – the second wave – to the third wave as revolutionary changes.

Toffler is apparently not afraid of the bureaucracy, one of the dangerous aspects of modern society, already formulated by Max Weber some hundred and fifty years ago (1864/1920, cited by Van der Loo en Van Reijen 1993). Weber envisaged an oppression of the individual by social structures. Bureaucracy is the only way of organising large numbers of people effectively, and therefore inevitably expands with economic and political growth. The pessimistic view on the growth of bureaucracy is reflected in several novels in the twentieth century, summarised in the famous sentence: *Big brother is watching you*, stemming from Aldous Huxley's *Brave new world* (1932). Other novels that depict a world in which the individual is oppressed by bureaucracy are Orwell's *1984* (1948) and the novels of Kafka (1935a, 1935b).

Though most people in the modern western societies regard individualisation as progress, it is also held responsible for less valued phenomena like criminality, political indifference, lack of responsibility, hedonism and moral numbness (Sociaal en Cultureel Planbureau 1998). Loneliness is another aspect of individualisation, emphasised by Handy (1995), calling it the '*real disease of the next century*.' Modern, Walkman and television insulate people from others, who do not know where to connect to or what they belong (Handy 1995). Individualisation is often equated with privacy. Where loneliness has a negative ring, privacy has a positive connotation: it is a sought-after being alone, with emotional and interpersonal aspects, but also with a spatial component (Klein Meulenkamp 1986).

Van der Loo and Van Reijen point out that both the pessimistic and the optimistic views see insufficiently the paradox of individualisation. The pessimists say that people – though thinking they became, in the course of history, more free and autonomous – are in reality trapped in a network of anonymous and bureaucratic relationships. As against this vision, the optimists think that modern people are better able to determine their own fate and own responsibilities. The paradox is that individuals are increasingly independent in their choices, but at the same time they are forced to make these choices. Paradoxically they increasingly seem to make the same choices all over the world (Van der Loo en Van Reijen 1993). Or in the words of Nowotny:

'A massproduced and commercialized entertainment supply of information and services advertises to suit the ideosyncratic whims of each individual consumer, helps to standardize taste and shape demand according to the guiding principles contained in its supply' (Nowotny 1982: 104).

The paradox applies to consumption, but is also applicable to political decision-making, as discussed in *Orwell of Athene*, a compilation of articles on democracy and

information society (P. Frissen et al. 1992). Application of ICT enables direct individual consultation by opinion polls and plebiscites. This can be very democratic, but at the same time undermines the active participation of citizens and the formation of political opinions in the context of organisations in which they participate (i.e. work, neighbourhood, union). Electronic plebiscites – unless they are organised in the framework of a social debate – can lead to a push-button-democracy with passive registration of opinions formed in an isolated private situation (at home watching TV). One of the values of the democratic system is exactly that the pro's and cons of arguments are considered in a process in which all interested parties can contribute. If the forming of political opinions would shift from group settings to isolated citizens, the protective and stabilising function of groups would perish (Van den Donk en Tops 1992).

The process of individualisation, the erosion of kinship relationships and village communities, is already going on for over a century. In the last twenty-five years individualism also penetrates the last stronghold of traditional society, namely the family. In 1998 only 14 percent of the Dutch population considered unmarried people more pitiful than married people. In 1965 60 percent took that view. Nevertheless, almost everybody wants to share his or her adult life with a partner, but the former automatism of marriage made way for a chain of considerations with an uncertain outcome. The individualisation has been leading to an increasing number of different types of households, with a striking increase of single persons. In 1970 17 percent of Dutch households consisted of singles, in 1998 their share was almost doubled. This increased participation of women can also be seen as a result of the individualisation process (De Hoog 1995; De Hoog en Vinkers 1998; Sociaal en Cultureel Planbureau 1998; *NRC* 4 January 2001).

3.1.5. Development of technology

Giddens (1997) defines technology as:

*'The application of knowledge to production from the material world.
Technology involves the creation of material instruments (such as machines)
used in human interaction with nature'* Giddens (1997: 596).

The impact of technological development on economic and social structure is profound. According to Galbraith (1967), the most important consequence of the application of technology is in forcing the division and subdivision of any task in its component parts. Micro-processor based technologies, in particular, have an invasive character because their application is not restricted to one domain of activity. The introduction of electronic commodities has had a propelling force in individualised consumption patterns as well (De Hart 1995).

Technology is regarded by some authors as a panacea for all kinds of problems, by others as a curse. An optimistic belief in the future, common among those engineers who focus only on the specific functions of technology, is in marked contrast to the ambivalence and pessimism often found among social theorists and philosophers. In the latter vision advancing technology can be a dangerous force that dominates and

controls mankind, standardises the qualities of human life, and makes cultures more homogeneous. In this vision consumers of new artefacts are passively shaped by these constructions, seduced by promises of better living (Lie and Sørensen 1996b).

Both visions are often presented as each other's contradiction, but in fact they are real paradoxes. Both are true; dependence and liberation go together, technology, mankind and society are inextricably related (Van der Loo en Van Reijen 1993). An integrated and constructivist approach of technology makes room for a type of analysis that is more sensitive to the contradictions, contingencies, and nuances of technological development. In this approach, the determinist conception of technology is abandoned. Technology is seen as something unfinished and thus malleable in principle (Nowotny 1982; Lie and Sørensen 1996b).

Technological developments penetrate only partly the direct living environment of people. The influence develops more implicitly and through the production process, and becomes manifest in productivity of labour – which increased in the Netherlands between 1970 and 1995 with over 70 percent per year (Sociaal en Cultureel Planbureau 1998). In everyday settings, we consume technologies – or, more precisely, technical artefacts – by integrating and using them. We are also consumed by the artefacts when they gain our attention and have us react to them and become occupied by their abilities, functions, and forms. This dual relationship between humans and technologies is the outcome of a process of *domestication*. Metaphorically speaking, we tame the wild and exciting technologies that surround us in our everyday life. This process of taming is characterised by reciprocal change: the tamed technologies are cultivated as well. In this process new technologies and services, to a significant degree unfamiliar – and therefore both exciting and threatening and perplexing – are brought under control by domestic users. However, in their ownership and in their appropriation into the culture of family or household and into the routines of everyday life, they are at the same time cultivated. They become familiar, but they also develop and change. And these developments and changes, the product of the work consumers do in taking possession of new technologies and services, feed back into the innovation process. This is why the innovation process is so difficult to predict (Silverstone 1994; Van der Loo en Van Reijen 1993).

The notions described above, also apply to new information and communication technology, but these new technologies have new characteristics as well. Before the introduction of ICT, the application of advanced technology required an increased span of time between the beginning and the completion of any task and an increase of capital. Knowledge and equipment were dedicated to a specific task, which made the production process increasingly inflexible. As a result an increased need for planning arose. *'The prospect had to be carefully appraised. And the customer had to be carefully conditioned to want this blessing'* (Galbraith 1967: 29). ICT bears different economical consequences. There is relatively few capital needed for investment, and not inflexibility, but flexibility is the key issue. Furthermore – and this is new compared with all former technological developments – ICT controls not only our physical surroundings, but is also directed to ourselves and our social relationships (P. Frissen 1992). Information and communication technology effect an increased accessibility of persons and organisations. It enables the processing of complex information and improves or innovates communication between computer systems and the outside world

(Grijpink 1992). Modern equipment like microwave oven, video recorder and Internet, enable a better temporal division of activities, through which one is less dependent on others. Meals can be heated at every desired moment, films can be seen during the day, information can be retrieved during the night (Van de Broek en Breedveld 2000). Thus flexibility is mirrored in everyday life.

Though new in certain ways, the development of ICT shows parallels with the development of former technologies (Nowotny 1982). The first parallel is the potential to rationalisation and increased productivity. Second, Nowotny notices a striking resemblance with the conveyor belt. Ford' s discovery changed the order of things, by moving the pieces to be produced around, instead of moving people. Likewise, information technology makes it possible to move data around instead of people. The main effect of these techno-systems is their inclusive nature: once the techno-system is about to establish itself, it becomes virtually impossible to remain outside its gripping force. Data-processing can be regarded as a continuation of a story which began with the industrial revolution, and which incorporates the development of abstract terminologies within the development of technologies. Information technology is basically a technology of co-ordination and control of the labour force, the white collar workers, which taylorist organisation does not cover.

The application of technology is gender-biased (Nowotny 1982; Lie and Sørensen 1996). Some feminist studies see technology as an effective tool in the balance of power between men and women. In this view technological development is taken as a patriarchal strategy, aimed at the control over nature, including women. Also when technology is not regarded as a control mechanism, researchers find significant differences between men and women. For instance, Tijdens (1989), De Rooij (1992), Cockburn and Ormrod (1995) and others (Turkle 1986; V. Frissen 1992; Webster 1994; V. Frissen 2000) note substantial gender differences in accessibility to information and communication technology and in the use of technological products. Women display a different *style* in using new technology. They use computers often in an efficient, functional way, when they need to know something or want to have a task performed. Men and boys more often use the technology for entertainment. Initially, these differences were regarded as problematic, a token of techno-phobia. In more recent years there is a greater acknowledgement of the differences. Technological development is no longer seen as an inescapable progression, but as a social-cultural development in which certain values and meanings are dominant. Many women and senior citizens react with their rejection more to the representation and the social context of technology, than to the technology itself (V. Frissen 2000).

Lately however, women are catching up. The active internet use of men in the Netherlands increased from 1998 to 2000 from 22 to 53 percent; women' s use raised from 8 to 38 percent (Pro Active 2000). In the USA however, 60 percent of new Internet home-users are women (NUA 2000). It is not unthinkable that e-mail use develops in the same direction as telephone use. There we see the roles change. Women use the telephone for communication, men for instrumental messages (V. Frissen 1997).

3.1.6. The interrelation of the four perspectives

The four different perspectives, discussed in the above sections, could be discerned but not separated. Changes in structure, culture, technology and on an individual level affect each other mutually. Changes in one field are not possible without the other. The main characteristics of modern society – modularisation, flexibilisation, individualisation and globalisation – can be observed from all four perspectives, but are also inter-related themselves. For instance, observing flexibility from a structural point of view, we see flexible work patterns, independent on time and space. From a cultural point of view, flexibility means flexible consumer patterns, resulting in a modularisation of daily life. This modularisation is connected with personalised, diversified consumption patterns. Technology facilitates these developments, by enabling flexible production patterns, global distribution and local diversification, and by supporting the acquirement of consumer information.

The ultimate consequence of the development of the information society is the reversal of the chain of supply and demand. The increased power of consumers, combined with new production methods, realises a situation in which consumer demand steers production instead of the other way around. An example is the manufacturing of furniture and cars, which starts after the order is made. This development applies in particular to the media and other information-intensive sectors. As a result of the Internet, the control over society seems to shift from the established institutions to the individual (Giesen 2001). Newspapers are threatened in their existence or will at least have to change their focus when almost everybody can combine thousands of sources on the web. The same fate will strike the music industry when consumers no longer buy CD's but download their favourite songs. Citing Shapiro's *The control revolution*, Giesen argues that the judgement of politicians, journalists, medical staff and captains of industry will be disputed. The advocates of this development see the old ideal of direct democracy realised through the Internet. The critics warn for a world in which personal inconvenience is more important than war. Cheap mass media played an important role in the establishing of social cohesion. On the Internet this cohesion dissipates again. Information from the web can be richer and more satisfying as long as personal hobbies are concerned, but news that is of importance for a whole community could get lost (Giesen 2001).

3.2. Telecommuting and societal change

Telework is one of the many means and methods managers have available to react to changes in the environment (Limburg 1998). The above-described societal changes are favourable for the development of telecommuting. At the same time, the core characteristics of telework seem to become a defining feature of all work in the information society:

'The critical use of electronic network technologies is enabling or promoting the core characteristics of telework, thereby profoundly affecting all types of work whether or not traditionally considered as telework; telework thus has spill-over effects on all work' (European Commission 1998: 11).

In March 2000, the European Council concluded that the shift to a digital, knowledge-based economy, prompted by new goods and services, will be a powerful engine for growth, competitiveness and jobs. In addition, it will be capable of improving citizen's quality of life and the environment.

These and other aspects of the information society are discussed in this section and grouped according to the four dimension of societal change: structure, culture, the individual and technology. Telework can be seen as an answer to global and societal change, or as a reaction to external developments like outsourcing, decentralising, increasing flexibility, and the increase of international competition. Telework can also be a personal choice of individual employees or a result of improved electronic infrastructure and the availability of cheap, high quality technology (Geerdink et al. 2000).

3.2.1. Structural aspects

In the 1998 *Status Report on European Telework*, the European Commission lists a number of core characteristics of modern society beneficial to telework. Some of those characteristics relate to changes in organisational structures and flexibility:

'Work takes place in disaggregated, often dispersed, smaller organisational units displaying delayed, flatter hierarchical structures. (...) Work becomes more project-like with specific goals, budgets, processes, organisation and time horizons. Work becomes more dynamic and flexible in response to rapidly changing market situations' (European Commission 1998: 11)

The dynamics and flexibility of work in general, and the well-defined goals of projects, match very well with telecommuting practices. Vice versa, the flexibility of organisations can be increased by telecommuting (Weijers 1995; Telewerkforum 2000). It enables the employer to react quickly on changes in the market, and it improves the accessibility of the organisation and its employees by, for instance, extending service hours. This is one of the opportunities that improve the service level of the company and might indirectly affect turnover (European Commission 1998).

This last aspect – turnover, profit and thus productivity – is, after all, the main objective of organisations:

'Although the benefits of telework at the societal and individual level are very important, it is the business benefits which are most likely to drive its future development' (European Commission 1998: 20).

Similarly, Nilles (2000b) asserts that the first rule of teleworking is that it: *'... MUST provide a positive economic benefit to employers'*. Therefore, it is not surprising that telecommuting projects and publications focus on the increase in productivity and the improvement of the quality of the delivered work (Zegveld et al. 1995; Suomi, 1998; Spinks 1999; Gordon 1997; Telewerkforum 2000; European Telework Online 2000). Both employees and employers expect – and in fact realise – a higher productivity when working at home. Productivity increases of 40 percent have been reported, though a range of 10 to 40 percent is probably more typical across a large-scale pro-

gramme (European Telework Online 2000). The European Commission states that white-collar productivity is difficult to quantify, but mentions an increase of 0 to 45 percent depending on the circumstances. There appears to be no evidence of any cases where it has been associated with reduced output (European Commission 1998). A Kensington Telecommuting Survey indicates in 1998 that nearly 75 percent of telecommuters say they get a lot more work done while at home or on the road, as opposed to time spent in the corporate office. The majority said their productivity level was about 30 percent higher (Investor's Business Daily, cited at NUA 2000).

In all citations on productivity improvements associated with the utilisation of telework one has to exercise some caution on the questions of definition and measurement. Furthermore, the increase of productivity might be caused by a 'researcher effect'. Different studies (Weijers 1995; European Commission 1998; Limburg 1998) emphasise that the extra attention and coaching that accompany telecommuting projects can have a positive effect on the participants. Telecommuters have to be managed on output, rather than on presence. The consequence is that in many instances the work of the telecommuters has to be redefined. This alone might cause an increase of productivity, or at least raise the quality of the work performed. Moreover, in some projects the best employees are selected and rewarded with the possibility to take part. A positive assessment of the project is in the participants' advantage, because it exerts influence on continuation. Gordon expresses his suspicion about big productivity gains for telecommuters as follows:

'First of all, remember that the concept of 'productivity' is an industrial-age term that compares output with input; when output goes up per unit of input, that's a productivity increase. But that concept is woefully inadequate when applied to most office work; there isn't the same simple kind of input-output relationship for knowledge workers' (Gordon 2000).

Like the European Commission, Gordon finds it hard to define 'white-collar productivity'. Nevertheless, he comes across references to productivity gains in the range of 15 to 25 percent. He prefers to use the term 'effectiveness', which includes quantity of work produced, quality, timeliness, and ability to handle multiple projects and priorities:

'We have seen in case after case that telecommuters are doing more and better work, are meeting their deadlines better, and are better able to juggle multiple priorities and deadlines. Call it what you will - productivity, effectiveness, or something else: the results are there' (Gordon 1997).

The European Commission calls it business efficiency and sums up a range of different benefits, including productivity. One of the other benefits is the ability to decentralise activities to get closer to the customer in both time and space. Next to that, once telecommuting is introduced, the company is able to form, and re-form 'virtual teams' at short notice. Easier recruitment and retention of valued personnel can also be an argument to introduce telecommuting. Finally, savings on office overheads, travel costs and

a decrease in sickness absenteeism will contribute to the profit of the firm (European Commission 1998; Steward 1999).

Generally, the productivity effect of telework is calculated per day, implicitly assuming that each additional day of telework causes the same productivity increase. Gareis (1998) puts this assumption on trial and expects a correlation between teleworking days per week and average daily productivity changes. Predominant absence from the office environment means that teleworkers are excluded from circulating information, especially informal information that might be vital for their work. Therefore, the total productivity effect of telework might fall to zero if specialists work from home on four days per week, and may even turn out to be negative in the case of permanent telework (Gareis 1998).

The emphasis on productivity might disregard aspects that are difficult to be expressed in measurable, quantitative goals. Employees can be valued because they are a good colleague, stimulating and motivating others just by being around. The informal talks over the coffee machine – Hill et al. (1996) call them 'water cooler break times' – are the famous example: there the good ideas arise, there the basis of promotion seems to be laid (Casimir 1999c).

Failed projects are very poorly documented. When telecommuting does not pay off, the project is often ended and not discussed further. People who cannot concentrate at home – because they are too much distracted by household chores, children or the temptations of other activities – are called back or choose to work in the employer's office again. In some cases they realise how much they like being at home and taking care of the children, and decide to reduce the number of hours they work in their paid job (Vernooij en Casimir 1996). The *2000 Status Report on New Ways of Work*, spends a section on 'bad practice in telework'. Characteristics of bad practice are grouped under the headings bad management, no integration, not enough control over costs and employee exploitation. No integration includes: insufficient IT-support, no work process adaptation, no change in communication patterns, only a small share of teleworkers per unit, lack of involvement of works councils and neglecting of data security issues (Johnston and Nolan 2000). This list does not clarify how often projects fail, but it makes clear that they can fail on a variety of aspects.

Although the number of teleworkers is steadily growing (see Chapter 2, *Telework definitions*), the concern for teleworking as such seems to decline since telework becomes an integrated part of strategic company policies. These policies are, in the light of increasing globalisation, aimed at a better service level, more flexibility, improvement of electronic infrastructure and redesign of work processes that are increasingly interdependent globally. Telework is not just a new way of working, but an element in advancing *telematising* (Geerdink et al. 2000).

3.2.2. Cultural aspects

The cultural aspects of modernisation – the development of a consumption-information society, modularisation, individualised consumption patterns, rationalisation and egalitarianism – are reflected in the work environment. Individualised working patterns become current, with workers gaining more independence and self-control (Van der Loo en Van Reijen 1993; V. Frissen 2000). As organisations become more dependent

on skilled workers, they have to reckon with their aspirations. Control can no longer be assured by compulsion, because the processes are so much more complex. Every guarded and forced worker would call for a many times larger number of guards and enforcers. The process can only function when workers believe that they are cared for in the way they care for their work. Bare compulsion makes space for persuasion and finally conviction of the workers themselves (De Swaan 1982). Although Felstead and Jewson (2000) note that there is ' *surprisingly little evidence* that supports this view, it is generally felt that new practices of management evolve, characterised by an ostensibly ' high trust' model. Organisational governance tends to develop away from the external imposition of bureaucratic rules and regulations towards the internalisation of norms, values and attitudes through the manipulation of organisational culture or corporate identity:

'The values of entrepreneurialism – and an ideological construction of the entrepreneurial personality – have become the dominant practices, organisational forms and personal identities that public and private sector firms seek to encourage' (Felstead and Jewson 2000: 113).

Work cultures exhibit more and more delegation and horizontal communication (Gordon 2000). Employees are increasingly required to meet externally-set production targets by taking responsibility for their own output through the development of innovative, self-directed and creative problem-solving techniques (Felstead and Jewson 2000; Geerdink et al. 2000). Greater trust becomes more important to most work relations, and all parties involved in work need to develop flexible attitudes (Johnston and Nolan 2000; European Commission 1998; Krijgsman 1999). *'Employers who are stuck on the old 9-to-5 model of everyone being a full-time, ' regular' worker are really out of date'* , is the opinion of Gordon (2000). These employers are missing a good opportunity to attract and retain top-quality workers who need more flexibility.

Despite observed alterations, culture is still perceived as the most important barrier to teleworking. In this respect first of all ' management attitudes' are mentioned, ranging from ' conservatism' or ' fear of change' to fear that the remote workers will not perform adequately or fear of managers to become redundant (European Commission 1998). Geerdink et al. (2000) remark that managers in simple projects can call upon manuals with practical guidelines, action plans and lists of do' s and don' ts. However, these are not sufficient in bigger organisational processes of change with higher risks. The social and cultural dimension of those change processes appear to be most crucial. Changes in working times and working spaces must be seen in the context of social processes. Not the physical denotation of time and place is the issue, but in what way employees attribute social significance to time and space. The logic of mass production was based on punctuality, precision, ardour, discipline, obedience and responsibility. Place and time aspects of work are historically connected with opinions about industrial discipline and status hierarchy. The satisfaction of wants for variation, challenge, autonomy and influence are directly coupled to promotion, progress and career. Self-organisation, absence of the work place and distance are related to authority, prestige and status and therefore cultural inappropriate for subordinates. Geerdink et al. are of the opinion that the telework debate is in its essence a discussion about norms and values. This discus-

sion is not restricted to the management culture, but is also applicable to the way colleagues communicate with one another. The co-operation between teleworking colleagues becomes for a part more formalised: one has to arrange a meeting with others, because the chance of coincidental running into somebody at the corridor is reduced to almost zero. At the same time, the 'virtual meetings' at the Internet, become more formal: in electronic communication status symbols evanesce. The emphasis on functionality changes the hierarchic balance of power within organisations, eventually leading to the formation of self-regulating teams (Geerdink et al. 2000). As Jackson and Van der Wielen (1998) put it:

'...the integration of dispersed activities demands new forms of co-operation, co-ordination and control. Consequently, telework becomes not simply an experiment in cost-efficient production, but more importantly, an exercise in self-management by the workers themselves. It demands reduced input control and output-oriented management and supervision' (Jackson and Van der Wielen 1998: 14).

Hengstmengel (2000) and Gordon (1999) emphasise the role of other cultural aspects that exceed flexibility and that have to be taken into account to make ICT-related developments to a success. Hengstmengel lists the cultural elements an organisation has to consider, when evolving to a digital community. These elements range from clothing and working hours to the use of the company logo and leased cars. In his opinion, the office obtains the character of a community centre, where people meet each other, formally and informally, but not routinely (Hengstmengel 2000). Gordon (1999) presented in his key note speech at the Tokyo Telework Conference 1999 this very issue as one of the major mistakes made in telework: *'Not enough emphasis on the role of corporate culture'*. Discussions on norms and values relate not only to leadership and communication within the work environment, but also extend to the private sphere. Teleworkers will need to develop skills in managing the psychological and social boundaries between work and home. Telework can be used as a strategy in balancing work and private life. This will be one of the subjects in Chapters 4 (*Theoretical framework*) and 5 (*Exploring the field*).

3.2.3. Individual aspects

The border between cultural changes and changes on an individual level is difficult to draw, because cultural norms and values permeate the personality and behavioural repertoire of individuals. Changes in organisational culture seem to require employees, who are capable to invent their own job, career, qualifications, biography and ultimately themselves (Felstead and Jewson 2000; Hengstmengel 2000). Or, as the European Commission states:

'The individual takes more responsibility for his or her own development of skills, competence and career paths. The individual develops the skills of working independently but also co-operatively in both physical and networks contexts; this encompasses professional expertise as well as all-round

competencies such as use of Information Society Technologies (ISTs), common sense, organisational work-management, planning, human relationship and team working skills' (European Commission 1998: 11).

Increasing personal flexibility is often mentioned as the most important objective of telecommuters (Weijers 1995). Sometimes this flexibility is necessary because of the care for smaller children. In other cases it is desirable to be able to take advantage of a creative or productive state of mind. In all cases it fits with general trends in society. When working from home, telecommuters have to manage their own time and space in getting the job done within a deadline. They must control the progress and the quality of their work themselves, and they need to be self-motivated. Besides that they will have to manage the interface between paid work and unpaid, domestic chores (Felstead and Jewson 2000).

Many aspects of societal change, discussed as business benefits in section 3.2.1, are also beneficial for individuals. Examples are – next to personal flexibility – job security, increased productivity and decrease of sickness absenteeism (Steward 1999). One reason for this latter decrease can be that the increase of productivity and the raised quality of the work also increase the satisfaction with the work in general, which leads to less stress and less absenteeism. Another reason is that illness is often not reported. Conventional office hours and working patterns normally serve to define illness and define occupational related disorders. According to Steward, illness is the subjective evaluation and experience of bodily symptoms of malaise. Someone who is ill, is not in a condition to work or to perform other daily occupations. Office work is associated with stress related to commuting, team dynamics and contaminating environments. Computer work is associated with repetitive strain injuries, eye problems and musculo-skeletal strain. In the traditional office, people are permitted to cease working when their mobility, social communication and work endurance are not adequate. In comparison telecommuting is viewed as removing these risks (Steward 1999). According to Steward, there appear to be only few occasions when telecommuters are too sick to work. This is also the case with traditional home-workers. Overdiep and Visser (1983) report the words of a home-worker: *'There might be regulations for sickness leave, but as a home-worker you don't report yourself being sick so easily. If you don't feel well one day, you work a bit harder the other day.'* This particular woman remarks that this goes at the expense of her body, because she works on until she is really dangerously ill (Overdiep en Visser 1983). For telecommuters the danger might even be bigger: the worker is constantly available to the work, and the work to the telecommuter. Even hospital admission no longer precludes carrying out work. Telecommuters reported new sickness behaviours. Rather than deciding not to work and remaining off sick for the rest of that day, they continually monitored their work fitness, recommencing if only for short periods when symptoms diminished. Short periods of work thus became possible, which served to reinforce the self-perception of not being ill (Steward 1999).

Steward puts forward that many dislike the traditional black-and-white decisions about being fit or unfit to work. Many like to work flexibly in ways that match their fluctuating state of health. She also found that telecommuters experience a time/space paradox. Going home to be sick is impossible for them. It is difficult, or even impossible, to find a sick space, impenetrable to work or employers. Working in a bedroom,

the sick and work space is co-terminus. Defining a time to be sick is also problematic. Without a medical certificate or a culturally determined time span for an illness, many telecommuters are at a loss about how to be sick at home. According to Steward, telecommuting thus might change the definitions of sickness. Steward's research raises the issue whether employers are aware of the long term consequences on the quality of work-output.

Despite those critical remarks regarding sickness, the above-mentioned authors come to the conclusion that most teleworkers value their status positively. The increased flexibility and grown responsibility for their own work can contribute to the quality of life. This will be one of the issues in this research.

3.2.4. Technological aspects

The definition of telework indicates the significance of technology. Without information and communication technology (ICT), the concept of teleworking would not exist. ICT is capable to bridge time zones and space. Because of ICT, it hardly matters where and when people work. However, the technological possibilities do not guarantee the use of it in every situation. Cultural aspects, routine, structure, personal preferences or economical conditions are likewise important. Not every country has an infrastructure that is sufficient to enable telecommuting, not every household has enough money and space to install a computer. Nevertheless sooner or later ICT will penetrate all aspects of modern life. According to the European Commission:

'Work becomes fully networked, covering both physical interaction as well as interaction and communication over the telecommunications network'
(European Commission 1998: 11).

ICT enables co-operatively working across national boundaries or time zones, thereby fully exploiting the 24-hour day. The use of technological artefacts – computers, faxes, Internet, mobile phones – has grown tremendously over the past few years. According to Multiscope (2000), 56 percent of the Dutch population owns a mobile telephone; almost two third of Dutch households have a PC and 39 percent have Internet access from home. Mass access to the Internet heralds an imminent and revolutionary leap in the number of jobs that could potentially be done at home for all or part of the time (Felstead and Jewson 2000).

ICT has become normal, for users as well as for suppliers. Consequently, ICT is a minor issue in telework practices. As stated before, the attention in telework projects shifts from technological issues to organisational, cultural and individual aspects. Technology needed for telework is proven technology (Geerdink et al. 2000). Notwithstanding that, the focus of many telework projects is still on the technical implementation of home work spaces or flexwork offices, even though a known advocate like Gordon (1999) calls the emphasis on technology one of the biggest mistakes. The European Commission (1998) sees a lack of infrastructure, hard- and software capable of supporting data-intensive teleworking at acceptable speed, not only as a serious barrier to the uptake of teleworking in an absolute sense. It also introduces relative differences between European regions.

A serious aspect of the use of advanced technology for remote working is the threat to security. Unauthorised access should be prevented and copying of confidential data should be discouraged. Gordon (2000) does not want to trivialise security concerns, but he emphasises that they should be considered in relation to other security measures. As long as employees can walk out the door of their organisation with reports, drawings, diskettes, files, and anything else in their pockets or briefcases, it is incorrect to say that telecommuting presents a new and different security risk. Security risks can partly be fenced off by hardware and software solutions, which are not completely secure, but form reasonable barriers to unauthorised access. Next to that, telecommuters should be selected carefully and trained where needed (Gordon 2000).

3.2.5. Telecommuting in context

In this chapter, telecommuting has been considered in relation to general societal changes. Structural, cultural and technological changes, as well as changes on an individual level, enable new ways of working. At the same time, these new practices call for further development of technological applications and organisational structures. Flexibility is one of the key characteristics of modern society. It is to be found in organisational structures: flexible work patterns, time and space independent; in cultural patterns: modularisation of the daily life; in individual behaviour: personalised consumption patterns; and flexibility is facilitated by technological developments.

Telecommuting is part of all these developments and makes – vice versa – these developments possible. It became an integrated part of post-modern society. Through telecommuting the modern information and communication technology enters the private space of the home. In this chapter, the micro-context of the home and the household – within which the telecommuter performs his or her paid labour – is left out of consideration. That will be the subject of the next chapters.

4. The theoretical framework of household studies

Chapter 3 (*Telecommuting in the context of societal change*), describes changes in modern and post-modern societies – and in particular changes in the labour market –, constituting the scenery against which telework could evolve. A distinctive feature of telecommuting – interpreted as *home-located* telework – is that it takes place in the home, in the context of a household and amongst household activities. This chapter takes this context as point of departure, deriving the theoretical concepts from the field of home economics or household studies.³

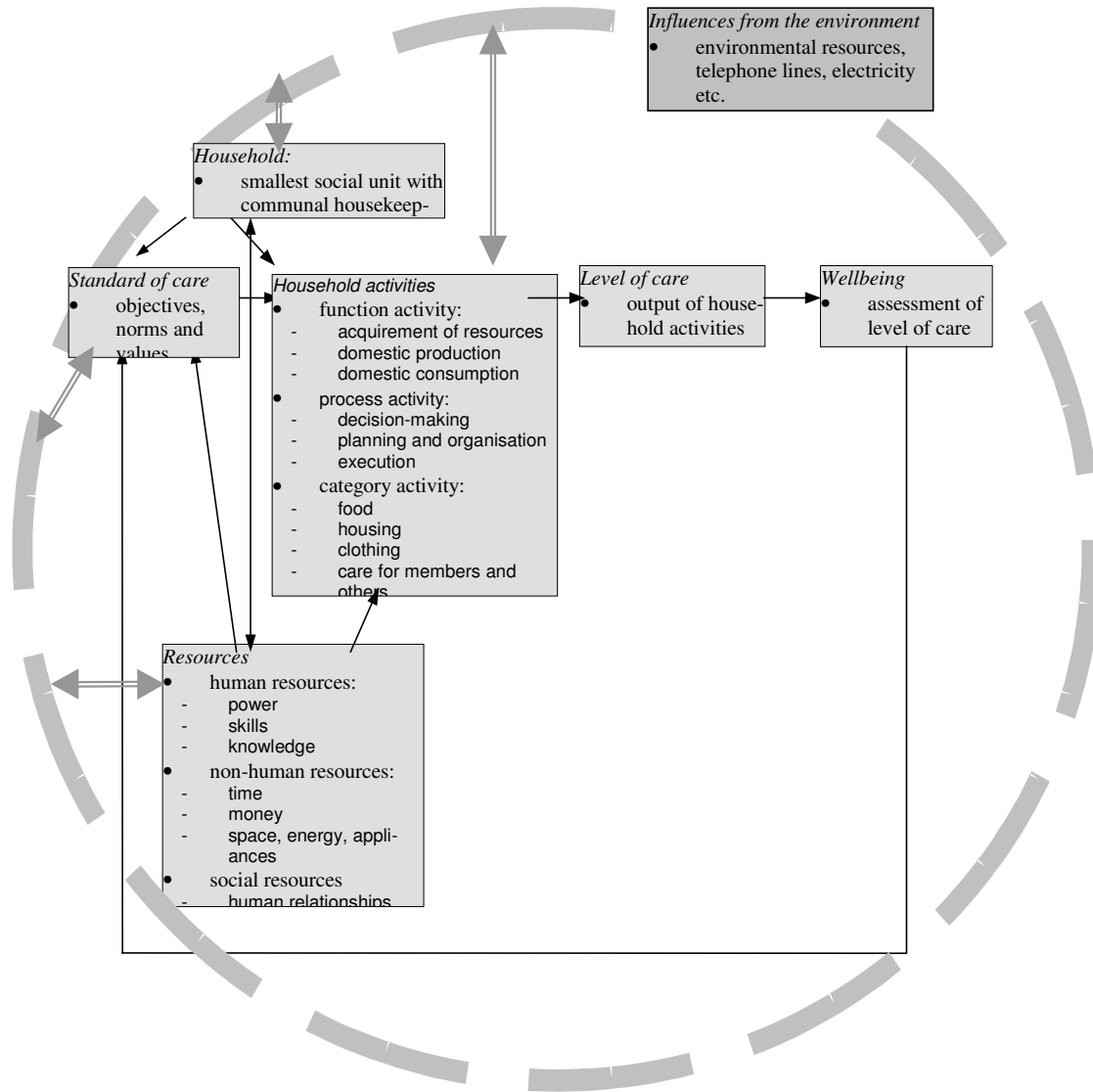
4.1. Home economics

Home economics investigates the phenomena of household and family in an integrated approach. This means – according to Van Dongen (1993) – that insights from a range of other disciplines – economics, sociology, psychology, biology and technology – are routinely integrated into the articulation of research questions and the reported results. Home economics is not only interdisciplinary, but also an applied, practical study characterised by an ongoing interaction between theory, practice and policy. Theoretical statements should be empirical verifiable and have practical relevance. If possible, they should be applied in strategic plans and recommendations. Home economics does not confine itself to activities within the home, but also involves the relation of the household with its direct surroundings and the society as a whole. This implies an integration of micro, meso and macro levels of explanation. Additionally, in an integrated approach the basic assumptions of the researcher are made explicit. This study is based on a holistic view, in which society is seen as a complex structure and all human labour is interpreted as productive processes.

Although the content of home economics as a discipline is not unambiguous – reflecting social change over time and the focus of specific universities – there is considerable consensus on the objectives of study and the concepts used.

³ A discussion on the name of the field is to be found in Casimir and Lyon 1998.

Figure 4-1: The Home Economics Model



Derived from Zuidberg (1981) and Goossens en de Vos (1987); English descriptions from Hardon-Baars 1994.

4.1.1. A model

The central interests of Home economics are the activities and functions of the household. Home economists investigate how daily care and domestic production are organised and which resources are applied to it. They examine the structures and ideologies associated with the activities and functions and which are expressed in the standard of

care. The assessment of the activities indicates the degree of wellbeing of the household (Zwart 1994).

The model of Zuidberg summarises these concepts (Zuidberg 1981; Goossens en de Vos 1987; Hardon-Baars 1994). In this model household activities are defined as the satisfaction of material needs and creating conditions for the satisfaction of other, non-material needs in the domains of food, clothing, housing, health, care and leisure. These activities include decision-making, planning and organisation, and execution of the care related to the mentioned categories. To carry out these activities both human and non-human resources are used. Human resources are: strength, skills and knowledge; non-human resources are time, money, goods and services.

Household activities take place within a household: the smallest social unit with communal household activities. The output of these activities consists of goods and services produced and is directed at the wellbeing of its members, referred to as level of care or level of living. This output can be evaluated against the objectives, norms and values of the household and its members, called the standard of care.

As an addition to Zuidberg's model, Goossens and De Vos (1987) inserted the effect of external factors, like the state of science and technology, political and cultural factors, and the availability of environmental resources (telephony, electricity etc.). Changes in the environment of the household are most likely to influence both resources and standard of care. Indirectly, other parts of the model can be affected. The application of time, labour and money by the household results in goods and services, either supplied by the market, or produced within the home. However, the availability of typical appliances and utensils, and of space and energy are often referred to as resources of the household, because they can play a role in household production. In the original model the human resources are power (or: strength), skills and knowledge. Human relations – networks of relatives and acquaintances – are not mentioned and, arguably, might be a very important resource. They can be included in the concept of *social resources*, the networks of human relationships and social institutions, to the disposal of families.

Thus the model gets the form of figure 4-1. As said before, home economics is characterised by its integrated approach, including concepts derived from sociology, economics, psychology, biology and technology. However – without always making a clear-cut division between the various sciences –, in this research the emphasis is on the sociological aspects of the model: the study of human groups and societies, giving particular emphasis to the analysis of the industrialised world (Giddens 1997). In the subsequent sections the different aspects of the model are elaborated, focussing on those elements that are relevant in this sociological approach. The environment as such is sufficiently discussed in Chapter 3 (*Telecommuting in the context of societal change*), and here only gets attention in its relation to other aspects of the model.

4.1.2. Household activities

The core of the home economics model is formed by household activities. These are divided into three types of activities: function, process and category activities. Function activities consist of the acquirement of resources, the domestic production and the domestic consumption, concerning the categories food, housing, clothing and care for

members and others. These functions are subject to the process activities of decision-making, planning and organisation and the actual execution of domestic tasks.

Household production

As shown in Chapter 3 (*Telecommuting in the context of societal change*), capitalism separated the two forms of labour – paid labour on the labour market and unpaid domestic labour – in time and space, but also in sex. The first – capitalist production – has been mainly the domain of men. In the second – the reproduction, involving both daily care and care for a new generation – women are over-represented (Wheelock 1990).

The appearance of the domestic sphere as a private domain can be seen as a Victorian middle-class construction. Its privatisation was founded on the exclusion of women from paid work and their idealisation as morally superior ‘angels in the house’ (Phizacklea and Wolkowitz 1995). One of the characteristics of this work is its relatively invisibility, brought to light in the late 1960s and the 1970s. The indication ‘work with no name’ Visser used in 1969 is significant in this respect (Visser 1969; see also Oakley 1974; Phizacklea and Wolkowitz 1995; Sevenhuijsen 1995). A major concern in the ‘domestic debate’ is to make the work visible and recognised as work.

The work of Tronto (1993) deepened this debate. She distinguishes ‘caring about’, ‘taking care of’ and ‘care-giving’, next to ‘receiving care’. The first involves the recognition that care is needed and can relate to groups of people. Caring about is culturally and individual shaped: it is how we think and what we are, but it can also be described on an political level, relating to the way society is caring about underprivileged citizens, for instance. Taking care of involves the recognition that one can act to address the needs of others. A husband is taking care of his family by working at his job. A doctor is taking care of a patient, but the nurses are providing the hands-on care. This is the third category: caring for, the direct meeting of the need for care. Caring for has been mainly the work of slaves, servants, and women in Western history. Caring for is usually conceived as a private concern, supposed to be provided in the household. The largest task of caring, those of tending to children, and caring for the infirm and elderly, have been almost exclusively relegated to women. The relatively powerless in society have little to take care of, and if they care about, it is about private or local concerns. Conversely, men and people of greater privilege care about public and broader issues. They are also the ones who are taking care of. Thus, Tronto argues, care is gendered, raced and classed. Tronto pleads for the development of an ethic of care. This is, however, obstructed by the boundary between private and public sphere, which is a moral boundary (Tronto 1993).

The morality aspect of household production is also discussed by Pennartz and Niehof (1999). Family and kinship are embedded in a normative structure, involving family obligations. The exchange of goods and services within the household is based on reciprocity and morality, and does not follow the rules of the market economy.

Economists conventionally defined the domestic sphere as the opposite of the public sphere. They saw the public sphere as production, the domestic activities as trouble-free consumption. This vision is problematised by many authors, not only feminists. Becker (1965) was, with his article ‘*A theory of the allocation of time*’ one of the first to develop a theory on household production. In his words:

'The integration of production and consumption is at odds with the tendency for economists to separate them sharply, production occurring in firms and consumption in households' (Becker 1965).

Also Galbraith (1975, cited by Wheelock 1990) emphasises the importance of household production, because the commodities bought on the market are not in a consumable form, and need housework to convert them into regenerated labour power. This housework becomes more important, since rising standards of popular consumption and the disappearance of personal servants create an urgent need for consumption to be managed. Unlike Becker, Galbraith recognises the gender-aspects of housework, stating that women have been *'converted into a crypto-servant class whose role is critical for the expansion of consumption in the modern economy'* (Wheelock 1990: 69).

Moser (1993) discusses the fact that the New Home Economics identify the household as a unified unit of consumption and production. Both production and consumption often extends beyond the household to include others. Besides that, family labour time is not like other factors of production:

'(it cannot) be flexibly allocated based on its comparative costs in market and non-market activities. Gender as well as age and status are all critical determinants in differentiating the mobilisation and allocation of family labour to different activities' (Moser 1993: 22).

Household work is definitely *work*, since work or labour can be defined as human self-care in a socially organised relation of co-operation. An activity has the character of work, when it is felt in some way or another as a duty, as something one *has* to do (Kwant, cited by Visser 1969; see also Van Houcke 1982). However, household work is different from work on the labour market, not only because of its gendered character, but also because it is performed under different conditions. It is private, it is self-defined and the housewife's work is related to social labour by marriage and motherhood, not by wage (Wheelock 1990). This relation between society and household activities is two-sided:

'On the one hand, structural economic change affects the internal dynamics of the household, in terms of the division of labour between men and women, both in practice and in ideological terms. On the other hand, the way in which households behave, and the work strategies men and women adopt affect the functioning of the labour market' (Wheelock 1990: 4).

Decision-making

The way household production is being performed is subject of decision-making. Decision-making is a main issue within home economics and family studies. Pennartz and Niehof (1999) remark that it is considered to be a crucial process underlying all functions of family resource management and essential to the quality of human life. Decision-making serves the prospect of the family's continued survival within limited environments, and the preservation of the natural environment. Developments in soci-

ety intensified the need of households' decision-making (Pennartz and Niehof 1999). The knowledge society – as described in Chapter 3 (*Telecommuting in the context of societal change*) – with its rationality, individuality, globalisation and ICT, increased both the opportunity and the responsibility to make decisions.

Most decision-making studies are based on a *Rational Choice Approach*, taking the individual – with his or her preferences and available resources – as its unit of analysis. Pennartz and Niehof argue that this approach leads to a reductionist view of reality in family households' everyday life. They consider, following Ajzen (1991), that the Rational Choice Approach can be completed with the concept of 'normative beliefs' as an explanatory variable, and exemplify the conceptual framework with the theme of the recycling behaviour of households. They discuss other approaches, in order to complement the picture of the process of resource management. The *Strategy Approach* studies decisions as being part of or being embedded in future-oriented strategies of households. It takes the household – and not the individual – as its unit of analysis. The *Organisation Approach* brings different patterns of allocation of resources to the fore, the way these practices depend on household characteristics, and also inequalities regarding earning opportunities among household members. The *Power Approach* detracts from the ideal of the family household as a unit. It introduces ideology as a factor to explain inequality within family households and it conceives decision-making as just one level at which power operates. This approach does not deny the validity of resource-based explanations of the division of power, but rather it intends to explain existing inequalities regarding the physical and psychological burdens. The *Opportunity Structure Approach* introduces external forces – comprising the network of social agencies and institutions – to explain decisions and practices within households. The *Longitudinal Approach* includes family life-cycle concepts and the interrelationships between individual time, family time and historical time. Finally, the *Morality Approach* analyses care for its moral and political aspects. Gender is shown as an important element in family morality and care giving (Pennartz and Niehof 1999).

Within the framework of this research, it takes too far to discuss these approaches exhaustively, but elements of them will play a role in the remainder of this study. Important is to see that the study of the decision-making process can be approached from many different angles and disciplines. The outcome of the process of decision-making is the allocation of resources within the family and between the family and the outside world.

Van Dongen (1993) introduces the concept of internal and external division of labour. The internal division is the division of labour between members of the household. The external division of labour concerns the allocation of tasks, labour and resources between the family and the market, like choices between purchased consumer goods and services and home production. This fits with the ideas of Felstead and Jewson (2000), who discuss the managing of boundaries *within* the home, and *between* the home and the outside world. Though boundaries of a different kind, they are closely related. Moser (1993) points at a limitation in the New Home Economics approach, that assumes a joint utility function of households:

'Critical here is the fact that welfare maximization is conditional on the 'free choices' or 'preferences' of household members being equally represented in a

single household utility function. How do the single family welfare functions cope with the fact that within households individuals are perceived to make free and voluntary economic choices?’ (Moser 1993: 22)

The allocation of labour within the household has ideological, cultural and economic reasons. Intra-household decision-making, management and distribution arrangements vary depending on the household form and nature of the ‘conjugal contract’ (Moser 1993). These ‘contracts’ or ‘understandings’ can change when circumstances change. Wheelock (1990), for instance, found a correlation between the hours of paid labour of the female partner in a household and the amount of domestic labour done by her unemployed husband. In her study, unemployed men in families with an employed wife took up more household chores than expected, when the wife was not at home at crucial moments, such as dinner time or children’s bedtime (Wheelock 1990).

Next to individual preferences of members of the household and power relationships within the household – which will be discussed further in section 4.1.4 –, the organisation of everyday life is also determined by other elements, mentioned in the model: the composition of the household and its stage in the family life-course, the normative context (standard of care) and the availability of resources, together with environmental factors as structure, culture and the state of science and technology. Felstead and Jewson (2000) suggest that two allocation processes are central to the ordering and lived experience of household life: the domestic division of labour, and the management and control of household finances. This study focuses on the division of labour.

Category activities

Household production is directed to the categories: food, housing, clothing and care for members and others. The first three are often called the household activities in the narrow sense. They comprise preparing meals, setting and clearing the table, doing the dishes; dusting, vacuum cleaning, cleaning windows and doors, floors, toilets, bathrooms; waxing furniture and floors; making beds; chores around the house; doing the laundry, ironing, clearing away the laundry; mending clothes, polishing shoes; organising the work; shopping, transportation for household activities. Personal care and caring for members of the household consist of sleeping, eating and other personal care; care for children and others (De Hart 1995).

Wheelock (1990) identified regular and occasional tasks, skilled and unskilled tasks, major and minor tasks and tasks that are gender neutral or gender segregated. She made a classification of activities that are more gendered than others:

‘Amongst the major, regular, skilled tasks, there was a noticeable amount of sharing making the main meal, but very few men always or mostly undertook this. Washing and ironing both showed a strong gender differentiation, and were overwhelmingly women’s tasks. Amongst the semi-skilled regular tasks, hoovering was gender neutral. However, ‘bottoming’⁴ was an almost exclusively female activity. (...) Amongst the tasks which had a strong responsibility or

⁴ ‘Bottoming’ is a local term, used in North East England, which means pulling the furniture out and giving a thorough vacuum (Wheelock 1990: 65).

managerial element in them, both planning meals and checking what was needed in the way of shopping were strongly women's work' (Wheelock 1990: 105-106).

On the basis of her analysis, Wheelock established a quantitative benchmark for the gender-differentiation of tasks. Three major tasks – the main meal, washing and ironing – were predominantly done by the wife, whilst two tasks – vacuum cleaning and washing-up – are either shared or done by the husband. Deviations of this modal position grade the extent of gender-differentiation in the household.

4.1.3. The household

Household activities are performed in the context of households. A household is the smallest social unit with a communal *householding*, sharing one residence, with an own facility for domestic care, i.e. a facility for food and other essential necessities of life (Hardon-Baars 1994; Zwart 1994). Pennartz and Niehof (1999) discuss the imperfection of this definition. Sharing a dwelling is not necessarily sharing resources and expenses. Extended families may share a compound or even a house, but do not necessarily share a kitchen. The household itself may contain non-related persons more or less on a temporary basis, such as colleagues, friends or lodgers. Besides that, members of the household may leave the dwelling temporarily for seasonal labour migration or study. Many reproductive functions may be taken over by wider networks of kin, friends, or neighbours:

'In short, the concept of 'household' is broader than just 'a group of individuals living together and sharing meals'. Boundaries around households are fluid rather than stable' (Pennartz and Niehof 1999: 3).

Without giving a clear-cut definition Zwart (1994) lists four main aspects of the household concept: the collective residence; the collective daily care; the nature of the mutual relationships, marriage and kinship; the identification with the group.

For a long time it has been implicitly assumed that family and household coincide, and that both could be described with the above-mentioned four characteristics (Moser 1993). During the last twenty years, this became increasingly questionable. Zwart gives the example of the student, who is emotionally and economically still part of his or her family of orientation but who shares separate collective housing and daily care with other students, or with a landlord's family. In this case it is difficult to determine the household of which the student is part. Hareven (1982), in discussion of the difference between household and family, suggests that the family household is not static. It is also the place where young people return to in times of emergency, or where old people are cared for. Pennartz and Niehof (1999) also note that the equation of household and family is a little outdated. *Family* has a biological connotation and is based on alliance and kinship; *household* refers to household activities. Pennartz and Niehof distinguish family-households and non-family households. A family-household comprises of at least two persons, related to each other by either marriage – or an equivalent partner-

ship – or by birth or adoption. A non-family household comprises either a householder who lives alone or one who is not related to anyone residing in the household.

Zwart pleads for the focus of the household concept to be that of executing collective housekeeping. Pennartz and Niehof take the same direction, when they comply with the definition of Wallerstein and Smith:

‘A household is a social unit that effectively over long periods of time enables individuals, of varying ages and of both sexes, to pool income coming from multiple sources in order to ensure their individual and collective reproduction and wellbeing’ (Pennartz and Niehof 1999: 3).

This does not, however, totally resolve the demarcation problem, because daily care or reproductive activities are not a clearly defined set of activities. The definition also ignores the fact that individuals can be regarded as participants in the political and the economic system on one hand, and are at the same time part of the family household, fulfilling its productive and reproductive functions. Family households are not only influenced by society, but are active agents that exert a certain influence on society as well. Family households are able to perform changes within broad structural constraints, they are relatively autonomous vis-à-vis macro-structural processes, and they act as mediating agencies between the individual and society (Pennartz and Niehof 1999). Laslett (1972) describes the family as the final unit of society, as the citadel of its values, both collective and individual. In modern societies, characterised by the values of individualism, the family is a domestic group, sharing a common house and facilities. The family is defined in terms of activities (Harris 1990).

Important characteristics of the household are: its composition (number of household members), the age of the family members and the stage of life cycle or life course the family finds itself in. It is obvious that a bigger family brings about more household work. Families with smaller children have to devote more attention to childcare. Younger couples display different behaviour from older ones with respect to household chores, childcare and career ambitions (Van der Lippe 1993; De Hart 1995).

For the purpose of this research, it is important to distinguish the employment situation of members of the household: the job they have and the amount of hours they spend on this job. In the course of this study – in particular in the questionnaire for the survey (see Chapter 6, *Methodological aspects*) – employment situation is a separate chapter and not an attribute of the household.

The household attributes cannot be detached from the social environment. Societal change is reflected in the composition of households, for instance the age of cohabitation and marriage, age of child birth, etceteras. Many sociologists regard industrialisation and urbanisation as the main perpetrators of the disruption of traditional family patterns, replacing the three-generational extended family by the nuclear family (Hareven 1982). Next to that, in the United States, pioneer conditions, the rise of the public school and the extension of democratic principles accelerated its development (Laslett 1972). Although a causal relation can be disputed, many claim a ‘fit’ between the nuclear family and the requirements of industrial society:

'Because the occupational system is based on achievement rather than ascription, the detachment from rigid rules of extended kin renders individuals more mobile and therefore more adaptable to the labor demands of modern industry' (Hareven 1982: 1).

However, Hareven considers the existence of a three-generational extended family in the pre-industrial past a myth of 'Western nostalgia'. The nuclear household seems to be the dominant form of family organisation in Western society for at least the past two centuries. Despite that, the importance of kin relations as a resource should not be underestimated (Hareven 1982). Laslett (1972) notes that historians and sociologists left suppositions about the size and complexity of households in the past often undisturbed. According to him, those scholars describe the three chief historical stages in the evolution of the family – the large patriarchal family of ancient society; the small patriarchal family which had its origins in the medieval period; and the modern democratic family which to a great extent is a product of the economic and social trends accompanying and following the industrial revolution – without actual figures, nor references to sources which might contain them.

Recent developments, like the increased level of education amongst women and their entry in the labour market, have their effects on the household structure. Decreasing housing shortage, increasing geographical mobility, mechanisation of the household and the attachment to personal autonomy and privacy gave an important stimulation to the so-called family individualisation and a spectacular growth of the number of singles (De Hart 1995).

The form of family organisation is related to its life cycle. Felstead and Jewson (2000) determine the stage of the life-cycle as one of the forces that give rise to variations in the way households manage the boundaries between paid and unpaid labour. Other forces are the labour market, the nature of activities and tasks, beliefs and values, which will be discussed in other sections. Pennartz and Niehof (1999) write about life-cycle:

'The life-cycle concept presupposes the existence of an unwritten blueprint of the temporal patterning of the life of an individual, in which the various stages, their sequence and duration, and the transitions from one stage to another are given. It is normative in character and provides society with a certain measure of predictability of, and social control over, the individual life course' (Pennartz and Niehof 1999: 158).

Forsebäck (1995) describes this 'blueprint' as a number of mental development phases, which are characterised by a different extent of group dependency. People in their early teens leave the 'biological group', the circle of family, to enter the unorganised group. People in their late twenties, after having finished studying, enter the organised group; it is work and family that dominate everyday life. When in their early forties, they enter the 'symbolic group', where an informal organisation increasingly replaces the formal order and where individual networks gradually form the foundation of identity and mental security. Around 55 years of age people enter the solitary phase, where the

individual is identified by his or her own name, rather than by organisational or institutional labels (Forsebäck 1995).

Because the life-cycle approach has the above-described normative and standardised character, Pennartz and Niehof (1999) suggest a life-course approach, which emphasises human agency. Central concepts in the study of life course dynamics are trajectories and transitions. Transitions from one stage to another are embedded in trajectories, and each trajectory is marked by a sequence of transitions. A life course can be described as the way in which an individual progresses through various stages in life, and through various careers, without the normative connotations often associated with the concept of life cycle. The framework allows for more variability than the life-cycle approach.

A crucial question in both a life-cycle and a life-course approach is how people move through their lives fulfilling different roles sequentially or simultaneously and how individuals synchronise their activities with those of other family members and in response to historical conditions (Hareven 1982). The answer to this question asks for a longitudinal approach, which is beyond the scope of this research. Stage in the life course is taken into account as an attribute of the household, and is as such a determining factor in the extent and the allocation of household labour. According to Hareven, a life-cycle approach converges on the issue of timing. More about time is to be found in section 4.1.5.

4.1.4. Standard of care

The allocation of resources within the household, is – as described in section 4.1.2 – to a high degree dependent on the attitudes and opinions of members of the household, the normative context. This is influenced by norms and values of society. Opinions concerning the way the housekeeping should be performed, norms and values about the quality of daily care, and about the division of tasks among the members of the household, differ with time and social change. Developments discussed in chapter 3 (*Telecommuting in the context of societal change*) – like modularisation, individualisation, rationalisation and egalitarianism – are reflected within the normative beliefs of modern households. Various studies in the field of home economics (Van der Lippe 1993; Baanders 1998) prove that the normative context of a household exerts crucial influence on decisions within it. Pennartz and Niehof (1999) argue that the domestic arrangements have a certain moral content. They see the moral properties of family household organisation as arising out of the weighing of interests, rights and responsibilities of individual members as against those of the group, or vice versa, on the basis of a certain normative consensus.

This normative consensus is seldom a conscious, intentional feature of household behaviour. Felstead and Jewson (2000) state that households incorporate values and assumptions, derived from practices, beliefs and values that are habitual or taken-for-granted. They describe these as *household understandings*. These are based upon deeply held assumptions about what is perceived to be fundamental, commonly regarded as ‘second nature’, normal, appropriate and decent, and they are constructed around personal ties of sexual partnership, marriage and parenting. Household understandings are not formally stated – as in a contract – but are expressed symbolically,

implicitly and intuitively. Komter (cited by Niehof 1994) calls this the power of casualness. Overt statements of the principles of household understandings are relatively rare and are usually confined to exceptional moments of conflict, celebration or 'rites of passage' (Felstead and Jewson 2000).

This section focuses on two interrelated dimensions of the normative context. The first dimension is the attitude towards paid and unpaid labour. The second dimension is the attitude towards division of labour among members of the family, in particular between men and women (Van der Lippe 1993; Droogleever Fortuijn 1993; Van Dongen 1993).

Attitudes towards paid and unpaid labour

Throughout history thoughts about labour are ambiguous. As pointed out in Chapter 3 (*Telecommuting in the context of societal change*), in industrial society the term 'work' obtained significance as paid labour, either in the employ of a capitalist employer, or as a self-employed producing goods or services. On the one hand, this paid labour is regarded as a joy of life and on the other as a symbol of difficult, 'laborious' existence. Mok (1990) discerns people with a high work ethos, who assign a positive connotation to labour, and people with a low work ethos, for whom working for a living is a necessary evil.

Droogleever Fortuijn does not speak of high or low ethos. She introduces the concept of self-sufficiency, which indicates to what extent a household is career-oriented or family-oriented: do they purchase as many goods and services on the market as possible and spend most of their time on paid labour, or do they emphasise self-production and spend as little time to paid labour as possible. She defines the *careerists* as households in which household activities and childcare are arranged around the paid labour of both partners. *Familistic* households focus on self-sufficiency and arrange the paid labour around household activities and childcare (Droogleever Fortuijn 1993). Then there are households, that mainly realise their domestic needs by the acquirement of goods and services on the market. We might call them the '*monetarians*': trading money for household tasks (De Hoog en Van Ophem 1995).

In a similar attempt to develop a household classification, Qvortrup (1998) discerns career-oriented households: the '*ones who live to work*', and '*wage earners*': the ones who work to live. He adds a third group: the self-employed. He argues that all three categories can be defined by the way work and leisure time are related. The family-oriented wage earners place leisure time above work, career-oriented households prize work above leisure time, whereas self-employed people are very reluctant to draw a line between working hours and leisure time. They cherish other values, such as running their own farm or firm, and they do not experience any significant conflict between family life and working life (Qvortrup 1998). According to Kraan en Dhondt (2001), researchers of the Dutch research institute TNO, telecommuters resemble the self-employed more than conventional employees. They work long days and work often in the evenings and in weekends, partly because they are evaluated on measurable goals and are more often confronted with narrow deadlines (*Algemeen Dagblad* 21 February 2001; Kraan en Dhondt 2001). According to these researchers, telecommuters miss the opportunity to compare their situation with that of their colleagues. As a result, and against accepted opinions, they work harder and they spend all the time saved

on commuting, on paid labour. Because of these long hours, they have – more than the average employee – the difficulty of combining paid work and private life. Stress and RSI (Repetitive Strain Injuries) lay in wait. Concentration problems and even insomnia would be the consequence. This situation was explained in terms of a constant sense of guilt: during the paid work household chores would haunt the home workers.

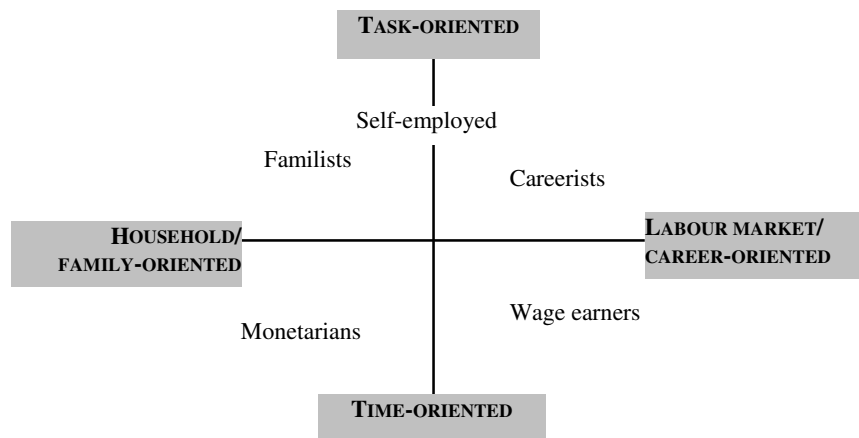
Wheelock (1990) cites studies, for instance Wajcman (1983) and Evans (1984), that focus on several aspects of women's relation to domestic work and paid work. One classification that can be made is a division into women with a positive, and women with a negative attitude towards household work. Attitudes can either change over the life course, or they do not. Evans concludes that there are very close links between women's attitudes to domestic labour, their domestic practices and their activity in the paid labour market (Wheelock 1990).

A different way to describe people's relation to (paid) work comes from Lise Vogel. She distinguishes time-oriented and task-oriented labour. The pre-capitalist production of goods and services by self-employment is typically task-oriented labour. Time-oriented labour is the dominant form in capitalism, but career-oriented people often experience their labour as task-oriented, even when they formally work for a specified amount of hours. It is clear that the wage earners are mainly trading time for money (Vogel 1987, cited by Kloeck 1989).

Kloeck (1989) applies Vogel's view on the division of paid and unpaid labour. The work of the breadwinner is paid and his (rarely her) work is restricted in time; the housekeeping of the housewife is unpaid and unlimited in duration. Domestic labour can be seen as a remnant of the pre-capitalist, task-oriented family, in which all work was part of family life. In traditional families (i.e. families with a traditional division of labour), domestic time hardly is an issue: the housewife and mother is available 24 hours a day, 365 days a year. Tasks have to be performed, but are not measured in terms of time or costs. Since more mothers work outside the home, linear time becomes more and more important in everyday life. So, although the private sphere is in essence task-oriented, time becomes ever more important, mainly by the relation between work and home, but also because advertisements and media impose an increasing consciousness of time upon us (Lyon and Colquhoun 1998).

Figure 4-2 summarises the two angles, from which the attitudes towards paid and unpaid labour can be described. The upper part represents a task-oriented attitude; the lower part a time-oriented one. Household labour is represented on the left, paid labour on the right. Family-oriented households have a task-oriented attitude towards domestic labour. They can be found in the upper left quarter of the diagram. These might be (but not necessarily are) the same households, that have a time-oriented attitude concerning paid labour: the wage earners, the ones who trade time for money on the labour market. Families with a time-oriented attitude concerning domestic labour are the monetarians: the ones who buy consumption goods and services on the market. In many cases this goes with a careerist attitude towards paid work.

Figure 4-2: Task or time-oriented versus family or career-oriented.



The attitude towards career and family is gender biased. Since women are still in majority the first responsible for household and childcare, it is plausible that they have a more family-oriented attitude, whereas men have more often a career-oriented attitude. And although women increasingly recognise the need to seek and retain full-time employment careers, they still have another perspective than men. Women are satisfied with adverse terms and conditions, because their primary commitment is to the domestic sphere (Phizacklea and Wolkowitz 1995). This brings us to the second dimension: the attitude towards the division of labour within the household.

Attitudes towards division of labour

The way domestic labour is actually being performed is dependent on many factors, such as the available resources (section 4.1.5) and the process of decision-making, planning, and organisation (section 4.1.2). Opinions on quality also play a role, but most crucial are attitudes towards the way the labour should be divided between members of the household, in particular between men and women. Times are changing slowly, and Oakley's observation made in 1974 is still not totally outdated:

'Despite a reduction of gender differences in the occupational world in recent years, one occupational role remains entirely feminine: the role of housewife. No law bans men from this occupation, but the weight of economic, social and psychological pressures is against their entry into it. The equation of femaleness with housewifery is basic to the structure of modern society, and to the ideology of gender roles which pervades it' (Oakley 1974: 29).

In the literature, many explanatory models can be found to explain the gender division of labour, based on different types of theories and disciplines. The most important sources are: historical materialism and other economical theories, biological explanations, the role of technology, theories of power, role theories, theories on ideology and

socialisation (Daru 1993; Shelton & John 1996). All of these theoretical concepts have their own strength and shortcomings and an element of truth in it. One theory is never sufficient to understand the whole picture. Many do not sufficiently explain differences between men and women in terms of the division of labour. Social circumstances are under- or overestimated. For instance, economic theories interpret the division of labour between partners as the result of negotiations, in which the optimal fulfilment of needs and wants is the point of departure. Others argue that social desirability steers choices, combined with possibilities under specific circumstances. The way women are socialised determines to a large extent how they deal with their role as a mother and housewife (Chodorow 1978). There are not only many different ways to explain differences, there are also many different ways to address them. This will be elaborated in section 4.1.7.

In individual households, the combination of different motives will be the case. Economic motives will play a role, in most cases there is a certain balance of power, sometimes acquired by conflict; people behave according to expectations of their environment; but at the same time, they make their own choices and determine what they want, regardless their circumstances or background. People develop an ideology, partly from experiences in their youth – sometimes following the norms and values of their parents, sometimes reacting against them – partly related to the possibilities they have, and to prevailing norms and values in the surrounding society (Van der Lippe 1993). These norms and values are changing (Terreehorst 1994; Van der Maas en Haket 1995; Te Kloeze et al. 1996), but they are still different for men and women. Wheelock (1990) emphasises that women with families combine two jobs. Whilst the wife's employment career stops and starts, the husband's is continuous, and this asymmetry reflects the distribution of roles within the family and the gender division of labour. Gunter (1994) couples this double task with her attitude:

'Evidence suggests that the more traditional a role a woman adopts the more likely it is that she will be saddled with two jobs – waged work and unwaged housework' (Gunter 1994: 445).

Others (Moser 1993; Hochschild and Machung 1989) do not speak of a double role, but of a triple role of women:

'Indeed, women more often juggle three spheres – job, children, and housework – while most men juggle two – job and children. For women, two activities compete with children, not just one' (Hochschild and Machung 1989: 9).

Moser (1993) combines housework and children to one role: the reproductive work, the childbearing and rearing responsibilities, required to guarantee the maintenance of the labour force. The second role is the productive work, often to provide a second income. She adds a third role: the community managing work, including the provision of items of collective consumption, undertaken in the local community both in urban and rural contexts.

Hochschild found three types of ideology of marital roles: traditional, transitional and egalitarian. A woman's gender ideology determines what sphere she *wants* to

identify with (home or work) and how much power in the marriage she wants to have (less, more, or the same amount as her husband). Even though she works, the *pure* traditional woman wants to identify with her activities at home (as a wife, a mother, a neighbourhood mom), wants her husband to base his at work and wants less power than he. The traditional man wants the same. The *pure* egalitarian woman, as the type emerges here, wants to identify with the same spheres her husband does, and to have an equal amount of power in the marriage (Hochschild and Machung 1989).

Te Kloeze and others distinguish modern-western families and post-modern families, and families in transition from one type to the other. Modern-western is the type of family in which the man is the breadwinner and the woman takes care of household and children, while the relations between men and women are based on respect and affection. A post-modern ideology distinguishes more egalitarian opinions, which results in a more symmetrical division of labour (Te Kloeze et al. 1996). Nevertheless, Oakley's words are still valid, and supported by others, for instance Wheelock (1990), Hochschild and Machung (1989), and Van der Lippe (1993):

'Modern marriage may be characterised by an equality of status and 'mutuality' between husband and wife, but inequality on the domestic level is not automatically banished' (Oakley 1975).

Felstead and Jewson (2000) discern egalitarian and hierarchical households. Egalitarian households commonly seek views of all members and involve them in reaching a consensus. This often entails processes and techniques of negotiation and compromise. In hierarchical households decisions are made by some members and received by others (Felstead and Jewson 2000).

Droogleever Fortuijn (1993) classifies households according to their family- or career-orientation on one hand, and to their symmetry or asymmetry on the other. This classification leads to a description of four 'ideal types' of households: the 'careerist-symmetrical families'; the 'careerist-asymmetrical families'; the 'familist-symmetrical families'; and the 'familist-asymmetrical families'. These ideal types are – as Gasson and Errington (1994) describe it – '*a hypothetical construct, conceptually helpful but not necessarily exactly corresponding with empirical reality*'. Droogleever Fortuijn remarks that reality shows more multiformity than the four types of households she describes, and one household does not necessarily belong to one category over a longer span of time. She found too that her respondents – dual-income households – were neither pronouncedly family-oriented, nor pronouncedly career-oriented.

Attitudes – though very important – are but one explanatory aspect of household decisions and activities, next to household composition and family life course. The available resources are as important as that. Those are subject of section 4.1.5.

4.1.5. Resources

A central household activity is the allocation of resources. Households have resources available in terms of non-human resources such as time, money, goods and services (technical devices, software, infrastructure facilities, space) as well as human and social capital. Human capital relates to knowledge, skills and motivation. Social capital

can be defined as a network of human relationships. In the following subsections these resources are discussed.

Time

It is disputable whether time is a resource or a dimension of other resources. Engberg (1990, cited by Niehof and Price 2001) notes that time is neither human, nor material, but all activities have a time dimension. Time can be interpreted as a physical quantity, but it is also a social construction. De Hart calls time a basic dimension of individual and social reality. The rhythms of individual lives constitute the rhythm of the collective life, which in turn rules and comprises individual lives. Different societies use different time systems, with a diverging duration of a week, dependent on the rhythm of local markets and regional economic situation. The current time system relates to the social structure and mirrors social changes (De Hart 1995).

Hareven (1982) discerns three types of time: individual time, family time and historical time. Family time designates the timing of life-course events as marriage, the birth of a child, a young adult's leaving from the home, and the transition of individuals into different family roles. 'Individual time' and family time are closely synchronised, because most individual life transitions are interrelated with collective family transitions. Family time and individual time are both affected by historical time, the overall social, economic, institutional and cultural changes in the larger society. Hareven sees industrial time as an aspect of historical time. It encompasses the industrial culture governing behaviour and relations in the workplace and industrial communities:

'An understanding of the synchronization of these different levels of timing is essential to the investigation of the relationship between discrete lives and the larger process of social change' (Hareven 1982: 6-7).

Historical time is part of the environment, influencing households and housekeeping. Family time is reflected in the family life-course, which is an attribute of the household (see section 4.1.3). Individual time can be regarded as a resource. It is time that someone has to his or her disposal; but time is also a matter of priority, that is how much time people want to spend on something. Available time seems to be elastic. Busy people seem to have more time than people who have little to do. In this respect Van Ophem (1994) remarks that, for instance, volunteers in community activities more often than not have a full-time job. The amount of time needed for domestic labour is related to standards of quality and available non-human resources, but also to knowledge, skills, and organisational talent. A skilled person needs less time to perform a task than someone who is not skilled nor experienced. Furthermore, time has the same characteristics as perishable goods: if someone does not make use of a certain point of time, it is gone and not anymore at one's disposal (Broekman 1983). Gender plays an important role in time allocation: men and women are supposed to spend their time on different activities (Moser 1993; Niehof and Price 2001).

The amount of time available for household activities, is to a large extent influenced by the paid job people have (Terreehorst 1994; Spittje 1995). Becker (1965) remarks that in most countries the average work week declined to less than fifty hours per week, which means a third of the total time available. He continues:

'Consequently the allocation and efficiency of non-working time may now be more important to economic welfare than that of working time; yet the attention paid by economists to the latter dwarfs any paid to the former' (Becker 1965).

According to traditional economic theory, households maximise utility, subject to the resource constraint: they purchase goods of a certain price on the market, using income and other earnings. Becker assumes that households combine these market goods with non-working time, to produce more basic commodities that enter their utility functions, thus adding time constraints to the goods and income constraints.

Pred (1981) introduces the term *'coupling constraints'*, when describing the lives of the wives of industrial wage earners. Their daily practices are hemmed in not only by the reduction of family time resources, but also by the constraints dictated by the fixed operating hours of schools. Free time projects outside the home are subject to strict synchronisation requirements and time discipline (Pred 1981). Free time or leisure time is often defined as time *not* needed for obligations in respect of paid labour and caring activities (Te Kloeze et al. 1996). Time constraints seem to be of growing importance. According to Lyon and Colquhoun (1998), modern societies are obsessed with the mastery of time:

'The need to co-ordinate activities in time, and accomplish tasks with ever greater speed, has permeated virtually all aspects of everyday life' (Lyon and Colquhoun 1998).

Lyon and Colquhoun put forward many examples of the importance of time in the private sphere, and of time and speed as a selling argument.

'...Recent moves towards a 24 hour society are as much an expression of our inability to wait for traditional opening hours as they are a measure of our technical and commercial sophistication' (Lyon and Colquhoun 1998).

They also describe the paradox: whereas speed and time become a dominant factor in everyday life, powerful technologies allow for the manipulation of time. Video recorders, microwave ovens, word processors, answering machines save time or enable us to watch programmes and answer telephone calls at a time it suits us.

Space

Home – as a specialised site of residence, consumption, leisure and family life – is a recent phenomenon, generated by the high levels of structural differentiation typical of modern societies (Felstead and Jewson 2000). Phizacklea and Wolkowitz (1995) note:

'The appearance of the domestic sphere as a private domain, outside the truly social space of work and politics, is a Victorian middle-class construction; its privatization was founded on the exclusion of women from paid work and their idealization as morally superior 'angels in the house' (Phizacklea and Wolkowitz 1995: 14).

Nowotny (1982) calls the home a social space of special significance, in which privileged human interaction in the form of family relations goes on. It is the place in which repair takes place, in a diffuse and non-professionalised way. The domestic sphere is an ideological category, not simply a physical space. Space can be looked upon as a 'physical distance' that has to be overcome and as the 'container' – the walls, rooms, etceteras – in which work and family life take place (Jackson and Van der Wielen 1998). In the latter sense, space can be interpreted as a resource. Since technological innovations and modernisation reshaped temporal, spatial and cultural boundaries, other denotations of space have to be taken into account as well. Kompast and Wagner (1998) call space both a geographical and a cultural category. Time-space structures are constitutive features of the relation between work and family life (Jackson and Van der Wielen 1998). This relation changed over the past decades. Increasingly, the public space is invading the private sphere, as a result of which the household gradually is losing its autonomy (Nowotny 1982).

According to Pennartz (1981) the home has three basic functions. First a utilitarian, functional one, which supplies basic needs as protection and safety. Second a social function: it is the place where one can meet people, but also withdraw oneself from the outside world. And third an existential function: it is the place of self-expression, of identity. A home represents the psychological necessity of an own territory, which stands for identity, security, freedom and the want for community *and* privacy (Bakker and Bakker-Rabdau 1976). Bakker and Bakker-Rabdau assume that when people become older, their habitat grows, but also their want for an own territory. Woolf (1928) considered in *A room of one's own* this own territory to be a condition for self-development, emphasising the fact that very few women do have a room of their own.

Kesler (1991) remarks that when people decide to share a home and form a communal territory, they paradoxically start a territorial conflict. She defines territory as property of material goods, but also non-material property like knowledge, a social role or the attention of others. The fierceness of this conflict is related to the interest people assign to the disputed area. This also could become an issue when people start working at home, because the telecommuters claim part of the home, that formerly could have been used for other activities or by other members of the household.

An interesting concept is addressed by Steward (1999). She notices that many telecommuting projects assume a malign office and a benign home. Various studies – for instance Hochschild's *Time bind* (1997) – question this assumption. The home can have an ambiguous connotation. In many telework projects home is assumed to be a safe and secure place, with warm personal ties, where people feel relaxed, free and in control over their environment and can express themselves; in short, where they feel *at home*. However, the home can also be a place of profound insecurity, of stress, abusive relationships, of tensions, or of gender inequalities (Hochschild 1997; Steward 1999; Felstead and Jewson 2000; Daru 1993).

Other non-human resources

In modern society money is an indispensable resource, which most households acquire by paid labour. Only a limited percentage of them earns money by selling products, by allowances or in rare cases by earnings on savings. This money is spent on household

needs and activities, on education and leisure, on transport and health. Money is not only indispensable, it is also a source of power. According to Hochschild and Machung (1989) this applies more for men than for women. They think men derive their gender identity, status and power from the possession of money. For women this connection is less obvious. Money might give them a little more power, but it does not keep them from household chores. Although money is important, too much emphasis on money could distract from the fact that purchased goods are not yet ready for consumption (see section 4.1.2).

In Chapter 3 (*Telecommuting in the context of societal change*) is clarified how structural and cultural changes, and the development of science and technology, shape new goods and services. The availability of particular goods and services is partly a matter of location and historically grown situations. For instance, the availability of telephone lines, electricity, public transport, the size of houses and job possibilities differ from country to country, from region to region. The actual acceptance and usage of new products – leading to changes in life-style – crystallises in the interaction with economic and cultural developments. Household technology for instance offers the possibilities to facilitate heavy work in the private domain. This development did not take place without a change in life itself (Visser 1969). The raised standard of living, the upturn of frozen food industry, the decrease of domestic servants, but also emancipative ideas about the position and role of women and the subsequent consequences for household labour: these all favour the mechanisation of the household, making use of the possibilities the new technology offered. For a matter of fact, this development originated the paradoxical combination of an increased flexibility in the private domain, with at the same time an increased dependence on universal facilities and large-scale infrastructural services (De Hart 1995).

As we have seen in Chapter 2 (*Telework: definitions and developments*), goods and services fulfil basic needs, but have a communicative function as well (Douglas and Isherwood 1979). Regarding the artefacts of information and communication technology – PC's, Internet accessibility, mobile phones – Van Dijk et al. (2000) conclude that the property of these goods and services is mainly dependent on income. However, differences in usage and digital skills are to a large extent related to sex and age. Men and youngsters use ICT more often and are more skilful than women and elderly (van Dijk et al. 2000).

Human and social capital

Human capital consists of the skills, knowledge and motivation the household has to its disposal. Some skills save time, others save money. Motivation, the liking or disliking of certain chores, plays a role too. These factors obviously affect the way the domestic labour is carried out and will be divided over the members of the household, but they also affect the division between paid and unpaid work, partly because human capital determines the opportunities on the labour market. People who are efficient on the labour market will not only acquire more money there, but will also spend less time on consumption activities within the home (Becker 1965).

A special word is needed on information. Information can be regarded as acquired or applied knowledge. In that sense it is a human resource, but it can also be interpreted as a resource in the environment, including the access to information and the availabil-

ity of large amounts of information. Information has become the key resource of (post-)modern western societies (see also Chapter 3, *Telecommuting in the context of societal change*). Grünsteidl, head of Philips' Strategic Planning foresaw this already in 1984 when he argued:

'The dominant role of information is something totally new. It is one of the reasons that our classical economic laws don't count anymore, because they assume that resources and materials are subject to wear. Information has something of a Stradivarius; it can become more valuable as it is used more' (Van den Berg en Casimir 1984).

Also in the context of the household, information has become increasingly important. Consumer goods are more complex, more difficult to judge. There are more choices to make, more products to compare. Consumers have to choose between different services, that formerly were monopolised, like telephone providers. Developments in the area of e-business (tele-banking, tele-shopping, tele-democracy etc.) and telecommunications (GSM, WAP) ask for skills to handle those. And the ever-changing market of consumer goods makes that consumers no longer can rely on routine or on skills and knowledge passed on from mother to daughter (Brussé en Casimir 1979). Although daughters do no longer acquire knowledge about housekeeping from their mothers, there still are significant differences in human capital of men and women, reflected in education, payment, job opportunities and skills. Gender differences have been the subject of preceding subsections and will also be elaborated in Chapter 5 (*Exploring the field*).

Households do not only have human capital of their members at their disposal, but can often make use of others, by means of their network of social relations, consisting of kin relations, neighbours, colleagues, friends and acquaintances. These relations can be defined as social capital. Hareven (1982) emphasises the importance of kinship relationships, both for industrial organisation – for instance recruiting new labour force through networks of kinship relations – and for the internal organisation of the family. She cites studies that document the pervasiveness of informal kin relations in contemporary American society outside the confines of the nuclear family. Those studies describe mutual assistance between married children and their ageing parents, the survival of kinship ties in a highly mobile society and the positive role of kin in social mobility. They emphasise the continuity of inter-generational exchanges of goods and services between the nuclear family and extended kin over the life course of the family and its members. Harris (1990) elaborates the meaning of kinship relationships, placing them opposite economic relationships:

'Now economic relationships in modern society may be defined as universalistic, affectively neutral, achievement-oriented and specific. In contrast, kin relationships are particularistic, affective, ascribed and have a diffuse significance' (Harris 1990: 55).

Kinship and economic relations constitute polar opposites, but they inhere in the same society at the same time and influence each other. Kinship relationships can, according

to Harris, constitute a major resource to economic life. These relationships are not related to a status, but are personal; they are unique and unlike friendships, not chosen. Kin relations provide a diffuse social solidarity, on the basis of which relations of amiability or hostility can arise, based on a so-called 'consciousness of kind'. Like Hareven, Harris recognises the mutual assistance of kin. He criticises social theorists, who assume that the functional separation of productive and reproductive institutions also implied the segregation of kin relationships from the economic sphere, thus identifying kinship with affectivity and ignoring its cognitive properties. Harris notes that the obligations of kinship are informal and diffuse, providing the opportunity for negotiation and bargaining. Kinship relationships involve exchange, but not necessarily equivalent exchange; they are concerned with advantage, but the calculation of advantage is not strived for. They are based upon reciprocity over time made possible by the degree of trust engendered by their solidary nature. Kinship networks have significance in economic life, because they establish the social identity and moral character of persons by virtue of their association with known others. They have practical significance in that relatives provide domestic services, information about housing and job opportunities, act as sources of influence, and so on (Harris 1990; Luijkx 2001).

Significance of resources

Resources determine to a high degree the level of care that households can provide. This is obvious for money, goods and services, but it also applies to human skills. Budgeting skills, for example, can prevent financial problems in households with a low income. Knowledge of nutrition and skills in food preparation can improve health and wellbeing, regardless of disposable income. The same applies to skills in the field of do-it-yourself activities, like home maintenance, home decoration and maintenance of equipment. And, as said, social networks can prevent households to drop below the poverty line.

Resources can be a source of power. The one who owns the most resources, or the most crucial resources (money, strength), can apply these to win negotiations. Many authors (Daru 1993; Hochschild and Machung 1989; Shelton and John 1996) assume that the one who possesses the most resources, negotiate him or herself *out of* the domestic labour, presupposing a negative view on this type of work, both for men and for women. Chen (1996) however, cites several studies in which no mono-causal connection between power and resources was found and emphasises the importance of the cultural context. Brinkgreve (1992) argues that not only money and strength can be seen as essential resources, but also human relations. For instance: women can derive status from the fact that they give birth to and care for children.

4.1.6. Level of care and wellbeing

The level of care of workers is partly determined by the wage bargain between labour and capital, but also by the contribution of domestic labour (Becker 1965; Wheelock 1990). In the level of care, the interdependency of the contexts of work and household becomes clear. The assessment of the level of care, evaluated against the norms and values, beliefs and opinions of members of the household, determines the degree of wellbeing. Many authors have tried to capture this concept in terms like welfare, pros-

perity, quality of life, contentment, or even ‘happiness’. Büssing (1998) defines ‘quality of life’ as the global evaluative term that summarises a person’s reaction to the expectations in his or her life:

‘Quality of life is based on different contexts for human activity, for example, satisfaction with the physical environment, satisfaction with work, and feelings of economic security and political involvement’ (Büssing 1998: 146).

Each of these contexts can be described with concepts derived from different disciplines (economics, ecology, sociology, psychology etc.). Büssing focuses on the quality of work on the one hand (productivity gains, cost savings, affective reactions) and on the quality of non-work life on the other. In this respect Büssing discerns: time with the family, leisure time and money saved. He notes that the quality of non-work life of the individual worker can be described with variables like satisfaction, motivation, wellbeing, enhancement of skills, feelings of competence, control and so forth. This individual perspective, however, is restricted. For a valid understanding of the quality of non-work life the impacts of teleworking should be investigated in their context, i.e. in consideration of family, partnership and non-work living arrangements. Next to that, Büssing emphasises that researchers should investigate how telework affects the interrelation of work and non-work domains in life. These mutual interdependencies are most significant for the quality of life in both domains, is his opinion (Büssing 1998).

Wheelock (1990) also points at the interrelation between work and non-work. According to her the long-term wellbeing of the household is mainly secured by activities in the work domain and has been originally men’s concern, whilst women – because of their housekeeping role – were more concerned with immediate needs of everyday life. The two systems – family and work – significantly influence one another through a permeable boundary (Hill et al. 1995). This influence can be defined as spill-over. Spill-over can have a negative and a positive connotation. Positive spill-over occurs when skills or other resources, acquired for the paid job, can be used within the domestic domain. Negative, when work increases stress among family members.

4.1.7. Feed back: strategies to cope

When the outcome of household activities (level of care) does not correspond with expectations (standard of care), people apply different strategies to balance level and standard of care. These strategies represent the way people mobilise, guide, manage, energise and direct their behaviour, emotions and orientation and can have cognitive, affective or behavioural aspects (Pennartz and Niehof 1999). Either the standard is accommodated to the situation, or the allocation of resources is changed. In some cases people tackle the resources themselves, trying to earn more money, gain more time or acquire more skills. Or they re-evaluate their situation, rethinking the assessment itself. The most drastic strategy is to change the composition of the household, by moving out or in, by marriage or divorce, or by giving birth to or adopting children.

Strategies are best to be observed when major changes occur, for instance the birth of child, or the unemployment of one of the members of the family. Wheelock (1990) concentrates on the latter, listing substitution processes following a drop in income and

an increase of time available. Extra self-production activities might be undertaken to replace the purchase of goods or services, varying from knitting and baking, to extensive decorating or repairing the car. Or the family may resort to barter, making use of the informal economy by exchanging goods and services with relatives and neighbours or friends. These kind of activities include looking after grandchildren or caring for elderly parents. Other strategies are the replacement of employment in the formal economy with employment in the informal sector, and the substitution of more expensive goods and services by cheaper ones.

De Hoog and Van Ophem (1995) concentrate on household tasks, when they mention three strategies to cope with changes: rearrangement of tasks, avoidance of tasks and monetarisation of tasks. Monetarisation is a form of time-money substitution, either by outsourcing household tasks to the market (hiring a cleaning person or handyman), or by buying goods that facilitate the work (a tumble drier, convenience food, takeaway food). When a household chooses for a rearrangement of tasks, gender differences might be an issue. A symmetrical division of tasks is one of the possibilities, though often difficult to establish because of gender-related knowledge, skills and attitudes.

The idea that substitution takes place is grounded on the thought that the total amount of labour within a family will stay approximately the same. According to this 'theory', households that spend much time on paid labour, would use time saving strategies to limit the total amount of labour. Households that spend little time to paid labour, would compensate their lack of income with more household production. Droogleever Fortuijn (1993) found that substitution only partly takes place. Women spend less time on unpaid labour as they spend more time on paid labour, for men this correlation does not exist. Wheelock (1990) however, found substitution effects for men as well, due to societal changes:

'The forces of structural economic change mean that it might be increasingly appropriate to fit men into gendered models. Additionally substantial changes in family structure, particularly the growing importance of single parent families where women tend to be heads of household, mean that the traditional gender model is increasingly inappropriate. There may thus be a need to articulate both men's and women's domestic and labour market roles by extending a labour process perspective to family work strategies' (Wheelock 1990: 80).

In the framework of this study, strategies that manage the boundaries between work and non-work are most significant. Felstead and Jewson (2000) discern strategies *within* the home and strategies *between* the home and the outside world. Strategies to manage the boundaries within the home are either segregation or integration; strategies to manage the boundaries between the home and the outside world are openness or closure (Hill et al. 1995; Kompast and Wagner 1998; Mirchandani 1998).

Segregation or segmentation is mostly used to handle the effects of negative spill-over within the home. It is the way of strictly separating the two spheres of work and home, in time and space, by managerial or technological interventions. The opposite of segmentation is *integration*: the establishment of a fusion of the two activities, generating a synthesis that reshapes and redefines the home (Felstead and Jewson 2000).

In managing the boundaries between home and the outside world, we can discern *closure* and *openness*. Closure draws a clear and unambiguous line between the private life of the home and the demands of employment. Closed families are not very likely to allow telecommuting. Vis-à-vis closure we can discern openness. Openness implies a tolerance of ambiguity and the reconciliation of divergent needs.

The use of the word ‘strategy’ does not necessarily imply deliberate planning and premeditated intent. The described patterns can be the result of conscious planning, or can emerge in a cumulative and unreflexive way. This depends partly on the type of strategy applied, as Felstead and Jewson (2000) note:

‘Strategies based around openness and integration are likely to involve ongoing processes of negotiation between household members. Spatial and temporal divisions within the home and between the home and the wider world are a movable feast, open to reinvention and reconfiguration depending upon circumstances. This implies discussion, debate and the explicit expression of meaning entailed in the use of elaborated linguistic codes. Households that institutionalise strategies of closure and segregation are characterised by much more immutable spatial and temporal boundaries. They are more likely to celebrate ritualised, symbolic and mythical modes of communication, incorporating the implicit or intuitive meanings typical of restricted linguistic codes’ (Felstead and Jewson 2000: 148).

Hootsmans (1997) adds the concept of *compensation*, not so much a strategy to manage boundaries, but a way of tuning work and private life. People can compensate negative experiences (stress, difficulties, disliking) in one sphere with positive experiences in the other. Compensation can work in both directions: negative aspects of the paid job can be compensated by working at home, in a good atmosphere and/or by the alternation with agreeable activities. Stress at home can be compensated by interesting work. In both cases, when working at home, it is easy to escape into the other sphere, when compensation is longed for (Hootsmans 1997).

Wheelock (1990) and Hochschild and Machung (1989) give examples of affective strategies. They report what they call ‘mental exercises’ to balance the level of care and the standard of care. For instance, women display gratitude, because their husband is not as bad as the others. Or they perpetuate the myth that their husband is doing half of the homework, while in fact he is only cleaning his own miniature trains. The reverse also exists: men who tell that they are not doing much in the house, while they are actually performing a lot of tasks. In these cases they often emphasise the ‘emergency factor’: they are only doing it now, while their wife is in hospital or while they are unemployed. As soon the situation is normalised, they reinstall the traditional division (Wheelock 1990; Hochschild and Machung 1989). The strategy here is not so much to change the actual behaviour, but to change the value judgement of the actual situation.

4.2. Actual trends in Dutch housekeeping

The accelerated societal changes of the last two decades, to a high degree related to the introduction of new information and communication technology, has also affected the

private domain. In this section recent changes in this domain are described, using the concepts discussed above: household activities, composition of households, standard of care, available resources, assessment of wellbeing and strategies applied.

4.2.1. Changing household activities

Despite reported changes in opinions, and despite an exponential growth in the participation of women on the labour market, Dutch households are not very egalitarian in their division of domestic tasks. Women still spend, on average, almost three times more time on unpaid work than men. In 1990, Dutch women averaged 26.6 hours per week against 10.4 by men. The time expenditure of young women without children was then only 17.4 hours, but women with a youngest child under five years old, spent 47.1 hours per week. Or in percentages: in 1990, 82 percent of the domestic labour and 66 percent of childcare is executed by women. They undertake 20 percent of the paid labour. When both partners have a paid job, the woman's share in household activities is still 77%. In total those households spend less time on household labour. In households with both partners having a job, the woman spends 27 hours (commuting time included) on paid labour, the man 47 hours; 36 percent of the paid labour is done by the woman (De Hart 1995).

The share of women is slowly decreasing. Full-time housewives with a working partner spend in 1998 – according to Keuzenkamp et al. (2000) – over 68 hours per week on housework and care. They undertake 80 percent of the total time of the household chores. In double-income households the portion women contribute to household tasks is still 60 percent. In this same research, the amount of hours men spend per week on housekeeping and care ranges from 17.3 in single earner families to 20.5 in the one-and-a-half-earner households. The most time these men spend on chores around the house (around 5 hours per week); in double-income households they take part in the cooking (3.7 hours per week), washing up and cleaning (2.2 respectively 2.9 hours per week). The total amount of time spent on domestic labour is related to the earner type of the household. Table 4-1 shows the differences between the different earner types.

Dutch men performed in 1990 more household tasks than their Italian and Austrian counterparts, but less than Belgium, French, German and British men. Between 1990 and 1995, the Dutch men increased their contribution. The Netherlands is moving towards a more egalitarian division of household and family tasks. Remarkably, even in notorious emancipated countries as Sweden and Denmark, the time men spend on those tasks is not more than sixty percent of that of women. A truly equal division seems not to be in the offing in the short run (Sociaal en Cultureel Planbureau 2000).

Table 4-1: Time budgets 1998

	Hours per week ¹			Difference between double-earner and single-earner households		
	Single-earners	Small one-and-a-half earners	Big one-and-a-half earners	Double earners	Hours	Percent
Labour and education (a)	51.0	64.2	83.4	99.9	48.9	96
Housekeeping and care	85.7	81.7	68.4	48.7	-37.0	-43
Volunteer work and help	7.7	5.9	4.9	5.3	-2.4	-31
Sleeping	103.0	101.0	103.8	102.8	-0.2	0
Eating, dressing	15.9	15.7	15.3	14.6	-1.3	-8
Leisure	38.9	39.0	37.6	40.3	1.4	4
Total time	302.2	307.4	313.2	311.7	-9.5	-3
<i>Specification housekeeping and care:</i>						
Preparing food	12.0	10.5	10.0	9.3	-2.7	-22
Washing up	6.9	6.7	6.7	4.8	-2.1	-31
Laundry, ironing	8.8	8.2	6.5	5.0	-3.8	-43
Cleaning	15.8	15.7	12.0	9.1	-6.7	-42
Shopping, services	9.6	8.0	7.9	6.6	-3.0	-31
Jobs around the house	9.5	9.6	7.9	7.6	-1.9	-20
Caring adults	1.1	0.9	0.6	0.5	-0.6	-52
Caring children (b)	6.1	6.0	5.3	4.9	-1.2	-20
Picking up, bringing children (b)	3.9	3.5	3.2	1.5	-2.4	-60
Playing with children, reading (b)	18.7	17.2	15.6	13.9	-4.8	-25

a) travel time included

b) only families with children (n = 261 / 83 / 200 / 20).

1) Reported actual time budgets and differences in time budgets for domestic and caring tasks between single earner and double earner families, persons who live together with a partner and of whom at least one of them is between 19 and 49 years old; differentiated according to earner type, 1998 (in hours per week and in percentages). Source: SCP (TOP98), cited by Keuzenkamp et al. 2000.

As might be expected, the division of unpaid work within households is closely related to the division of paid employment. As women's share of paid employment rises, their share of unpaid work falls. This is, however, primarily because the woman will in those cases devote less time to unpaid work, rather than because the man makes greater efforts in this field. When both partners have a higher education, the woman takes a bigger share of the paid labour. Younger women work on the average more hours in a paid job and less hours in the household than older women (cited by Van der Lippe 1993).

In households with children, men spend more time on paid labour and women more on household labour and childcare, especially when the children are young. Men spend, regardless the age of the children, more time on guidance and accompanying children, than on childcare. They do more often pleasant things with children (Van der Lippe 1993; Droogleever Fortuijn 1993; De Hart 1995). As Hochschild and Machung (1989) describe in *The second shift*:

'Beyond doing more at home, women also devote proportionately more of their time at home to housework and proportionately less of it to childcare. Of all the time men spend working at home, more of it goes to childcare. That is, working wives spend relatively more time 'mothering the house'; husbands spend more time 'mothering' the children. Since most parents prefer to tend to their children than clean the house, men do more of what they'd rather do. More men than women take their children on 'fun' outings to the park, the zoo, the movies. Women spend more time on maintenance, feeding and bathing children, enjoyable activities to be sure, but often less leisurely or 'special' than going to the zoo. Men also do fewer of the 'undesirable' household chores: fewer men than women wash toilets and scrub the bathroom' (Hochschild and Machung 1989: 9).

Keuzenkamp et al. (2000) asked respondents – apart from estimating the number of hours per week that they themselves devote to various activities – to estimate their own share and that of their partner in household activities. This revealed that both men and women overestimate their own share. It is notable that more men than women consider the tasks to be equally shared, even if the actual situation shows otherwise.

The facts are changing, though. Men spend more and more time on household labour, and are also involved in paid labour for more hours per week. In 1985 men spent two hours per week less on obligations – both paid and unpaid – than women. In 1990 both sexes spent an equal amount of time on labour, while in 1995 men were up and about two hours more than women. In 2000, women still performed the majority of caring tasks (Sociaal en Cultureel Planbureau 2000).

4.2.2. Changing households

Of course the division of labour is related to the composition and stage in the life course of the household. The last twenty five years showed dramatic changes in the composition of Dutch households. Thirty percent of Dutch households under 60 years of age consist of singles. The average size of households is 2.4. Three-generation households are in the Netherlands exceptional. Fertility rates decreased until the mid-1980s quicker than in any other European country, and the postponement of the first birth went further than elsewhere. In the time until the first child is born, women invest in their career. After the birth, they take up – more than in for instance the Scandinavian countries – part-time jobs in order to combine work with family and childcare duties. It seems that not only a shortage of childcare facilities plays a role here, but also the desire to do so (Keuzenkamp et al. 2000; Sociaal en Cultureel Planbureau 2000).

The stage in the life course of a family – the family time (Hareven 1982) – is partly related to the earner type of households. Keuzenkamp et al. (2000) note, for instance, that an above-average number of single-earner families are at the family formation stage. Next to that, job opportunities are of importance. If small-one-and-a-half earner households are compared with all other earners together, it turns out that a disproportionate number of the women have very low status jobs. Men whose wives work a limited number of hours a week are more frequently to be found in sectors lacking arrangements in the field of part-time work, childcare or leave arrangements. The

demographic statistics do not reveal the importance of kin relationships and the sometimes not so strict boundaries of households. It appears, for instance, that grandparents and other relatives play a role in the care for children, and children – in particular daughters – care for their parents when they become needy (Keuzenkamp et al. 2000; Luijkx 2001).

Households are nowadays, not only in a demographic sense, in a continuous state of change, reacting on changes in the external system and influencing this system as well. As already mentioned in section 4.1.3., Pennartz and Niehof (1999) consider the household as mediating agency between structure and the active, individual subject. This mediating role increases in times of social change. It appears that households are flexible and vary according to time and culture:

'In order to survive, family households have to search continuously for compromises, have to coordinate the changing beliefs, ambitions, and behaviours of its members, and mould them into new forms. (...) Transformations such as waning ideologies or ideological hegemonies have to pass family households and the connected informal social networks in order to gain support in civil society at large. Family households may keep traditions alive as well as participate in the undoing of traditions' (Pennartz and Niehof 1999: 214).

Though some may see the household as the last resort – the 'last sanctuary in a bewildering outside world' (Nowotny 1982) – it is unjustified to regard family households just as bulwarks of tradition (Pennartz and Niehof 1999). Different forms of households, different behaviour, and different arrangements during a family life course, for instance by working alternately less or more, have come into effect (Keuzenkamp et al. 2000).

4.2.3. Changing standard of care

Trends discussed in Chapter 3 (*Telecommuting in the context of societal change*) can be observed in Dutch society. In its 1998 report the Sociaal en Cultureel Planbureau considers individualisation as one of the major characteristics of social dynamics of our time. According to the 1998 Sociaal en Cultureel Rapport, modern people are not dependent on families, but on 'infrastructure'. The erosion of kinship networks started already in the nineteenth century, but typical for the last twenty-five years is that individualisation also penetrated the last fort of the traditional society: the family (Sociaal en Cultureel Planbureau 1998). Though this notion can be nuanced – see the remarks in section 4.2.2. – fact is, that individualisation is something that has to be taken into account.

In the 2000 report, the Sociaal en Cultureel Planbureau notes that a 'traditional way of life' has a low reputation in the Netherlands. Dutch people support an equal division of tasks between men and women. Only 19 percent of the Dutch see the traditional division – in which the man works outside the home and the woman does the house-keeping – as the only correct possibility (Sociaal en Cultureel Planbureau 2000). Autonomy of partners and children, like having own friends and activities, is positively

evaluated. Motherhood is rejected as the only life fulfilment or social identity. In post-modern families men find family life and leisure time more important than their career (Te Kloeze et al. 1996).

Keuzenkamp et al. (2000) found differences in attitudes towards sharing and combining related to earner types. Single earner households are the least oriented towards the combination of employment and care and a more equal division of tasks between the partners. They attach greater value to traditional male-female relationships. This applies to both men and women, while the members of the two-income families are the most oriented towards a non-traditional division of tasks. The one-and-a-half earner categories occupy an intermediate position, with the small-one-and-a-half earners resembling the single-earners more closely and the large-one-and-a-half earners moving closer to the double-earners. If the small-one-and-a-half earners are compared with single-earners, only the time expenditures of women differ. 'Breadwinner' males evidently do not distinguish themselves from men whose women have a minor part-time job. Small-scale participation in the labour market is, however, associated with a more positive attitude towards working and sharing. The male partners of women with a large part-time job are more positive about equal rights issues (Keuzenkamp et al. 2000). Among Dutch youngsters, girls are more often advocates of an equal labour division than boys. A majority of the boys would like to leave the household labour to their partners, while only a quarter of the girls want to do it alone. When they are asked about children, the differences between girls and boys are small. Boys and girls would like to share education and caring, though still, the boys are more interested in education than in caring (Keuzenkamp en Oudhof 2000).

4.2.4. Changing resources

The available time in the non-work sphere is to a large extent dependent on the time that is spent in paid jobs. The Netherlands occupies a special position in Europe in this respect, because of its high number of part-time jobs. As a result of that, the average number of working hours per week and per year are the lowest in Europe (Sociaal en Cultureel Planbureau 2000).

Time is also related to mobility. In post-war Netherlands, and in particular the last twenty years, there has been a considerable increase in geographical mobility. In 1993 half of the working population lived more than 7.5 kilometre from the employer's office. The average commuting distance was 13.4 kilometre, growing to 17.4 in 1999 (De Hart 1995; CBS 2000). Compared to former migration patterns the motives have changed. In the nineteenth century and shortly after World War II, economic reasons prevailed. People moved because of employment opportunities. Nowadays, migration in western societies is mainly prompted by the housing market and housing conditions (Giddens 1997; Van Loo en Van Reijen 1993), enabled by increased radius of action created by car ownership (De Hart 1995). Prices of houses in the urban areas also play a role here. However, increased traffic congestion results in increased commuting time. This is reflected in time budgets of Dutch households: increased working hours are to a large extent the result of increased commuting time.

The role of the home in daily life changed remarkably. According to the Dutch Sociaal en Cultureel Planbureau (2000), the house was formerly a place where family

members came together to spend free time, nowadays it is the operating base of activities outside the home: more women working in paid jobs, more leisure activities performed elsewhere, and a more individualised time pattern of the members of the household. Time spent together by household members is decreasing. As a result of these developments, the location of the home becomes of increased importance (Sociaal en Cultureel Planbureau 2000), as does the quality of the house itself. Houses built after 1970 are on the average bigger than before, they are more often single-family dwellings and they offer more comfort and better technical quality (Sociaal en Cultureel Planbureau 1998).

The general level of prosperity grew, the average national income increased in fifteen years with one quarter. At the same time, the gap between wages and social security benefits also widened. Fixed costs take an increasing part of the budget of low-income households, as a result of which their pattern of spending is restricted. The increased prosperity calls for claims that are difficult to honour in an egalitarian society: spacious houses in agreeable surroundings, technologically advanced medical treatments without waiting lists, quality education and congestion-free recreation (Sociaal en Cultureel Planbureau 1998).

Though girls leave the educational system with a diploma more often than boys, women are still to be found in lower jobs with lower incomes than men. Their share in leading positions and in political decision-making is small (Keuzenkamp en Oudhof 2000). Most Dutch people think it is normal for a woman to have a paid job, but it is not *necessary* that she has one. The result is that women on average earn less than men and are in fewer cases economically independent. Next to that, women still feel more responsible for household tasks, partly because men still expect them to be (Keuzenkamp et al. 2000).

An informal economy, based on the exchange of services instead of money seems to grow (*Volkskrant*, 26 August 2000). Extensive research on poverty in the Netherlands shows that in particular poor allochthonous households rely to a high extent on the informal economy offered by supporting networks (Engbersen et al. 2000; Van Bommel 2000).

4.2.5. Assessment of changes

According to the Sociaal en Cultureel Planbureau (2000) Dutch people regard their work as more than a way to earn money. At the same time they value a clear separation of work and private sphere. Married women perceive a dilemma: is it worth to strive for full-employment if this means a loss in quality regarding family life and less involvement in the education of their children? This question is answered by women and men on an individual basis, often relating their answer to their financial situation and career prospects, although socially and political the choice is already made. Since 1990, women are obliged to work, if they are able to do so (Sociaal en Cultureel Planbureau 2000).

Dutch people seem to be content with labour and the environment, but their opinions concerning the educational system, health care and the battle against criminality have become more critical. 'Happiness' is in the highly developed societies for the greater part dependent on money. Welfare states guarantee their citizens a minimum

level of care. They cannot prevent personal unhappiness, but they can create conditions for happiness, offering a stepping stone to a better realisation of possibilities and capacities of the individual. The welfare state is changing, moving from a supply to a demand orientation, from general arrangements to specific ones, from all-embracing facilities to complementary. These changes are also reflected in the endeavours of the labour unions. Their sustained effort to limit working hours and strictly separate work and private life is almost imperceptibly downed by practices of blurring boundaries, not in the least as a consequence of the application of information and communication technology. Most people gain profit from this development, because it made their work more appealing and more individual and autonomous. However, there is a price to pay in the form of increasing work stress, burnout and chronic fatigue. These pressures are amplified by the advanced monetarisation of life: there is ever more money needed to maintain a customary level of care and it has become more common to express every activity in money (Sociaal en Cultureel Planbureau 2000).

4.2.6. Applied strategies

The dilemmas Dutch families are confronted with – egalitarian society versus freedom to choose, career ambitions versus family life – ask for strategic solutions. The most important policies enabling the combination of work and care are the possibility to gear working hours to caring tasks, facilities for childcare and arrangements for parental leave. Next to that strategies of outsourcing are used. The study of Keuzenkamp et al. (2000) has revealed that earner-types differ from one another – among other things – in terms of the strategies they apply to combine work and private life. The double-earners, in particular, contract out half the household activities; they make little use of childcare because they do not generally have children. The extension of shopping hours also turns out to be a facility from which they particularly benefit. They also make use of time-saving facilities, such as a dishwasher.

The large-one-and-a-half earners make above-average use of formal childcare and also often contract out household work – though somewhat less than double-earners. An above-average number of women in this category have saved up leave in order to care for children and have made use of paid or unpaid parental leave. Notably enough, men in the various earner categories take up the same amount of parental leave, which is little. Finally, the small-one-and-a-half earners – i.e. the women in this category – have made relatively little use of the ability to adjust their working hours in line with the school hours of their children. The potential application of the various strategies is in part held back by the lack of appropriate facilities. There remain, for example, too few day childcare facilities, and after-school care and leave facilities are problematic – especially in a financial sense (Keuzenkamp et al. 2000). More flexible time regimes of schools, public services and public transport can contribute to a more supple combination of work and care (Sociaal en Cultureel Planbureau 2000).

In the studies discussed here, telecommuting is not or only incidentally mentioned as a potential strategy to balance work and private life. Nor is evaluated what strategies telecommuters typically apply to balance both spheres. These topics will be subject of the following chapters.

5. Telecommuting and household: exploring the field

5.1. Blurring boundaries: telecommuting and the household

Work and private life may have been separated sectors since industrial revolution, they have been influencing each other in a very profound way. Most actions in private life are adjusted to working hours, to hours at which schools start, to opening hours of shops (Terreehorst 1994). When telecommuting comes in sight, the boundaries between work and non-work become really blurred: there are no longer spatial and temporal boundaries. Related to characteristics of the worker (gender, education) and the type of work, the home-based worker will experience more or less intrusion of the work on family life (Fitzgerald and Winter 2001). Home-located production – and telecommuting in particular – potentially problematises the social relations of the household. Decisions about the division of labour, the allocation of resources, the use of space etc. will have to be reconsidered. Felstead and Jewson (2000) expect a raised awareness of the significance of home and the private domestic sphere of life. Reaching decisions about how to accommodate work and home may force household members to articulate principles and beliefs about domestic time and space that have not previously been expressed explicitly. Ingrained and taken-for-granted habits and practices may thus evolve into conscious decision-making (Felstead and Jewson 2000).

With the growth in numbers of telecommuters and the fact that this way of working is becoming more common, the limits of it also become more clear. Commenting on projects of the Commissie Dagindeling, Dirks (2000) warns of 'modern schedules'. Experiments in the United States proved not to be successful, since the labour market acquires an all-or-nothing attitude. De Rek (2000) also pays attention to the limits of flexibility. She notes that modern employees are flexible, they work at home, take their child to the office, have their mobile phone in their pocket, even on holidays, but she wonders when the limits of this flexibility are achieved. The dissolution of boundaries between private life and work is not the result of a suddenly dawning deeper insight, but has practical reasons. Paid work is more intrusive to private life than the other way around. De Rek gives examples of a troublesome relationship between the two spheres. Her message is a radical one: maybe people are not as flexible as some might think;

maybe it is not so bad to have a nine-to-five job. Breedveld of the Sociaal en Cultureel Planbureau, cited in *de Volkskrant* of 29 January 2001, reports that the average working week of a family with two working parents has increased to seven days. In this same article, Nogueras – advising Dutch families about their program of the day – argues that Dutch people live to work, while Spanish employees go home after work to enjoy their non-work life. Nogueras is no advocate of telecommuting. In her eyes it causes an undesirable blurring of the boundaries between work and private life.

Changes within the home are related to its surrounding world. Chapter 3 (*Telework in the context of societal change*) was constructed around the paradoxes of societal development and the interactions of technology, individuality, culture and structure. Relevant characteristics of post-modern society are modularisation, flexibilisation, individualisation and globalisation. These characteristics permeate the four perspectives and are very determinative for modern society, but their opposites are in operation as well. Modularisation and flexibility are facing rooted habits and standard packages of norms and values; individuality coincides with group consciousness; globalisation develops simultaneously with an increased attention for the local environment.

Breedveld (2000), for instance, argues that the 24-hour economy has no boundaries and the only belief that exists is the belief in one's own self. However, despite profound changes in opinions and culture in the last 25 years, daily time schedules still show a high degree of continuity. The Sociaal en Cultureel Planbureau asked Dutch persons between 18 and 64 years if they undertook daily activities – getting up, starting and ending work, eating and going to bed – at the same point of time on two days in a row. Though the proportion of positive answers declined since 1975, in 1995 still more than half of the respondents performed these activities at the same hour on two successive days. Combined with the fact that, in 1995, 87 percent of all labour is still performed on week days from 9:00 to 17:00, it can be concluded that the majority of the population still has a routine schedule for the day. The 24-hour economy exists mainly because people shift their domestic activities to evenings and weekends, and not because more paid labour is performed at other points of time (Breedveld 2000; Van den Broek en Breedveld 2000).

Individualism is generally regarded as the main characteristic of post-modernity – achievement *and* curse – but this issue too can be put into perspective. Keuzenkamp et al. (2000) notice a strongly developed family ideology: '*if there are children the family must be given priority*' (Keuzenkamp et al. 2000: 148). Despite the increasing number of single-person households and a culture of individuality, there are many examples of different opinions and activities.

As argued in Chapter 3 (*Telecommuting in the context of societal change*), economic and cultural developments influence each other. A good match between the two prevents frictions in the system (Breedveld 2000). Flexibility in working hours and contracts of employment could not have been implemented without an ideology in which change and variation prevail over security and certainty, and routine behaviour is equated with dullness. Structural changes – from an industrial society to a flexible service economy – were simplified by simultaneous cultural changes in the direction of individualisation. On the other hand, Breedveld observes that not all ideological changes resound in the formal economy. The changing division of labour between men and women hardly lead to new management and working conditions. He suggests two

ways to accommodate economics and culture. One is to offer services supporting the combination scenario, like childcare, flexible working hours, telecommuting facilities etceteras. The other is to adjust or phase – or at least reconsider – one's aims in life (desired career, ambitions, attention and time for children).

In recent decades the Netherlands – as have other Western-European countries – has switched from a society based on the traditional breadwinner model to one with an increasing number of two-income families (Breedveld 2000; Van Dongen et al. 2001). The one-and-a-half-earner couples – in which the male partner works full-time and the female partner part-time – has become a particularly popular option (Keuzenkamp et al. 2000). The promotion of the combination scenario is an objective of emancipation policy in the Netherlands. Next to childcare facilities and flexible work arrangements as instruments to achieve this goal, the Ministry of Social Affairs provides subsidies for projects that facilitate the combination of work and private life. These projects vary from experiments with multifunctional use of space in new housing development, childcare facilities and meal service in a rural area, management of flexible working hours, to pilot activities for senior and non-native citizens. Telecommuting is part of many of those projects (Dagindeling 2001; *Volkskrant* 13 July 2000). The family household plays an important mediating role between society and individual, in particular in times of social change (Pennartz and Niehof 1999). It appears to be very resilient, finding new forms, content and structure, when the surrounding society changes (Nowotny 1982). The possibility of living a life of one's own offers new forms of sovereignty, but these can lead to uncertainty and to encroachments from one domain into the other as well (Breedveld 2000).

The role of technology – and in particular of information and communication technology (ICT) – in the developments described above is significant and paradoxical. Technology freed people from their natural limitations and made them dependent at the same time. ICT intensified the developments, associating central control with decentralisation, facilitating an individualised mass production. As is the case with technology in general, ICT is simultaneously credited with the potential of its positive applications and decried for its equally plausible negative and obstructive effects (Nowotny 1982). Simultaneously, ICT is capable of helping us surpass the paradoxes, because it enables us to gain control over our life. Industrial technology separated the spheres of work and private life, information and communication technology helps us to bridge those spheres again. At the same time, an analogy with Ford's conveyor belt can be seen here: the assembly line moved the pieces around and kept the people in their place; likewise ICT keeps the people in their places and moves the data around. ICT helps to expand the scope of unpaid consumer work – like driving, shopping, gathering consumer information, self-service in the household – into the sphere of paid work, while the underlying organising principles of the paid labour gradually merge into the domestic sphere (Nowotny 1982).

In telecommuting all the paradoxes and ambiguities of modern society come together: family and career; private and public sphere; task and time orientation; traditionally male and female activities; centralised, co-operative work patterns versus decentralised, individualised flexible schemes; time and space independent work versus the reproduction of traditional office hours. Researching these dual pairs of concepts as binary opposites, conceals the hierarchy that is incorporated in those dualities

– one being regarded as more powerful than the other – and does not leave room for the many shades that are possible in between. This dilemma has been the subject of debate within gender studies (Scott 1989; Farganis 1989; Sevenhuijsen 1993; Crutzen 2000). The disconnection of the concept of gender from biological sex was initially experienced as liberating, because it showed that so-called female characteristics were a result of education and culture, rather than of biological predestination. That gave an opening to change. However, this intellectual strategy appeared to have its limitations and disadvantages. It forced women to ignore their body and to proclaim rationality as the norm. Next to that, femininity had a negative connotation and was associated with 'traditional role patterns'. The reaction was de-gendering as a strategy, in which equality, in the meaning of sameness, became the norm. But when equality means being identical, it is difficult to think about the positive significance of differences and about the question to whom or what one has to be identical. A more fruitful approach shows that the paradoxes are two sides of a coin, both being a result of the same societal developments, influencing each other in a dialectical process. Equality should not be represented as the absence of differences, but should acknowledge and incorporate the existence of differences. Emphasising differences – for instance between men and women – should not lead to a propagation of an unbiased multiformity, but lead to the deconstruction of the antitheses that are enclosed in the paradoxes (Scott 1989; Sevenhuijsen 1993). The emphasis on paradoxes in Chapter 3 (*Telecommuting in societal context*) and Chapter 4 (*Theoretical framework*), can be seen in this perspective.

With these thoughts in mind, the qualitative, exploring phase of the current research was devised. This phase consisted of a literature search, interviews and a group discussion. The interviews and the group discussion took place in winter and spring of 1996. On the basis of the preliminary outcome of these interviews and discussion, several survey questions were formulated. These were added to a survey that market research bureau IDC-Benelux organised in the Netherlands in the summer of 1996 (Casimir 1996a, 1996b; Vernooijen and Casimir 1996). Next to that, expert interviews took place, to collect background material. It was expected that telecommuting would affect all aspects of the home economics model – the household activities, the standard of care, the applied resources, and possibly even characteristics of the household. And vice versa, these aspects will determine the way telecommuting is performed.

The remainder of this chapter describes the way the interviews, the group discussion and the IDC-survey were conducted. Subsequently, the results of these exploratory investigations are discussed, following the aspects of the home economics model. The chapter concludes with a set of refined research questions and the formulation of hypotheses, on which further research was based.

5.2. Exploratory investigations

5.2.1. Interviews and focus group discussion

From January through March 1996 eight telecommuters and some of their partners were interviewed, and a focus group discussion with another eight was arranged. Fourteen of these respondents were women, mainly because they were recruited via a women's magazine. Because children influence the content and amount of hours spent

on household labour to a high extent, it was the purpose to interview families with children. All participants – except one – of the interviews and the group discussion answered this criterion. The one person without children was single and lived alone. Others lived with a partner of opposite sex, the age of their children varying from zero to mid twenties. One of them had no children living at home anymore, but took care of her granddaughter every day.

There was no strict questionnaire for the interviews nor for the group discussion. Both focused on the concepts of the home economics model (see chapter 3): household activities – including childcare –; resource management – in particular management of time and space –; evaluation of the telecommuting situation and strategies to cope. Differences between men and women also were a topic. Aim of both the interviews and the group discussion was to generate as many arguments, motives and considerations as possible, related to telework. The interviews were all carried out by the telecommuters at home, for several reasons. It would cost them the least time and when talking to them in their own surroundings, the interviewer would get an impression of the way the telecommuting space was furnished and equipped. All interviews were carried out in an open, relaxed atmosphere. All interviewees were very much willing to share their experiences.

Focus group discussions – or focused interviews with groups – are already in 1920 mentioned as a market research technique. This technique became popular in the 1970s and 80s for instance in the evaluation of health education material and in film and television reception studies. The term ‘focused’ refers to the fact that some kind of collective activity is involved. Crucially, focus groups are distinguished from the broader category of group interviews by the explicit use of the group interaction as research data (Kitzinger 1994). The discussion gains depth by the interaction and makes it more than just a cost-effective way for interviewing several people at once.

The focus group discussion in this research brought together eight telecommuters in a central place in the Netherlands, easy to access by public transport, and with a car park in the vicinity as well. To start the discussion all participants were individually asked to line up statements containing motives for telecommuting, in order of decreasing importance. The nine statements were printed on one sheet of paper. To be able to line them up, it was necessary to tear the paper in parts. This was deliberately done, to ease the atmosphere. After this exercise the participants could clarify their choice and explain their often ambiguous opinions on the subject. Here they could help each other to specify their opinion. After this a vivid and informal discussion on different aspects of telecommuting evolved, only occasionally structured by questions or remarks of the facilitator, to be sure every aspect would be taken into account. According to Kitzinger, anecdotes, jokes and loose word association are important:

‘Such variety of communication is important because people’s knowledge and attitudes are not entirely encapsulated in reasoned responses to direct questions’ (Kitzinger 1994).

That is exactly what happened here: talking about – for instance – dealing with colleagues, employers, household members, friends and relatives clarified the attitudes of the participants towards the subject. The discussion ended with ten propositions. Participants were asked to vote for or against each proposition by means of a coloured

card (green for 'agree', red for 'disagree', and yellow for 'don't know'). When someone differed from the majority, she or he was asked to clarify. In the evaluation the exchange of experiences proved to be especially valuable for the participants. For the facilitator both the interviews and the group discussion produced enough material to lay the basis for the next step. The results of both the interviews and the focus group discussion are incorporated in the remainder of this chapter (see also Casimir 1996b and 1997d).

5.2.2. IDC-survey and expert interviews

In the summer of 1996 market research company IDC-Benelux performed a survey on computer property and computer use among 1000 Dutch households. In this survey questions were inserted about telecommuting. These questions were based upon the findings in the interviews and the group discussion. In the survey two important distinctions were made. First, there is the difference between those people who work at home and those who do not, the latter group divided into people who want to work at home, and people who do not want to do so. The second distinction is between main breadwinners and other income earners in the household. It appeared that there are significant differences in motives and wishes between main breadwinners and others.

The first set of questions in the IDC-survey was about the motives to work at home (including time for household and family). The second set was about the perception of telecommuting and the consequences of it. Here the boundaries between work and leisure time were addressed. The survey was done among 1000 Dutch households. In 161 of those the main breadwinner worked at home, at least sometimes.

In addition to the IDC-survey experts in the field of telework were interviewed. These were researchers, representatives of industry, government (both national and European) and labour union. The outcome of these interviews are published – together with results of the survey – in Vernooij and Casimir (1996). Results of the interviews, the IDC-survey and the expert interviews are interwoven in the remainder of this chapter.

5.3. Household activities done by telecommuters

The suggestion that working at home would influence the division of household labour and the content of household tasks is affirmed by the interviews and group discussion, and by the results of the IDC-survey.

Many telecommuters observe an increase in household tasks, being confronted with them while working at home. Fothergill emphasises that in particular women find it difficult not to notice the breakfast things piled up in the sink when going into the kitchen to make a cup of coffee. The temptation is to spend time washing them up, rather than ignoring them until the work is completed.

' It may require a lot of discipline on the part of some women to switch off from their ' domestic role' into their work role (Fothergill 1994: 343).

All interviewees and participants in the focus group discussion mentioned examples like this; 25 percent of the telecommuters in the IDC-survey indicated to perform more household chores when working at home. One reason for this increase is the attitude of the teleworker her- of himself, finding it difficult to ignore the housework. Some went so far that they refrained from paid domestic help, because they were at home *anyway*⁵:

'When you are away thirty hours a week, I think you consider more easy to let somebody do something in the house, for instance one morning per week. Now you just don't do that. Because, well, you are at home anyway.'

Or:

'We made some good arrangements then, when I started my studies, about the division of tasks. In the period that I had no paid work, I (...) did more of the housework. That is logical. It would not be fair otherwise. But I think that I do now more things than I did then.'

But there is also this remark:

'I can very well leave things as they are.'

Apart from self-imposed behaviour, the expectations of household members were a reason for the increase. Home-located producers are often saddled with smaller or bigger tasks by their partners or children: *'If you are still⁵ at home, you might do ...'* These tasks varied from walking the dogs, mending clothes, doing some errands or receiving the plumber, to repairing things in the house or pick up the children from day-care. As one of the interviewees said:

'When I started with my job, my husband walked the dogs. He fed them. He did the dishes. Since I am working at home, that is not the case anymore.'

Planning becomes a more conscious activity among telecommuters. Mirchandani (1998), among others, stresses the fact that telecommuting disrupts conventional equivalencies between 'work' and location, and instead define 'real work' as activities which can be clearly measured and planned. While they work at home, telecommuters continually plan and measure not only the activities that they do as part of their jobs, but also their domestic work and childcare.

⁵ The Dutch word '*toch*' is difficult to translate into English. Van Dale's dictionary (Martin en Tops 1991) gives nine different meanings and even more words: all the same, nevertheless, still, yet, anyway, but, even so, nonetheless, rather, actually, really, after all, since. Often the word is used as modal particle, useful in the (oral) communication to soften an imperative or to express anxiety, impatience, or surprise. The English uses in those cases often modal verbs instead of particles (Van Maris 2001). Instead of *'If you are at home anyway'* a more appropriate translation could be: *'If you happen to be at home...'*

While it is clear that telecommuting influences the division of labour inside the home, it can also have a direct or indirect influence on the division between paid and unpaid work whereas it opens job opportunities that were formerly not available or not acceptable. In families with special circumstances like ill or handicapped children, or in surroundings with little opportunities for childcare, working from home sometimes seems to be the only possibility to perform a paid job (see for instance Fothergill 1994). In some cases it works the other way around. One male interviewee started working from home to spend more time with his handicapped daughter. However, he could not concentrate on his work while doing so, and subsequently he arranged to work part-time. Here is a rare case in which telecommuting initially offered an opportunity to get acquainted with a part of life, that proved to be valuable, and finally lead to a change in external division of labour, without telecommuting, though.

External division of labour also relates to the extent of *monetarisisation* of the household, which means the division between purchased consumer goods and services and home production, or the substitution of domestic labour by the labour or production of others, also called outsourcing. Keuzenkamp et al. (2000) discern informal and formal modes of outsourcing, the first being outsourcing to friends and relatives, the latter to the market, for instance ready-made food, paid domestic help, delivery services. They found that double-income households often have paid domestic help, but that this was seldom the case with small-one-and-a-half earner households and the single-earner households. Some interviewees mentioned feeling guilty when someone else was cleaning their house while they were working at their computer. In cases like this they had two alternative. One was to take over the cleaning themselves – which some did. The other was to schedule the paid help on days they worked in their employer' s office.

In 1995, the Sociaal en Cultureel Planbureau found that almost one quarter of Dutch households make use of delivery services, mainly of groceries (Keuzenkamp et al. 2000). In particular, this was the case in single-earner and small-one-and-a-half-earner households. Keuzenkamp et al. seek the explanation for this in the fact that these products are delivered in the daytime. It can be assumed that women in single earners and small-one-and-a-half earner households are more often at home by day than the those in large-one-and-a-half-earner households and double-earner households. However, telecommuters are at home during the daytime as well. Further research would be necessary to see if there is a relationship between telecommuting and utilisation of home delivery services. By that time, only few Dutch households mentioned tele-shopping as an option. This kind of shopping was then still in its infancy. More recent figures make clear that 36 percent of Dutch Internet users ordered something on line and 30 percent of all consumers are interested in doing one' s shopping that way (Keuzenkamp et al. 2000). Telecommuters have in most cases access to the Internet and they are at home during the day. The interviewees and also the respondents of the IDC-survey mentioned tele-banking and tele-shopping as an option. On the other hand, some interviewees also mentioned to go shopping more often since they worked at home. They liked to leave the house every once in a while and replaced the once-a-week shopping by smaller amounts of purchases during the week.

The assumption is plausible, that families with home-working members spend less money on childcare and baby sitting, and fast food. This idea was supported by remarks of interviewees:

'When the children were smaller, I was glad to work outside the home. Otherwise I would have let them lunch at home, which takes an awful lot of time.'

On the other hand, parents with small children stated that they did not cut back on paid childcare, because:

' Working with children around is not possible.'

Next to changes in the division of labour among members of the household or between household and market, the content of the activities themselves could change. Interviewed telecommuters tended to go out for an errand when they needed anything, because they had the time for it or because they liked the break. It was suggested that telecommuters replace the once-in-a-week visit to the supermarket by everyday shopping in the neighbourhood. The supposition that telecommuting might affect the daily menu and composition of meals has to be further investigated. When spending more hours at home it is possible to prepare traditional dishes as soups and stews, which require long cooking time. In this phase of the research, no indications in this direction were found.

5.4. Household, family life course and telecommuting

Without demographic changes there would not have been such an increase of telework, is the opinion of Kompast and Wagner (1998). Especially the growth of both single-parent households and of two-earner households in Europe had a stimulating effect. Full-time childcarers have become a statistical rarity. There are also fewer households that are able to rely on the extended family (in particular grandparents) to provide childcare. The majority of households with young children are now faced with the necessity to juggle work commitments with caring ones, often extended to the care for a sick or frail adult. Forsebäck's life-cycle approach (1995) expects a growing interest in telecommuting with age:

' If we adopt such a perspective, we should, beginning in our early forties, have a gradually lower demand for self-affirmation by an affiliation to a fixed work organisation. In other words, we should have an increasing incentive to strive to liberate ourselves from a working place community that means relatively less and less. As 'solitaries' we should have strong reasons to seek seclusion to try to sum up our experiences and try to share these with other people. If this hypothesis is correct, the interest in telework should have a positive relationship with age. But the hypothesis cannot be tested, for one thing because today's 'solitaries' to such a small extent have been able to assimilate the most basic and practical prerequisites for teleworking, i.e. have not acquired a sufficiently intimate knowledge of computers and electronic communication' (Forsebäck 1995: 86).

In many researches a correlation between young children and home-working women is suggested. Fothergill (1994) for instance found that in particular women mentioned children as the main reason to work at home. Tailieu and Van der Wielen (1995) also note that lower income groups – mainly consisting of young women with children – think time for family and possibilities for childcare a rather important advantage of telecommuting. The middle and higher income groups think this is hardly an advantage. For them this reason probably did not play a role in their decision to work at home.

The interviewees and focus group participants – mainly women – related in majority to children. Some of them started to work at home when their first child was born; one did it to be able to take care of her grandchild, one had a handicapped child and one had children that were often ill.

'I want to be at home for him, very intentional.'

But there were also some who started working at home when the children grew older, because they were afraid that young children would distract them from work. For 19 percent of the respondents in the IDC-interview, the confrontation with children (and household tasks) were a reason for *not* working at home. Most interviewees made remarks about the difficulty or even impossibility to combine work and children:

'You are allowed to have children, but they shouldn't be a burden to your boss.'

Children distract the telecommuters from their work and diminish their concentration, and children's noises do not give a professional impression. On the other hand, working at home means that the telecommuter can jump in when necessary, because he or she can shift working hours to other points of time. Or they are at home for an ill or handicapped child, who does not need active care, but for whom it is pleasant that a parent is around. Though critical remarks were made, many of the interviewees stressed the fact that they wanted it this way:

'I wanted to have it all. Work and children. And we want to do everything ourselves.'

Moreover, children can impinge on the work sphere, but they also can contribute in a positive way to a separation of work and domestic sphere, because they force the parent to concentrate on something else:

'When my child comes home, I have to do something else, so I change from one role into another. Then you are seized by something totally different and then you can leave your work behind...'

This particular interviewee noted that work and family life were much more intermingled before she had a child. Then she went to the office in weekends or at night, or took work home to get things done. The interviewees agreed with the statement – drawn from researches of Fothergill (1994) and others – that women more often relate

to children than men. Men seem to be more capable to cut themselves off of the demands children make. The opinions of these mothers were not unambiguous. Small children might have been a reason to work at home, and they would do it again, if they had the choice. However, because concentrated work is not possible with children around, they thought that as much childcare was needed as when working outside the home. Despite this conviction, children came home for lunch, parents worked while their children were sleeping, a mother worked while her grown-up, handicapped son was around the house, a second mother worked while her children were ill in bed. They could – and more often than not did indeed – save money on day-care, lunch at school, baby-sitters and other services, despite their emphasis on the need for care.

5.5. *Changing norms and values*

Working at home could be the expression of the post-modern norms and values, of changing work structures and management culture. Nowotny (1982) emphasises the increasing resemblance of the organising principles of work and leisure. She points out that earlier attempts to subject the home to the guiding principles of scientific management had only been moderately successful (see for instance Collange 1970; Van 't Klooster-van Wingerden en De Wit-Sauer 1978). Differences between factory work and housework appeared to be too large. With the massive introduction of information technology on one hand, and of self-service goods into the home and leisure activities on the other, Nowotny expected a more successful rapprochement this time. According to Haddon (1998) domestic life has its own rhythms and routines, its temporal and spatial patterns, its shared values and rules as well as its domestic conflicts. These all shape how teleworking can enter the home and has to be adjusted to fit in with home life. On the other hand, the arrival of telework, with its own organising principles, can have a bearing on those domestic patterns (Haddon 1998).

A similar approach is taken by Breedveld (2000), putting the changing attitudes towards work in their historical context. According to him, the modest Dutch were in the 1960s little by little caught up in what he calls the *American way of life*. Work became an instrument to earn money, instead of a holy duty. Because money could be earned, luxury appeared to be within the reach of many. In their spare time, people could show who they were. Leisure time and labour became each other's antipodes, like men and women had their own worlds and like Sundays and weekdays had their own meaning. This is what Breedveld (2000) terms a *tea cosy culture* with a dual time system. Very different from the dual tea cosy culture is the culture of the 24-hours economy, which is the culture of the '*me-generation*' with flexible working hours and places, flexible contracts, participation of women in the labour market and of men in household tasks. Breedveld (2000) and others (Keuzenkamp et al. 2000) advocate a replacement of the work ethics by a combination ethic. The combination scenario leads on the one hand to an over-organised existence, while on the other hand a growing attention to a hedonistic way of life can be observed. Consequently, attitudes towards labour take many forms. There are those who do not feel ashamed to admit that they only work for the money, while others take their work more serious than ever and spend most of their time on it. In both cases, work culture and atmosphere and employee's benefits are important. This is reflected in, for instance, employment advertisements. '*They unde-*

stand that you work to live' , says a radio spot in the beginning of 2001. And a full-page advertisement of one of the Netherlands' biggest banking companies pays extensive attention to culture. After a long story about the content and significance of culture, the advertisement concludes with:

' You should not underestimate this culture. (...) It is important to wonder if a company' s culture matches your own culture. (...) Your work has to be a place where you are at home. A place that is ' own' (Advertisement ABN-AMRO, Volkskrant 10 February 2001)

Twenty – and maybe even five – years earlier, such an advertisement would have been unthinkable. Now it is one way to attract enough – and the right – applicants for the many vacancies that exist. Those vacancies are partly filled by women. In the 1960s and 1970s they entered the labour market, not so much out of necessity but as a result of their emancipation process. Now the limits of the combination scenario are felt. Breedveld (2000), citing the Commissie Dagindeling (the Committee Program of the Day), indicates how serious the difficulties are. Two million Dutch experience problems with the combination of work and care. Double-income couples feel more stress and run a bigger risk to marital conflicts than single-earners. And women are less happy than men (*Volkskrant* 14 April 2001). However, there is no way back. It would be short-sighted to conclude that women could better stay at home. As Hochschild writes in *The Time Bind*:

' The difficulty is not that women have entered the workplace but that they have done so on male terms' (Hochschild 1997: 247).

These general changes in norms and values – also reported by Terreehorst (1994), van der Maas en Haket (1995), te Kloeze et al. (1996) – might favour telework, in particular in post-modern families, in which man and woman share the responsibility for household and childcare and autonomy of partners and children is positively evaluated. In those families motherhood is rejected as the only life fulfilment or social identity, and men attach significance to family life and leisure time over their career. The acceptance of home work increases with the growth in flexibility in general and with a trend towards entrepreneurialism. This trend is described by Felstead and Jewson (2000), when they mention the evidence of a general trend in organisational governance away from the external imposition of bureaucratic rules and regulation towards the internalisation of norms, values and attitudes through the manipulation of organisational culture. Empowerment, participation, self-motivation and self-control, are the values of entrepreneurialism. Employees are expected to become entrepreneurs of the self, who invent their own job, career, qualifications, biography, and ultimately themselves. This trend fits very well with telecommuting, where the employees are away from the office and the direct control of their managers. By working at home, principles and practices derived from the workplace are introduced into the home. This may require a redefinition and renegotiation of the household understandings (Felstead and Jewson 2000). One of the expressions of this is the bigger need for planning, as mentioned in section 5.3.

The attitude towards career and family is gender biased. According to several authors (Fothergill 1994; Greenbaum 1994; Tailleu en Van der Wielen 1995; Vernooij and Casimir 1996; V. Frissen 2000), women put forward more family-oriented motives to work at home than men. Fothergill (1994) remarks that women show a discrepancy in their views on gender roles and their actual behaviour. They claim that being a mother or a housewife is not their primary role, and taking care of household and children is not their sole responsibility. On the other hand, their practical situation is different, as we have seen in Chapter 4, *Theoretical framework*. More highly educated women are on average more career-oriented than women with little education (Droogleever Fortuijn 1993; De Hart 1995). Consequently, highly educated women might apply more career-oriented motives to work at home, than others. Fitzgerald and Winter (2001) indicate that men are less sensitive than women to intrusions of home-based work on family life because men's role definitions do not include household chores and childcare. Thus they are more capable of clarifying kins or neighbours that they are at work, when being at home.

Since most interviewees were women, it was difficult to gain insight into the gender aspects of the attitudes. The education of the interviewees ranked from lower vocational training to university. The women with children all expressed their ambiguity. In particular the more highly educated women referred to family-oriented motives to work at home. They wanted to continue their career and yet have children, which was made possible by – at least part of the time – telecommuting. The IDC-survey produced clear gender differences. Only 10 percent of breadwinning home-workers thought *gaining time to spend on household and family* was an important argument for working at home. The answers of the second income earner in a family, mainly women, were different: 30 percent of them thought family was an important or very important reason to work at home (Casimir 1997d; Vernooij en Casimir 1996).

It can be questioned if norms and values about the content of housekeeping change, when people work at home. In general, time spent on cleaning the house is decreasing (Sociaal en Cultureel Planbureau 1998, 2000). Norms about cleaning change over time and can show big individual differences. For instance, the frequency of window cleaning can vary from once a week to once or twice a year. On the other hand, clothes are cleaned more often. The introduction of the washing machine did not cause a decrease in hours spent on laundry.

The exploratory investigations did not established a relation between telecommuting and changing norms on housekeeping in general. However, remarks were made about appearance. Working at home meant for most interviewees that they dressed differently and spent less time on 'grooming'. They did ~~not~~ have to dress up, wear a tie, use the hairdryer. Although the respondents felt this as a positive aspect of telecommuting, they also saw that dressing up for colleagues or clients has a social and expressive aspect, which is enjoyable as well. The image of a whole family in pyjamas at the computer, was regarded with apprehension. Appearance was subject of the group discussion also in a different way. In the preceding long and very hot summer, some of the participants used to work early and spent the afternoons in the garden or on the beach. The remark of one of them:

'But use a sunscreen factor 20, because it is absolutely not permitted to get tanned. Your colleagues might think that you are doing nothing but sitting in the garden...'

was encountered with recognising laughter. Jealousy of colleagues seemed to be a common thing and many accommodated their behaviour to avoid disapproval or envy.

5.6. Resources and telecommuting

5.6.1. Time

The available resources affect the way telecommuting is performed, and vice versa, telecommuting can influence the resources. Most influenced, of course, is time. Not only the amount of time can change – mainly by saving commuting time, partly by saving time on grooming – but also the moments of time on which the telecommuter is available for other activities.

Gained time can be spent on work or on household chores. The women who reported to feel embarrassed with paid domestic help when they were at home, choose to spend more time on cleaning the house. Most of the women, and some men, reported specific tasks that were done in between, in particular laundry and dishes:

'Then I put on the washing machine in the morning and when I take a coffee break, I take the laundry out.'

Half of the female interviewees reported that they spent more time on the house and the children, not so much because there was more time available, but mainly because they happened to be there. Children asked to have lunch at home '...because you are at home anyway.' Paid work was shifted to the time the children were asleep or the partner was available to take care of them. Here not only the quantity of time counted, but also a more qualitative aspect of time, i.e. the moments the telecommuter was available (Spittje 1999; Casimir 1997d).

Saving travel time was not necessarily a reason or a motive to work at home. It depended very much on the situation of the person involved. Main breadwinners who worked at home did not report travel time as an important item. In the IDC-survey only 9 percent of them thought this was important or very important. However, if a second worker worked at home, saving travel time was important: 29 percent of them said so. For the ones who wanted to work at home, travel time was even more important. 38 percent of them answered that saving travel time was important or very important.

The explanation for this difference might be that the main breadwinner was more often than not a man, the other income earner a woman. Women are more often responsible for the children and they spend more time on childcare than men. When there is one car in a family, women have in lesser cases this car at their disposal (Droogleevers Fortuijn 1993; Sinkeldam en Groot 2001). In the Netherlands there are little facilities for day-care after school hours. A school bus system is only maintained in specific situations, for instance on behalf of a special school. Consequently mothers (more often than fathers) have to be at the school at a specific time to pick up their

children. Hence, they have an interest in saving travel time. Droogleever Fortuijn found in this respect that women tend to work closer to their homes than men. A similar difference is found regarding the statement: *'Gaining time to spend on household and family'*. Only 10 percent of home working breadwinners thought this was an important or very important motive to work at home, 30 percent of the second home workers and 33 percent of the ones who wanted to work at home found this important or very important.

The most important aspect of time is the flexibility of time.

'I couldn't do without that flexibility; I work when I like to work.'

And someone else said:

'I work at 'strange' hours, on Christmas Day for instance, or late at night.'

Fifty percent of the breadwinning home workers and even 65 percent of the others found it important or very important to control their own time schedule. Often flexibility is very much associated with telework, but the extent of flexibility depends on the type of work. Telephonists who work at home cannot master their own schedule. They have to be there at fixed hours. Workers in higher positions, especially when employed in staff positions, have more freedom to master their own time schedule and work content. They can shift work to convenient moments, or they interrupt their professional work with household chores. Flexibility seems obvious from an individual point of view, but often the nominal gain in freedom for family and leisure time is outweighed by indispensable obligations. Taking into account the working time patterns of couples and families, instead of individual telecommuters, one has to consider a deregulation of those patterns in many areas of work. A growing flexibility of working time schedules determines the degree of common social time through the number of unsocial hours that have to be worked in families (Büssing 1988). Or, as Haddon puts it:

'...those female clerical teleworkers, and some professionals, who could not afford to pay for childcare could often only work when the children were not around or when their partners could look after them. In cases where young children were present this meant working in the evenings and at weekends' (Haddon 1998: 139).

Most interviewees and respondents in the IDC-survey remarked that it is not possible to combine childcare and work at the same time, but when a child needs to be taken care of during working hours, it is easier to arrange this when working at home. The work can wait until the evening or the weekend. This flexibility is at the same time a pitfall. It is tempting to start cleaning up or do the laundry when one should be at work, and the mingling of private and public sphere can give rise to the feeling that the work is never done. Indeed, 26 percent of the respondents in the IDC-survey reported so.

5.6.2. Human resources

Working at home requires special characteristics. People who work at home need to be self-motivated and self-disciplined; they must be able to work alone, at their own speed. If the telecommuter has not developed these skills, the telecommuter's vulnerability to interruption may become a source of stress (European Commission 1998). As Forsebäck writes:

'The at times very slight difference between success and failure, dream or nightmare, lies mainly in the way both parties are able to cope with the social perspectives that beckon. For example, how the employees are able to set up performance goals for themselves and put up their own rules and routines for everyday work, and how they succeed in drawing the line between work and leisure' (Forsebäck 1995: 81).

Felstead and Jewson (2000) call this the ability to managing the self. Next to these management skills, telecommuters need the skills to master the high-grade technology they are using. In contrast to work in the office, there is generally no help-desk near at hand. In the interviews this was often mentioned as one of the drawbacks of working at home. In particular the installation of fax machines was mentioned as a problematic thing. On the other hand, the skills – and the equipment – acquired by this kind of work, often benefited the private life of the telecommuter or his or her household members. PC's and Internet connection were used for volunteer work or recreational activities.

Social networks can play an important role in the execution of telework. As one of the participants of the focus group discussion put it: *'The whole family is teleworking.'* She meant that other members of her household took her work into consideration, left her alone when needed or took care of the children when she was at work. Sometimes they even gave practical assistance with the work itself, for instance a father-in-law who helped with a mailing. In those cases the household could be regarded as a production unit, not only producing domestic goods and services, but also producing for a market. This looks like Terreehorst's description of the pre-industrial farm model (Terreehorst 1994; see also Chapter 3).

5.6.3. Money, goods and services

Money is, of course, a very important resource and sometimes a reason to start working at home, for instance when no other possibilities are available. Schop (1998) lists the categories, where costs or savings can be encountered, or for which employers may grant allowances: technical devices; work space (possibly renovation, furnishing, use); energy and electricity; communication; commuter traffic; childcare. Next to these, telecommuting can effect household expenses in a more indirect way. Some households refrain from paid domestic help. Others report that telecommuting gives them the possibility to take part in activities during the day, for instance outdoor sports, which also influences their budget (Schop 1998). Although telecommuters might save travel expenses (Spittje 1999), they sometimes miss some benefits in this respect. A leased

car or a seasonal ticket for public transport is not profitable for their employer, when they work at home more than one day.

From the interviews and group discussion it appeared that great differences existed in the way employers deal with reimbursements. Direct costs of telecommunication were paid by most of them. It was common that technical devices as computer and accompanying software, printer, modem, fax machine, answering machine, or a photocopier, were provided by the employer, if clearly needed for the job. Infrastructure and telecommunication connections were often entirely or partly provided by the employer. Some telecommuters had their own computer. Although working at home involved energy costs – heating, electricity, but also coffee, which, in most offices, is offered by the employer – hardly any employer paid an allowance for that. There were exceptions, though. The secretary of a co-operation of building contractors was paid rent for her room. Some larger firms have had discussions with the Dutch Treasury about allowance levels. If they pay too much, the employee is taxed for it (Casimir 1996b). Many telecommuters never raised the question, because they did not realise that telecommuting was also beneficial for their employers, who save money and time on commuting. Also, they felt highly privileged by working at home and hence did not want to disturb the relationship with their employer. Some admitted that the thought of asking a reimbursement never crossed their mind (Casimir 1997d).

Telecommuting and technical equipment, infrastructure and connections go together. Some of the interviewees liked working at home because they had better facilities there, like a faster PC or an Internet connection. In other cases the facilities in the office of the employer were better, for instance a high quality printer, an Internet connection (or a faster Internet connection than at home), a photocopier and the availability of a help desk or colleagues who could assist with hardware and software problems. The presence of facilities at home often facilitated telecommuting or made the decision to do so easier. One of the interviewees for instance reported that there was no room in the office and no PC available for her. The fact that she had both room and equipment at home, played an important role in her case.

When asked if they used the equipment for private activities, the first reaction of many interviewees was negative. After giving some examples, they all came up with activities: minutes of a meeting, homework of children, tele-banking, results of sports competitions, communication with relatives and friends, desk top publishing of a hobby magazine etc. The equipment – in particular the extra telephone line and answering machine – could also be used to manage the boundaries between work and private life.

5.6.4. Space

Communication technology makes work even more independent of place. As a result of this, the place is increasingly important for the worker him- or herself. The functional aspects of the accommodation will be expanded (see Pennartz 1981). The home will have to provide working space and facilities – infrastructure for telecommunications and electricity – to do so. Next to that, the social and existential function will change too, both for the private as for the work environment. Since the home is – in capitalist societies – the primary site of social reproduction, the social relations of re-

production impinge upon those of production and vice versa (Felstead and Jewson 2000).

A Dutch government publication about house-building in the future states that telecommuting could influence the demands employees make on their accommodation, especially in certain regions (Toekomstgericht Bouwen 1994). Terreehorst (1994) thinks a spacious country house ideal for the post-modern telecommuting family, because according to her, working parents must have enough room for small offices where they can place the communication hardware and software, room to receive guests, to relax, and for gymnastics. However, also people with more moderate wishes, prefer a separate room to work, as one of the interviewees remarked:

'When we bought this house, a separate study for me was an absolute condition. I want to be able to close the door behind me and to concentrate on my work. The place has to be really well fixed. It has to be a really business-like work environment, so to say, at least for me. It must not mingle with private things.'

For many the study expressed a symbolic or existential function:

'It is really my room.'

Or:

'I shut the door behind me and I think: 'now it is my turn.'

The room had a social connotation where it was the place to meet people, or just to retreat from others:

'I find it alright when the children play there, but I couldn't work in the living room.'

Only few worked in the living room, not because there was no room elsewhere in the house, but because they liked it that way:

'It forces me to clear my desk when I get visitors.'

The utilitarian function of space was often indicated. The room had to provide enough space for all the equipment and it had to be good to work in. Often professionalism was mentioned:

'It is important that this room is perfect to work in. This room has to have a professional character.'

If the telecommuter hosted clients or colleagues at home, not only the room itself, but also the entrance to the room had to have a professional look. In some cases the room had to be conquered over household members. One of the interviewees used to have her desk in her husband's study, but after this husband took a few times accidentally

her papers to his work, she decided to arrange a desk in the bedroom. She hoped nobody would start to send faxes in the middle of the night. When no room was available, building one was sometimes a solution. One couple made a big study in the garage, also suitable to receive clients. Others were more reluctant to do so:

'Half a year ago we were thinking about rebuilding the place. Make it more an office. But I am not sure if I really want that.'

Enough room and a suitable room to work was one thing. Next to that, the interviewees stressed the significance of nice surroundings, a good school for the children, a pleasant house. Especially the ones who lived in rural communities or in the woods, valued their living conditions very much. Conversely, some interviewees reported that they wanted to leave the strongly urbanised agglomeration of Western Holland. There were interviewees who could stay in one place when their employer's office moved to another, or who could move to the countryside and keep the job in the city. One moved back to the village where he originated from, another one was thinking about a similar move. The Sociaal en Cultureel Planbureau (2000) notes, that mobility on the housing market decreases with age, beginning around forty years old. The interviewees suggested that immobility and the wish for telecommuting go together.

5.7. Assessment

It was expected (by Fothergill 1991; Büssing 1998; and others) that especially gender related obligations would be a moderator of the relationship between teleworking and the quality of life outside of work, as well as at work. Female telecommuters would pick up a more traditional female role when they are confronted with the laundry and the dishes because they live in the house all day. Fothergill (1991) indeed found such a correlation:

' There is little evidence of a significant change in traditional gender roles within the home. (...) The pattern of gender roles is not automatically changed just because a man works at home' (Fothergill 1991: 346).

Büssing's research (1998) shows two sides of the coin and depicts gains, losses and the ambivalence of the teleworkers. He found, for instance, a better overall fit and an improved synchronisation between family obligations and work requirements, especially for women; reduced stress because of reduced working hours; more autonomy for working time regulations; and so on. However, because the fit between work and family is largely due to the decision of the teleworker, one easily can imagine the 'golden cage' the teleworker is caught in (see also Weijers en Weijers 1986).

Sahori found in this respect that especially female workers felt a slightly higher impact of telework on aspects outside their work, i.e. in the domestic sphere, while men seemed to feel a stronger effect on the work itself. Her research shows that women working outside the home felt difficulty in balancing household chores and raising children with work. Working at home was one way to ease the situation (Sahori 1999).

Steward (1999) points out that most telecommuting projects assume that being at home is always preferable to working in the office. She calls this the concept of a '*maligned office and a benign home*'. Hochschild (1997) found in *The Time Bind* that fathers report more positive emotional states at home; whereas mothers note more positive emotional states at work. Home is not always the best place to be, and a separation of home and work has not only negative aspects, is her conclusion. On the contrary, many people like to go out of their homes regularly, to meet other people, but also to escape from the home or their family.

In Chapter 4 (*Theoretical framework*) the concept of *spill-over* was introduced. Hill et al. (1995) cite several examples of positive spill-over as a result of telecommuting, in particular in integrating work and family responsibilities like childcare and other household tasks. Another example of positive spill-over is when work-related skills or goods benefit partners, children or friends in their daily life, for instance: volunteer work, help with children's school work, communication with distant relatives. Also, more understanding for the work of the breadwinner by other members of the family as a result of the regular confrontation with that work, can be regarded as positive spill-over.

The interviews and group discussion gave examples of these. The combination of being an employee and a parent was made more easy by the possibility of telecommuting. It could diminished stress, as one man (no children) stated. He did the dishes or started hoovering, when he got stuck with his work. According to him:

' *Household labour is a good cure for stress.* '

On the other hand, there is also some empirical evidence for negative spill-over. The lack of spatial separation between family and work might increase stress among family members; and vice versa, there could be a negative relationship between family relations and satisfaction with telework (Benschop 1997; Felstead and Jewson 2000). Many claim that combining dependent care with telework is ineffective (Hill et al. 1995; Casimir 1996b).

Although the interviewed telecommuters evaluated their situation in general as positive, they made many remarks about the disadvantages. Interviewees reported that, while working at home, household tasks imposed themselves upon them. The dishes were sitting on the kitchen sink, asking to be washed, the laundry was waiting for treatment. The result was that many women experienced an increasing amount of domestic labour. There was, for instance, the woman who's husband did walk the dogs before she started working at home, and the one who realised that the original negotiated division of labour had faded away. However, though these facts were presented as complaints, they were followed by the admission that it was their own fault that things went in this direction, or that they do not mind so much.

Not only the household chores interfered with the work, the work also interfered with the private sphere. Twenty-five percent of the teleworkers in the IDC-survey expressed the feeling that the (paid) work was never done. The interviewees and discussion participants said the same. Many of them found that they spent more time on their job when working at home, because they wrote down net hours and because they wanted to perform a good job:

'My work should not be good; it should be perfect.'

Considering all the pro's and cons of telecommuting, many of the interviewees regarded telework as the best of two evils:

'I rather would work outside the home, but the good thing is that you can shift your work easily to another point of time, in case of a calamity. There seems to be a calamity every week...'

In general, respondents thought that advantages of working at home prevailed over the disadvantages. It improved the quality of daily life, enabled a better interaction between work and private life, and it raised the quality of the paid work.

5.8. Strategies regarding telecommuting

The main challenge for telecommuters is to balance work and private life, managing the boundaries between them. To manage the boundaries *within* the home, and to handle the effects of negative spill-over within the home, segregation or segmentation is mostly used. To get enough work done on one hand, and to guard themselves against too much work on the other, many telecommuters write down the exact amount of hours worked, using fixed time schedules and a fixed place to work. In the IDC-survey, 34 percent of the respondents agreed with the proposition that a time schedule is essential; 44 percent said not to need it. When telecommuters wrote down their hours, they often reported to write net hours, unlike when working in an office where coffee breaks and chatting with colleagues count as part of the job.

As telecommuters separate working time from leisure time, they also separate working space from leisure space. The study serves as an office, separated from the rest of the house. Rules and agreements about the use of resources are formulated. Often the admission to the PC is subject to strict rules (with priority for the telecommuter). Some examined families made appointments about the use of the telephone: no private calls during working hours. In other cases an extra telephone line, fax or answering machine separated private calls from business communication. Thus telecommuters reproduced the traditional division of labour between paid and unpaid work (Vernooijen Casimir 1996; Casimir 1996b).

Hill et al. (1996) suggest that teleworkers should establish rituals at the beginning of the work day to mark the start of work, and more importantly, other rituals to mark the end of the work day. There are no data available to know if the interviewees practised this kind of rituals or not.

Segmentation is used by career-oriented families to prevent the private sphere to intrude into the work sphere, and by family-oriented households to keep the work outside the private life. Segmentation is not only useful for the telecommuter him- or herself. It makes also clear to others when this person is working and when he or she is free. Segmentation has next to time and space also to do with noise: both telecommuters and their employers usually do not like barking dogs or screaming children in the background, when talking on the telephone to a client (A. Metselaar 1994; Casimir

1995b). The opposite of segmentation is *integration* and *openness*: the establishment of a fusion of the two types of activities and spheres (Felstead and Jewson 2000). In an integrated, open household, domestic and work activities are executed in the same space, within sight and sound of each other, allowing for easy and ready interaction. There is no prohibition, for example, on members of the family answering the telephone to clients or for neighbours coming in at working hours.

Only a few interviewees preferred integration and openness. They had their desk in the living room or they made a playing corner in their study. Women showed an ambiguous attitude towards an integrational strategy. On one hand they seemed to be better equipped to manage the combination of many tasks at the same time. On the other hand they indicated to be more susceptible to the expectations of others than men are. The interviewees reported difficulties in concentrating on their work when children were around and asked for attention.

From literature it is known that there are two factors that encourage men to perform more household tasks (Wheelock 1990; Te Kloeze et al. 1996). One is the need for it, for instance when their female partner has a job outside the home and paid childcare is too expensive. The other is their motivation. If they really want to take care of their children they will more readily engage in household tasks. Several of the female telecommuting interviewees had husbands who took care of the children when they were working. Some men indicated to use telecommuting as a strategy to be able to take more care of the children. Thus telecommuting did not only call for strategies to balance work and private life, but was also used as a strategy itself to realise a desired balance.

5.9. Research questions and hypotheses

The literature discussed in Chapter 3 (*Telecommuting in the context of societal change*) and 4 (*Theoretical framework*), combined with the results of the exploratory investigations discussed in this chapter, clarifies the possible interrelationship of telecommuting and household activities, household characteristics, standard of care, resources, level of care and quality of life. However, it leaves as many questions as well.

Do telecommuters really perform more household tasks than before and do these tasks change? To what extent is the family life course related to telecommuting? What is the role of the normative context of telecommuters? What role do resources play and how does their use and allocation change as a result of telecommuting? How do telecommuters assess their situation and what strategies do they apply to balance their expectations with their actual situation?

5.9.1. Refining the research questions

The above questions can be summarised in the following research questions:

1. To what extent does the external division of labour (division between paid and unpaid labour, extent of outsourcing to the market or self-care) change when people start telecommuting?
2. How does the internal division of labour among household members change by telecommuting and how does the content of the daily care change?

3. How do households assess these changes and what strategies do they apply to minimise possibly negative consequences; or is telecommuting by itself a strategy to match wishes and possibilities.

It is expected that changes in level of care caused by telecommuting differ according to household characteristics, resources and standards of care. In family-oriented, asymmetrical households – in which the man is the main breadwinner and the woman first and foremost housewife and mother – it is plausible that women perform more household tasks as they or their husband start working at home. Families aspiring a more symmetrical division of labour, might use telecommuting as a strategy to realise or enhance this. It will be investigated whether the answers to the questions above differ according to household characteristics, resources and standard of care. Since children have a great impact on domestic labour, this research focuses on families with children.

It is hypothesised that in family-oriented, asymmetrical families, telework will intensify the asymmetry and will amplify the extent of self-production. As a consequence of telecommuting, the external division of labour, the magnitude of household labour and the internal division of labour will shift in a such a way that women get more work to do. Women with a traditional, asymmetrical view will be reinforced in their role of housewife, not only when they themselves start working at home, but also when their male partner does. In those households more time and attention will be paid to domestic labour. Consequently, less money will be spent on paid facilities.

In households where the man wants to take more responsibility for children, telecommuting can be used as a strategy to enable this. In some cases, telecommuting leads to a higher participation of men in household tasks, even opposed to their own ideology. This can be the case when the woman has a substantial job outside the home and there are not enough financial resources available to afford paid domestic help and childcare. It is expected that family-oriented women positively assess the changes in the direction of a reinforced housewife's role, whereas career-oriented women evaluate this negatively.

5.9.2. Hypotheses

When the work sphere and the domestic sphere come physically closer, it is plausible that also the differences in attitudes towards paid and unpaid labour will decrease. The assumption is, that both the attitude towards domestic labour and to paid labour change, when the two spheres move closer to each other. Telecommuters might acquire a more task-oriented and less time-oriented attitude towards their paid labour, because this labour is performed in the domestic sphere, which is more task-oriented in itself. Time becomes less important, one does not need to hurry, to be ahead of the traffic jam, to be in time for dinner, to catch a train on time. Working late does no longer entail an empty unpleasant building, or an unsafe bicycle ride to a deserted railway station. Work is not so much squeezed in measured units. As a matter of fact, this is in accordance with changes that are reported from telework managers: the work itself has to be defined in terms of output, and not so much in the amount of time that is spent on it and presence of the worker at the work place, like traditional managers were used to.

Introducing work in the domestic sphere could change the attitude towards paid labour as well. The idea that telecommuting brings back the old productive family is true in the sense that working at home strengthens the task-orientation of the paid labour. There is, however, a relation with the extent of autonomy of the teleworker. Telephone operators, for instance, still do very time-bound work. It is plausible that their attitude towards work is also time-oriented; they are typical 'wage earners' who work to live. Money is more important than job satisfaction. Schop's interviews support this assumption. She found that her interviewees were not very much interested in the costs of telecommuting and the reimbursement of expenses by their employers, except for the one who had a job as a telephone operator (Schop 1998). Teleworkers with little autonomy are more time-oriented and therefore more interested in costs and direct benefits of the job. Of course the level of income influences their interest in money, but others with low incomes do not emphasise this aspect as much. They experience more secondary benefits of working at home. The assumption is plausible, that families with home-working members spend less money on childcare and baby sitting, fast food, and paid domestic help.

Summarising, the central hypothesis of this research is:

In asymmetrical, family-oriented households telecommuting reinforces the asymmetry. This applies to households of both male and female telecommuters.

Derived from this a second hypothesis can be formulated:

As a consequence of telecommuting, the attitude towards both unpaid, domestic and paid labour changes. The first becomes more time-oriented, the second more task-oriented.

To answer the research questions and to verify the hypotheses a survey was devised. The following chapter (Chapter 6, *Methodological aspects and study design*) describes the operationalisation of concepts and the design of the survey. Chapter 7 (*Results*) reports the results. In Chapter 8 (*Discussion*) the results are discussed and placed in the context of preceding chapters.

6. Methodological aspects and study design

6.1. *Research questions*

In the preceding chapters three research questions are developed to explore the changes in the division of domestic labour in telecommuters' families:

1. To what extent does the external division of labour (division between paid and unpaid labour, extent of outsourcing to the market or self-care) change when people start telecommuting?
2. How does the internal division of labour (division among the members of the household) change by telecommuting and how does the content of the daily care change?
3. How do households assess these changes and which strategies do they apply to minimise possibly negative consequences; or is telecommuting by itself a strategy to match wishes and possibilities.

To find the answers to those questions and to examine if answers vary in accordance with household characteristics like size, composition, standard of care and available resources, a survey was conducted. This chapter describes the design of the survey and the operationalisation of concepts.

6.2. *General considerations*

In choosing a research methods, there are several issues to consider (Baarda en De Goede 1997). One of the keywords in the above-mentioned research questions is change. Change is, as Wheelock (1990) says, a difficult concept to grasp, and even more difficult to measure it. A longitudinal investigation – or a life history approach – seems most appropriate to examine changes over time. Such an investigation is always difficult to carry out. To most effectively employ this approach, the first interviews and observations should be done with people who are not yet telecommuting. The next sets of interviews or observations should be done when those people are working at home. It will be very complicated to find enough respondents who will actually start working at home within a given period of time.

Equally, a quasi-experimental technique using a control group – comparing a group of people who are actually telecommuting with a control group of people who are not – also has its difficulties. It will be very complicated to find a control group with exactly the same characteristics as the telecommuters. Differences between telecommuters and non-telecommuters might be the result of specific characteristics of the ones who work at home, not of the telecommuting as such.

One of the goals of this research was to collect data about behaviour. It is generally suggested that behaviour should be investigated by observation, because many aspects of behaviour are unconscious – or at least unrecognised – and because in interviews social acceptability plays a role. However, social acceptability can also influence observations. Next to that, the research not only wanted to measure behaviour, but also examine how people think about changes and the strategies they apply to match current and desired situations. For the investigation of knowledge, attitudes and opinions the survey can be the appropriate method, provided it is carried out properly. Quantitatively oriented interview research has been criticised for its use of closed answer categories that provide little understanding for the way people really lead their daily lives, experience their jobs or perceive work-related issues. Open questions, on the other hand, demand much of the respondents, because they are time consuming and require verbal skills. If closed questions are used, it is important that they are phrased in such a way that they can be understood by everyone without conveying the suggestion that one answer is better or more correct than another (Reinharz 1994).

Considering all the advantages and disadvantages of the different methods, a written survey seemed most appropriate. For several reasons – explained below – the survey was placed on the Internet. Respondents were sought through employers with telecommuting-projects, who asked their telecommuters to co-operate on a voluntary basis.

6.3. *Internet surveys*

Digital surveys, either by e-mail or by Internet, are growing in popularity. A recent study among 300 managers found that 87 percent of them regard the Internet as a useful instrument for marketing research. In another piece of research 81 percent of firms surveyed, expected to use the Internet for market research in the coming five years (Alternet 1999). The actual mechanisms used, vary from client specific chat-rooms to interactive surveys on the Web. Inquiries sent by e-mail are also among the possibilities.

6.3.1. *Advantages*

Advantages of e-mail and web research can be summarised as follows (Alternet 1999; Multiscope 1999; Research Spectrum 1999): it is fast and cheap, easy to distribute, not intrusive, relatively objective and error-free.

Research on the Web is fast because it requires a shorter period of processing the data. Since the respondents type in the data, the results can be processed immediately. No time – and no costs – has to be spent on data entry. The distribution of the surveys is also cheap. It does not require postage or telephone expenditures. In traditional sur-

vey research the number of respondents is often determined by cost considerations, because most expenditures are respondent related: telephone, postage, time spent on interviewing etc. When research is undertaken via the Web, the number of respondents hardly influence the costs. Programming, server time, etc. are fixed costs; communication costs are at the expense of the respondents (Alternet 1999).

Web surveys are easy to distribute among dispersed respondents. Distance does not play a role. They are user-friendly, in that they are very easy to complete. In particular the correction of mistakes is much easier than on paper. If necessary, on line context-driven help can be made available. It is also possible to process data 'real time', which might result in immediate feedback to respondents. When properly programmed, a web survey can also skip questions that are not applicable for that specific respondent.

Web surveys are also less intrusive than, for instance, telephonic surveys. People check their e-mail and surf the Web when they have time for it. Respondents complete the survey at their convenience. The survey can be accessed 24 hours a day. Furthermore, respondents can be objective, because there is no interviewer influence. According to some market researchers (The Research Spectrum 1999) respondents give longer, more articulate open-ended responses than they would over the telephone.

Finally, there is a reduced chance of error. If only one answer is allowed, the program never takes more than one answer. The program can also check the input and, for instance, 'force' the respondent to fill in obligatory fields. Retyping of data by the researcher is not necessary, which not only reduces processing time and costs, but also the chance of errors.

6.3.2. Disadvantages

There are, of course, disadvantages as well. Web research is not suitable for every project or target group. Respondents should have access to the Internet and, because the Internet use is not uniformly distributed throughout the population, many types of potential respondents would be underrepresented. The majority of Dutch Internet users are still private persons, male, between 21 and 32 years old, highly educated with an above-average income. However, the number of women using the Internet is growing; 23 percent of all users are female. Users between 45 and 64 years old comprise 18 percent of the total. Around 65 percent of all users log on to the Internet from their home address and over 58 percent have a private e-mail account at their disposal (Inter/Media scope 1999).

Respondents also should be active users, who read their mail and are inclined to fill in questionnaires. European Telework Online (ETO) is of the opinion that it is easier to get respondents offline than online. The ETO suggests to design a very short, easy to fill in questionnaire, in which a question is added: *'Would you be prepared to answer additional questions?'*

' If 50 percent of the people you reach return the first short questionnaire and affirm the last question you have a good chance of getting a further, more detailed response from them later. (...) A typical response rate to unsolicited questionnaires is below 5%. Exceptionally, well designed and targeted

questionnaires can achieve 15 percent or even 25 percent or more' (European Telework Online 1998).

In this research a high percentage of the population does have Internet access. According to Heliview, logging on to the local network of the company is going to be the main mode of communication by telecommuters. Traditional telephone and fax use is clearly decreasing, while e-mail connections are increasing (Heliview 2000). Hence it is plausible that respondents are relatively easy to recruit by e-mail or through references on related websites, and perhaps even easier than with a mail survey.

6.4. Population and sample

The research was restricted to the Netherlands because the division of domestic labour is to a high degree related to cultural differences and social services. Comparison between different countries should also take these differences into account. The total population of telecommuters in the Netherlands is estimated to be 200,000 in 1998. As described in Chapter 2 (*Telework*), estimates of numbers vary according to the definition of a telecommuter. This research focuses on employees, who regularly work at home. As this research project was particularly interested in changes in the division of labour for men and women, households with partners of the opposite sex were especially invited to answer the questionnaire.

The research aimed for a sample of a few hundred respondents. They were to be approached through firms with telecommuting projects. Addresses were obtained through the Dutch Telewerkforum and furthermore, an announcement was put in the magazine *Telewerken* and on the website of Wageningen University. Of course, the danger of bias is present: respondents might have specific characteristics, for instance they are more likely to be young male highly educated professionals. As long as we know the origin of the respondents (through their e-mail addresses, if communicated), we can determine any deviation from the average, provided we have information about the profile of the population participating in telecommuting projects. In all surveys, people with definite opinions, either negative or positive, are more likely to fill in questionnaires than others.

6.5. Operationalisation

The survey had to answer the research questions. For this purpose a questionnaire was devised, in which the central concepts of these questions were operationalised. These concepts have been elaborated in the theoretical framework – Chapters 2 to 5, but in particular Chapter 4. For the operationalisation process, the scheme developed by Baarda and De Goede (1997) is used. To make the concepts measurable, complex concepts were divided into different elements. For each element, indicators were determined, based on literature and the exploring phase of the research project. Subsequently, for each indicator, questions or statements were formulated to represent variables. The first column in this scheme contains the concept intended, the last col-

umn is reserved for the concept defined. In Figure 6-1 an example of this process is given.

Figure 6–1: The operationalisation of the concept 'Appreciation of Greentown'

Concept	Element	Indicator	Question/statemen/item	Variable
Appreciation of Greentown Definition: degree of Appreciation by Inhabitants	As a town to live in		Answering scale 1 = totally disagree, 5 = totally agree	Appreciation of Greentown Score = sum of scores per item
		Quality of houses	In Greentown there are many good houses	
		Price of houses	The houses in Greentown are relatively cheap	
		Parking facilities	In Greentown you can always park your car	
		Accessibility	There are hardly any traffic jams around Greentown	
		
	As a shopping centre	Quantity of shops	There are many shops in Greentown	
		Quality of shops	There are many good shops in Greentown	
		
	As entertainment centre	Bar, pub	There are many nice pubs in Greentown	
		Restaurant	There is a good choice of restaurants in Greentown	
		Cinema	There are enough cinemas in Greentown	
		Theatre	There is a good theatre in Greentown	
		
Concept intended		Operationalising		Concept as defined

Source: Baarda and De Goede 1997: 152

For the questionnaire, answer categories per question or statement had to be defined. These answer categories can be noted in the last column. Then the final questionnaire consists of the last two columns of the scheme, according to the example in figure 6.2. The complete questionnaire, including the matching concepts, elements and indicators, is to be found in Appendix I.

Figure 6–2: Part of the operationalisation process of this research

Concept	Element	Indicator	Question/item/remark	Answer categories
Household	Composition: size, demographic data	Respondents' characteristics	What is your age?	...
			Are you	man woman

The sections below describe the operationalisation of the concepts, needed to answer the research questions. As already mentioned, these concepts are to be found in Chapter 4, *Theoretical framework*, following the aspects of the home economics model. If applicable, notions from the other preceding chapters were included. The order below is that of the questionnaire which is slightly different from the order in Chapter 4. First, household characteristics and facts about employment and telework situation are discussed. Then, resources – property, use, and allocation of resources – are considered, followed by motives and opinions, expressions of the standard of care. The next section describes household activities, focusing on the division of labour, both external (between household and market) as internal (between partners). This chapter ends with the respondents' own evaluation and applied strategies. The figures show the elements per concept, followed by the indicators for each element. The last column, 'Question/item/remark', gives a clarification, if necessary, or the essence of the question or statement.

6.5.1. The household

The first concept to be discussed was the household. It was expected that household characteristics, as well as gender, influence attitudes towards telecommuting and the way household chores are executed. The elements composition, special characteristics and the fact if other members of the household were telecommuting as well, were taken into account.

Figure 6–3: Operationalisation of household

Element	Indicator	Question/item/remark
Composition	Respondents' characteristics	Age, gender, marital status
	Characteristics of other members of the family	Size of the household: number, age and gender of members of the household
Special characteristics	Special situation, illness or handicap	Personal circumstances influencing telecommuting
	Coinciding with other important changes	Birth of child, move, new job, etc.
Other members of the family	More telecommuters in the household?	

6.5.2. Employment situation

The employment situation of the respondents was characterised by four elements: their current employment situation, their telecommuting situation, their former situation and the employment situation of members of the household. The type of work that telecommuters do, determines their flexibility in allocating their time. It was assumed that people with higher organisational positions and more education have more freedom in this respect than employees with lower income and status. Education and income can be indicators for autonomy, but are not exclusively so. Some administrative tasks can be performed at indiscriminate moments, some managerial tasks are to a large degree time-bound. Therefore, the extent of autonomy and flexibility were added as indicators for the telecommuting situation. To describe the current employment situation some characteristics of the company – size and profit or non-profit – were added. This was done because literature suggested that big companies differ in their telecommuting policy from small companies.

It was assumed that the more hours a telecommuter is at home, the more this work will affect the domestic pattern. Not only the amount of hours, but also the number of days over which telecommuters spread their work were supposed to be relevant. Furthermore, it seemed relevant if a telecommuter takes work home now and then, or on a regular basis. In the first case, the influence on the division of labour within the home will probably be incidental as well. To complete the description of the telecommuting situation, the duration of the telework situation was added as an indicator. Furthermore, the fact if the respondent is the only telecommuter in his or her work environment or if telecommuting is a regular part of the work culture. Also relevant seems the location where the telecommuter can work if not at home.

The main purpose of the survey was to discover changes as a result of telecommuting. To detect if observed changes really are the result of telecommuting, or caused by other changes, different questions were included in the questionnaire. One of the elements of the employment situation was the former situation: how many hours did the respondent work in a paid job before the current situation?

Wheelock (1990) found that the amount of homework done by men was very much related to the presence of their wives. Unemployed men tended to take over more household chores when their wives were not at home. Therefore, the employment situation of other members of the family was included as an important element. All elements and indicators of the employment situation are to be found in Figure 6–4.

Figure 6–4: Operationalisation of employment situation

Element	Indicator	Question/item/remark
Current employment situation	Type of work, status	Executive, managerial, professional, policy maker, teacher, researcher, technician, sales person, administrative etc.
	Income class	
	Education	Primary school, lower vocational training, etc.
	Size of company	
	Characteristic of company	Profit/non-profit
	Hours employed	
Telecommuting situation	Since when telecommuting	
	Incidental or regular	
	Number of hours working at home	
	On how many days	
	The only telecommuter in company or department or part of a group	
	Location when not working at home	
	Autonomy	Able to choose working hours
	Flexibility	Working on fixed hours
Former situation	Work done before telecommuting	
Situation members of the family	Other members of the family having paid jobs	If yes, number of hours

6.5.3. Resources

Availability of resources

Telecommuters might have resources available that influenced their decision to work at home, or that influence household behaviour. The first element examined consisted of technical resources; indicators are the availability and financing of computer, printer, modem, mobile telephone, Internet-connection, etc. Another indicator was the influence that the possession of resources exerted on the decision to start teleworking. Additionally, respondents were asked if they were using their equipment for private purposes, like schoolwork children, education adults, tele-banking and tele-shopping, communication with family and friends, volunteer work, hobby or sports.

The second element was accommodation. It was assumed that nice surroundings and long commuting distances influenced telecommuting in a positive way. Location, degree of urbanisation, distance and travel time to employer's office, and mode of transport, were considered to be indicators of accommodation. Also, the size of the house itself and the availability of a separate work area, were examined as indicators of the living conditions. The degree of urbanisation was calculated on the basis of the community, that respondents chose from a list. The Dutch Central Bureau for Statistics (CBS) has determined for every Dutch community the average number of addresses per km². The density of environmental addresses represents the degree of concentration of

human activities, like living, working, going to school, shopping, or going out (CBS 2000).

Figure 6–5: Degree of urbanisation

Degree of urbanisation	Density of environmental addresses
Not urban	< 500
Little urban	500 – 1000
Moderately urban	1000 – 1500
Strongly urban	1500 – 2500
Very strongly urban	> 2500

Next to this objective measurement, respondents were asked about their subjective experience. Possibly they lived in the outskirts of a strongly urbanised community and thought their environment was more rural than urban.

The third element attributed to resources was human capital, consisting of the indicators skills, motivation and knowledge. In the exploring phase of this research, the interviewees mentioned that problems with the mastering of equipment sometimes complicated the telecommuting. Two questions in this respect were included. The first related to the knowledge and skills of respondents to master their equipment. The second asked if the employer offered enough support to solve problems.

Figure 6–6: Operationalisation of availability of resources

Element	Indicator	Question/item/remark
Technical resources	Availability and financing	Are resources listed available; are they paid by employer or respondent : PC, lap top, peripherals, telephones, connections, furniture and work area, transportation
	Influence	Did the availability of technical resources influence the decision to start telecommuting
	Other use	Are the resources used for private activities (education, communication, transactions)
Accommodation	Location	Degree of urbanisation
		Distance to employer
		Former location
		Mode of transport
	Size of house	Did housing conditions influence decision
Human capital	Skills, motivation, knowledge of respondents	Number of rooms
	Support by employer	Enough knowledge and skills at your disposal to handle the telecommuting hard- and software?

Changes in allocation of resources

Next to the availability of resources, the allocation of them as a consequence of telecommuting was important for this research. Elements examined in this respect were time and financial resources. Respondents were asked to indicate to what extent they changed their expenditures of both time and finances since they were working at home – with a special focus on food, childcare, energy and communication. An open-ended question was added about other expenditures. Were there other things or activities that got more (or less) attention due to telecommuting: hobbies, for instance?

Figure 6–7: Operationalisation of changes in allocation of resources

Element	Indicator	Question/item/remark
Allocation of time and money	More/less time or money for homemaking and family	<i>Indicate for the listed activities if you spend less or more time or money on it since you are working at home:</i>
		Household chores in general
		Paid domestic help
		Food: eating out, convenience food, meals (eating / preparation)
		Childcare
		Electricity, heating, telephone
		Shopping (total time, how many times)
		Other

6.5.4. Standard of care

Within the framework of this research *standard of care* was narrowed to four elements: family or career-orientation, task and time orientation, egalitarianism, and integration or separation. Motives that referred to childcare, more time and attention for family, hobbies, the house and surroundings were an indication of a family-oriented attitude. These were: 'Want to care for children myself' ,*Can spend more time to household and family* ' ,*Can better pursue hobby / sport* ' ,*Parents should educate their children as much as possible* ' , and *Family and leisure time should come in the first place; working hours are adjusted to that as much as possible* ' . Motives concerning better productivity in paid labour, better concentration etc. indicated a career-oriented attitude: 'Work better, more concentrated at home' ,*Can determine own working tempo* ' ,*Can determine own working hours* ' ,*Paid labour comes in the first place; leisure time and family have to be organised around that* ' ,*Paid labour is a necessary evil; you need the money to live* '. The responses to the five statements for family orientation were combined into one cumulative score. The same was done for career orientation, after having the last statement recoded from low to high, because here 1 means a high degree of career orientation.

Some of the motives could represent both. For instance, the advantage of planning one' s own activities, flexibility in time and tempo can benefit the quality of the paid

labour as well as the quality of daily non-work life. Other reasons for telecommuting, like *'no other jobs available'* , *ono room in the office'* , and *could not get along with colleagues'* did not have any relation with a family-oriented nor a career-oriented attitude.

Task and time orientation were determined by opinions concerning the value of paid labour and leisure time. The first question sought to establish if respondents estimate family and leisure time more or less important than paid labour. The second was about the judgement of paid labour: do respondents regard that as necessary evil or not?

The degree of egalitarianism was measured by two indicators. First, the opinions about differences between men and women: *'Children benefit most from a mother who is there when they come home from school'* ; *A woman is more suitable to educate small children than a man'* *It is more important for a man to have a good job than for a woman'* . Second, opinions about the sharing of labour between man and woman: *'Man and woman should share domestic labour equally'* ; *Childcare is equally the responsibility of the man and the woman'* ; *Man and woman should share paid labour equally'* ; *The household is equally the responsibility of the man and the woman'* . A combination of these seven statements into one cumulative score – after having the first two statements and the last one recoded in reverse order – indicated the degree of egalitarianism.

The last element to be discussed is integration or separation. Opinions about this topic might influence the actual division of labour when telecommuting and possibly even the decision to start telecommuting. The way telecommuters divide their time is probably highly connected with their opinion about integration.

Figure 6–8: Operationalisation of standard of care

Element	Indicator	Question/item/remark
Family or career orientation	Family-oriented motives for telecommuting	Want to care for children myself
		Can spend more time to household and family
		Can better pursue hobby / sport
	Opinions representing a family-oriented attitude	Parents should educate their children themselves as much as possible
		Family and leisure time should come in the first place; working hours are adjusted to that as much as possible
	Career-oriented motives for telecommuting	Work better, more concentrated at home
		Can determine own working tempo
		Can determine own working hours
	Opinions representing a career-oriented attitude	Paid labour comes in the first place; leisure time and family have to be organised around that

Element	Indicator	Question/item/remark
	Other motives / motives representing both categories	Paid labour is a necessary evil; you need the money to live
		Childcare too expensive
		Childcare not available
		Could keep my job despite moving
		Difficult to work outside the home because of illness or handicap
		Could keep job despite moving of the company
		Save commuting time
		Cannot get along with colleagues
		No other job available
		No room for me in the office
		When men start telecommuting, they automatically take up more household chores
		When women start telecommuting, they automatically take up more household chores
		Other
Time or task orientation	Opinions concerning paid and unpaid labour	Family and leisure time should come in the first place; working hours are adjusted to that as much as possible
		Paid labour is a necessary evil; you need the money to live
Egalitarianism	Opinions concerning differences between men and women	Women can better raise small children than men
		It is more important for a man to have a good job than for a woman
		Children benefit most from a mother who is there when they come home from school
	Opinions indicating degree of egalitarianism (sharing)	Man and woman should share domestic labour equally
		Childcare is equally the responsibility of the man and the woman
		Man and woman should share paid labour equally
		The household is equally the responsibility of the man and the woman
Integration or separation of work and home	Opinions concerning the separation or integration of work and leisure time	Work and leisure time should be separated as much as possible
		By telecommuting, paid labour and childcare can be combined

6.5.5. Household activities: division of labour

The main research questions to be answered in the survey were: *To what extent does the external division of labour and the internal division of labour change when people start working at home?* In this section the division of labour, and the domestic labour itself, will be operationalised.

External division of labour

The external division of labour – the division between paid and unpaid labour and between outsourcing and self-supporting – might change when people start working at home. The answers to the questions asked in the section *Employment situation* gave an insight into the division of paid labour among the members of the family. Questions about the application of resources and changes in household activities inform us about the division between market and private household. In particular, questions on (paid) domestic help, food and paid childcare were important. These questions are discussed in section 6.5.3 (*Resources*) and will be included below (*Internal division of labour*).

Internal division of labour

The internal division of labour is the division of domestic tasks among members of the household, in particular between partners. This research focused on the core activities of domestic labour, i.e. preparation of meals and washing dishes, cleaning, doing the laundry; caring for other members of the family; shopping (De Hart 1995; Wheelock 1990). Only daily, recurring tasks, which are possibly influenced by regular telecommuting, were taken into account. Included were the five tasks of Wheelock's benchmark, which were preparing the main meal, washing-up, washing, ironing and Hoovering. In this research, ironing was combined with clearing away the laundry. Then three tasks concerning children were added: taking care of children, leisure activities with children and getting children from school. This last task was chosen, since primary schools in the Netherlands end around three o' clock in the afternoon and school busses are not very common. Picking children up at that time is not possible with a full-time job outside the home. The ninth task included was shopping. Wheelock left this out of her benchmark, because shopping did – in her sample – not contribute to the gender analysis of the regular tasks.

The emphasis was on the division of labour between partners. In 1990, the SCP found considerable differences between men and women for those tasks (De Hart 1995; Table 6–1).

Table 6–1: Time spent on different tasks

Activities	Man	Woman	Total	Difference women/man ²
	minutes ¹	minutes	minutes	
Cooking	93	282	188	3.0
Setting/clearing table, dishes	40	115	78	2.9
Sweeping / hoovering	25	144	85	5.8
Laundry	10	68	39	6.8
Clearing away the laundry	6	66	37	11.0
Taking care for the children	17	51	34	3.0
Leisure activities with children ³	30	64	47	2.1
Cycling/walking with children	3	26	15	8.7
Daily shopping	32	59	45	1.8

1) SCP 1990 (De Hart 1995)

2) Time of woman divided by time of man

3) Added up the minutes of reading, playing indoors, walking with child

In order to get as much information as possible, very precise questions about actual activities were asked. For instance, not: *'How do you divide tasks?'* but: *'Who does the laundry?'* To investigate changes due to telecommuting, respondents were asked to compare their current situation with the situation before they started working at home. Thus, respondents were asked to mark who was doing particular activities on days the telecommuter worked at home. Who did them before he or she regularly worked at home, and who was doing it on the other days.

Figure 6–9: Operationalisation of internal division of labour

Element	Indicator	Question/item/remark
Changes in division of domestic labour		For all activities: who is doing it on home-working days, who does it on other days and who did it before the start of telecommuting
	Food preparation	Cooking
	Dishes	Doing the dishes
	Cleaning	Sweeping / hoovering
	Laundry	Doing the laundry
		Clearing away the laundry
	Childcare	Taking care for the children
		Leisure activities with the children (reading, walking, playing)
		Getting children from school
	Shopping	Daily shopping

6.5.6. Assessment

The evaluation of the outcome of household behaviour – the comparison of standard of care with level of care – determines the extent of wellbeing in the household. In this

research this question was narrowed to a subjective value judgement. Did respondents value their current situation as an improvement or deterioration compared to their former situation? Here two elements of standard of care return, namely family orientation and task/time orientation. Observed indicators were children, meals, the house, the spill-over and the integration or separation of paid and unpaid work. Figure 6–10 shows the details.

Figure 6–10: Operationalisation of assessment of changes

Element	Indicator	Question/item/remark
Family orientation	Attention for the children	Children get more attention
	Food patterns	I spend more time on meals
	State of the house	House and garden look better
	Spill-over	I have more attention for household chores and childcare
		I always see housework to be done
		I pay too much attention to household and family
		Because I am working at home, I am (fortunately) always there for my housemates
	Expectations of the environment	I am always the one who has to do everything in the house
Task or time orientation	Paid work	I do my paid job with more satisfaction
		I do my paid job less hurried (I do not count my hours so much, I pay more attention to quality)
		I do my paid job more efficiently
	Domestic labour	I do my domestic labour more efficiently / systematically
		I do my domestic labour less systematically because I can do it in between
Quality of house and housing conditions	Living in beautiful house or nice surroundings	It was possible (finally) to live where I wanted
Quality of daily life	Integration	It is good to get the best of both worlds
	Spill-over	The whole family 'works' with me
	Other	Telecommuting is not my first choice, but the least bad in my circumstances

6.5.7. Strategies: tuning actual and desired situation

When a current situation is assessed as being negative, or not the desired situation, people can develop strategies to diminish the disadvantages and improve their situation. Telecommuting itself can function as a strategy to change life. In Chapter 4 (*Theoretical framework*), segmentation is described as the mostly use strategy to han-

dle the effects of negative spill-over within the home. Four indicators for segmentation have been considered: segmentation in space, in time, in resources and in agreements and rules. Then, other strategies to limit disadvantages were observed. A third element of strategies was the observation of telecommuting as a strategy itself.

Figure 6–11: Operationalisation of strategies

Element	Indicator	Question/item/remark
Segmentation	In space	Separate study for paid labour
	In time	Fixed working hours
	In resources	Separate telephone line and answering machine
	In agreements, rules and behaviour	Computer and telephone use
Other strategies to limit disadvantages	Conditions that should be fulfilled to make it the ideal solution	
	Strategies to limit the disadvantages of telecommuting	What do respondents do to limit disadvantages
Telecommuting as a strategy	Telecommuting makes a different division of labour possible	Did respondents start telecommuting to realise a different division of tasks

6.5.8. Concluding questions

The questionnaire ended with two general evaluative remarks. Next to that, respondents were asked about their willingness to answer additional questions and if they wanted to be informed about results. In that case an e-mail address can be entered.

Figure 6–12: Concluding questions

Element	Indicator	Question/item/remark
General questions	General evaluation	Does the respondent think that telecommuting is ideal
	Remarks about telecommuting or about this research	
Continuation	Willingness to answer additional questions	
	Interest to be kept informed	

6.6. Data collection

6.6.1. The technique

As described in section 6.3 the survey was presented on the Internet. It was most suitable to choose an address at Wageningen University, because of its impression of reliability and credibility bestowed. The questionnaire itself was transformed to an

HTML-form, linked to a database in which the answers were gathered. The questionnaire consisted of one single file, which had the advantage that it could easily be saved on disk or printed out. Also, the Internet-connection could be interrupted while filling in the questionnaire. When the respondent was ready and clicked the 'send'-button, most browsers automatically re-established the connection. In this way costs could be saved when respondents made use of a telephone connection to the Internet. Since the answers were stored in a database, a simple conversion to a statistical program sufficed to make the data available for analysis.

6.6.2. Approaching respondents

As described in section 6.4, respondents were approached via organisations that had telecommuting employees. Addresses were obtained from the Dutch Telewerkforum. The firms were either member of the Association Telewerkforum, or had shown their interest in telecommuting. Fifty organisations were approached. They received a letter and, two weeks later, a telephone call. If that did not result in contact with the right person, there was follow-up with an e-mail. Though numbers of telecommuters and of firms with telecommuting employees are said to have increased, the reactions were a little disappointing. Many of the approached firms appeared to have no teleworkers themselves. Some of them were participating in the Telewerkforum because they expected to sell products and services to telecommuters. Others were, at the time, just starting with telecommuting and did not have experience yet. Then, there were firms that were in the process of research themselves and were afraid that this research would conflict with theirs, or that their employees would be tired of yet another survey.

In the autumn of 1999 approximately twenty companies – varying in size from less than ten employees to big consultancy firms – were willing to co-operate with the research. These companies put the Internet address of the questionnaire on their website or Intranet, or they sent a message to all telecommuters to bring the questionnaire to their attention. It goes without saying that all participating companies emphasised that participation of their employees was voluntary. Further to that, the address was published in the magazine *Telewerken* and on the website of Wageningen University.

Within a month, some 40 questionnaires were returned. In April 2000 this number raised to 80, climbing slowly to 90 in October 2000. By that time it was decided to organise a second round of acquisition. Remarkably enough, willingness to co-operate appeared to be greater than the year before. With less effort more respondents from a smaller number of firms filled in the questionnaire. This time, there were again consultancy firms, but also a large institute for higher education took part. From the latter, the researcher received many e-mails, stating that sender was not part of the target group, but nevertheless was interested in the research. This type of e-mail doubled the number of real respondents from the same institute. In December 2000 142 valid questionnaires were returned, rising to 171 in February 2001. Chapter 7 (*Results*) is based on those 171 cases.

6.7. *Methods of data analysis*

The methods by which survey data were analysed were, of course, determined and limited by the objectives of the research, the form of the questionnaire, and the number of respondents. The survey is a sample survey with a limited number of respondents. The measurement of most variables is at a nominal or an ordinal level. The data provided frequencies and could be combined in cross-tabulation to detect differences between different groups of respondents. The following paragraphs give a summary of the statistical operations.

The report of results starts with a description of the respondents: frequencies (percentages) of men and women, frequencies of respondents in certain income classes, sizes of households, respondents' ages, and hours worked inside and outside the home, distance to employer's office. In most cases this concerns simple counts. Only the variables of age and distance had to be recoded. Ages and distances were indicated in years and kilometres. A simple listing of those results did not give much information, therefore answers were divided into classes. For age this study follows the division used by the Dutch Central Statistical Office (CBS) to classify the working population. Using the same classes made the results comparable with general statistics for the Netherlands. For distances, the classes were based on the division of respondents: each quartile was recoded into one class. The first class was up to ten kilometres, a distance generally considered small enough to travel by bicycle.

For many variables, a five-point scale was used, ranging from very unimportant to very important, or from strong disagreement to strong agreement. Because of the relatively small number of respondents, but also for convenience of comparison, these scales were recoded into a three-point scale, combining the categories of 'unimportant' and 'very unimportant', and likewise of 'important' and 'very important'.

Since research questions and hypotheses referred to differences between men and women, for most questions these differences were made visible by means of cross-tabulations. Cross-tabulations were also used to detect differences between respondents who answered 'yes' or 'no', between families with or without children, and between households with younger or older children. To test the likelihood that observed differences were not based on chance, the Chi-square test was used. When this test returned a probability (p) smaller than 0.01 the results were regarded as statistically highly significant. A probability between 0.01 and 0.05 was chosen to indicate statistically significant differences. For a probability larger than 0.05, but smaller than 0.1, the result was regarded to be indicative. However, it should be noted that this choice not only determines the probability for adopting non-existing differences (α -error), but it also determines the chance for the rejection of real differences (β -error). In this research a vast number of relations is tested, so there is a possibility that some of the found relations are in reality non-existing, or that differences that did not show a statistically significant relationship are real differences. More research would be needed to further prove the significance – or non-significance – of such results.

For family and career orientation, time and task orientation and egalitarianism a new variable was devised by combining the answers into one cumulative score (see section 6.5.4). This cumulative score could rank from 1 to 25 – when five statements were combined – or from 1 to 35 in the case of egalitarianism, for which seven statements were combined. In order to keep the number of cells limited, these scores were

divided into four classes, ranking from a low degree of family-orientation (scores up to 6) to a high degree of family-orientation (scores 19 and higher). The scores for career orientation and egalitarianism were processed in the same manner. The combination of several items into one score is acceptable when those items measure the same concept, i.e. when they are homogeneous. This homogeneity was tested with the Cronbach's alpha test.

To indicate how symmetrical or asymmetrical the actual division of labour was, the answers concerning the internal division of labour were combined. Assuming that all partners of male respondents were female and all partners of female respondents were male – because the introduction of the survey asked for heterosexual couples – for each respondent the number of tasks performed by males and females could be counted. For male respondents the number of tasks performed by himself were added; for female respondents the number of tasks performed by her partner. The same was done for women. Next to that, the number of tasks performed together were also counted and divided between males and females. It could be argued that here a proportional attribution should be made. It is reasonable to think, that in a very asymmetrical household, joint performance of tasks will in fact mean an asymmetrical performance as well. When men think they do the task together in a situation in which the woman does most of the work, the contribution of the man in that specific task is, possibly, disproportionately small. Since the survey did not ask how much time was spent on each task, nor the intensity and weight of each task, this assumption cannot be substantiated. Therefore tasks performed by both partners together, were evenly divided between the two.

The task count resulted in two figures per household, both ranking from 0 to 9, that indicated the number of tasks performed by the man, respectively the woman. The next step was to define the difference between them. The number of tasks performed by the man was subtracted from the number of tasks performed by the woman. A score between -1 and $+1$ indicated a symmetrical division of tasks. A negative score suggested that the man did most of the tasks. A high positive score represented an asymmetrical division in a traditional direction: the woman doing the most. A comparison of these symmetry scores before and after the start of telecommuting clarified the direction of changes on a household level. When the scores stayed the same, the symmetry stayed the same. If the result was positive (meaning: the traditional asymmetry was bigger before telecommuting than after), then the household shifted to a more symmetrical division of labour. For a negative result, the division of labour within the household became more asymmetrical.

In Chapter 8 (*Conclusions*), discussing the hypotheses, the answers 'before' and 'after' are not compared per household, but per task, reviewing all households together. The frequencies of respondents indicating performance of the mentioned tasks on home-working days were divided by the frequencies before they started telecommuting. This was done for all respondents, and for male and female respondents separately. The result was a figure that indicated how many more respondents were performing these tasks on home-working days.

7. Results of the survey

This chapter gives an overview of the results of the survey, starting with general characteristics of the respondents' household and employment situation, their resources, and their motives and opinions. The subsequent sections give an answer to the research questions: to what extent does the external and the internal division of labour change and which strategies do telecommuters apply to diminish possible disadvantages of telecommuting? The internal division of labour – the main subject of this survey – will be related to characteristics discussed in section 7.1. The chapter concludes with a summary of the results, leading to rejection or support of the hypotheses.

7.1. Respondents' characteristics

Respondents of the survey can be characterised by general characteristics (age, size and stage in life-cycle of household), employment situation (type and number of hours worked, income) and education. These characteristics are presented in section 7.1.1. The subsequent section 7.1.2 discusses resources that respondents have at their disposal. The normative context – motives and opinions, attitudes – is the subject of section 7.1.3.

7.1.1. General characteristics

Household characteristics

The survey yielded 171 valid questionnaires. Most respondents (100) were male, the rest were female (71). The average age was 42 years old; the youngest being 18, the oldest 71 years old. Half of the respondents were aged between 35 and 49 years. Comparing these ages with averages in Dutch labour force, respondents over 40 were relatively over-represented. In Chapter 6, *Methodological aspects*, it was indicated that Internet users are mostly under 33 years old. This research gave no evidence that telecommuters belonged predominantly to that age group.

Table 7–1: Age of respondents in this research and in the Netherlands

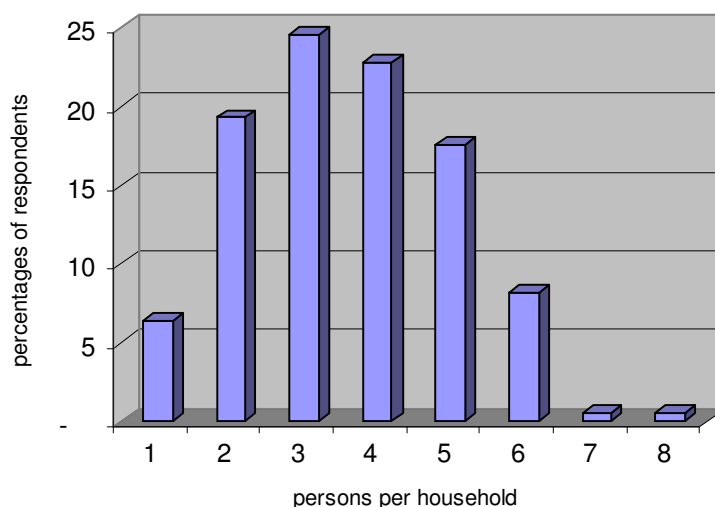
Research	Man		Women		Total	
	GC ¹ (n = 100)	CBS 1997 ² (7.5 million)	GC (n = 71)	CBS 1997 (7.5 million)	GC (n = 171)	CBS 1997 (15 million)
Age	%	%	%	%	%	%
<19		3	1	4	1	3
20-24	5	8	1	12	4	10
25-39	33	44	39	47	36	45
40-49	33	26	41	25	36	26
50-64	27	18	17	12	23	16
65>	2	1	-	0	1	1

1) This research

2) CBS 1997 (Statline 2001) represents total labour force.

Ninety percent of the respondents lived with a partner, married or otherwise. This was a high percentage, but not surprising since the introduction of the questionnaire informed readers about the target group, being households of at least two persons. The average household size of respondents was 3.6. The average Dutch household is 2.4 persons in 1997 (CBS 2000). The average size of households with children is 3.7 persons (*Volkskrant* 21 March 2001).

Figure 7–1: Size of households in percentages of total



In 72 households there were children under 4 years old, in 64 households there were children between 4 and 12 years old; in 32 cases there were children older than 12 years. In 62 households - one third of the sample - there were no children under 18 at all. Female respondents did not report noticeably different numbers of children in their households than male respondents. On the contrary, there seemed to be more house-

holds with children among the male telecommuters (68 percent as against 58 percent of the households with a female respondent), but these differences were not statistically significant.

Employment situation and education

Income and education of the respondents was above average. Most of them earned more than 1600 Euros a month, half of the respondents earned between 1600 and 3000 Euros, almost a quarter earned 3400 or more. They also had a high level of education, 85 percent received higher vocational training or university. There were no significant differences between men and women concerning income. However, men did have a significantly higher level of education than women. In particular, they were more often graduates of higher vocational training. Chi-square calculations for these educational differences were 22.1 ($df = 2$, $p \leq 0.01$). Most respondents had an executive position or were a researcher, or a teacher. Only ten percent had an administrative occupation. They worked in substantial part-time, or almost full-time, jobs though women worked fewer hours than men. This difference between men and women was statistically significant (Table 7–2). The respondents in this research, in particular the female respondents, worked more hours in their paid jobs than the average for Dutch women. The average in the Netherlands is 16.6 hours per week for women and 43.4 for men (Keuzenkamp et al 2000). Most respondents lived with someone with a job. Only 22 percent were the only income earner in the household, including the 10 percent single respondents; 30 percent of the households could be described as one-and-a-half-earner households – with one (almost) full-time and one part-time job – and 48 percent of the respondents lived in a double income household, both partners having a fulltime or almost fulltime job.

Table 7–2: Working hours of paid jobs

Gender	Men (n = 100)	Women (n = 71)	Total (n = 171)
Hours paid job	%	%	%
No answer	3	4	4
0-8 hours	4	1	3
9-16 hours	-	4	2
17-24 hours	1	20	9
25-32 hours	8	41	22
>33 hours	84	30	61

$\chi^2 = 62.7$, $df = 5$, $p \leq 0.01$.

At the moment the respondents filled in the questionnaire, they worked at home since almost 4 years on average. More than one fifth, 22 percent, started telecommuting less than a year before. Another 21 percent worked at home one or two years, while 22 percent worked at home already more than five years. The maximum number of years that someone worked at home, was 22 years.

Most of the respondents, 75 percent, worked less than 16 hours per week at home, only 6 percent worked more than 24 hours per week at home. They spread their homework over one to five days a week. A reasonably high percentage, 27 percent, worked at home on five successive days, even when these respondents had small jobs. More

men worked at home between 9 and 16 hours per week. Differences between men and women were statistically significant for the number of hours worked. Regarding the number of days over which the work is spread, the gender differences were not statistically significant (see Table 7–3).

These results correspond with observations in Chapter 2 (*Telework*), in which it was indicated that telecommuting shows a variety of forms. They also correspond with the outcome of the IDC-survey (Vernooij en Casimir 1996), especially for women. Then, the majority worked at home one or two days per week, 41 percent worked at home 1-7 hours and 38 percent 8-20 hours per week. Almost no one worked at home 21-34 hours, and around 12 percent over 35 hours per week.

Table 7–3: Hours and days worked at home; percentages of total respondents

Days per week	Hours worked at home					Men	Women	Total ²
	0-8	9-16	17-24	25-32	>33	(n = 100)	(n = 71)	(n = 171)
	%	%	%	%	%	%	%	%
1	15	1	-	-	1	16	17	16
2	12	13	1	-	-	29	21	26
3	3	11	6	-	-	18	21	19
4	2	6	2	-	-	9	11	10
5	4	7	11	3	2	27	27	27
Men (n = 100)	32	46	19		2	100		
Women (n = 71)	41	28	20	7	4		100	
Total (n = 171) ¹	36	39	19	3	3			100

1) χ^2 for hours worked at home related to gender = 12.8, df = 5, $p \leq 0.05$.

2) χ^2 for days worked at home related to gender = 2.2, df = 5, not significant.

The telecommuting situation was not only defined by the number of hours worked at home, but also by some other characteristics. Respondents were asked to indicate if they worked with or without a written contract, and if they took work home regularly or irregularly (Table 7–4). Almost 20 percent of them took work home now and then, over 40 percent worked at home on a regular basis, of whom 19 percent had a written agreement. Women had a written agreement more often than men and the difference between the two was statistically significant.

Table 7–4: Telecommuting situation

Telecommuting situation	Men	Women	Total
	(n = 100)	(n = 71)	(n = 171)
	%	%	%
Take work home now and then	21	14	18
Work on fixed days, on the basis of an oral agreement	30	23	27
Work on fixed days, with written agreement	10	31	19
Differently	39	32	36

$\chi^2 = 12.2$, df = 3, $p \leq 0.01$.

One third of the respondents (39%) made arrangements other than the options listed in the question. Their answers showed a high degree of diversity, varying from 'Take work home now and then' *Dependent on projects or schedule* 'Work at home on eve-

nings' to work at home regularly at irregular hours'. Many respondents appeared to be flexible in the way they organised their home-working activities. This corresponds with the answers to another question: 'Are you free to determine your own working hours'. The majority – 78 percent – stated that they could choose their own working hours, with men being able to do this more often than women. Differences were statistically significant (see Table 7–5). Women worked more often in administrative functions or were telephonists, which might explain the differences in freedom. The 11 percent of respondents who said they could partly determine their own working hours, indicated, for instance, that they had to be reachable at certain periods of time (office hours). Many respondents remarked on their freedom to organise their own work, and about the irregularity and diversity of the work. Flexibility seemed to be a daily routine for those telecommuters. Only a few respondents (7%) were the only telecommuter in their department. The rest were divided over companies where less than half of the employees worked at home (48%), and companies (or departments) in which more than half were telecommuters (42%).

Table 7–5: Can you determine your own working hours?

Gender	Men (n = 100)	Women (n = 71)	Total (n = 171)
Determining own working hours	%	%	%
Yes	89	63	78
No	2	18	9
Partly	6	18	11
No answer	3	-	2
Total	100	100	100

$\chi^2 = 23.9$, $df = 3$, $p \leq 0.01$.

7.1.2. Resources

In Chapter 6, *Methodological aspects*, three types of resources were discerned: the technical resources, accommodation and human capital. Next to that, the allocation of time and money was included. These elements will be discussed below.

Technical resources

Most telecommuters, 78 percent, owned a personal computer, 35 percent owned a lap top computer. A combination of these answers reveals that 90 percent had either a lap top, or a PC, or both and 10 percent had no computer at all. When using a strict definition of telecommuting, this latter group should be excluded, because they do not make use of modern information and communication technology. The called themselves telecommuters because they worked at a distance, using a telephone for their work. In 1997, 43 percent of Dutch households owned a PC, so the number of PCs is well above average. Table 7–6 shows which equipment the respondents had at their disposal, differentiated between male and female respondents. Significantly more men than women had a mobile telephone, a lap top computer and a printer. More than half of the respondents – 64 percent of men and 49 percent of women – had an Internet connection. Dif-

ferences were not more than indicative. Men were more likely to have an analogue fax machine. They seemed to have more scanners, photocopiers and Internet connections than women, but here the results were only indicative and would need larger number to test for statistical significance. The other differences between men and women were not statistically significant.

More than half of the respondents, 53 percent, had either a separate telephone line or an ISDN-connection or both. Remarkably few respondents – less than 35 percent – reported having a car, while 76 percent of Dutch households and 38 percent of persons generally have one or more cars (CBS, Statline 2000). However, this could be a result of the way the question was phrased. Respondents were asked: *'What do you have at your disposal in favour of your telecommuting job?'* So there might be cars, that are not used for the job. That fewer women than men reported to have cars – 23 percent of women and 42 percent of men – is in accordance with general figures. In 1998, 57 percent of the men and 52 percent of women went by car to their work (Sinkeldam en Groot 2001). When there is one car in a family, this car is often used by the male partner (Droogleever Fortuijn 1993).

Next to possession, Table 7–6 indicates who was covering the expenses of this equipment: the employer, the respondent or both. In 70 percent of the cases, the employers paid for the lap top computer. The PC was only reimbursed in 45 percent of the cases. In 12 percent of the cases the employer contributed to the costs of the PC. If special software was needed, the employer paid for it in 69 percent of the cases. In 67 percent of the cases the employer paid for a separate telephone line. Mobile telephones were paid for by the employers in 56 percent of the cases. Contributions to the costs of a study, heating, or the installation of additional power points were hardly ever made. Nearly one third of the employers (32%) supplied extra furniture – when needed – and another 12 percent contributed to the costs of it. Internet connections are in 41 percent at the expense of employers.

Table 7–6: Possession and financing of equipment and facilities

Equipment and facilities	Available			Significance ¹	Paid by		
	Total (n = 171) %	Men (n = 100) %	Women (n = 71) %		Employer %	Self %	Both %
Computer (PC)	78	79	76	n.s.	45	43	12
Printer	76	84	65	$p \leq 0.01$	37	55	8
Separate study	64	63	65	n.s.	1	97	3
Furniture	63	65	61	n.s.	32	56	12
Internet connection	58	64	49	$0.05 \leq p \leq 0.1$	41	49	10
Heating	56	58	52	n.s.	3	91	7
ISDN	49	50	47	n.s.	54	37	9
Connections (electricity)	47	49	45	n.s.	5	92	3
Scanner	39	45	31	$0.05 \leq p \leq 0.1$	19	74	7
(Fax) modem	39	41	35	n.s.	33	59	7
Mobile phone	37	46	24	$p \leq 0.01$	56	39	4
Lap top	35	47	18	$p \leq 0.01$	70	28	2
Car	34	42	23	$p \leq 0.01$	29	54	16
Separate telephone line	28	25	32	n.s.	67	25	8
Special software	23	25	20	n.s.	69	24	7
Answering machine	23	25	21	n.s.	7	91	2
Fax (analogue)	22	29	13	$p \leq 0.05$	52	48	
Photocopier	11	15	6	$0.05 \leq p \leq 0.1$	39	52	9
Public transport season ticket	7	5	10	n.s.	43	36	21
Other	6	5	7	n.s.	10	80	10

1) Chi² is calculated for gender and owners (yes/no); df = 1

2) Percentages of owners.

For 33 percent of the respondents, the availability of a separate work area did influence their decision to start working at home. The availability of (Internet) connections played a role for 32 percent of the respondents. The availability of hard- and software influenced this decision even more: 44 percent of the respondents answered affirmative to this question.

Most respondents, 80 percent, used their computer for other activities than work (Table 7–7). Examples were volunteer work, hobbies or sports, and communication with friends and relatives. The latter was – with over 54 percent of respondents – most popular. Women seemed to use their computer more for that reason, but with these number of cases this outcome was not statistically significant. Men used the computer more often for tele-banking or tele-shopping and for volunteer work than women. Also, the children of home-working men, used the equipment more for their homework, than the children of female respondents.

Table 7–7: Use of facilities for other purposes

Gender	Men (n = 100)	Women (n = 71)	Total (n = 171)	Signifi- cance ¹
Purpose	%	%	%	
Correspondence with family / acquaintances	52	58	54	n.s.
Tele-banking, tele-shopping (for private purposes)	50	32	43	$p \leq 0.05$
Hobby, sports	44	41	43	n.s.
Volunteer work	46	27	38	$p \leq 0.05$
Homework children	34	13	25	$p \leq 0.01$
Education adults	18	10	15	n.s.

Chi² is calculated for differences between men and women per item; df = 1.

Accommodation

It was assumed that pleasant surroundings and distance from workplace influenced telecommuting in a positive way. Indicators of accommodation were: location, urbanisation, distance and travel time to employer' s office, and mode of transport. Also the house itself – size, availability of a separate study – was regarded to be an indicator of the living conditions.

Two thirds of the respondents, 68 percent, had houses of five rooms or more, and another 22 percent lived in houses of four rooms. Employers' offices were at a distance of 40 km on average – 41 km for men and 38 km for women – and 45 minutes from the homes of the telecommuters, with a maximum of 231 km. Women were over-represented in the smaller distances, though differences with men were only indicative and not statistically significant. Compared with the average Dutch commuting distance of 17.4 km, the respondents lived far from their work. In the Netherlands, women live on average 5 kilometres closer to their work than men (Sinkeldam en Groot 2001). In this research the difference is 3 kilometres. In 30 percent of the cases, the distance to work increased after the start of telecommuting. When the telecommuters in this went to their employer' s office, 59 percent of them used a car or motorbike, 19 percent made use of public transport and the rest (18%) walked or went by bicycle. Of course, the people who walked or cycled lived closer to their work: 52 percent of the respondents who lived within 10 km from their employer's office, went their walking or by bicycle. These figures are presented in Table 7-8.

In this research there were no statistically significant differences between men and women in their choice of transportation. Corresponding figures for Dutch population in 1998 were 57 percent of men and 52 percent of women using a car to go to work, 28 percent of men and 33 percent of women walk or use a bicycle and 8 percent of men and 12 percent of women use public transport. Most of those who walk or cycle to their work, live within a radius of 5 km (Sinkeldam en Groot 2001). In the current research 60 percent of the respondents who walked or used the bicycle to go to work lived 5 km or less from their employer, 20 percent between 5 and 10 km.

Table 7–8: Distance to employer' s office

Distance to employer' s office	Gender ¹		Total (n=171)	Mode of transport				Total (n=171)
	Men (n=100)	Women (n=71)		Walking / bicycle	Motor (bike) / car	Public transport	No answer ⁴	
	% ²	% ²	% ²	% ³	% ³	% ³	% ³	%
<10km	21	37	27	52	28	7	13	100
11-30km	31	18	26	14	75	11		100
31-55km	22	23	22	-	68	32		100
>56km	26	23	25	-	67	29	5	100
Total	100	100	100	18	59	19	5	100

1) Chi² for differences between men and women = 6.5, df = 3, $p \geq 0.05$ and ≤ 0.1 (indicative).

2) Percentages of column totals (men/women/total).

3) Percentages of row totals (mode of transport).

4) Including respondents who indicated that they never work at their employer's office.

Despite relatively large commuting distances, the living conditions played hardly any role in the decision-making process to work at home. At least, this was what 71 percent of the respondents reported. Women' s answers were not notably different from those of male telecommuters. However, within the group of respondents for whom living conditions did play a role, two third (64%) lived more than 30 km from their employer' s office. This outcome was statistically significant. The crosstabulation (Table 7–9) of 'Commuting distance' and 'Did living conditions play a role' returned a Chi-square value of 19.5, df = 3, $p \leq 0.01$.

Table 7–9: Did living conditions play a role, related to commuting distance

	Did living conditions play a role				Total	
	yes		no			
Commuting distance	n	%	n	%	n	%
<10km	8	17	38	31	46	27
11-30km	9	19	35	29	44	26
31-55km	10	21	28	23	38	22
>56km	20	43	22	18	42	25
Total	47	100	123	100	170	100

Chi² = 12.0, df = 3, $p \leq 0.01$

Another question referred to the extent of urbanisation around the respondent' s home. The assumption was that people in areas with a low degree of urbanisation would be more inclined to work at home than people in more urban areas. The degree of urbanisation was calculated (see Chapter 6, *Methodological aspects*). Relating this urbanisation measure to the role played by living conditions in the decision to work at home, gave no evidence for this assumption. However, the calculated measure of urbanisation was not necessarily the same as respondents' perception of urbanisation. It might be so that respondents perceived their surroundings as less urbanised than indicated by the calculated measure. It was, for instance, possible that they lived on the outskirts of a bigger community. This supposition, however, did not prove to be true. Table 7–10 shows the small differences between the calculated and the perceived degree of urbanisation.

Table 7– 10: Degree of calculated and perceived urbanisation

Degree of urbanisation	Calculated degree of urbanisation (n = 161 ¹)	Perceived degree of urbanisation (n = 171)
	%	%
Not or little urban	25	27
Moderately urban	31	32
Very urban	44	40

1) Not all respondents indicated where they lived.

Human capital

Two questions were asked on the subject of human resources,. One was about the knowledge and skills of the respondents, the other one about the support of the employer. A large majority of the respondents (91%) felt they had enough knowledge and skills to handle their equipment. The majority – 73 percent of women and 58 percent of men, 64 percent of total – was satisfied with the support of their employer. Nevertheless, using the opportunity to comment on these questions, remarks were made like: '*I have just enough skills*' , or '*It is better now than in the beginning*' . Also, some respondents said that they could manage, not because of sufficient support of their employer, but thanks to the help of colleagues.

Allocation of resources

Within the framework of the current research, the allocation of resources has been limited to the changes in expenditures, in both time and money since respondents started telecommuting. The questions concentrated on household chores in general, on paid domestic help, food, childcare, electricity and telephone and shopping. The results of these questions are presented in Table 7–11. The division of time among members of the family will be discussed in relation to the division of labour in section 7.3.

Almost one quarter of the respondents, 23 percent, reported an increase in time spent on domestic labour. More women (14%) than men (4%) indicated to spend less time on household chores since working at home. However, these differences were only indicative ($0.05 \leq p \leq 0.1$). For households with small children, 30 percent noted an increase in household chores. Of all respondents, 11 percent spent more time on the preparation of meals. This applied more to women than to men. Eleven percent spent more time on the meals themselves; in households with children also 11 percent spent less time on meals, against an average of 6 percent spending less time. Ten percent had more expenditures on food. Here, women seemed to score higher too, but numbers are too small for statistical significance.

Table 7–11: Changes in time and expenditures since working at home

		Men (n = 100)	Women (n = 71)	Significance gender ²	Households w. children < 4 (n = 72)	Significance children ³	Total (n = 171)
Spending time/money on...		%	% ¹		% ¹		%
Household chores	more	24	23	0.05 ≤ p ≤ 0.1	30	n.s.	23
	same ¹	72	63		63		68
	less	4	14		8		8
Paid domestic help	more	8	9	n.s.	11	n.s.	8
	same	91	90		88		91
	less	1	1		1		1
Eating out (expenditures)	more	6	6	n.s.	4	n.s.	6
	same	92	90		93		91
	less	2	4		3		3
Convenience food	more	3	9		4	n.s.	5
	same	93	85		89		90
	less	4	7		7		5
Food (expenditures)	more	7	14	n.s.	13	n.s.	10
	same	90	83		83		87
	less	3	3		4		3
Meals (time)	more	10	11	n.s.	11	p ≤ 0.05	11
	same	85	82		78		84
	less	5	7		11		6
Preparation of meals (time)	more	11	17	p ≤ 0.05	13	n.s.	14
	same	87	73		83		81
	less	2	10		4		5
Childcare (hours)	more	7	10	n.s.	15	p ≤ 0.01	8
	same	86	78		68		83
	less	7	13		17		9
Childcare (expenditures)	more	6	9	n.s.	13	p ≤ 0.01	7
	same	87	80		72		84
	less	7	12		15		9
Children (time)	more	34	18	p ≤ 0.01	46	p ≤ 0.01	28
	same	57	79		46		66
	less	9	3		8		6
Children (attention)	more	33	17	p ≤ 0.05	43	p ≤ 0.01	26
	same	60	80		50		68
	less	7	3		7		5
Electricity	more	56	63	n.s.	63	n.s.	59
	same	40	34		33		37
	less	4	3		4		4
Heating	more	48	56	n.s.	53	n.s.	52
	same	47	40		49		44
	less	5	4		6		5
Telephone	more	52	54	n.s.	57	n.s.	53
	same	40	42		33		41
	less	8	4		10		6
Shopping (total time)	more	7	9	n.s.	10	n.s.	8
	same	82	86		89		90
	less	1	6		1		3
Shopping (times per week)	more	13	10	n.s.	14	n.s.	12
	same	84	83		82		84
	less	3	7		4		5

1) 'same' means no changes, including 'no answer'.

2) Chi² for differences between men and women; df = 2.3) Chi² for differences between households with and without children under 4 years old.

Substantial changes were shown regarding children: 28 percent of the respondents indicated that they spent more time on children, and 26% spent more attention on children. For male respondents the impact of telecommuting was bigger than for females: 34 percent of the male and 18 percent of the female respondents spent more time on children. For attention these figures were 33 percent for men and 17 percent for women. These statements were, of course, only applicable for households with children. Almost half of the households (46%) with children under 4 years noted that they spent more time on them and 43 percent indicated paying more attention since telecommuting. In households with children under 18, this was still 41 percent and 39 percent. A slight decrease in time and money for childcare was noticeable. In 17 percent of the households with small children a reduction in hours childcare was mentioned, and 15% of these households reported a reduction in expenditures on childcare. These differences with households without young children were statistically significant ($p \leq 0.01$). More than half of the respondents noted an increase in expenditures on electricity (59%), heating (52%) and telephony (53%). Eight percent said they spent more time on shopping, whilst 12 percent went out for errands more often.

There was no statistically significant relation with the increase in domestic tasks and the amount of time worked at home. Surprisingly, the 'heavy' telecommuters (working at home more than 16 hours per week) showed a smaller increase in domestic chores than those who worked at home less than 16 hours. The same applied for respondents who spread their telecommuting tasks over more days a week. The greatest increase was indicated by those who worked at home one or two days. Also, the biggest increase was shown among respondents in whose household there was no other home-worker.

7.1.3. Motives and opinions

In Chapter 6 (*Methodological aspects*), four elements of standard of care are defined: family or career orientation, degree of egalitarianism, task or time orientation and the wish to integrate or separate home and work. Next to that, some elements of standard of care have been discussed, that are no indication of one of these attitudes in particular.

Family orientation

Table 7–12 shows the answers to the questions and statements concerning family orientation. As discussed in Chapter 6 (*Methodological aspects*), these answers could be combined into one score. A homogeneity test with Cronbach' s alpha returned an alpha value of 0.59. According to Baarda and De Goede (1997) this is an acceptable score for complex concepts. That means that a combined score of family orientation could be devised. This score is presented in Table 7–13.

Table 7–12: Family oriented motives and opinions

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Motives to work at home	%	%	%	
Want to care for my children myself				p ≤ 0.05
important	36	52	43	
not important / not unimportant	36	15	28	
unimportant	28	33	30	
More time for housekeeping and family				n.s.
important	43	45	44	
not important / not unimportant	28	33	30	
unimportant	29	22	26	
Can better practice hobby or sports				n.s.
important	13	20	16	
not important / not unimp.	14	10	13	
unimportant	72	69	71	
Parents should educate their children themselves as much as possible				p ≤ 0.01
agree	74	54	66	
neutral	19	23	20	
disagree	7	23	14	
Family and leisure time should come in the first place; working hours are adjusted to that as much as possible				n.s.
agree	26	31	28	
neutral	35	38	37	
disagree	39	31	35	

1) Chi² is calculated for differences between men and women; df = 2.

From the exploratory investigation in 1996, it was expected that women would show a higher degree of family orientation and men a higher degree of career orientation. In the IDC-survey, 10 percent of the main breadwinners (most of whom males) and 30 percent of the second income earners (most of whom were females) thought ‘*Gaining time for family and housekeeping*’ an important motive to work at home. In the survey, men and women did not answer differently to this item, and the percentage of respondents who found this important was much higher: 44 percent. More than half of the respondents, 60 percent, had a fairly high or high degree of family orientation. The male respondents scored with 61 percent slightly higher on family orientation than the female respondents with 58 percent, but these differences were not statistically significant (Table 7–13).

Table 7–13: Family orientation, combined score

	Men (n = 98)	Women (n = 64)	Total (n = 162 ²)
Family orientation ¹	%	%	%
Low degree of family orientation	7	8	7
Reasonable degree of family orientation	32	34	33
Fairly high degree of family orientation	55	52	54
High degree of family orientation	6	6	6
Total	100	100	100

1) Chi² = 0.20; df = 3; p > 0.1 (not significant).

2) Not every respondent answered all questions.

Career orientation

The answers to motives and opinions concerning career orientation are presented in Table 7–14. The combined score for career orientation – presented in Table 7–15 – returned an alpha value of 0.45 on the homogeneity test (Cronbach's alpha). This low score means that respondents who scored high on one item, might have scored low on another one in the same category. When for career orientation only three items were combined ('*Work better, more concentrated at home*' ; '*Can determine own working tempo*' ; and '*Can determine own working hours*'), the homogeneity was better: alpha was then 0.77.

Almost 90 percent of the respondents who answered the questions had a high (68%) or very high (21%) degree of career orientation. There were proportionally more women (27%) in the highest score of career orientation. These differences between men and women were indicative only. When career orientation was defined by only three items, the scores were lower. Then 62 percent of the respondents scored a rather low career orientation; differences between men and women were not statistically significant.

Women found '*Work at home better and more concentrated*' a very important argument – 84 percent of them, against 75 percent of men. However, the differences between men and women were not statistically significant. Also, women seemed to value the possibility to decide over their own working time and pace more than men, but this difference was not statistically significant either. Men (43%) and women (45%) thought '*More time for family and housekeeping*' equally important. These percentages are much higher than the percentages found in the IDC-survey of 1996 (Vernooij en Casimir 1996). Then, 68 percent of the main breadwinners thought '*Work better, more concentrated*' an important argument, against 79 percent of the current survey. In the IDC-survey 10 percent of main breadwinners thought '*Gaining time for family and housekeeping*' was important, and 30 percent of the second income-earners.

It was not the case, that respondents who scored high on family orientation, scored low on career orientation. Apparently these two orientations go together very well. This suggests a high degree of pluriformity. This will be discussed in Chapter 8, *Conclusions*.

Table 7– 14: Career-oriented motives and opinions

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Motives to work at home	%	%	%	
Work better, more concentrated at home				n.s.
important	75	84	79	
not important / not unimportant	12	12	12	
unimportant	13	4	9	
Can decide over own working pace				n.s.
important	46	53	49	
not important / not unimportant	27	27	28	
unimportant	26	19	24	
Can decide over own working hours				n.s.
important	73	80	76	
not important / not unimportant	16	11	14	
unimportant	11	8	10	
Paid labour comes in the first place; leisure time and family have to be organised around that				p ≤ 0.01
agree	17	7	13	
neutral	25	11	19	
disagree	58	81	68	
Paid labour is a necessary evil; you need the money to live				n.s.
agree	28	29	29	
neutral	23	29	26	
disagree	49	41	46	

Chi² is calculated per item; df = 2.

Table 7– 15: Career orientation

	Men (n = 92)		Women (n = 62)		Total (n = 154)	
Career orientation	5 items ¹	3 items ²	5 items ¹	3 items ²	5 items ¹	3 items ²
	%	%	%	%	%	%
Low degree of career orientation	1	11	7	13	3	12
Reasonable degree of career orientation	8	66	8	56	8	62
Fairly high degree of career orientation	74	22	58	32	68	26
High degree of career orientation	17	0	27	0	21	0
Total	100	100	100	100	100	100

1) For 5 items: Chi² = 6.4; df = 3; 0.05 ≤ p ≤ 0.1 (indicative).

2) For 3 items Chi² = 2.1; df = 2; p > 0.1 (not significant).

Task and time orientation

Related to the concept family and career orientation, is the concept of task and time orientation. Do people live to work, or is their work their life? Do they perform their paid labour in a more task-oriented manner when working at home, or becomes their domestic labour more time oriented? In this section, the attitudes towards paid and unpaid work is the subject of discussion.

In the survey there were two items concerning task and time orientation. Not more than 11 percent of the respondents agreed on both items, 20 percent disagreed on both.

These differences did not show statistical significance. Table 7–16 presents the scores on the individual items. Observed differences between men and women were not statistically significant.

Table 7–16: Task and time-oriented opinions

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
	%	%	%	
Motives to work at home				
Family and leisure time should come in the first place; working hours are adjusted to that as much as possible				n.s.
agree	26	31	28	
neutral	35	38	37	
disagree	39	31	35	
Paid labour is a necessary evil; you need the money to live				n.s.
agree	28	29	29	
neutral	23	29	26	
disagree	49	41	46	

Chi² is calculated for differences between men and women per item; df = 2.

Egalitarianism

To establish a degree of egalitarianism, the responses to seven statements concerning differences between men and women and the division of labour between the sexes were combined. This measure achieved a high degree of homogeneity (Cronbach' s alpha = 0.82). A high score means that respondents agreed with all – or almost all – statements in which equal share of household and paid labour was proposed. Additionally, they disagreed with statements that suggested that women are better fit to raise children and men in particular need a good job. Respondents with a low score (not very egalitarian) did not agree with statements suggesting equal share. They agreed with statements concerning differences between men and women.

Women thought – more than men – that women were not necessarily better at raising small children than men: 77 percent of the female respondents disagreed with this statement, while 57 percent of men disagreed. Most women (97%) indicated that child-care is equally the responsibility of men. A few male respondents, 4 percent, disagreed on this matter, 88 percent agreed as well. More than men, women wanted to share both domestic and paid labour equally. Although women wanted to share paid labour almost twice as much as men, the overall agreement with this statement was rather low: only 33 percent of the respondents – 26 percent of the men and 41 percent of the women – agreed with the idea that paid labour should be shared equally. A much higher percentage (67%) agreed with an equal share of domestic labour. In Table 7–17 the responses to the individual statements are presented. Table 7–18 shows the combined score.

Table 7–17: Motives and opinions relating to egalitarianism

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
	%	%	%	
Motives to work at home				
Women can better raise small children than men				p ≤ 0.05
agree	23	9	17	
neutral	19	14	17	
disagree	57	77	66	
Children benefit most from a mother who is there when they come home from school				n.s.
agree	30	27	29	
neutral	24	21	23	
disagree	46	51	48	
Childcare is equally the responsibility of the man as of the woman				0.05 ≤ p ≤ 0.1
agree	88	97	92	
neutral	8	3	6	
disagree	4	-	2	
It is more important for a man to have a good job than for a woman				n.s.
agree	3	4	4	
neutral	22	14	19	
disagree	75	81	78	
Man and woman should share domestic labour equally				p ≤ 0.05
agree	61	74	67	
neutral	17	20	18	
disagree	22	6	15	
The household is equally the responsibility of the man				n.s.
agree	82	89	85	
neutral	13	11	12	
disagree	5	-	3	
Man and woman should share paid labour equally				p ≤ 0.05
agree	26	41	33	
neutral	31	37	34	
disagree	43	21	34	

Chi² is calculated for differences between men and women per item; df = 2.

Table 7–18: Egalitarian attitude, combined score

	Men (n = 92)	Women (n = 70)	Total (n = 162 ¹)
	%	%	%
Egalitarian attitude ¹			
Not or not very egalitarian	1	-	1
Reasonable egalitarian	20	10	15
Fairly egalitarian	49	40	45
Very egalitarian	30	50	39

1) Chi² = 7.7; df = 3; 0.05 ≤ p ≤ 0.1 (indicative).

2) Not all respondents answered all questions.

Integration or separation

The survey contained two questions concerning opinions on separation or integration of work and leisure time. One was about the combination of paid labour and childcare.

Sixty percent of the respondents agreed with the statement that telecommuting allowed people to combine work with childcare. Men disagreed more with this statement than women (24 percent against 11 percent for women); 27 percent of the female respondents gave a neutral answer. Some respondents used the opportunity to comment this question. They argued, that a combination of work and childcare can be difficult, because the telecommuter can be distracted from his or her work. But on the other hand, remarks were made that telecommuting can offer the possibility to change working hours and therefore contributes to easy transitions from work to family life.

The second question on separation or integration was: '*Work and leisure time should be separated as much as possible*'. Here, 48 percent agreed with this statement, 26 percent did not agree nor disagree, and 27 percent disagreed (Table 7–19).

Table 7–19: *Motives and opinions on integration and separation*

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Motives to work at home	%	%	%	
By telecommuting, paid labour and childcare can be combined				0.05 ≤ p ≤ 0.1
agree	59	61	60	
neutral	17	27	21	
disagree	24	11	18	
Work and leisure time should be separated as much as possible				n.s.
agree	51	43	48	
neutral	24	28	26	
disagree	26	28	27	

1) Chi² is calculated for differences between men and women per item; df = 2.

Other motives and opinions concerning home-work and telecommuting

In Table 7–20 all other motives and opinions concerning home and telecommuting – not discussed yet – are combined. The table shows that women were less indifferent about childcare than men.

The responses of women were either disagreeing or agreeing, and in less cases neutral than the responses of men. For instance, more women thought it was important to care for their children themselves, but also more women thought this was unimportant. The same applied to '*Childcare too expensive*' and '*Childcare not available*', though here the differences between male and female respondents were only indicative and not statistically significant. Also, women seemed to attach more importance than men to '*Saving commuting time*': 77 percent of female and 68 percent of male respondents. In the 1996 IDC-survey '*Saving commuting time*' was an important motive for 9 percent of the main breadwinners and for 29 percent of the second income earners. Increased traffic congestion, or perceptions of traffic congestion, over the last few years might play a role here.

Table 7–20: Several motives and opinions concerning telecommuting

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
	%	%	%	
Motives to work at home				
Save commuting time				0.05 ≤ p ≤ 0.1
important	68	77	72	
not important / not unimportant	16	18	17	
unimportant	17	5	12	
Childcare too expensive				0.05 ≤ p ≤ 0.1
important	3	8	5	
not important / not unimportant	27	14	22	
unimportant	70	78	73	
Childcare not available				0.05 ≤ p ≤ 0.1
important	5	10	7	
not important / not unimportant	29	12	22	
unimportant	65	78	70	
No other job available				n.s.
important	4	6	5	
not important / not unimportant	21	12	17	
unimportant	75	83	78	
Cannot get along with colleagues				n.s.
important	2	4	3	
not important / not unimportant	14	10	13	
unimportant	83	87	84	
No room in the employer' s office				n.s.
important	18	20	19	
not important / not unimportant	20	13	18	
unimportant	61	67	64	
Cannot work elsewhere by illness or handicap				n.s.
important	2	4	3	
not important / not unimportant	14	8	12	
unimportant	83	88	85	
Can keep job despite moving				n.s.
important	2	9	5	
not important / not unimportant	15	7	12	
unimportant	83	85	84	
Can keep job despite moving firm				n.s.
important	6	4	6	
not important / not unimportant	13	9	12	
unimportant	80	87	83	
When men start telecommuting, they automatically take up more household chores				p ≤ 0.05
agree	44	31	39	
neutral	28	47	36	
disagree	28	22	25	
When women start telecommuting, they automatically take up more household chores				n.s.
agree	23	29	25	
neutral	41	29	35	
disagree	36	43	39	

Chi² is calculated for differences between men and women per item; df = 2.

Only 25 percent of the respondents (29 percent of women and 23 percent of men) thought that women would automatically take up more household chores when work-

ing at home. More respondents, 44 percent of men, 31 percent of women and 39 percent of total, thought men would do so.

In this section, general characteristics of the respondents, their resources and their standard of care have been discussed. These characteristics set the scene for the main research questions of the survey, the division of labour between partners. The following sections will focus on those questions.

7.2. *Changes in external division of labour*

The first research question concerned the external division of labour: *'To what extent does the external division of labour change when people start telecommuting?'* The external division of labour was defined as the division between paid and unpaid labour and the division between outsourcing and self-supporting. There were questions asked about the employment situation of the respondents and of other members of the family. However, no questions were included on changes in this respect as a result of telecommuting. Only 3 percent of the male and 5 percent of the female respondents did not have a job before they started telecommuting. For 82 percent of the men, the number of hours worked in a paid job, did not change since they started telecommuting. Ten percent of the rest decreased their jobs, 8 percent increased the number of hours worked. The women showed more changes. Of the female respondents, 61 percent worked as many hours in a paid job before telecommuting. For 14 percent the hours per week increased, for 25 percent the hours decreased. Differences between men and women were statistically significant ($p \leq 0.05$). Only 44 respondents (26 male and 18 female) indicated the reason for those changes. When they did, the arrival of a child was for 3 women and 1 man the reason to decrease the number of hours worked. Next to that, only 5 percent (4% male, 6% female) indicated that telecommuting was the only possibility for paid work, because there were no other jobs available. These results could not demonstrate an influence of telecommuting itself on the number of hours worked in paid jobs (Table 7–21).

Table 7–21: *Changes in paid labour since telecommuting*

	Men	Women	Total
	%	%	%
Hours worked per week decreased	10	25	16
Hours worked stayed the same	82	61	73
Hours worked per week increased	8	14	10

$\text{Chi}^2 = 7.1$; $\text{df} = 2$; $p \leq 0.05$.

Responses on questions about the allocation of resources provide information on the division between market and private household, in particular the questions on (paid) domestic help, food (eating out, using convenience food) and paid childcare. Only the latter showed substantial changes in comparison with the situation before telecommuting, especially in households with small children. There, 17 percent indicated to spend less on paid childcare, but 14 percent spent more. Also 12 percent of the respondents mentioned an increase in expenditures on food in general. There were not enough data available to detect if these increases coincided with the birth of a child or other major

changes in circumstances. For other categories, there was no evidence that the telecommuters in this survey were outsourcing less. Dining out, for instance, is often used by double-income households without children as a substitution of domestic labour (Keuzenkamp et al. 2000). For households with children it is generally too expensive, too time-consuming and too impractical. Since most of the respondents in this research had children, dining out was probably already not very common before they started telecommuting. Therefore, no changes could be observed in this respect.

Questions about the execution of specific household chores gave some insight in the degree of self-sufficiency. Respondents were asked to indicate who routinely undertook specific tasks – themselves, their partner, shared between them or done by someone else. This someone else could be a child or another member of the household, a kin or relative, but also a hired person. It appeared that in 82 percent of the cases, the number of tasks done by someone else did not change after the start of telecommuting. In 11 percent of the households others took up more tasks. In only 7 percent of the cases others performed fewer tasks after the start of telecommuting. These results are included in Table 7–23, in section 7.3, *Changes in internal division of labour*.

To what extent does the external division of labour change when people start telecommuting? This survey found little evidence of change in the external division of labour. Only childcare seemed to decrease under the influence of telecommuting. More research will be needed to detect changes in other activities, including paid labour.

Table 7–22: Changes in the division between household and market

Spending time/money on...	Men (n = 100)	Women (n = 71)	Significance gender ¹	Households w. children < 4 (n = 72)	Significance children ²	Total (n = 171)
	%	%		%		%
Paid domestic help					n.s.	
more	9	11	n.s.	13	.	10
same	71	73		75		72
less	1	2		2		1
Eating out (expenditures)					n.s.	
more	7	6	n.s.	5		7
same	83	81		86		82
less	2	5		3		3
Convenience food					n.s.	
more	3	10	0.05 ≤ p ≤ 0.1	5		6
same	85	67		82		78
less	5	9		8		6
Food in general (expenditures)					n.s.	
more	8	16	n.s.	14		11
same	83	74		79		79
less	3	3		5		3
Childcare (expenditures)					p ≤ 0.01	
more	7	11	0.05 ≤ p ≤ 0.1	14		9
same	62	39		61		53
less	8	15		17		11

1) Chi² calculated for differences between men and women; df = 2.

2) Chi² calculated for differences between households with children and households without children under 4 years old; df = 2.

7.3. Changes in internal division of labour

7.3.1. Participation in nine household tasks

The main question for the current survey was: 'To what extent does the internal division of labour change when people start telecommuting?' For nine daily, recurring tasks respondents were asked to indicate who undertook these tasks on home-working days, on other days, and before he or she worked at home regularly. The results are summarised in Table 7–23. Table 7–24 shows the same items, but only for respondents who answered 'me'. In this table the results for male and female respondents are separately shown, as well as the results for families with children under 18 years old.

Table 7–23: Who does what?

Who does what and when?	Me % ¹	Partner % ¹	Both % ¹	Other % ¹	No answer % ¹
Cooking					
on home-working days?	51	24	20	1	4
on the other days?	24	35	34	3	4
before you started working at home?	30	36	27	2	5
Dishes					
on home-working days?	28	7	41	15	10
on the other days?	27	6	40	14	12
before you started working at home?	25	5	44	14	13
Sweeping / Hoovering					
on home-working days?	29	21	17	23	9
on the other days?	23	22	24	26	5
before you started working at home?	24	23	23	23	8
Laundry					
on home-working days?	36	33	21	2	8
on the other days?	27	39	25	2	7
before you started working at home?	29	35	28	1	7
Clearing away the laundry					
on home-working days?	26	39	20	6	9
on the other days?	22	43	23	6	6
before you started working at home?	21	40	26	5	9
Taking care for the children					
on home-working days?	29	8	21	12	30
on the other days?	11	21	32	6	30
before you started working at home?	12	20	26	9	33
Leisure activities with children (reading, walking, playing)					
on home-working days?	17	7	39	6	31
on the other days?	9	8	49	3	31
before you started working at home?	9	12	40	5	34
Getting children from school					
on home-working days?	29	9	14	7	41
on the other days?	13	20	18	8	40
before you started working at home?	12	19	14	9	45
Daily shopping					
on home-working days?	51	17	18	2	13
on the other days?	27	31	32	1	10
before you started working at home?	31	26	29	1	13

1) Percentages of row totals.

The biggest changes between the situation before and after telecommuting were shown for cooking and activities with children. Half of the telecommuters, 51 percent, were preparing the dinner on their home-working days, while 30 percent of them reported they did so before they started working at home. A comparable increase could be observed concerning the daily shopping. Before telecommuting, 31 percent of the respondents did the daily shopping, 51 percent of them did this on home-working days. When we look at activities with children, we see even bigger changes: 29 percent of the respondents were taking care of their children and got their children from school, while 17 percent of them was reading or playing with children on their home-working days. Before they started working at home, only 12 percent was active in childcare and get-

ting children from school, and only 9 percent was reading, walking or playing with their children regularly.

Daily cleaning distinguishes itself from the other activities, because it was most often done by others. In 23 percent of the cases this task was contracted out. In 15 percent of all households, the dishes were done by other people than the respondent. Here possibly children played a role. In households with children older than 4 years old, the percentage of 'other' dishwashers was 19 percent, in households with children older than 12, this was 28 percent.

In Table 7–24, the percentages of respondents who answered '*me*' are summarised, classified according to gender and to households with children under 18 years old. The totals of table 7–24 correspond with the percentages in the column '*me*' of Table 7–23. For instance, 51 percent of all respondents was cooking on home-working days; 40 percent of the male respondents indicated to cook on their home-working days. The table also shows whether the differences between the men and women, and the differences between households with or without children, were statistically significant. The changes between before and after the start of telecommuting are visualised in Figure 7-2.

The biggest changes were to be found amongst men. Women cooked relatively and significantly more often than men (67% versus 40% on home-working days), but the increase after starting telecommuting was bigger for men than for women. The share of men more than doubled, whilst the share of women only increased by a half. More changes could be observed in respect of children. This applied to all respondents, but in particular to men. Only 5 percent of the male respondents took care of the children before they worked at home. After they started telecommuting, their share increased to 26 percent for all respondents, and from 3 to 31 percent for men in households with children. Within households with children, 25 percent of the female respondents took care of the children before telecommuting, increasing to 50 percent on home-working days. There were no women who let their partner take care of the children on the days they work at home. Some men did, likewise some of the female interviewees in 1996 reported. Getting children from school was done by men 7 times more since telecommuting than before. Women's share only increased with a factor 1.8.

Table 7–24: Who does what; respondents who answered ‘me’

Who does what and when?	Men (n = 98)	Women (n = 70)	Significance ¹	Households w. children (n = 107)	Significance ²	Total ³ (n = 168)
	% ⁴	% ⁴		% ⁴		% ⁴
Cooking						
on home-working days?	40	67	p ≤ 0.01	51	n.s.	51
on the other days?	12	40	p ≤ 0.01	22	n.s.	24
before working at home?	16	50	p ≤ 0.01	27	n.s.	30
Dishes						
on home-working days?	31	24	n.s.	27	n.s.	28
on the other days?	28	27	n.s.	28	n.s.	27
before working at home?	26	25	n.s.	26	n.s.	25
Sweeping / hoovering						
on home-working days?	18	44	p ≤ 0.01	24	p ≤ 0.05	29
on the other days?	13	37	p ≤ 0.01	19	n.s.	23
before working at home?	12	41	p ≤ 0.01	19	0.05 ≤ p ≤ 0.1	24
Laundry						
on home-working days?	12	69	p ≤ 0.01	36	n.s.	36
on the other days?	6	57	p ≤ 0.01	22	n.s.	27
before working at home?	6	60	p ≤ 0.01	22	0.05 ≤ p ≤ 0.1	29
Clearing away the laundry						
on home-working days?	8	51	p ≤ 0.01	25	n.s.	26
on the other days?	7	43	p ≤ 0.01	18	n.s.	22
before working at home?	7	40	p ≤ 0.01	17	n.s.	21
Taking care for the children						
on home-working days?	26	35	p ≤ 0.05	38	p ≤ 0.01	29
on the other days?	5	20	p ≤ 0.01	12	p ≤ 0.01	11
before working at home?	5	21	p ≤ 0.01	11	p ≤ 0.01	12
Leisure activities with children						
on home-working days?	13	22	n.s.	20	p ≤ 0.01	17
on the other days?	7	11	n.s.	8	p ≤ 0.01	9
before working at home?	7	12	n.s.	8	p ≤ 0.01	9
Getting children from school						
on home-working days?	21	40	p ≤ 0.05	40	p ≤ 0.01	29
on the other days?	4	27	p ≤ 0.01	17	p ≤ 0.01	13
before working at home?	3	27	p ≤ 0.01	17	p ≤ 0.01	12
Daily shopping						
on home-working days?	40	66	p ≤ 0.01	49	n.s.	51
on the other days?	19	37	p ≤ 0.05	26	n.s.	27
before working at home?	20	46	p ≤ 0.01	30	n.s.	31

1) Chi² calculated for differences between men and women; df = 2.

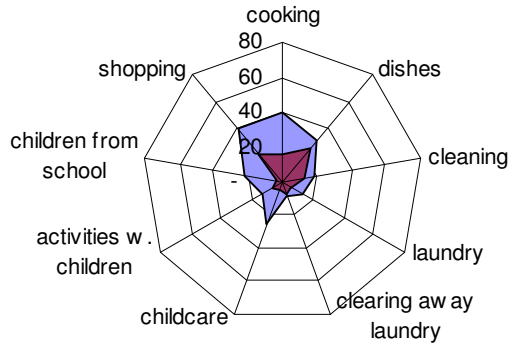
2) Chi² calculated for differences between households with children and households without children under 18; df = 2.

3) Not all respondents answered all questions

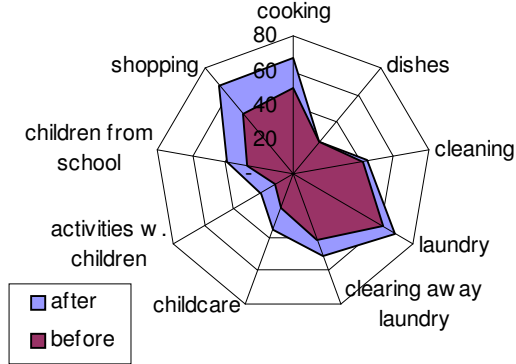
4) Percentages of respondents who answered ‘me’.

Figure 7–2: Tasks performed by male and female telecommuters before and after the start of telecommuting

male respondents



female respondents



Percentages of male respondents (left) and female respondents (right) performing the indicated tasks before and after the start of telecommuting.

Doing the laundry appeared to be the most gender-differentiated activity. Though some men started washing and clearing away the laundry when working at home, their share still lagged behind that of women, and behind other activities. Washing dishes was the most neutral activity. There were little differences between the sexes. This activity also showed the least differences before and after respondents started telecommuting. Looking closer at the respondents who washed the dishes on their home-working days, it appeared that 83 percent of them did this also before they started working at home, and 72 percent washed the dishes on the other days too. These results show that this activity was least influenced by telecommuting. Childcare on the other hand, was the most influenced. Only 38 percent of the respondents who took care of their children on their home-working days also did this before they started working at home; 35 percent did it on the other days. The relative increases for male and female respondents, and for households with children, are summarised in Table 7–25.

Table 7–25: Increase of activities

Activity	Men	Women	With children	Total	% same person ²
	increase ¹	increase ¹	increase ¹	increase ¹	
Taking care for the children	4.6	2.3	4.7	3.3	38
Getting children from school	7.0	1.8	3.1	3.0	42
Cooking	2.4	1.6	2.3	2.0	54
Leisure activities with the children	1.9	2.0	3.5	1.9	52
Daily shopping	1.9	1.7	1.9	1.8	59
Doing the laundry	2.0	1.1	1.9	1.3	72
Clearing away the laundry	1.1	1.2	1.7	1.2	77
Sweeping / hoovering	1.4	1.0	1.2	1.2	74
Doing the dishes	1.2	1.0	1.1	1.1	83

1) Relative increase of respondents answering ' me' ; percentage performing the task on home-working days divided by percentage before working at home

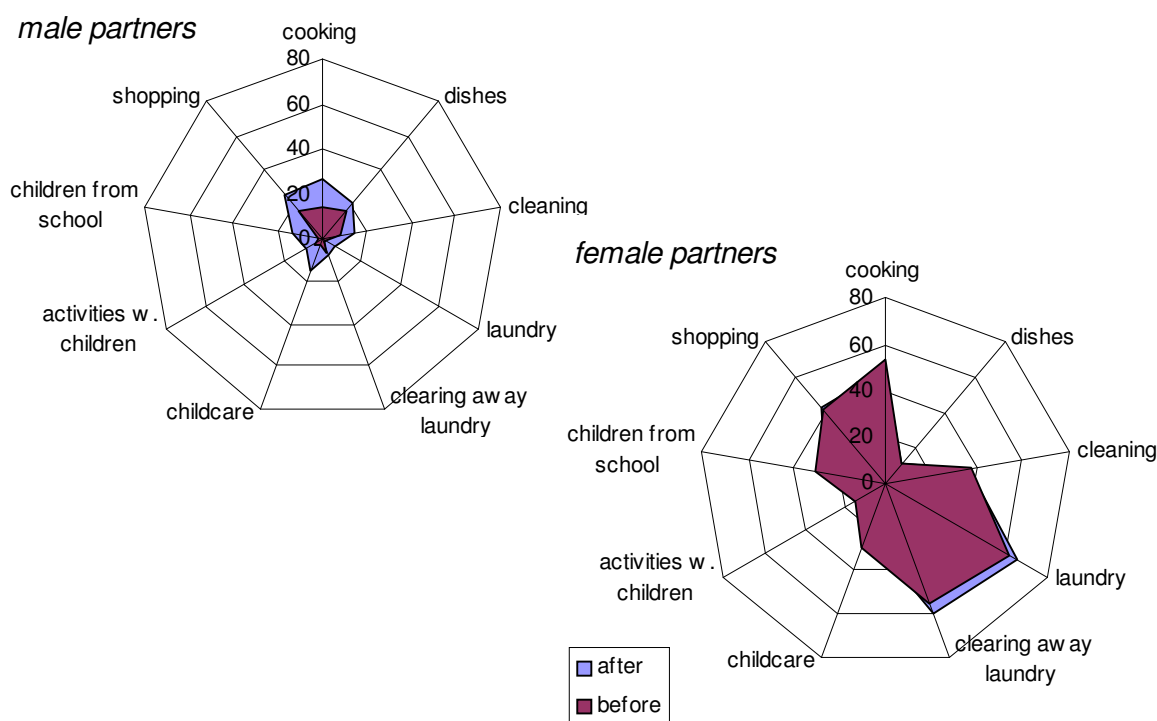
2) Percentage of respondents who performed this task both before and after the start of telecommuting

7.3.2. Gender differences in the division of labour within households

There are several ways to detect the differences between men and women. Above the percentages of male and female respondents per question and per answer category were summarised. This gave a picture of changes in general, but not necessarily of changes within households. To define the division of domestic tasks between partners, all tasks were ascribed to the man and wife within a couple. For this operation only respondents living with a partner were taken into account. In this survey, all married – or otherwise living together – respondents lived with a partner of opposite sex. When male respondents did answer ' *me*' and female respondents did answer ' *partner*' the man was the one who performed the specific task. Conversely, the task was performed by the wife when male respondents answered ' *partner*' and female respondents answered ' *me*'

Table 7–26 shows the results of this operation. In 49 percent of the couples, the woman was the only cook. Washing dishes and activities with children were often done jointly. Daily shopping was less likely to be done together after the start of telecommuting than before. Couples rarely leave the cooking and daily shopping to others, and they always launder their clothes within the household. With the exception of the laundry and daily shopping, the female contribution decreased after one of the partners started working at home. The male participation increased for all nine tasks. This table is visualised in Figure 7-3.

Figure 7–3: Tasks performed by male and female partners



Percentages of male and female partners performing specified tasks. See Table 7-26

In Table 7–27 a comparison is made of the data in this research, and the data collected in the 1990 time budget survey of the Sociaal en Cultureel Planbureau (De Hart 1995). The SCP data concern 3.158 respondents, who reported spending more than one quarter of an hour in the research week on specific tasks. For a majority of tasks, the share of men had increased compared to 1975. Only for two tasks the male contribution decreased. Washing-up declined from 54 percent in 1975 to 45 percent in 1990 and – remarkably enough – reading, playing indoors and walking with children, from respectively 14 to 13 percent, 21 to 14 percent and 9 to 5 percent. Getting children from school was not a separate category in the SCP research. The SCP researched mobility with children in several categories: motor or car with child, moped, bicycle or walking with child, public transport with child. All categories counted less than 10 percent, with the exception of cycling or walking with a child by women. In 1990, 15 percent of the sampled women had taken part in this activity.

Table 7–26: Tasks performed by male and female partners

Activities	Male	Female	Together	Other	No answer
	% ¹	% ¹	% ¹	% ¹	% ¹
Cooking					
On home-working days	27	49	21	-	3
On the other days	14	45	37	1	3
Before you started working at home	14	53	29	-	5
Dishes					
On home-working days	21	11	43	15	9
On the other days	17	13	43	15	12
Before you started working at home	16	11	46	14	13
Sweeping / hoovering					
On home-working days	14	37	17	25	8
on the other days	9	35	24	27	5
before you started working at home	8	38	23	24	7
Laundry					
on home-working days	6	65	21	-	7
on the other days	4	64	26	-	6
before you started working at home	1	62	30	-	7
Clearing away the laundry					
on home-working days	7	59	21	5	8
on the other days	7	59	24	5	5
before you started working at home	6	55	27	3	8
Taking care for the children					
on home-working days	15	23	22	12	28
on the other days	5	27	34	5	28
before you started working at home	3	29	29	8	31
Leisure activities with children					
on home-working days	8	15	42	5	29
on the other days	4	11	53	2	29
before you started working at home	4	15	44	5	32
Getting children from school					
on home-working days	13	26	15	6	39
on the other days	3	31	20	8	38
before you started working at home	2	31	15	8	44
Daily shopping					
on home-working days	26	43	18	1	12
on the other days	19	39	33	-	9
before you started working at home	16	41	31	-	13

Percentages of all couples, row totals; n = 153.

Table 7–27: Comparison of this research with 1990 SCP time budget research

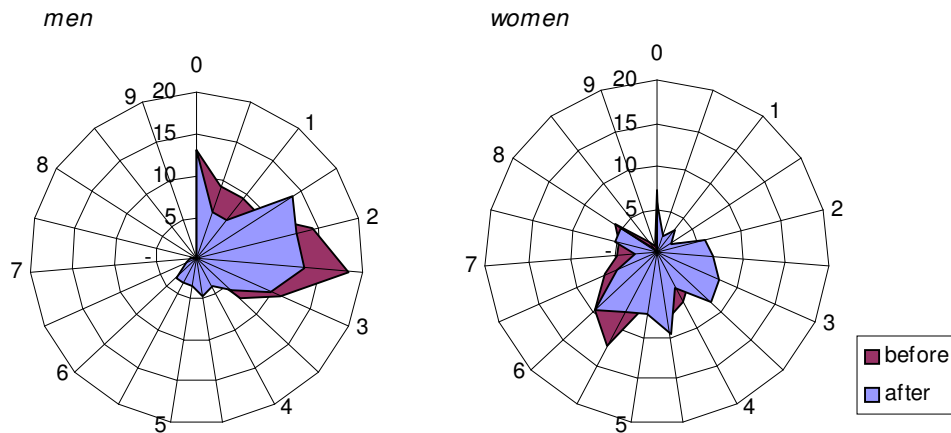
	Men		Women	
	SCP ² (n = 3158)	GC ³ (n= 153)	SCP ² (n = 3158)	GC ³ (n= 153)
Activities	%	%	% ¹	%
Cooking	59	48	90	71
Dishes ⁴	45	64	74	55
Sweeping / hoovering	35	31	85	53
Laundry	17	27	75	87
Clearing away the laundry	12	28	71	80
Taking care for the children	11	37	22	45
Leisure activities with children	14	51	19	58
Getting children from school ⁵	4	29	15	41
Daily shopping ⁶	46	44	72	61

- 1) Source: time budget research of Sociaal en Cultureel Planbureau CP 1990 (De Hart 1995).
- 2) Percentage of respondents who spent in the research week at least one quarter to this task.
- 3) Percentage of respondents performing the tasks on home-working days by husband or wife, added with percentage of respondents answering ' together' .
- 4) In SCP-research setting and cleaning the table is included.
- 5) Cycling/walking with child in the SCP-research
- 6) In SCP-research: supermarket, food/groceries

To detect the contribution of each partner to the domestic labour within the household, the number of tasks performed by each of them have been counted (see also Chapter 6, *Methodological aspects*). This count was augmented with half of the count of the jointly performed tasks. Figure 7–4 displays the number of tasks performed by men and women, before and after the start of telecommuting, in percentages of family households. After starting telecommuting, there were more men who did more than four tasks and fewer men who did less than four tasks. For women the trend was reversed. The intersection of the two lines lay for them at five tasks. The number of women who performed more than five tasks decreased, the number of women performing less than five tasks increased.

Before telecommuting, in 55 percent of the households the man performed up to two tasks and in 5 percent of the households five tasks or more. After the start of telecommuting, the percentage of households in which the man performed five tasks or more increased to 12 percent. The percentage of households in which the man performed four tasks or more, increased from 8 to 20 percent. Still in 51 percent of the family households, the man performed no more than two tasks. The average number of tasks performed by men within households was 2.0 before telecommuting, increasing to 2.4 on home-working days.

Figure 7–4: Number of tasks performed by men and women



Percentages of households that perform the indicated number of tasks, before (dark) and after (lighter colour) the start of telecommuting; $n = 153$ (90% male, 63% female respondents); average number of tasks: men before = 2.0; men after = 2.4; women before = 4.6; women after = 4.3.

In 17 percent of the households, women performed two tasks or less than that before telecommuting, while in 52 percent of the households they did five or more tasks. After one of the partners started telecommuting, the percentage of households in which women did most of the work – five or more tasks – decreased to 44 percent. The number of households in which they did not more than two tasks increased slightly from 17 to 19 percent. In 37 percent of the households, women did between two and five tasks, against 31 percent before telecommuting started. The average number of tasks women performed before telecommuting was 4.6, decreasing to 4.3 on home-working days of the telecommuter in her household. Not in the figure are the numbers of tasks performed by people other than the respondents and their partner.

To define the realised division of labour between the partners within households, a combined scale for symmetry was devised. This scale compared the number of tasks performed by man and woman per household. If man and wife performed the same – or almost the same – number of tasks, the household had a symmetrical division of domestic labour. The bigger the difference, the more asymmetrical the division was. Table 7–28 presents the degree of symmetry before and after the start of telecommuting.

Before telecommuting, 61 percent of the households were asymmetrical in a traditional way (woman doing more tasks), 41 percent of which were ‘rather’ to ‘very’ asymmetrical (women performing more than five tasks more than men). After the start of telecommuting, the percentage of traditionally asymmetrical households decreased to 54 percent, and the percentage of very asymmetrical ones to 37 percent. Most of the households that were asymmetrical after the start of telecommuting, were already asymmetrical before. Only a few asymmetrical households (7% of total) became even more asymmetrical than before. The percentage of symmetrical households decreased from 33 to 29 percent. The percentage of asymmetrical households in which the man

performed more tasks than the woman increased from 6 to 17 percent. Before telecommuting, no differences between male and female respondents were found. That means that the degree of symmetry within households of male telecommuters did not differ from that of female telecommuters. After the start of telecommuting, the non-traditional asymmetrical households consisted mainly of the households of male respondents.

In Table 7–28, the grey cells indicate the percentages of households for which the degree of symmetry did not change after starting telecommuting. This was the case for 51 percent of the households. All scores above and to the right of this diagonal indicate a change in the direction of more male participation. This applied to 31 percent in total (because of rounding off this total is less than the sum of percentages in the table). The scores below and left of the diagonal point out a decrease of male participation. This was the case for 18 percent of the households. These changes in symmetry are presented graphically in Figure 7–5.

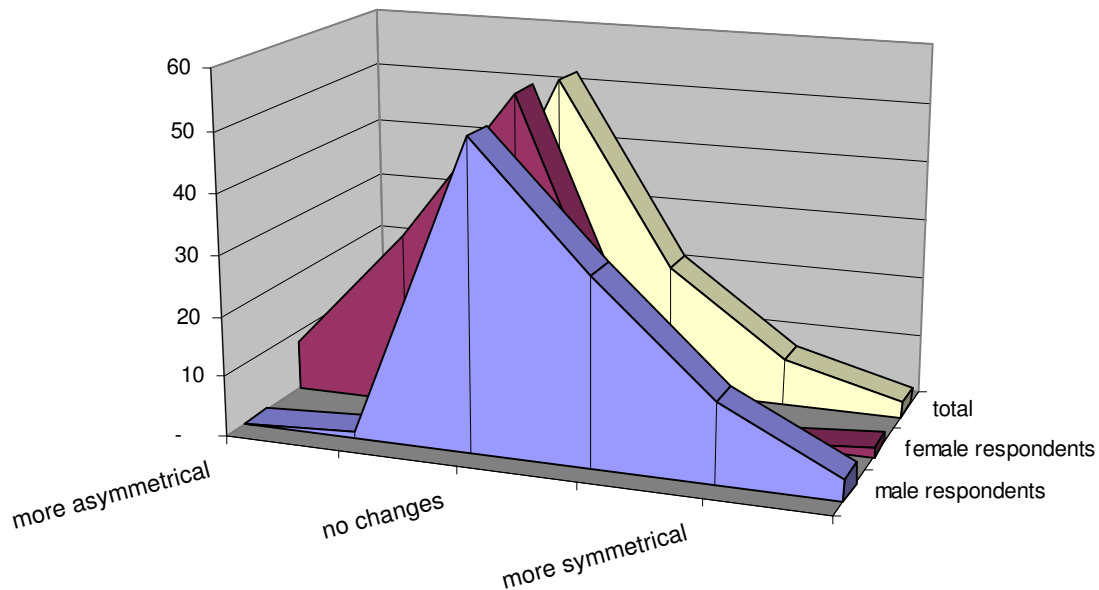
There was no statistically significant correlation with the asymmetry before telecommuting. Initially very asymmetrical households did not change more than the ones that were already fairly symmetrical. There were, however, statistically significant gender differences. In those cases that an increase in traditional asymmetry was detected, the telecommuter was – except one – a woman.

Table 7–28: Symmetry before and after telecommuting

Degree of symmetry before telecommuting	Man did more			Woman did more			Total (n = 153)
	Asymmetrical	Somewhat asymmetrical	Symmetrical	Asymmetrical	Rather asymmetrical	Very asymmetrical	
Degree of symmetry after the start of telecommuting	% ¹	%	%	%	%	%	%
Asymmetrical (man did > 5 tasks more)	1	-	2	1	1	1	5
Somewhat asymmetrical (man did 2-4 tasks more)	-	2	6	2	2	1	12
Symmetrical (difference = 1 or 0)	-	2	18	5	5	-	29
Asymmetrical (woman did 2-4 tasks more)	1	1	4	8	3	1	17
Rather asymmetrical (woman did 5-7 tasks more)	-	-	3	4	19	3	29
Very asymmetrical (woman did > 8 tasks more)	-	-	-	1	2	4	7
Total	1	5	33	20	31	10	100

1) Percentages of total married (or otherwise living together) respondents.

Figure 7–5: Changes in symmetry, percentages of family households



7.3.3. Relation to other characteristics

Having calculated the changes in symmetry, it is possible to relate these to other characteristics of the household. The results of the factors that showed a statistically significant relation with symmetry, are presented in Table 7–29.

The factors gender, education, earner type, duration of telecommuting practices, presence of children between 4 and 12 years old, egalitarian attitude, the conviction that parents should educate their children themselves and the way the household labour is organised seemed to be relevant. All other attitudes or factors that could be related to the symmetry or asymmetry within the household – for instance, age, income, type of job, family or career orientation – did not return statistical significant differences.

A comparison of the change in symmetry with education, shows that in the categories ‘no changes’ and ‘more symmetry’, respondents with higher vocational training were over-represented. In the category ‘more asymmetry’, respondents with a university education were over-represented. To phrase it differently: respondents with a university background changed less than average in a more symmetrical direction, and more than average in an asymmetrical direction.

The earner type appeared to be an important explanatory variable. Single-earner households kept more than average the same degree of symmetry after starting to telecommute and those households displayed a less than average increase in symmetry. An increased asymmetry was in particular detected in one-and-a-half-earner households, while increased symmetry was found in double-income households. Changes in symmetry also had a relation with the number of years respondents worked at home. The

most changes were found among the ones who worked at home between 2 and 3 years. The symmetry in households with children between 4 and 12 years old increased more than average. In households with younger or older children, changes were not statistically significant.

Table 7–29: Changes in symmetry related to selected respondents' characteristics

		more symmetry	no changes	more asymmetry	Significance ²
		%	%	%	
Total ³		33	52	15	
Gender	male telecommuter	48	51	1	$p \leq 0.01$
	Female telecommuter	10	54	37	
Education	Lower / middle	27	59	14	$p \leq 0.05$
	Higher vocational	40	56	4	
	University	28	47	25	
Earner type	Single earner	26	65	9	$p \leq 0.01$
	one-and-a-half earner	22	47	31	
	Double income	40	52	9	
Duration of telecommuting	< 1 year	28	48	24	$0.05 \leq p \leq 0.1$
	Between 1 and 2 years	36	52	12	
	Between 2 and 3 years	46	27	27	
	Between 3 and 4 years	18	76	6	
	Between 4 and 5 years	18	82	-	
	>5 years	36	52	12	
Households with children 4-12 years old	Yes	42	42	16	$0.05 \leq p \leq 0.1$
	No	25	59	15	
Egalitarian attitude	reasonable	48	39	13	$p \leq 0.01$
	fairly high	38	56	6	
	very	22	47	31	
Parents should educate their children themselves	agree	40	50	10	$p \leq 0.01$
	neutral	17	62	21	
	disagree	20	40	40	
Since I work at home I do the domestic labour less systematically	agree	46	32	21	$p \leq 0.05$
	neutral	47	45	8	
	disagree	23	62	15	

- 1) Figures represent row totals. Only those characteristics that showed statistical significance or indications of significance are taken into account.
- 2) χ^2 is calculated per variable, comparing each variable with symmetry; df differs per variable.
- 3) Totals can differ from other tables, because not all respondents answered all questions; n = between 138 and 153.

The egalitarian attitude – supposed to be the most important explanatory variable for the realised symmetry – appeared to have an unexpected reverse effect. The higher the score on this scale, the lower the chance to divide the tasks more evenly between man and woman. From the ones with a fairly egalitarian attitude, 48 percent became more symmetrical. This is, compared to the 33 percent of total, considerably above-average. Those who had a very strong egalitarian attitude became more asymmetrical: 31 percent of them, against 15 percent of total. Not more than 22 percent of the very egalitarian

tarian households became more symmetrical after the start of telecommuting, which is low compared to the 33 percent of all households.

Not surprisingly, respondents who agreed with the statement that parents should educate their children themselves, showed a more than average increase in symmetry (40%). An overall family-oriented attitude, however, did not lead to statistically significant deviations from the average, nor did a career oriented attitude.

The respondents who indicated that they did their domestic work less systematically than before, were also the ones who changed their habits more than average: 46 percent of those who agreed with this statement also had an increased symmetry, while 21 percent had a decreased symmetry. This can also be phrased the other way around: the respondents who changed their habits the most, might have changed their ways of organising their domestic labour as well. More research is needed to examine this further.

7.3.4. Summarising the answers to the main research question

How does the internal division of labour (division among the members of the household) change by telecommuting and how does the content of the daily care change? The emphasis in this survey was on the division of labour between partners. In 52 percent of the households, the division of labour did not change as a result of telecommuting. In 32 percent of the households, the internal division of labour became more symmetrical, while in 16 percent of the households the internal division became more asymmetrical. The changes were biggest in households of male telecommuters. Men took up more household tasks when working at home, in particular activities with children and cooking. Men took care of children 4.6 times more often than before telecommuting, children were picked up from school by 7 times more men after the start of telecommuting. The relative increase for women was considerably less, respectively 2.3 and 1.8. The relative increase for cooking was 2.4 for men and 1.6 for women. Though more households of male telecommuters became more symmetrical than those of female telecommuters, if households became more asymmetrical, the telecommuter was more often than not a woman.

The increase or decrease in symmetry was not only related to gender. The asymmetry increased among respondents with an academic (university) background, while graduates from other institutes of higher education showed a more than average increase in symmetry. The one-and-a-half-earner households were over-represented in the group of decreasing symmetry, the double-income households became more symmetrical. Concerning the duration of the telecommuting practice, it seemed that respondents who worked at home between 2 and 3 years changed the division of tasks the most, both in an asymmetrical and a symmetrical direction. Households with children between 4 and 12 years old became more symmetrical, though this trend was statistically not more than indicative. Surprisingly, an egalitarian attitude did not guarantee a symmetrical division of tasks. On the contrary, the higher the degree of egalitarianism, the more asymmetrical the division of domestic labour. One of the statements was: *'Parents should educate their children themselves'*. The ones who agreed with this statement, showed a more than average increase in symmetry and vice versa, the disagreeing respondents showed a more than average decrease in symmetry.

Respondents who indicated that they performed their domestic work less systematically, showed a more than average increase in symmetry.

The findings of this section are summarised in Table 7–30. This table is based on Table 7-29. A plus sign indicates a deviation from the total in a positive sense. It means that the difference with the average percentage in the concerning column is between 5 and 10 percent. Two plus signs when the deviation of 10 percent or more. The same applies to the minus signs. A square means no deviation or a deviation less than 5 percent.

Table 7–30: Overview of changes in symmetry related to selected characteristics

Symmetry ¹		more symmetry	no changes	more asymmetry
Gender	male telecommuter	++	□	- -
	female telecommuter	- -	□	++
Education	lower / middle	-	+	□
	higher vocational	+	□	- -
	university	-	-	++
Earner type	single earner	-	++	-
	one-and-a-half earner	- -	-	++
	double income	+	□	-
Duration of telecommuting	< 1 year	-	□	+
	1-2 years	□	□	□
	2-3 years	++	- -	++
	3-4 years	- -	++	-
	4-5 years	- -	++	- -
	> 5 years	++	□	□
Households w. children under 4 years old	yes	+	-	□
	no	-	+	□
Egalitarian attitude	reasonably	++	- -	□
	fairly high	+	□	-
	very high	- -	-	++
Parents should educate their children themselves	agree	+	□	-
	neutral	- -	++	+
	disagree	- -	-	++

1) Changes are statistically significant or indicative (see also Table 7–29).

- + higher percentage than average (5-10% more)
- ++ much higher percentage than average (more than 10% more)
- lower percentage than average (5-10% less)
- - much lower percentage than average (more than 10% less)
- no changes (or less than 5% deviation of average)

See also Table 7-29.

Not only the division of household labour seemed to have changed under the influence of telecommuting, changes in the content of daily care could also be noticed, in particular in childcare, food preparation and shopping. Remarks were made about the possibility of cooking more extensive meals. The idea that the habit of one-stop-shopping once a week was replaced or complemented with repeatedly smaller errands during the week is confirmed by the results. It is conceivable that the flexibility in working hours and place of work affected daily routines in general, calling for new caring arrangements and agreements within the household. However, the data from this

research were not sufficient to reveal how and to what extent these arrangements and agreements change.

7.4. *Assessment and feedback*

The third research question of the survey was: *‘How do households assess the changes and which strategies do they apply to minimise possibly negative consequences; or is telecommuting by itself a strategy to match wishes and possibilities?’* In this section first the evaluation will be discussed and, next to that, the applied strategies.

7.4.1. **Assessment**

The evaluation of the outcome of household behaviour – the comparison of standard of care with level of care – indicated the extent of wellbeing of the household. In this research, the question was narrowed to a subjective value judgement: did respondents value their current situation as an improvement or deterioration compared to their former situation? And what strategies did they use to match the current situation with the desired? Did telecommuting play a role in this respect? Here again the concepts of family orientation and of task and time orientation were addressed, not as attitudes, but in the way the domestic labour was arranged.

Family orientation

Table 7–31 shows the results of the assessment questions related to family orientation. Only some statements showed statistically significant gender differences on the Chi-square test. Though men scored higher than women on childcare, the differences are not large enough to be statistically significant. The statements that did show statistically significant gender differences were: *‘house and garden look better’*, *‘I am always there for the members of my family’* and *‘I am always the one who has to do everything in the house’*. More women than men (20% against 4%) thought their house and garden looked better since working at home. Men and women agreed to the same extent (37%) with the idea that they were fortunately always there for other members of their household, but more women disagreed with this statement: 47 percent versus 28 percent men. A small proportion of the women – 11 percent – felt that they were always the ones who had to do everything in the house. No men agreed with this statement. In Figure 7-6 all percentages agreeing with the specified statements are presented.

The family-oriented statements in this category have been combined into one score, indicating a family-oriented practice. Table 7–32 shows these scores. They can be compared with the family-oriented attitude explained in section 7.1.3. The number of data is not sufficient to attach statistical significance to the differences.

Table 7– 31: Assessment, family orientation

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Evaluative statements	%	%	%	
Since I work at home the children get more attention				n.s.
agree	42	26	36	
neutral	36	41	38	
disagree	22	33	26	
Since I work at home I spend more time on meals				n.s.
agree	24	25	25	
neutral	23	23	23	
disagree	52	52	52	
Since I work at home house and garden look better				p ≤ 0.01
agree	4	20	11	
neutral	34	33	34	
disagree	61	47	55	
Since I work at home I am more interested in household chores and childcare				n.s.
agree	13	7	11	
neutral	26	28	27	
disagree	60	65	62	
When I work at home I always see housework to be done				n.s.
agree	18	22	19	
neutral	25	12	20	
disagree	57	66	61	
By working at home, I pay too much attention on household and family				n.s.
agree	4	6	5	
neutral	20	16	19	
disagree	75	77	76	
Because I am working at home, I am (fortunately) always there for the other members of my household				p ≤ 0.05
agree	37	37	37	
neutral	36	16	28	
disagree	28	47	36	
By working at home, I am always the one who has to do everything in the house				p ≤ 0.01
agree	-	11	5	
neutral	19	24	21	
disagree	81	65	74	

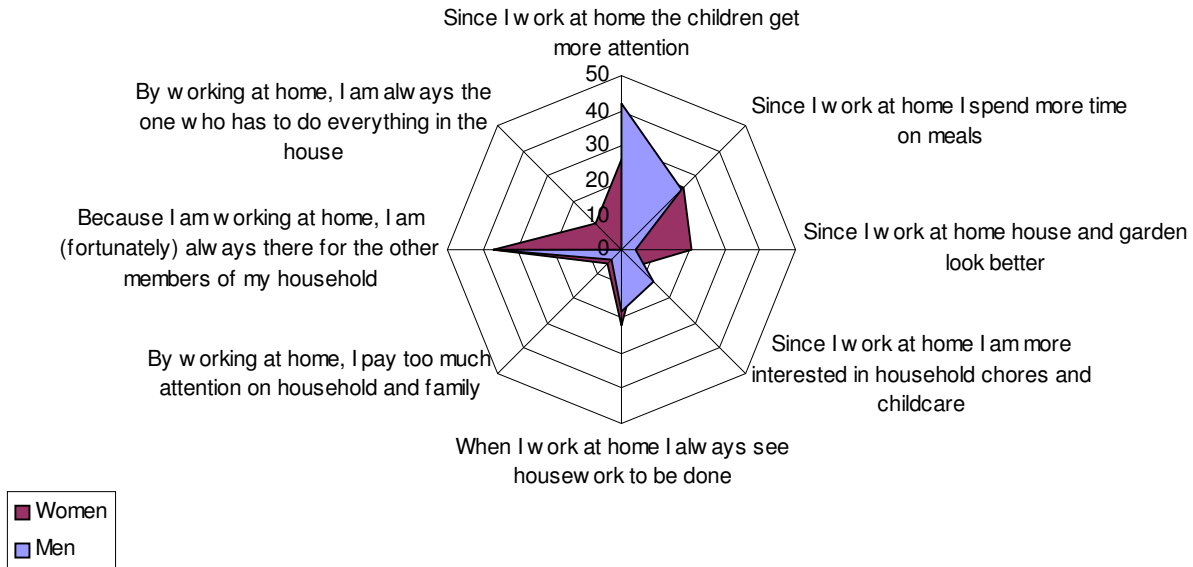
Chi² is calculated for differences between men and women; df = 2.

Table 7– 32: Family orientation: attitude and practice

	attitude (n = 162 ¹)	practice (n = 164 ¹)
Family orientation	%	%
Low degree of family orientation	7	10
Reasonable degree of family orientation	33	38
Fairly high degree of family orientation	54	48
High degree of family orientation	6	4

1) Not every respondent answered all questions.

Figure 7-6: Family orientation, percentages of respondents agreeing to specified statements



Task and time orientation

The next concept to be addressed was the task or time orientation. The items presented in Table 7–33 were defined as being indicators for a task- or time-oriented approach of domestic labour. The statements '*I do paid job with more satisfaction*' and '*do my domestic work more efficiently*', showed statistically significant gender difference. Women were in particular more satisfied with their paid job than men. Nevertheless, they also indicated more than men, that they did their homework more efficiently, and – at the same time – less systematically: 41 percent of the male, and 35 percent of the female respondents (39 percent of all) disagreed with both statements. Ten percent of the women agreed with both, 15 percent of them indicated to do the domestic work more efficiently, but disagreed with the statement that the domestic work was done less systematically. A correlation with attitude statements could not be established.

Doing the paid job with more satisfaction and less hurried, would indicate a task-oriented attitude towards paid work in the current situation. In particular women, 41 percent, agreed with both statements. For men this was 26 percent (32% for all respondents). There could no statistically significant relationship be detected between the perceived attitude towards paid labour and the observations in relation to telecommuting practices.

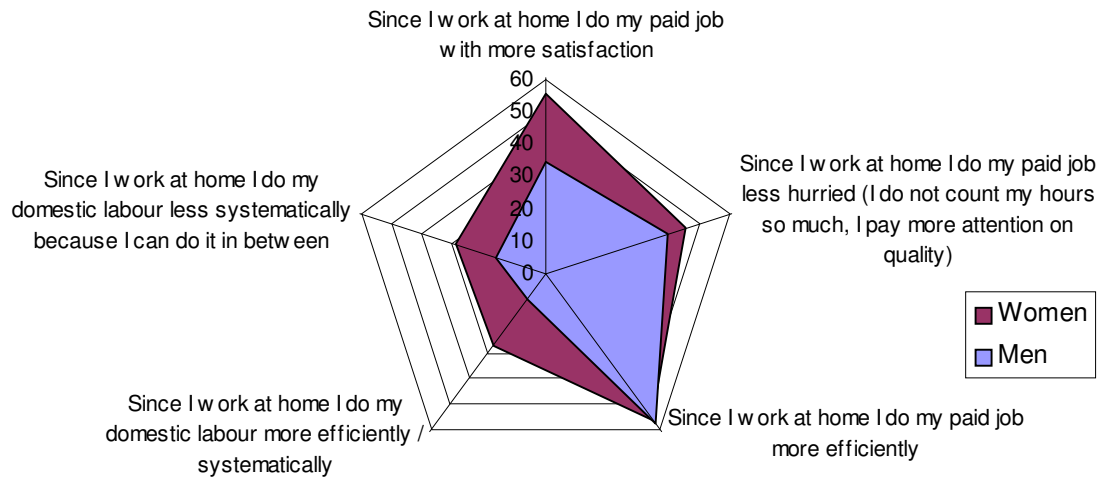
Table 7–33: Assessment, task and time orientation

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Evaluative statements	%	%	%	
Since I work at home I do my paid job with more satisfaction				p ≤ 0.05
agree	34	55	43	
neutral	32	25	29	
disagree	33	20	28	
Since I work at home I do my paid job less hurried (I do not count my hours so much, I pay more attention on quality)				n.s.
agree	39	45	42	
neutral	29	31	30	
disagree	32	23	29	
Since I work at home I do my paid job more efficiently				n.s.
agree	57	55	56	
neutral	26	25	26	
disagree	16	20	18	
Since I work at home I do my domestic labour more efficiently / systematically				p ≤ 0.05
agree	10	27	17	
neutral	34	29	32	
disagree	56	44	51	
Since I work at home I do my domestic labour less systematically because I can do it in between				0.05 ≤ p ≤ 0.1
agree	16	29	21	
neutral	37	17	29	
disagree	47	54	50	

1) Chi² is calculated for differences between men and women; df = 2.

Table 7-33 and Figure 7-7 show that all respondents – but women in particular, agree more with work-related statements than with statements about domestic labour.

Figure 7-7: Assessment, task and time orientation



Percentage of respondents agreeing to the specified statements.

Table 7–34: Assessment, remaining questions

	Men (n = 100)	Women (n = 71)	Total (n = 171)	Significance ¹
Evaluative statements	%	%	%	
By working at home it was possible (finally) to live where I wanted				n.s.
agree	5	15	9	
neutral	25	21	23	
disagree	70	64	68	
It is good to get the best of both worlds				n.s.
agree	48	65	55	
neutral	39	27	34	
disagree	12	8	11	
Because I work at home the whole family 'works' with me				n.s.
agree	8	19	12	
neutral	24	25	24	
disagree	68	56	63	
Telecommuting is not my first choice, but the least bad in my circumstances				n.s.
agree	8	15	11	
neutral	26	16	22	
disagree	66	69	67	
Do you think telecommuting is the ideal solution?				p ≤ 0.01
yes	54	79	64	
no	39	16	29	
no answer	7	6	7	

1) Chi² is calculated for differences between men and women per item; df = 2.

Table 7–34 presents the responses to assessment statements, not yet discussed above. The quality of house and surroundings, and the concepts of integration and spill-over were addressed in this section of the survey. These responses showed no relationship with attitude statements on integration or separation, as discussed in section 7.1 (*Respondents' characteristics*).

The overall assessment of telecommuting was positive: 54 percent of the men, and even 79 percent of the women, thought telecommuting was a good solution in their situation. This last statement was the only one within this group that showed statistically significant differences between men and women.

7.4.2. Strategies used

Though telecommuting was evaluated positively by most respondents, many of the respondents indicated in open answers that managing of boundaries between private life and paid job needed attention. They appeared to apply different strategies to minimise possible disadvantages of telecommuting. A segregation in space was applied by most respondents: 81 percent (77% male, 87% female) worked in a separate office. A segregation in time was less clear: 46 percent of respondents worked on fixed hours. Segregation by technical means seemed to be applied by a large minority: 42 percent had a separate telephone line. Some respondents pointed to the importance of this separate line or an answering machine to facilitate the separation. Only 20 percent made agreements with other household members about computer use. When they did, they emphasised the necessity of clear agreements about allowed interruptions and the use of equipment. Respondents who worked on fixed hours, made appointments with colleagues and the employer's secretariat about their availability. Many tried not to work in the evening or at weekends. Next to fixed working schedules they kept record of hours worked, both to do enough work and to prevent themselves from working too much. Some planned their home-working days fully with specified tasks. One of the respondents gave the key of his study to his partner when his work was finished or when it was time to stop. Otherwise his inclination to go back there might have been too big.

Although separation was the most commonly used strategy to manage the boundaries between work and private life, integration was mentioned as a key factor to success and constituted – together with flexibility – the main attraction of telecommuting. The high appreciation of flexibility worked against tight schedules. Women seemed to be more eager for the combination of work and home than men: 65 percent of the female respondents and 48 percent of the male respondents agreed on the statement that telecommuting offers them '*best of both worlds*'. However, these differences were not statistically significant.

Some telecommuters remarked that the route from work to home is often used to reflect on the day and to get work out of one's mind. When working at home, this time is missed. Therefore they mentioned getting out of the house for a while at the end of the working day, for instance to post a letter or do an errand. Others advised sports – '*... an hour tennis to combat the danger of too long working hours*' – or bicycle ride to signal closure of the working day.

Table 7–35: Summarising questions

Summarising questions	Men (n = 100) %	Women (n = 71) %	Total (n = 171) %	Significance ¹
Do you use a separate study for your paid labour?				n.s.
Yes	77	87	81	
No	17	10	14	
no answer	6	3	5	
Are you working on fixed working hours?				n.s.
Yes	48	44	46	
No	47	51	49	
no answer	5	4	5	
Are you using a separate telephone line and answering machine to separate work and private life?				n.s.
Yes	40	46	42	
No	55	51	54	
no answer	5	3	4	
Did you make agreements about computer and telephone use with your housemates?				n.s.
Yes	18	21	20	
No	78	76	77	
no answer	4	3	4	
Did you start telecommuting because you wanted a different labour division?				n.s.
Yes	3	4	4	
No	93	93	93	
no answer	4	3	4	

1) χ^2 is calculated for differences between men and women; df = 2.

The presence of children provoked ambiguous reactions. Though many telecommuters started working at home because of children, they also stated that working with children around was not possible. So their child went to childcare when they worked at home, or they made appointments outside the home when the children were there. On the other hand, children forced them to pay attention on family and daily life: *'Before I had children, work and private life were much more mingled.'* Children prevented telecommuters from being at work all the time, which was generally evaluated as positive.

Answering the question *'What do you do to limit the disadvantages of telecommuting'* some respondents reacted with the remark that there were no disadvantages: *'I love it'*, or *'I don't know any disadvantages'* However, they were a minority. Only 10 respondents reacted in this sense, while approximately 50 made remarks about disadvantages or suggested strategies to cope. A very small minority, 4 percent, started telecommuting because they wanted to divide domestic labour differently. The suggestion that telecommuting might be used as a strategy to realise changes in daily routines has to be rejected for this sample.

Although it was not the subject of the survey, many remarks were made about the importance of contact with colleagues and the employer's office to prevent loneliness and to improve the quality of work. Also, remarks were made about the indispensable discipline needed for telecommuting. Practical solutions were suggested, like regular meetings every other week; visiting the office twice a week; planning appointments in the office; trying to finish the work in the office as much as possible; calling colleagues

often, and outings with colleagues every year. These strategies were not directed at the combination of work and private life, but to the quality of work itself. As such they were of benefit to telecommuting and might be a requisite to preserve a good balance between work and the private domain.

7.5. The hypotheses

7.5.1. Symmetry and asymmetry

Based on the qualitative phase of this research, the main hypothesis to be tested in the survey suggested an increase of asymmetry in asymmetrical, family-oriented households. It was assumed that not only female telecommuters would take up more tasks when working at home, but that female partners of home-working men would do so as well. When men start working at home, it was assumed that they would not perform more household chores.

From the results of the survey, it can be concluded that the division of unpaid labour within the home of the respondents changed considerably under the influence of telecommuting. However, the hypothesis that this division would become more asymmetrical, has to be rejected. Only 16 percent of the households divided the domestic labour more asymmetrical after the start of telecommuting. In those households, the telecommuter was – except for one case – a woman. These households comprised 37 percent of the households of female telecommuters. Almost one third, 32 percent, of the responding households – 48 percent of the male respondents and 10 percent of the female respondents – became more symmetrical after the start of telecommuting. In the remaining households – 52 percent of total, 51 percent male, 54 percent female – no changes in symmetry were observed.

The hypothesis suggested that an increase of asymmetry would in particular occur in family-oriented, asymmetrical households. Such a relationship could not be detected from these results. Only in 7 percent of the cases an asymmetrical household became more asymmetrical. A relation with a family oriented attitude could not be detected from these data.

7.5.2. Changing attitudes

The second hypothesis expected changing attitudes towards both paid and unpaid labour. The paid labour would become more task oriented, the unpaid labour more time oriented, when performed in each other vicinity. The first part of this hypothesis seems to be supported by the results of the survey. An increase in time orientation in relation to domestic labour could not be observed. Both concepts were not enough crystallised to give clear-cut, distinctive outcomes. Responses to the open questions are most indicative in this respect:

‘The work is never done.’

‘I work more hours when I work at home’

or:

'I write down net hours when I work at home, while in the office the coffee breaks are counted as working hours.'

Some respondents explicitly held the transition from a time-oriented to a task-oriented culture responsible for their workload increase:

'Since I am evaluated by tasks, I work more hours. I check my e-mails in the evening, I finish a report in the weekend. Before, I thought it was enough when I had worked my weekly hours.'

The technology and flexibility accompanying telecommuting, is used to work at different places; for instance at different locations of the same organisation. The effect for employees with flexible workplaces was that their home is their most central workplace. Someone said:

'Now I am working at different places, I have most of my files at home. The consequence of that is that I always have to check or finish something when I come home in the evening.'

On the other hand, remarks were made about decreased stress when working at home, even when the total amount of hours worked increased. More than half of the telecommuters, 56 percent, said that they did their paid work more efficiently, 55 percent of the women and 34 percent of the men indicated that they did their paid work with more satisfaction; 45 percent of the female and 39 percent of the male respondents noted that they did their paid work less hurried since working at home.

It appeared more difficult to detect a more time-oriented approach of domestic work. Many of the interviewees in 1996 had said that household chores were intruding the work sphere and imposing themselves on the home-worker. Four or five years later, this seemed to be less of an issue. Only 4 percent of the current survey respondents thought that they were paying *too* much attention on household and family. A minority (11%) became more interested in household chores since working at home. More than a quarter of the women (27%), and 10 percent of the men reported that they performed their domestic work more efficiently. A comparable number of respondents, 29 percent female and 16 percent male, indicated a less systematic approach to domestic work since working at home. It was expected that respondents who agreed with the first statement (more efficient), would disagree with the second one (less systematic). This appeared not to be the case: 39 percent of the respondents (35 percent of the women and 41 percent of men) disagreed with both statements. Conversely, only 7 percent of respondents who agreed on a less systematic approach to the housework, disagreed also with the statement that they were performing their domestic work more systematically.

In Chapter 8 (*Discussion*), the answers to the research questions and the hypotheses will be discussed. There the conclusions will be related to the theoretical framework developed in Chapters 2 to 5.

8. Conclusions and discussion

8.1. A typology of households

This research studied the effect of telecommuting on the division of domestic labour between partners of opposite sex. Clearly, not all households will respond in the same way to telecommuting and it makes a difference whether the telecommuter is a man or a woman. Here the results of the research are presented as a typology. The classification is based on the sex of the telecommuter on the one hand and the degree and direction of change in the division of domestic labour on the other. Thus theoretically six types of households could be discerned, but only four of them appeared to occur in reasonable numbers:

1. Households with a female telecommuter changing in a more traditional direction (16% of cases).
2. Households with a male telecommuter, no changes in division of labour (28% of cases).
3. Households with a female telecommuter, no changes (22% of cases).
4. Households with a male telecommuter changing to a more symmetrical division of tasks (29% of cases).

This typology is presented in Figure 8-1. As can be seen in the figure, the remaining households were either households of male telecommuters, becoming more asymmetrical (1%), or households of female telecommuters becoming more symmetrical (4%). The four main types differ in the way they divide their tasks. Also, slight differences in income, education, and attitudes could be observed. In the following subsections four imaginary representatives of these telecommuter types are pictured.

Figure 8–1: Typology of households

	Male telecommuter (n = 100)	Female telecommuter (n = 71)
More asymmetrical	(1%)	1. <i>More work for mother</i> (16%)
No changes	2. <i>Shared responsibility</i> (28%)	3. <i>Continued gender differences</i> (22%)
More symmetrical	4. <i>Men taking over</i> (29%)	(4%)

Percentages of total number of households.

8.1.1. Becoming more asymmetrical: more work for mother

The smallest group (16%) consists of households of female telecommuters who take up more household tasks when working at home. Typically, the representative of this group is 42 years old and has children under 12 years old. She works in a substantial part-time job (24-32 hours per week) with a good income (more than 2500 Euros per month). She has an academic education. Her partner has a fulltime job. She works 16 hours per week at home, on two or three fixed days.

Before she started working at home, the partners did most of the tasks together. The cleaning was outsourced, and children went to day-care. After the start of telecommuting, her partner cut back his share. She took up the responsibility for most tasks, leaving the dishes as the only shared task on her home-working days. On the other days he contributes to the laundry – in particular to clearing away the laundry – , to activities with children and to shopping.

There was no indication that the start of telecommuting coincided with other major events, for instance the birth of a child. Although her partner contributes less to the domestic tasks since she is working at home, she is of the opinion that men are equally responsible for housekeeping and childcare. This household can be typified with the label: ‘more work for mother’.

8.1.2. No changes, male telecommuter: shared responsibility

Typically, the telecommuting man who does not change the symmetry within his household (28%) is 43 years old and has a high income: more than 3000 Euros per month. His employer’s office is 27 km away. He has a personal and a lap top computer, a mobile telephone, a separate telephone line, an Internet connection and an ISDN line. He works as a researcher, teacher or consultant and is highly educated. He has a

fulltime job, and he works at home on three or more days per week. His partner has either a fulltime or almost fulltime job, or she has no job or a very small part-time job (up to 8 hours per week). They have rather young children.

His household can be characterised as more symmetrical than the one of the female non-changing telecommuter. Though still asymmetrical – she does five tasks, they share four – he contributes more to the household than the male partner of female telecommuters. He does – alone or together – the dishwashing and is involved in the shopping. Occasionally he picks up the children from school and he also contributes to cleaning and laundering. Childcare and activities with children are shared with his partner.

This man has a fairly high to high egalitarian attitude. He thinks that women are no more capable of raising children than men. He agrees in particular with the statement that men are equally responsible for children and household. Thus this household might be termed: ‘shared responsibility’ as a type of response.

8.1.3. No changes, female telecommuter: continued gender differences

Households with a female telecommuter and no detected changes in symmetry (22% of total) were, and still are, asymmetrical. She is 40 years old and has children under 4 years old. She has worked at home for four years, on a three or more days per week basis, in a large part-time job (24 hours per week or more), of which 16 hours per week at home. Her education can be anything from lower vocational training to university level. Her job could be administrative or managerial, executive or academic. Her income starts at 1500 Euros per month. The average distance to her employer’s office is 40 km, but often this office is within cycling distance (less than 10 km). Her partner has a fulltime job. She has a personal computer, an Internet connection, a separate telephone line or ISDN.

The division of domestic tasks within her household was, and is, asymmetrical. She did and does six tasks alone, sharing three with her partner. Those shared tasks are the dishes, activities with children and childcare, though this last task is mainly done by her. Her partner hardly contributes to the other tasks. Telecommuting enables her to combine paid work and care. Though the contribution of her partner is minimal, she thinks that childcare is a joint responsibility. An appropriate label for this household would be: ‘continued gender differences’

8.1.4. Becoming more symmetrical: men taking over

The biggest group of households (29%) were those in which the division of domestic labour became more equal. This group can be typified as containing a male telecommuter, 44 years old, with a higher vocational or academic training. He has a full-time job, with an income above 2000 Euros per month. His employer’s office is 40 km distant. He has children, and a partner with a fulltime, or almost fulltime, job.

This man works at home between 8 and 16 hours per week, mostly on two days per week. There are times, though, when he does some paid work at home every day. He has a personal computer, a laptop, a mobile telephone and an Internet connection. He can decide his own working hours and has control over his pace of work. He thinks this

is a very important aspect of telecommuting. He does not work on fixed hours. Since working at home, he does his paid work more efficiently.

Before telecommuting, his partner performed most of the nine daily tasks, they shared dishwashing, leisure activities with children and shopping. Since he is working at home, he took over the cooking and the childcare, he gets the children from school and does the daily shopping. She still does the laundry, including the ironing and clearing away of textiles. The cleaning is done by her, or it is contracted out. The dishes and activities with children are still undertaken together.

His work is important for him. Typically, he argues that: '*By telecommuting I can decide over working hours.*' However, family and household take an important place. His opinion is that parents should educate their children themselves. Childcare is a joint responsibility and men are equally responsible for housekeeping as women. He also thinks that men automatically take up more family tasks when working at home. In short: 'men taking over'.

8.1.5. Discussing the outcomes

The results of the survey were surprising in several ways. It was assumed that male telecommuters would not automatically take up more household tasks when working at home. Female telecommuters, on the other hand, would get more domestic tasks, in particular when the division of tasks was already asymmetrical before they started working at home. Families aspiring to a more symmetrical division of labour, might use telecommuting as a strategy to realise or enhance this. Furthermore, it was suggested that telecommuting would amplify the extent of home-production. It was expected that family-oriented women would positively assess the changes in the direction of a reinforced housewife's role, whereas career-oriented women would evaluate this negatively.

Non of the assumptions above was convincingly supported by results of the survey. Half the male telecommuters did take up more household tasks, more than half of the female telecommuters did not change the division of domestic labour within their households. The increase of the contribution of male telecommuter was larger than the increase women showed. Asymmetrical households did not become more asymmetrical after telecommuting. Also, there was no indication of the utilisation of telecommuting as a strategy to realise an aspired change in the division of domestic labour. There were only some indications of the increase of domestic production.

In the subsequent sections these findings will be commented. They will be related to some respondents' characteristics – gender, earner type and education – and to the normative context of the respondents. Then, the household perspective will be discussed. These sections will be preceded with some methodological considerations.

8.2. Methodological considerations

The typifications detailed above are mainly based on the 153 family households participating in the survey. These households represented a variety of forms, income groups and professions but cannot be regarded as representative for all Dutch telecommuters. Every survey, in particular when the sample is not too large, can be criticised

for potential unrepresentativeness. The opinions of respondents and the way the sample was recruited might produce a sample with specific characteristics. People who are in favour of a subject – or the ones who are very much against – are always more motivated to complete a questionnaire than the ones who are indifferent to the subject. As a consequence, it is often debatable to what extent results can be extrapolated to the population as a whole.

Since the questionnaire for this survey was rather extensive it could be argued that it might have attracted respondents with a particular interest in domestic tasks. Respondents were recruited via firms with telework projects and, added to those, were people who came across the questionnaire through personal contact or via the Internet. When it was possible to identify the respondent's employing organisation, some insight into the population was gained, but this was not possible in all cases.

Typical of this research was the distribution of the survey via the Internet. Only one co-operating firm printed the questionnaire and distributed it on paper among their telecommuters. Some fifteen questionnaires came in by post. All others were completed on the computer and submitted online which automatically implied that the respondents had access to the Internet. This excluded part of the population, although it is plausible that telecommuters have an above-average Internet access. The advantages of this method of data collection, discussed in Chapter 6 (*Methodological aspects*), were obvious. The costs were independent of the number of respondents and could be kept very low. The data could be processed shortly after completion of the forms. No data entry was needed. When used in further research, a question about the research method could be added, to learn how respondents evaluate this way of responding.

As with all surveys, the danger of eliciting social acceptable answers existed. The researcher tried to avoid this problem in several ways. One was by asking very precise questions, because it is more difficult to lie distinctly than to lie indistinctly when a vague answer will suffice (Swanborn 1971). Therefore, questions were phrased in terms of: '*Who is cooking on home-working days?*' instead of '*Are you cooking more often since you work at home?*'. A second way was to give both positive and negative statements concerning the same subject, thus not revealing the opinion of the researcher. It was necessary to formulate extreme statements, either positive or negative, to discern advocates and opponents of an opinion. If one wanted to know, for instance, whether respondents were in favour of more symmetry within the household, balanced and nuanced statements would not be adequate (Swanborn 1971). To statements like: '*people will have to choose for themselves how they divide their tasks*', or '*in some cases an equal division of tasks is preferable*' advocates and opponents of symmetry will probably both return '*agree*'. Although the questionnaire contained items both in favour of symmetry as well as items that spoke against it, several respondents experienced the survey as being tendentious. Some of them thought the researcher focused too much on the traditional family consisting of a heterosexual couple with children. Others, conversely, accused the researcher of being too much in favour of equal sharing. Apparently, one type of statements provoked irritation among some respondents, while others reacted to the opposite statements. A survey is not the most suitable instrument to study ambiguous, paradoxical feelings and opinions. The richness of human thoughts and the variety of possibilities disappear when the answers are curtailed into structured answer categories. These do not leave the option of differentiated an-

swers of the type: 'Yes, *provided that...*' or 'No, *unless...*' If one nevertheless wants to use a survey to gain an insight into not quite crystallised opinions, then the phrasing of questions and statements is very important. Any wording that does not exactly represent the feeling of the individual respondent might evoke negative reactions even when the respondent basically agrees with the idea expressed.

Several studies point to the fact that both men and women overestimate their own share in the housework (Hochschild 1989; Keuzenkamp et al. 2000). Hochschild discusses, in *The second shift* (1989), the myth many couples maintain. She illustrates this mechanism with the couple that agreed on the fact that they had divided the domestic work evenly: he did downstairs, she upstairs. When observing this couple, it appeared that 'downstairs' contained one room, in which the man kept his model railway system. He cleaned this himself. She did all the rest of the housework. This research did not produce enough data to reveal an overestimation or existing myth. In-depth interviews are needed to uncover any similar myths or distortions employed by telecommuters.

In a survey, when a relationship between two phenomena is found, this does not necessarily indicate a cause-and-effect relationship. It can also be a matter of synchronism or it may concern a spurious relationship, meaning that the changes are both caused by a third variable. In 33 percent of the cases the start of telecommuting coincided with other major events, like a new job or the birth of a child. In particular, it is known that this latter event, more often than not, results in a redefinition of household understandings and daily routines (Droogleever Fortuijn 1993; Felstead and Jewson 2000; Keuzenkamp et al. 2000). Therefore it can be questioned if all reported changes are really a result of telecommuting or of the other reported events. Since a longitudinal study was not feasible, answers about the past had to be given from the respondent's memory. This was sometimes difficult, especially for those who had worked at home already for many years. A similar comment could be made about task-oriented attitudes towards paid work. Changes in this respect could also be a result of simultaneous changes in wider society.

Analysing the results, and comparing them with the existing literature – some of which were published recently and after this survey was initiated – showed that some questions should have been phrased differently and others should have been added. For instance, a few statements appeared to be ambiguously formulated. In particular this was the case with the attitude statements, as already mentioned in Chapter 7 (*Results*).

To define different concepts for this research, the home economics model presented in Chapter 4 (*Theoretical framework*), on one hand served as a checklist and, on the other, limited the scope of the study. Central themes were the division of labour – in particular within the home – and attitudes towards paid and unpaid work, with special attention to gender differences. The survey focused on the actual execution of nine domestic tasks. Household tasks with a strong managerial element in them – planning meals, checking what is needed, making a shopping list – were left out of consideration. From the literature it was known that these tasks in particular are gender-biased. Even when men do the housekeeping, women are often still the housewife – managing the domestic labour, organising and controlling the daily routines – with their partner helping them. A housewife is not just performing a task; being a housewife can be regarded as an existence, a status which is difficult for men to achieve. These delicate

differences are difficult to catch in survey questions and can better be studied using in-depth taped interviews.

8.3. *Respondents' characteristics*

8.3.1. Gender differences

Gender – and gender differences – was a main theme in this study. It was assumed that the impact of telecommuting on the division of labour within couples would be gender-related. The survey indeed showed gender differences, but the direction of these differences was not always as expected. Generally, the survey showed decreasing gender differences within the examined telecommuters families. Only the washing and ironing showed – as Wheelock (1990) found – strong gender differentiation. Overwhelmingly, these were tasks undertaken by women. Within the group of ‘shared responsibility’, some men actually contributed to the laundry. In the group of ‘men taking over’, they left the laundry to their partners. Wheelock observed that vacuum cleaning was often shared or done by the husband. There might be a difference in culture between North East England and the Netherlands, because the contribution of men in this research – and in other Dutch research (De Hart 1995) – is no match for that of women. The share of partners of female telecommuters decreased since telecommuting. The task was either taken over by the telecommuter herself or by paid domestic help.

Literature (Fothergill 1994; Fitzgerald and Winter 2001) and the interviewees in 1996 suggested that women would be more sensitive to their surroundings and to the fact that they always see housework to do when working at home. In 2001 61 percent of the respondents disagreed with this statement. Only 5 percent indicated that they paid too much attention to household and family. However, only women agreed with the statement ‘*By working at home, I am always the one who has to do everything in the house*’. We do not know if the respondents of the survey were very different from the interviewees, or if culture had changed in the meantime. The number of working women increased – and still increases – and working at home became more common. As a consequence it might be easier for home-working women to resist the pressure from the environment – family, friends – to pay attention to them when being at home.

The increase of tasks performed by male respondents corresponds with general trends in society and marks a tendency to an increased participation of men in household activities. Combinations of care and paid work are desired by many couples. An increasing number of men are involved in childcare (*Volkskrant* 23 December 2000). In April 2001 the Dutch parliament passed a law on labour and care, which regulates career interruptions, parental leave and caring leave (*Volkskrant* 20 April 2001). This illustrates that caring is taken seriously, not only by the public, but also by the Dutch government. Though a hopeful conclusion for everyone who argues for a combination scenario and wants to share both paid and unpaid labour evenly, cynics could make some critical remarks here. Recent research proves that women suffer more from the increased strains of paid work than men from their increased contribution to domestic duties (Breedveld 2000; Keuzenkamp en Oudhof 2000). When men are taking over the most rewarding part of the domestic life – cooking and childcare – it can be questioned how much women gain from this.

8.3.2. Earner type and education

One of the assumptions for the survey was that female partners of male telecommuters would do more in the house, because there would be more work to do. This assumption did not prove to be true. As stated in Chapter 4 (*Theoretical framework*), the division of unpaid labour is closely related to the division of paid labour. The Netherlands has a high proportion of one-and-a-half-earner household types. The respondents in this survey were no exception to this rule. The majority of households had one-and-a-half-earners, women having smaller jobs than their male partners. Thus, it is not surprising that the contribution of women to domestic labour is also larger than that of their partners. From other research it is known that men's contribution to household tasks is to a large extent dependent on the amount of hours their partners are away from home (Wheelock 1990). Since most of the partners of the sharing men had large part-time or fulltime jobs, they were not available all the time. The others had no or small part-time jobs. Any effect of these smaller jobs on the behaviour of the telecommuting men could not be observed from the data available. However, the single earners did change less than the households with one-and-a-half-earners or double incomes. This corresponds with findings of Keuzenkamp et al. (2000), who note that single-earner households are the least oriented towards the combination of employment and care and a more equal division of tasks between partners. They attach greater value to traditional male-female relationships (see also Chapter 4, *Theoretical framework*). The one-and-a-half-earners changed more than average in a more traditional direction, the double-income households changed in the direction of more symmetry. This last conclusion corresponds with the conclusion of Wheelock: the more the woman works outside the home, the more the man contributes to the domestic labour. Keuzenkamp et al. (2000) also found that double-earners were most oriented towards a non-traditional division of tasks.

A remarkable outcome was the relationship between education and symmetry. Women with a university background changed more than average in a traditional direction. This is remarkable, because the popular view is that poorly educated women are more likely to work at home. Felstead and Jewson (2000) disputed this view. They found that better qualified women are more likely to work at home. The outcome corresponds with findings in the interviews in 1996. Then also the more highly educated women referred – against expectations – to family-oriented motives to work at home and emphasised their desire to continue their career and yet have children. Telecommuting facilitated this combination.

8.4. Normative context

Generally, the normative context is regarded as the most important, though not sufficient, determinant for the division of labour (Van der Lippe 1993; Droogleeveer Fortuijn 1993; Baanders 1998; Pennartz and Niehof 1999). The degree of egalitarianism deserves particular attention. Though all men in this research showed a fairly high to very high degree of egalitarianism, there seemed to be no association with their contribution to household tasks. On the contrary: the men with the highest score on the egalitarian-

ism scale were the ones who contributed the least and vice versa. Some respondents remarked that they had answered ' *disagré* ' to some statements, not because they rejected equal sharing, but because they thought that nobody *has* to share tasks evenly. If not desired, not appropriate, or not feasible in their situation, people can make other choices. This emphasis on free choice is also mentioned by Keuzenkamp et al. (2000). They state that many Dutch couples choose for a one-and-a-half-earner model. Women want to have paid jobs, but not necessarily full time. They want to share paid labour, but not necessarily *equally*. Keuzenkamp et al. think it is probably typically Dutch to emphasise that women may work but do not *have* to. This freedom results in different solutions, different caring arrangements and different earner types. This freedom also means that Dutch families are confronted with dilemmas: an egalitarian society versus freedom to choose, career ambitions versus family life.

The fact that a deliberate change in the division of domestic labour is not very important for the respondents, also comes to light in the responses to the question: '*Did you start telecommuting because you wanted a different division of labour?*' The hypothesis suggested that telecommuters might utilise telecommuting practices as a means to realise a desired change in the division of domestic tasks. Only 4 percent of the respondents agreed with this thought. We must conclude that – though many respondents did change their household arrangements – no relationship could be detected between the wish to do so and the motives to start telecommuting. Some respondents warned: telecommuting should be applied to improve productivity or to serve the well-being of the employees, not to solve other problems like a lack of childcare facilities, traffic congestion or a family-friendly policy of employers.

The hypothesis assumed that, in particular, asymmetrical, family-oriented households would become more asymmetrical. The households that became more asymmetrical in this survey, were not asymmetrical before. This group originally shared most tasks. Since telecommuting, these women performed on their home-working days almost all tasks. As mentioned before, the women in this group all had a good education, most of them received academic schooling. They did not indicate that the start of telecommuting coincided with other major changes, like the birth of a child. They showed a very high degree of egalitarian attitude. They did not think that children should have a mother at home. Their partners had fulltime jobs, but that is not discriminative for this group. All these facts do not explain why this group did so much more in the house than before. They agreed on the statement: '*Telecommuting makes the combination of work and care possible*' and evaluated their situation as positive (79% of women did). The fact that they just want to combine paid work with domestic tasks could be an explanation for the changed pattern. However, this will need more research to clarify the meaning and extent of such changes.

Other possible explanations for the observed patterns can only be speculative. The survey did not produce clear, straightforward and unambiguous conclusions. However, this corresponds with general trends in society as well. As argued in Chapter 3 (*Telework in the content of societal change*) and 4 (*Theoretical framework*) individuality and multiformity are characteristics of modern society. People make their own choices out of the magnitude of available possibilities, thus creating their own arrangements. On the other hand, household patterns are subject to normative structures and morality. Moral obligations and expectations are built up in long-standing relationships within

families. Those obligations and expectations, ideals and unwritten rules, make that household arrangements do not follow the rules of the market economy and do not easily change (Felstead and Jewson 2000). In relation to the resilience of the household to change, Pennartz and Niehof (1999: 206) refer to the household as a '*context of condensed morality*'. This moral character of the family household might be an explanation for the fact that some of the observed households became or remained asymmetrical, even when the opinions of the respondents concerned were egalitarian.

8.5. *The household perspective*

In Chapter 5 (*Exploring the field*) it is argued that the vicinity of paid and unpaid work within the telecommuters' home would mutually affect both spheres (Nowotny 1982; Haddon 1998; Felstead and Jewson 2000). This research aimed to establish the extent of these effects. By taking a home economics perspective – as elaborated in Chapter 4 (*Theoretical framework*) – this research had the household as its entity of analysis. It studied the standard of care (the normative context), the application of resources, the domestic activities, the level of care and the strategies used to bring standard of care and level of care into conformity within the domestic setting. This resulted in an interdisciplinary approach, by which a variety of aspects were brought together, with the domestic activities as point of departure. Next to that, economic and technological aspects – made concrete in questions about available resources and financing methods – were taken into account. This research showed that – for these respondents – telecommuting definitely had its effect on the way domestic tasks were performed and the way these tasks were divided between partners. Vice versa, by working in the domestic environment, aspects of the paid work changed as well. Many respondents indicated that they performed their paid work more efficiently and with more satisfaction since working at home. Though the mutual influence was obvious, the respondents did not indicate that they experienced the paid work as intrusive on the domestic sphere.

As discussed in Chapter 5 (*Exploring the field*) and Chapter 4 (*Theoretical framework*), the household plays an important mediating role between society and individual, in particular in times of social change. Relevant recent changes – as discussed in Chapter 3 (*Telecommuting in the context of societal change*) – are the development of telecommuting as part of more general developments towards new, flexible forms of working and the emergence of a combination scenario, in which families are combining paid labour with caring tasks. From the data available, it could not be established how exactly the participating households played their mediating role and reacted on social changes. Nevertheless, a tendency to a combination scenario was at least plausible: 60 percent of the respondents (59% male, 61% female) saw the combination of paid labour and childcare as possible.

It was argued, that one of the aspects of an integrated approach is that it leaves room for paradoxes and ambiguity. A survey is not the best method to do justice to ambiguity. However, the preceding interviews, but also the answers to open questions, showed that the respondents experienced telecommuting in many different ways and were not restricted to standardised telecommuting practices.

In Chapter 2 (*Telework definitions*), definitions and descriptions of telecommuting and telecommuters' jobs have been given. The telecommuters who took part in this

research – the interviews and group discussion, as well as the IDC-research and the survey – correspond with these descriptions. They did have all kind of jobs, they were to be found amongst men and women, they lived dispersed over the country. The development of the discussion on telecommuting was also reflected in this research. Telecommuting cannot longer be defined as an isolated phenomenon, realised in special projects. Telecommuting equipment has become an integrated part of all modern networks, and of households as well. Organisational principles needed for telecommuting, such as task-oriented management, have become part of management culture in general. In particular in response to the open questions of the survey, the respondents indicated that their work was flexible, that they did not fit into prescribed patterns, and that the way they organised their household arrangements were flexible as well. Thus they reflected the multiformity of modern society.

8.6. Recommendations for further research

This study was undertaken to explore the relationship of telecommuting and household activities, in particular the division of labour between partners of opposite sex. Some answers have been given, but this study is no exception to others in that it evokes more questions than answers. Some of those questions will be summarised here.

More research is needed to know if the observed increase in symmetry is really a result of telecommuting *per se*, or a reflection of general cultural change. Also further research is needed to investigate the caring arrangements, the agreements and household understandings telecommuters deploy. The content of household activities was a subject touched upon in this research, but it needs further research to discover if telecommuting in the long run will create more home production, different cooking practices, etceteras. It was suggested that telecommuters would be a main target group for tele-shopping combined with home delivery. Here also more research is needed. More generally, the suggestion that telecommuting would lead to a decrease of outsourcing domestic tasks should be explored further. Within the scope of this study, the significance of the home for telecommuters was only touched upon. This very important issue deserves a study of its own.

On a theoretical level, the question of time and task orientation is interesting. This research suggested that paid work becomes more task-oriented, partly because of telecommuting, partly because of the dynamics of the work itself. The hypothesis that domestic labour would become more time-oriented when performed in the vicinity of paid labour, was not confirmed. Here further research could give more insight on this subject.

One of the ideas behind this research was that policy makers and organisations should take account of the home front when implementing telecommuting. If household members of telecommuters do not accept their being home, or if home is not the benign place that it is often assumed to be, then telecommuting projects are doomed to failure. Guidelines for telecommuting projects (Ministerie van Verkeer en Waterstaat 1995; Hengstmengel 2000) mention the importance of a good balance between work and private life. Hengstmengel remarks in this respect that the more appeal the organisation makes to the worker, the more important the attitudes in his or her social environment – of the partner and children, friends and relatives – are. The more the

organisation asks from its employee, the more it has to empathise with his or her individual situation. Hengstmengel (2000) points to the paradox that arises here: while the employee becomes more and more independent, the organisation should pay more attention to his or her personal environment. The results of this research, in particular the impact of telecommuting on domestic labour and the impact of the domestic environment on the quality of the paid labour, can contribute to this debate.

This research supported the idea that boundaries are blurring and that telecommuters make an effort to balance both worlds. However, more research is needed to know where the limits exactly are. How flexible are the teleworkers? Do they really want to change the rhythm of the working week, which is still firmly embedded in Dutch culture? How much do telecommuters differ in this respect from non-home-working employees?

8.7. Epilogue: blurring boundaries

Six years separate the start of this research project and the completion of this dissertation. When I started, only a few authors had paid attention to the domestic aspects of telecommuting. Telecommuting itself – though twenty years in existence – was still in its infancy. The discussion seemed to attract fierce advocates or opponents, who regarded telecommuting either as panacea or as an impracticable way of work. It was idealised or rejected. In those six years the situation changed. Especially in the last year, the development seemed to gain momentum. The number of telecommuters increased, telecommuting was placed on the agenda of policy makers and managers. Structural developments, increasing traffic problems and cultural changes, combined with technological possibilities, made it more common. This development was apparent in the course of this research project. By the end of 2000, it was easier to find telecommuters than in the beginning, and even easier than it was the year before.

Paradoxically, the increasing incidence of telecommuting caused a declining interest in the subject as such. The required technology and organisational practices have become intrinsic parts of reorganisation processes in general. Thus separate telecommuting projects became less and less necessary. In the meantime, the limits of current developments were disputed. Complaints about work stress, difficulties with the combination of care and work, projects supporting a more modern program of the day are some examples, touched upon in this study. Consequently, the discussion about telecommuting and the solutions that telecommuters find to manage the boundaries between work and private life, are differentiated. The modularisation of daily life comes into effect in the caring arrangements of different households.

This thesis started with a quote of Hareven:

' Family and work, the two most central commitments in most people' s lives, have emerged as themes in recent social history, but the relationship between these two areas has not been closely considered' (Hareven 1982: i).

It was noted that recently the two areas of work and home come closer together, since information and communication technology, on one hand, and societal changes on the other disconnect work from time and space. This thesis throws some light on the way

households arrange their domestic life when the boundaries between work and private life are blurring. The study of the private domain seems to be of increasing significance, since in domestic labour norms and values, equality and disparity, gender issues and quality of life are implied. Many major issues in current society – from food safety to domestic energy use, from individualisation to flexibilisation – require an insight into the functioning of the home. For that reason it is striking that the subject area of home economics is marginalised. Not only at Wageningen University, but everywhere in the world, home economics is undergoing a name change to consumer studies or is be combined with business administration or marketing studies to become a different subject area. Though regrettable, the blurring boundaries in fact provide the rationale for this development. The boundaries between work and domestic life, between consumer and producer, between public sphere and private sphere, and between humans and technology, are not as clear as they have been under industrialisation. An inversion of the product chain – from market push to demand pull – is generally regarded as a characteristic of recent societal change. Thus post-modernity gives a new impulse to a new direction.

However, ignoring the specific contribution of home economics or household studies amounts to throwing away the baby with the bath water. In the process outlined above, home economists should preserve the achievements of home economics (or household studies) and build on these. These achievements consist of knowledge and skills relating to the study of domestic activities and an interdisciplinary, integrative approach. This approach has always been the heart of the subject area, and have been part of this study as well.

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Addendum: Operationalisation

Here the full operationalisation process is presented. The first column represents the concepts used. The second column the elements observed. In the third column, the indicators are to be found that are assigned to these elements, in so far relevant for the survey in this research. The last two columns represent the accompanying questions and used answer categories. The questionnaire consisted of the last two columns.

A. General characteristics

The household

Concept	Element	Indicator	Question/item	Answer categories		
Household	Composition: size, demographic data	Respondents' characteristics	What is your age?	...		
			Are you	man woman		
			Are you married or living with a partner?	yes no		
		Other members of the family	How is your household composed?		male	female
				4-12 y		
				13-18		
				19-24		
				25-44		
				45-64		
				> 65		
	Special characteristics	Special situation, illness or handicap	Are there special personal circumstances that influence your working at home?	yes, no		

Concept	Element	Indicator	Question/item	Answer categories
		Coinciding with other important changes	Did other important changes in your life occur at the time you started working at home?	no yes, namely: birth of child move to different place first paid job new, different job different, i.e.: ...
	Other members of the family	More telecommuters in the household?	Does one of the other members of the family work at home?	not applicable no yes, i.e.: (partner/parent/child) amount of hours: ... amount of days: ...

Employment situation

Concept	Element	Indicator	Question/item	Answer categories
Employment situation	Current employment situation	Type of work, status	How would you characterise your current employment situation?	executive, managerial professional, policy maker researcher technician sales person teacher administrative employee manufacturing other, i.e. ...
		Income class	In which income class is your household situated?	Less than NLG 1500,- 1500-2500 2500-3500 3500-4500 4500-5500 5500-6500 6500-7500 over 7500
		Education	What is your highest education?	Primary school Lower vocational training Secondary school Middle vocational training Higher vocational training University
		Size of company	How many employees has your company in the Netherlands?	Less than 10 10-100 over 100
		Characteristic of company	What kind of company do you work?	Profit Non-profit

Concept	Element	Indicator	Question/item	Answer categories
	Working hours	amount of hours employed	Of how many hours does your paid job consist?	0-8 9-16 17-24 25-32 33 or more
	Telecommuting situation	since when telecommuting	Since when are you working from home?	Month / year
		Incidental or regular	What is the most accurate description of your telecommuting situation?	Take work home every now and then Work at home on fixed days by oral agreement Work at home on fixed days by written agreement Differently, i.e. ...
		Average amount of hours working at home	How many hours per week are you working from home on the average	0-8 9-16 17-24 25-32 33 or more
		on how many days	On how many days do you work at home?	1 2 3 4 5 or more
		the only telecommuter in company or department or part of a group	How many people of your department (company) work at home on a regular basis?	I am the only one Less than half of the staff More than half
		location when not working at home	Where do you work when you are not working at home?	Employer's office Customer's office Differently, i.e. ...
	Type of work	autonomy and flexibility	Can you, while working at home, choose your own working hours?	Yes No Differently, i.e. ...
			Do you, when working at home, work on fixed hours?	Yes No Differently, i.e. ...
	Former situation	work done before telecommuting	What was your situation before you started working at home	Worked outdoors ... hours Had no paid job Differently, i.e. ...

Concept	Element	Indicator	Question/item	Answer categories
	Situation members of the family	other members of the family having paid jobs	Do more members of your household have a paid job?	No, I am the only one Yes, i.e. ..., working ... hours

B. Possession and use of resources

Availability

Concept	Element	Indicator	Question/item	Answer categories
Resources (availability)	Technical resources	Availability, financing (who is paying)	<i>Indicate which of the following resources you possess for your work and who is responsible for the financing.</i>	
			Computer (PC)	employer / me / both
			Lap top computer	employer / me / both
			Printer	employer / me / both
			Scanner	employer / me / both
			Special software	employer / me / both
			Answering machine	employer / me / both
			Fax (analogue)	employer / me / both
			(Fax)modem	employer / me / both
			Photocopier	employer / me / both
			Cellular phone	employer / me / both
			Separate telephone line	employer / me / both
			Internet connection	employer / me / both
			ISDN connection	employer / me / both
			Separate study	employer / me / both
			Furniture	employer / me / both
			Extra outlets (power, telephone etc)	employer / me / both
			Heating	employer / me / both
			Car	employer / me / both
			Public transport season ticket	employer / me / both
			Other, i.e. ...	employer / me / both
			Does your employer offer special login facilities	Yes, i.e. ... No
		Influence (did the availability influence the decision)	Did the availability of resources influence your decision to work from home? (indicate yes or no or n.a.)	Study Hardware / software Connections Car Other

Concept	Element	Indicator	Question/item	Answer categories
	Accommodation	other use (are the resources used for private activities)	Are the resources used for other applications?	Schoolwork children Education adults Tele-banking, -shopping Communication with friends and relatives Volunteer work Hobby, sports
		location, urbanisation, distance to employer	In which municipality do you live?	Select from a list
			How would you characterise your environment?	Urban Fairly urban Not urban
			How far do you live from your employer	...km ...minutes commuting
			How far did you live from your employer before you started telecommuting	...km ...minutes commuting
			If you go to your employer's office, do you go there by:	Walking / bicycle Moped / motorbike / car Public transport
			Did your housing conditions and environment influence your decision to start telecommuting?	Yes No Remarks: ...
		size of house	How big is your house? (amount of rooms, kitchen and bathroom excluded)	1 2 3 4 5 or more
	Human capital	Skills, motivation, knowledge	Did you have enough knowledge and skills at your disposal to handle the telecommuting hard- and software?	Yes No Remarks: ...
			Are you being supported by your employer with installation or problems with hard- and software	Yes No Remarks: ...

Changes in application

Concept	Element	Indicator	Question/item	Answer categories
Changes in application of resources	Time and money	more/less time and money for home-making and family	<i>Indicate for the following activities if you spend less or more time or money on it, since you are working from home and estimate the amount of time or money</i>	

Concept	Element	Indicator	Question/item	Answer categories
			Time for household chores	less / same / more
			Paid domestic help	less / same / more
			Expenditures on eating out	less / same / more
			Expenditures on convenience food	less / same / more
			Time for meals (eating)	less / same / more
			Time for preparation of meals	less / same / more
			Amount of hours child-care	less / same / more
			Expenditures on childcare	less / same / more
			Time for children	less / same / more
			Attention for children	less / same / more
			Electricity	less / same / more
			Heating	less / same / more
			Telephone	less / same / more
			Shopping (total time)	less / same / more
			Shopping (how many times a week)	less / same / more
		other	Here you can complete the above	Remarks: ...

C. Motives and opinions to work at home

Standard of care

Concept	Element	Indicator	Question/item	Answer categories
Standard of care	family or career oriented	motives for tele-commuting	<i>Indicate below how important these arguments were in your decision to work from home</i>	<i>Five points scale ranking from very unimportant (1) to very important (5)</i>
			Work better, more concentrated at home	1-5
			Want to care for children myself	1-5
			Save commuting time	1-5
			Childcare too expensive	1-5
			Childcare not available	1-5
			Can determine own working tempo	1-5
			Can determine own working hours	1-5
			Can spend more time to household and family	1-5
			No other job available	1-5
			Cannot get along with colleagues	1-5

Concept	Element	Indicator	Question/item	Answer categories
			No room for me in the office	1-5
			Difficult to work outside the home because of illness or handicap	1-5
			Could keep my job despite moving	1-5
			Could keep job despite moving of the company	1-5
			Can better pursue hobby / sport	1-5
			Other	...
	symmetrical or asymmetrical	opinions concerning differences between men and women	<i>Indicate below if you agree or disagree with the statements</i>	<i>Five points scale ranking from totally disagree (1) to totally agree (5)</i>
			Parents should educate their children as much as possible	1-5
			Women can better raise small children than men	1-5
			It is more important for a man to have a good job than for a woman	1-5
			Man and woman should share domestic labour equally	1-5
			Childcare is equally the responsibility of the man as of the woman	1-5
			Man and woman should share paid labour equally	1-5
			Paid labour comes in the first place; leisure time and family have to be organised around that	1-5
			The household is equally the responsibility of the man as of the woman	1-5
			Children are most benefited by a mother who is there when they come home from school	1-5
			When women start telecommuting, they automatically take up more household chores than before	1-5

Concept	Element	Indicator	Question/item	Answer categories
	time or task oriented	Opinions concerning the work and leisure time	By telecommuting, paid labour and childcare can be combined	1-5
			When men start telecommuting, they automatically take up more household chores than before	1-5
			Family and leisure time should come in the first place; working hours are adjusted to that as much as possible	1-5
			Work and leisure time should be separated as much as possible	1-5
			Paid labour is a necessary evil; you need the money to live	1-5

D. Changes in household activities

Internal division of labour

Concept	Element	Indicator	Question/item	Answer categories
Internal division of labour	changes in division of domestic labour		<i>Indicate below who does what</i>	
		Food preparation	Who is cooking on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who was cooking (chiefly) before your started working from home?	me / partner / both / other
		Dishes	Who is doing the dishes on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
		Cleaning	Who is doing the sweeping / hoovering on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other

Concept	Element	Indicator	Question/item	Answer categories
			Who did it before your started working from home?	me / partner / both / other
		laundry	Who is doing the laundry on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
			Who is clearing away the laundry on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
		taking care for children	Who is taking care for the children on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
			Who is doing leisure activities with the children (reading, walking, playing) on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
			Who is getting children from school on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other
			Who did it before your started working from home?	me / partner / both / other
		(daily) shopping	Who is doing the daily shopping on the days you work at home?	me / partner / both / other
			Who does it on the other days?	me / partner / both / other

Concept	Element	Indicator	Question/item	Answer categories
			Who did it before your started working from home?	me / partner / both / other

E. Assessment and feedback

Assessment

Concept	Element	Indicator	Question/item	Variable
Assessment of changes	Quality of daily care		<i>Indicate below if you agree or disagree with the statements</i>	<i>Five points scale ranking from totally disagree to totally agree</i>
		attention for the children	Since I work at home the children get more attention	1-5
		changes in food patterns	Since I work at home I spend more time on meals	1-5
		changes in the state of the house	Since I work at home house and garden look better	1-5
	Relation work – private life	spill-over	Since I work at home I have more attention for household chores and childcare	1-5
			When I work at home I always see housework to be done	1-5
			Since I work at home I do my paid job with more satisfaction	1-5
			Since I work at home	1-5
			Because I work at home the whole family ‘works’ with me	1-5
		more or less task oriented	Since I work at home I do my paid job less hurried (I do not count my hours so much, I pay more attention to quality)	1-5
			Since I work at home I do my paid job more efficiently	1-5
		domestic labour more or less time oriented	Since I work at home I do my domestic labour more efficiently / systematically	1-5

Concept	Element	Indicator	Question/item	Variable
	Quality of house and housing conditions	living in beautiful house or nice surroundings	Since I work at home I do my domestic labour less systematically because I can do it in between	1-5
			By working at home it was possible (finally) to live where I wanted	1-5
			It is good to get the best of both worlds	1-5
	Quality of daily life	contentment with daily life	Telecommuting is not my first choice, but the least bad in my circumstances	1-5
			By working at home, I pay too much attention to household and family	1-5
	Asymmetry, family orientation	own opinions about the division of labour between men and women	Because I am working at home, I am (fortunately) always there for my housemates	1-5
			By working at home, I am always the one who has to do everything in the house	1-5

Strategies

Concept	Element	Indicator	Question/item	Answer categories
Strategies: tuning actual and desired situation	Segmentation	segmentation in room	Do you use a separate study for your paid labour?	yes no
		segmentation in time	Are you working on fixed working hours?	yes no
		segmentation in resources	Are you using a separate telephone line and answering machine to separate work and private life?	yes no

Concept	Element	Indicator	Question/item	Answer categories
	Telecommuting as a strategy	segmentation in agreements, rules and behaviour	Did you make agreements about computer and telephone use with your housemates?	yes no
		telecommuting makes a different division of labour possible	Did you start telecommuting because you wanted a different division of labour?	yes no
		does the respondent think that telecommuting is ideal	Do you think telecommuting is the ideal solution?	Yes No
		limitation of disadvantages	If not, what conditions should be fulfilled to make it the ideal solution?	Remarks: ...
			What do you do to limit the disadvantages of telecommuting	Remarks: ...

F. Final questions and remarks

Concept	Element	Indicator	Question/item	Answer categories
Final questions and remarks	Other remarks	Other	Do you have other remarks about telecommuting or about this research?	Remarks: ...
	Willingness to co-operate in further research	Indication of willingness	Are you disposed to answer further questions?	If yes, please give your e-mail address.
	Interest in research results	Indication of interest	Do you want to receive a summary of this research?	If yes, please give your e-mail address.

Samenvatting in het Nederlands

Telewerken en huishouding

Sinds de industriële revolutie verdient het grootste deel van de werkende bevolking zijn of haar geld in loondienst buitenshuis. Sinds die tijd bestaat er een bijna strikte scheiding van openbare en privé-sfeer. Deze scheiding lijkt de laatste decennia weer te vervagen. Informatie- en communicatietechnologie (ICT) kan de afstand tussen werk en thuis overbruggen, waardoor het mogelijk wordt onafhankelijk van tijd en plaats te werken. Telewerken staat inmiddels op de agenda van veel bedrijven en instellingen, waarbij diverse motieven een rol kunnen spelen. Telewerken wordt ingezet als middel om verkeers- en ruimteproblemen op te lossen, om de productiviteit te verhogen en om tegemoet te komen aan de behoefte van werknemers aan een grotere autonomie en flexibiliteit. Overheden stimuleren telewerken uit milieuoverwegingen, of om de participatie te bevorderen van moeilijk bereikbare of economisch zwakke regio's. Het combineren van betaalde arbeid en een gezin kan ook een reden zijn.

Veel onderzoek naar telewerken heeft een economische of arbeidssociologische invalshoek. Dergelijke onderzoeken bestuderen veranderingen in de productiviteit, de beleving van de werknemer of de managementcultuur. Ook zijn er onderzoeken gedaan vanuit het oogpunt van verkeer en ruimtelijke ordening. Tot nu toe is de thuissituatie slechts in enkele onderzoeken onderwerp van studie geweest. Het is aannemelijk dat telethuiswerk de taakverdeling binnenshuis beïnvloedt en mogelijk ook invloed heeft op de inhoud van de huishoudelijke arbeid.

Deze studie heeft die huishoudelijke arbeid als invalshoek, in het bijzonder de verdeling van arbeid tussen mannen en vrouwen. Het onderzoek is uitgevoerd in het kader van het project onbezoldigd promoveren voor vrouwen aan Wageningen Universiteit.

Telewerken

Het antwoord op de vraag hoeveel telewerkers er in Nederland zijn loopt uiteen van 137.000 tot 400.000. De grote verschillen zijn niet alleen het gevolg van het feit dat het aantal moeilijk te meten is, maar komen ook voort uit de verschillende interpretaties van het begrip telewerken. In het Engels worden de termen '*telework*' en '*telecommuting*' naast elkaar – en soms door elkaar – gebruikt. De eerste is de meer generieke

term, die iedere vorm van werken op afstand met behulp van moderne informatie- en communicatietechnologie behelst. Hieronder valt bijvoorbeeld ook het uitbesteden van *data entry* of programmeerwerk aan lagelonenlanden. De tweede term zou vertaald kunnen worden met ‘teleforensen’, meestal beschouwd als synoniem van het Nederlandse ‘telethuiswerk’. Deze studie hanteert de volgende werkdefinitie van telethuiswerkers:

Werknemers die minstens één dag per week in hun eigen woonomgeving werken, waarbij zij gebruik maken van moderne informatie- en communicatietechnologie en daarbij de beschikking hebben over dezelfde faciliteiten als op het kantoor van hun werkgever.

Telethuiswerk onderscheidt zich van traditioneel thuiswerk doordat ook banen die meer opleiding en ervaring vereisen op deze wijze worden uitgevoerd.

Telewerken is niet een op zichzelf staand fenomeen. De ontwikkeling van deze vorm van arbeid past in algemene maatschappelijke ontwikkelingen van de twintigste en de eenentwintigste eeuw. Decentrale besluitvorming in bedrijven en decentrale verwerking van informatie, gepaard aan centrale sturing, soms op wereldschaal, zijn mogelijk door de toepassing van netwerken die vervolgens ook voor telewerk gebruikt kunnen worden. Aansturing van werknemers op output in plaats van op aanwezigheid is voor telewerken noodzakelijk, maar neemt ook zonder dat in veel bedrijven toe. Een grotere autonomie en flexibiliteit van werknemers, met meer aandacht van vaders voor zorgtaken, is een algemene trend, waarbij telewerken een voorwaarde kan zijn.

Theoretisch kader: huishoudkundig model

Voor de analyse van de veranderingen in de thuissituatie als gevolg van telewerken, is het huishoudkundig model als uitgangspunt genomen. In dit model staan de huishoudelijke activiteiten centraal, bestaande uit de verwerving van hulpbronnen, de huishoudelijke productie en de huishoudelijke consumptie. Deze functies zijn onderwerp van besluitvorming, planning en organisatie, en daadwerkelijke uitvoering met betrekking tot de categorieën voeding, wonen, textiel, zorg voor leden van het huishouden en anderen. De huishoudelijke activiteiten vinden plaats in het kader van een huishouden, een eenheid van bij elkaar wonende personen met een gezamenlijke huishoudvoering. Het huishouden heeft de beschikking over hulpbronnen – menselijke en niet-menselijke, alsmede hulpbronnen uit de omgeving – en bepaalt haar doelen op basis van een normatieve context: de normen, waarden en opvattingen met betrekking tot de huishoudvoering. Dit wordt ook wel de levensstandaard of verzorgingsstandaard genoemd. Het resultaat van de huishoudelijke handelingen is het levensniveau of verzorgingsniveau. De mate waarin dit verzorgingsniveau voldoet aan de verzorgingsstandaard bepaalt het welbevinden van het huishouden. Bij eventuele afwijkingen kan ieder deel van het model – het huishouden, de middelen, de standaard of de wijze waarop de activiteiten worden uitgevoerd – aangepast worden.

In de sfeer van de huishouding zijn de hierboven aangeduide maatschappelijke ontwikkelingen voelbaar. Het aantal vrouwen op de arbeidsmarkt is de afgelopen twintig jaar enorm gegroeid. De gezinnen zijn kleiner geworden. De algemene welvaart is

toegenomen. Ook de mobiliteit – en daarmee de gemiddelde woon-werkafstand – neemt toe. Dit heeft zijn weerslag op de privé-sfeer. De verschillen tussen mannen en vrouwen op het gebied van de huishoudelijke arbeid worden kleiner, al blijven deze nog aanzienlijk omdat in Nederland vooral moeders vaak een parttime baan hebben.

Telethuiswerk en huishouding: een eerste verkenning

Met de begrippen uit het huishoudkundig model en de maatschappelijke ontwikkelingen in het achterhoofd zijn in 1996 acht telewerkers geïnterviewd en is met nog eens acht een groepsdiscussie gevoerd. Verder is een aantal vragen over telewerken opgenomen in een onderzoek naar computerbezit en –gebruik van marktonderzoeksbureau IDC-Benelux. Uit deze explorerende fase kwam naar voren dat veel telethuiswerkers, en vooral vrouwelijke telethuiswerkers, meer huishoudelijk werk gaan doen dan zij voorheen deden. Zij zien werk liggen wat zij even tussendoor doen. Sommigen besluiten af te zien van betaalde huishoudelijke hulp, omdat zij ‘toch’ thuis zijn. Anderen laten kinderen thuis lunchen die voorheen overbleven op school. Het zijn ook vooral vrouwen die aangeven gevoelig te zijn voor de druk van gezinsleden en anderen, wanneer zij thuiswerken. Er wordt gemakkelijk aangenomen dat zij beschikbaar zijn. Hoewel velen zijn begonnen met thuiswerk om beroepsarbeid te kunnen combineren met de zorg voor kinderen, merken zij tegelijkertijd op dat werken met kinderen om je heen niet goed gaat.

De geïnterviewde telewerkers beoordelen thuiswerk positief, maar zij geven wel aan dat het soms moeilijk is om de grenzen tussen werk en privé te bewaken. De meest gehanteerde strategie daarvoor is het reproduceren van klassieke kantoortijden. Daarmee zorgen zij er enerzijds voor genoeg te doen en zich niet te veel te laten afleiden. Anderzijds dient deze strategie er ook voor de thuiswerker te beschermen tegen te veel werk. Dit laatste lijkt een grotere valkuil voor thuiswerkers dan het eerste.

Op grond van deze eerste resultaten zijn definitieve onderzoeksvragen en hypothesen geformuleerd. De vragen waren:

1. In welke mate verandert de externe arbeidsverdeling (de verdeling tussen betaald werk en onbetaald werk, de mate van uitbesteding naar de markt of zelfverzorging) wanneer mensen gaan telethuiswerken?
2. Hoe verandert de arbeidsverdeling tussen leden van een huishouden door telethuiswerk en hoe verandert de inhoud van de dagelijkse verzorging?
3. Hoe beoordelen huishoudens deze veranderingen en welke strategieën passen zij toe om eventuele negatieve gevolgen te minimaliseren; of is telethuiswerk zelf een strategie om wensen en mogelijkheden met elkaar in overeenstemming te brengen?

Verwacht werd dat in gezinsgerichte, asymmetrische huishoudens – dat wil zeggen huishoudens waarin de man de hoofdkostwinner is en de vrouw in de eerste plaats huisvrouw en moeder – telethuiswerk de asymmetrie versterkt. De vrouw zou meer huishoudelijk werk gaan doen, zowel wanneer zij zelf gaat thuiswerken, als wanneer haar man dat doet. In het laatste geval is er vaker iemand thuis en daardoor meer te doen. Ook werd verwacht dat thuiswerkers minder uitbesteden en meer zelf doen. Als mensen thuis gaan werken, komen betaalde arbeid en huishoudelijke arbeid onder elkaars invloedssfeer. Naar verwachting zou de huishouding dan meer volgens de wetten van het bedrijfsleven uitgevoerd worden, dat wil zeggen efficiënter en meer tijd-

georiënteerd. De betaalde arbeid zou meer taakgeoriënteerd worden, omdat deze minder binnen precieze tijden plaats hoeft te vinden. Hiermee komen we tot de volgende hypothesen:

In asymmetrische, gezinsgerichte huishoudens versterkt telethuiswerk de asymmetrie, zowel in huishoudens van vrouwelijke als van mannelijke thuiswerkers.

Hiervan afgeleid is een tweede hypothese:

Als gevolg van telethuiswerk verandert de houding ten aanzien van zowel onbetaalde, huishoudelijke arbeid als van betaalde arbeid. De eerste wordt meer tijdgeoriënteerd, de tweede meer taakgeoriënteerd.

Onderzoeksontwerp

Om bovenstaande hypothesen te testen is een enquête opgesteld en op het Internet geplaatst. Internet-enquêtes zijn snel, goedkoop, gemakkelijk te distribueren, niet opdringerig en foutvrij. De resultaten kunnen direct verwerkt worden in een programma voor statistische bewerking. Deze wijze van enquêteren leek gerechtvaardigd gezien de hoge penetratiegraad van Internet bij de doelgroep. Respondenten zijn benaderd via bedrijven met telewerkprojecten, die het adres van de enquête op hun eigen *homepage* zetten of hun werknemers er via e-mail op attenderden. Op deze wijze zijn tussen november 1999 en januari 2001 171 geldige formulieren ingestuurd.

Voor de enquête zijn de concepten uit het huishoudkundig model geoperationaliseerd. Centraal stonden negen huishoudelijke taken, waarvan gevraagd werd wie deze uitvoert op thuiswerkdagen, op andere dagen en vóór de respondent begon met thuiswerken. Gevraagd werd of de respondent deze taken zelf deed, diens partner, samen of een ander. De taken waren: koken, afwassen, vegen en stofzuigen, de was doen, strijken en de was opruimen, voor de kinderen zorgen, 'leuke' dingen met de kinderen doen (voorlezen, spelen), kinderen van school halen, en dagelijkse boodschappen doen. Daarnaast is een groot aantal statements opgenomen met motieven om thuis te werken en met meningen over taakverdeling, huishoudelijke arbeid en telethuiswerk. In enkele gevallen is een aantal vragen of statements samengevoegd tot een gecombineerde score. Dit is gedaan voor gezinsgerichtheid, carrièregerichtheid, egalitarisme en symmetrie. Deze laatste variabele geeft het verschil in aantal taken uitgevoerd door de man en de vrouw binnen een huishouden.

Omdat de onderzoeksvragen en de hypothesen verwijzen naar verschillen tussen mannen en vrouwen zijn de antwoorden op de meeste vragen weergegeven in de vorm van kruistabellen. De statistische significantie van de gevonden verschillen is getest met behulp van de Chi-kwadraattoets.

Resultaten van de enquête

Kenmerken van de respondenten

De enquête werd ingevuld door 171 respondenten, 100 mannen en 71 vrouwen; 153 personen leefden samen of waren getrouwd met een partner van het andere geslacht. De gemiddelde leeftijd was 42 jaar, de jongste was 18, de oudste 71. De meeste mannelijke respondenten (84%) hadden een fulltime baan; de vrouwen hadden grote parttime banen (17 uur per week of meer). Driekwart van de geënquêteerden (75%) werkte minder dan 16 uur per week thuis, verspreid over een aantal dagen per week (variërend van 2 tot 5). Van de mannen kon 89 procent zijn eigen werkuren en –tempo bepalen, van de vrouwen 63 procent.

De woonsituatie speelde voor de meerderheid van de respondenten (71%) geen rol om te gaan telewerken. Wel was het zo dat degenen voor wie dit wel een rol speelde verder van het kantoor van hun werkgever afwoonden dan de rest. Iets meer vrouwen dan mannen (77% tegenover 68%) hechtten belang aan besparing van reistijd.

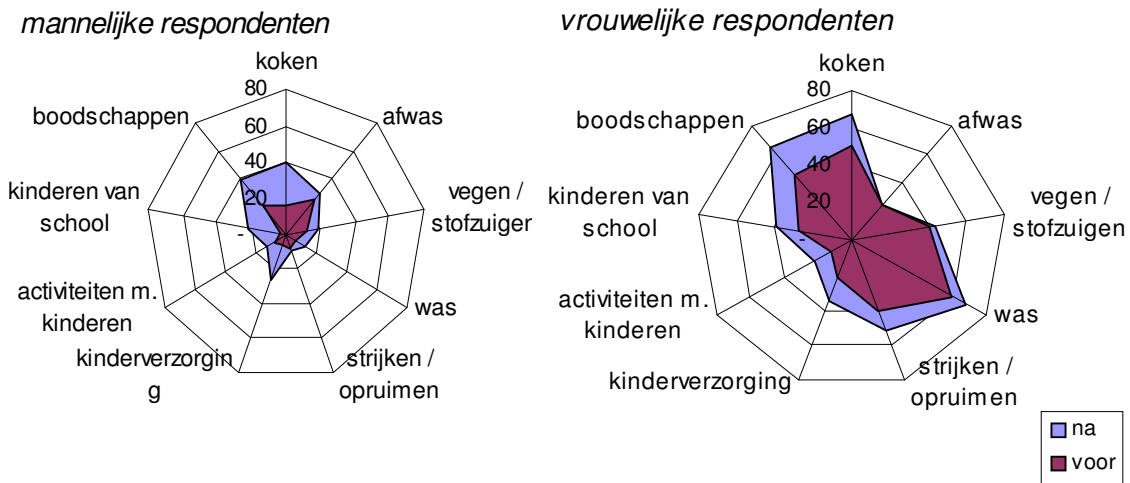
Voor 52 procent van de vrouwen en voor 36 procent van de mannen vormde ‘*Wil zelf voor mijn kinderen zorgen*’ een belangrijk argument om thuis te gaan werken. Overigens scoorden vrouwen niet hoger op gezinsgerichte motieven dan mannen. Carrièregerichte motieven om thuis te werken werden vaker genoemd dan gezinsgerichte: 79 procent van de respondenten vond het belangrijk dat zij zich thuis beter kunnen concentreren en daardoor beter werk afleveren; 76 procent noemde het kunnen beslissen over eigen werktijden als belangrijk motief. Op de egalitarisme-schaal scoorden vrouwen iets hoger dan mannen: 50 procent van de vrouwen had zeer egalitaire opvattingen, tegenover 30 procent van de mannen; 40 procent had betrekkelijk egalitaire opvattingen tegenover 49 procent van de mannen. Ongeveer de helft van de deelnemers (48%) was van mening dat werk en vrije tijd zoveel mogelijk gescheiden zouden moeten worden; 60 procent was van mening dat telewerken helpt om betaald werk en kinderverzorging te combineren. Mannen waren vaker dan vrouwen van mening dat mannen vanzelf meer huishoudelijk werk gaan doen als ze thuiswerken: 44 procent van de mannen was het met deze uitspraak eens; 31 procent van de vrouwen onderschreef deze gedachte. Over dezelfde vraag ten aanzien van vrouwen waren de respondenten het meer eens: 25 procent (23% van de mannen en 29% van de vrouwen, verschillen niet statistisch significant) meende dat vrouwen automatisch meer in huis gaan doen als ze thuiswerken.

Externe taakverdeling

In tegenstelling tot de verwachtingen bleek de externe taakverdeling – de verdeling tussen betaalde en onbetaalde arbeid en tussen markt en privé – weinig te veranderen. Wel gaf 17 procent van de gezinnen met kleine kinderen minder uit aan kinderopvang dan vóór de start van het telethuiswerk. Daar stond echter tegenover dat 14 procent meer uitgaf aan kinderopvang. Ten aanzien van voeding en betaalde huishoudelijke hulp waren weinig veranderingen te zien. Ook werd uit de enquête niet duidelijk of telewerken de mogelijkheid bood betaald werk te verrichten dat anders niet mogelijk zou zijn geweest.

Interne taakverdeling

De interne taakverdeling veranderde wel degelijk onder invloed van telethuiswerk. Vergelijken we de resultaten van vóór de start van telewerk met die op thuiswerkdagen, dan zien we een toename voor alle negen taken. Zorg voor de kinderen, kinderen van school halen en koken veranderden het meest. De afwas en de dagelijkse schoonmaakbeurt veranderden het minst. De relatieve toename was voor mannen beduidend hoger dan voor vrouwen. Mannen haalden 7 keer vaker hun kinderen van school dan voorheen en zorgden er 4,6 keer zo vaak voor. Verder kookten zij 2,4 maal zo vaak als voorheen. Voor vrouwen was de relatieve toename slechts 1,8 voor kinderen van school halen, 2,3 voor kinderverzorging en 1,6 voor koken. Wassen en strijken bleken de meest seksegebonden taken. Zij werden overwegend door vrouwen uitgevoerd. Afwassen was de taak die het minst door telewerken werd beïnvloed. Van degenen die op thuiswerkdagen afwasten, deed 83 procent dat voorheen ook al.

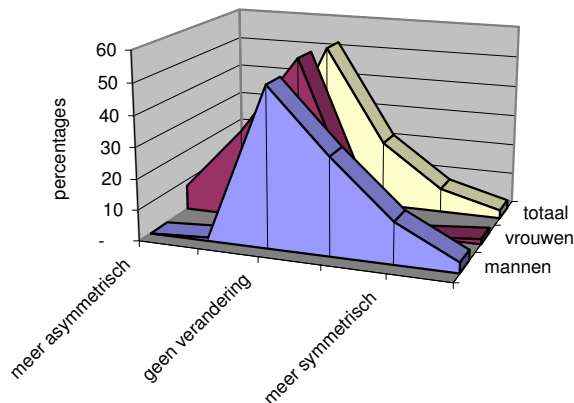


In bovenstaande figuur zijn de gegevens voor mannelijke en vrouwelijke telewerkers weergegeven. Het donkere vlak geeft aan hoeveel procent van de respondenten de betreffende taak uitvoerde voordat met telewerken was begonnen. Het lichte vlak geeft de percentages op thuiswerkdagen. De verdeling tussen mannelijke en vrouwelijke respondenten zegt nog weinig over de taakverdeling *binnen* huishoudens. Als mannelijke respondenten 'ik' antwoordden op de vraag 'wie doet wat?' en vrouwelijke respondenten 'partner', dan werd de taak door de man uitgevoerd; andersom, als vrouwen 'ik' antwoordden en mannen 'partner' dan was het de vrouw die de taak deed. Op die manier bekeken verschilde de invloed van telewerking op de taakverdeling tussen mannen en vrouwen nog meer. Het percentage huishoudens waarin de vrouw de betreffende taken uitvoerde nam voor de meeste taken nauwelijks toe. Voor koken, kinderverzorging en activiteiten met kinderen nam dit percentage zelfs af ten opzichte van de

situatie voordat thuisgewerkt werd. Voor de mannen namen alle activiteiten substantieel toe.

Om te bepalen of de taken binnen huishoudens symmetrisch verdeeld waren tussen man en vrouw, is geteld hoeveel taken elk van de partners deed, vermeerderd met de helft van het aantal taken dat zij gezamenlijk uitvoerden. Voordat een van de partners thuis ging werken voerden mannen gemiddeld 2 taken uit. Sinds er thuis gewerkt werd was dit aantal op thuiswerkdagen opgelopen tot 2,4. Vrouwen hadden aanvankelijk gemiddeld 4,6 taken, op thuiswerkdagen werd dit voor hen gemiddeld 4,3. Was het verschil in aantal taken tussen man en vrouw binnen een huishouden minder dan of gelijk aan één, dan werd het huishouden als symmetrisch beschouwd. Bij een groter verschil was het asymmetrisch in traditionele zin (vrouw doet meer) of in niet-traditionele zin (man doet meer). Vóór de start van telethuiswerk was 61 procent van de huishoudens asymmetrisch in traditionele zin, waarvan 41 procent tamelijk tot sterk asymmetrisch was (vrouw doet vijf of meer taken méér dan de man). Nadat een van beide partners thuis was gaan werken daalde het percentage traditioneel asymmetrische huishoudens van 61 naar 54 procent. De meeste huishoudens die asymmetrisch waren na de start van telethuiswerk, waren dat ook al voordien. Echter een zeer klein aantal (7%) werd nog asymmetrischer dan het al was. Het percentage symmetrische huishoudens groeide van 29 naar 33 procent. Het percentage niet-traditionele asymmetrische huishoudens, waarin de man meer deed dan de vrouw, groeide van 6 tot 17 procent.

De mate van verandering kon ook weer in een waarde uitgedrukt worden. Bij een verschil tussen de oude en de nieuwe situatie van minder dan één werd gezegd dat het huishouden geen veranderingen vertoonde. Dit gold voor 51 procent van de huishoudens. In 18 procent van de huishoudens daalde de participatie van de man; deze werden dus meer asymmetrisch; 31 procent van de huishoudens (48% van de huishoudens met een mannelijke telewerker) werd meer symmetrisch.



Slechts een beperkt aantal kenmerken van de respondenten bleek verband te houden met de verandering in symmetrie of asymmetrie. De sekse van de respondent speelde een grote rol. Huishoudens die meer symmetrisch werden, hadden vrijwel altijd een mannelijke telewerker. In huishoudens die meer asymmetrisch werden was de

telewerker een vrouw. Verder bleek opleiding van invloed. De meer asymmetrisch opererende vrouwelijke telehuiswerkers hadden overwegend een universitaire opleiding. Een volgende belangrijke factor bleek het verdienertype te zijn. Huishoudens van alleenverdieners veranderden het minst hun taakverdeling. Huishoudens van anderhalfverdieners (vrouw met parttime baan) werden relatief vaker meer asymmetrisch. Tweeverdieners kregen een meer symmetrische taakverdeling. Verder veranderden degenen die twee tot drie jaar thuis werkten meer dan gemiddeld, zowel in de richting van meer symmetrie als van meer asymmetrie. Gezinnen met kleine kinderen werden meer symmetrisch. Opmerkelijk was het verband met de egalitaire houding van de respondenten. Deze leek omgekeerd evenredig met de mate van symmetrie. Een hoge mate van egalitarisme ging samen met een meer asymmetrische taakverdeling en andersom: een lagere mate van egalitarisme ging samen met meer symmetrische huishoudens. Andere dimensies van de normatieve context bleken geen samenhang te vertonen met de verandering in symmetrie.

Op grond van bovenstaande resultaten moet de voornaamste hypothese verworpen worden. Asymmetrische huishoudens worden niet nog asymmetrischer. Huishoudens van mannelijke telewerkers worden vaker meer symmetrisch dan die van vrouwelijke telewerkers. De tweede hypothese wordt ten dele bevestigd. De houding ten opzichte van de betaalde arbeid wordt inderdaad meer taakgericht, maar of dit het gevolg van telewerken is, of dat telewerken en een meer taakgerichte houding beide passen in algemene maatschappelijke ontwikkelingen is hier niet mee gezegd. Of de houding ten opzichte van de onbetaalde, huishoudelijke arbeid meer tijdgericht wordt, kan op grond van deze resultaten niet geconcludeerd, noch verworpen worden.

Typologie

De onderzoeksresultaten kunnen gepresenteerd worden in de vorm van een typologie, ingedeeld naar het geslacht van de telehuiswerker enerzijds en de mate van verandering anderzijds. Dit levert theoretisch zes typen op, maar in het onderzoek bleken slechts vier typen in enige mate voor te komen:

1. Huishoudens met een vrouwelijke telewerker die veranderden in een traditionele richting (meer asymmetrisch; 16% van de gevallen).
2. Huishoudens met een mannelijke telewerker die geen verandering in taakverdeling vertoonden (28%).
3. Huishoudens met een vrouwelijke telewerker die geen verandering in taakverdeling vertoonden (22%).
4. Huishoudens met een mannelijke telewerker die veranderden in de richting van een meer symmetrische taakverdeling (29%).

De eerste groep kan gekarakteriseerd worden met de term: 'meer werk voor moeder'. De vertegenwoordigster van deze groep deelde voorheen vrijwel alle taken met haar partner. Sinds zij thuiswerkt doet zij de meeste van de negen taken. Alleen de afwas wordt gedeeld. Haar partner draagt enige mate bij aan de was en aan activiteiten met de kinderen en de boodschappen. Ondanks de geringe bijdrage van haar partner, vindt zij dat huishouding en kinderverzorging de gezamenlijke verantwoordelijkheid zijn van man en vrouw.

De tweede groep, de mannelijke telewerkers die niet veranderen, is genoemd: ‘gedeelde verantwoordelijkheid’. Deze huishoudens kennen weliswaar een asymmetrische taakverdeling – zij doet vijf taken, ze delen er vier – maar de man draagt wel bij aan de taken die zij uitvoert. Hij haalt zo nu en dan de kinderen van school en wil ook wel eens schoonmaken of de was doen.

De derde groep wordt gekenmerkt door ‘bestendigde sekseverschillen’. Zij doet zes taken, ze delen er drie (de afwas, activiteiten met kinderen en, in mindere mate, kinderverzorging). Hij draagt nauwelijks bij aan de overige taken.

Tot slot de groep die meer symmetrisch wordt: ‘mannen nemen het over’. De vertegenwoordiger van deze groep kookt, zorgt voor de kinderen, haalt de kinderen van school en doet de dagelijkse boodschappen. Zijn partner doet nog steeds de was en de strijk. Bovendien maakt zij schoon, tenzij deze taak is uitbesteed. De afwas en de activiteiten met kinderen doen ze samen.

Bespreking van de resultaten

De uitkomsten van de enquête waren verrassend. Aangenomen was dat mannelijke telewerkers niet automatisch meer huishoudelijk werk zouden gaan doen als zij thuis gingen werken. Vrouwelijke telethuiswerkers zouden daarentegen wel meer huishoudelijke taken op zich nemen, vooral in huishoudens waarin de taakverdeling al asymmetrisch was vóór zij thuis gingen werken. Gezinnen die een meer gelijke taakverdeling nastreefden zouden telethuiswerk kunnen gebruiken als strategie om dit te verwezenlijken. Verder werd verondersteld dat telewerken de mate van thuis-productie zou vergroten. Verwacht werd dat gezinsgerichte vrouwen een verandering in de richting van een versterking van de huisvrouwrol positief zouden waarderen, terwijl carriërgespecialiseerde vrouwen dit negatief zouden beoordelen.

Geen van de bovenstaande aannames werd door de enquête overtuigend ondersteund. De helft van de mannelijke respondenten nam meer huishoudelijke taken op zich, bij meer dan de helft van de vrouwelijke respondenten veranderde de taakverdeling binnenshuis niet. De toename bij mannelijke respondenten was verhoudingsgewijs veel groter dan bij vrouwelijke respondenten. Asymmetrische huishoudens werden na de start van telethuiswerk niet nog asymmetrischer. Er zijn geen aanwijzingen gevonden dat telewerk gehanteerd werd als strategie om een meer gelijke verdeling van huishoudelijk werk te realiseren.

Een deel van de uitkomsten kan verklaard worden uit de methodologische beperkingen van het onderzoek. De aantallen respondenten waren betrekkelijk klein en de vragenlijst was lang, zodat het mogelijk is dat vooral respondenten met belangstelling voor huishoudelijk werk de vragenlijst hebben ingevuld. De lengte van de lijst irriteerde sommige respondenten. Enkelen vonden de vragen tendentieus. Opmerkelijk genoeg vond een deel van hen dat de auteur teveel uitging van het traditionele gezin, terwijl een ander deel aangaf dat de onderzoekster teveel gericht zou zijn op een gelijke verdeling van taken. Een schriftelijke enquête is minder geschikt voor het waarnemen van daadwerkelijk gedrag en minder geschikt voor niet helemaal uitgekristalliseerde onderwerpen. Alleen bij de open vragen was het mogelijk echt genuanceerde antwoorden te geven. Bovendien valt niet te controleren in hoeverre respondenten sociaal wenselijke antwoorden hebben gegeven en of zij hun eigen aandeel in de huishouding

al dan niet hebben overschat. De enquête vroeg verder alleen naar wie een bepaalde taak uitvoerde, niet wie er allemaal aan bijdroeg. Ook de hoeveelheid tijd die aan de verschillende taken werd besteed is niet nagegaan.

Vergelijken wij de resultaten met recente literatuur, dan blijken deze daar in zekere mate mee in overeenstemming te zijn. Mannen vertonen in het algemeen een toenemende belangstelling voor huishoudelijk werk en kinderverzorging. In situaties waarin vrouwen buitenshuis werken en mannen thuis zijn, nemen zij vaker ‘automatisch’ huishoudelijke taken op zich. Sinds de interviews in 1996 lijken vrouwen zich beter te kunnen weren tegen de druk van anderen die menen dat zij ‘toch’ thuis zijn, en dus wel mee kunnen winkelen, een kind van school halen, leveranciers ontvangen en andere activiteiten uitvoeren die niet tot de betaalde arbeid behoren. Recent onderzoek toont aan dat vrouwen meer te lijden hebben van de toenemende druk van het betaalde werk, dan mannen van hun grotere bijdrage aan de huishouding. Telewerken kán voor sommige vrouwen uitkomst bieden. Vooral vrouwen met een academische opleiding lijken op deze wijze kinderen en werk goed te kunnen combineren en kiezen zo voor het beste van twee werelden. Juist hun huishoudens werden meer asymmetrisch.

De resultaten van dit onderzoek wijzen op een grote mate van pluriformiteit. Veel respondenten merkten op dat zij sommige vragen niet goed konden beantwoorden omdat hun situatie er niet in paste, of omdat de voorgestructureerde antwoordcategorieën geen ruimte lieten voor gemengde gevoelens en genuanceerde meningen. Ook bleken sommige respondenten zowel hoog te scoren op gezinsgerichte motieven als op carrièrerichte motieven. Telewerkers met een egalitaire opvatting hoefden nog geen egalitaire taakverdeling te hebben en andersom. Deze veelzijdigheid sluit aan bij de eerder genoemde modularisering, flexibilisering en individualisering in het dagelijks leven.

Door telewerken vervagen de grenzen

Zes jaar liggen tussen de start van dit onderzoek en het verschijnen van deze dissertatie. Toen ik begon hadden nog maar weinig auteurs aandacht besteed aan de huishoudelijke aspecten van telehuiswerk. Telewerk zelf stond – ook al was het begrip al twintig jaar oud – nog in de kinderschoenen. In die tijd kende het fenomeen vooral felle voor- en tegenstanders, die het idealiseerden of verwierpen. In die zes jaar is de situatie veranderd. Er wordt veel genuanceerder over het onderwerp gedacht. Telewerken is niet alleen thuiswerken; een telewerker hoeft niet altijd op afstand te werken; telewerken is: werken daar waar het voor alle partijen het beste uitkomt. Telewerken staat inmiddels op de agenda van managers en beleidsmakers en speelt een rol bij organisatorische en technische vernieuwingen, inclusief nieuwbouwplannen.

Paradoxaal genoeg neemt de belangstelling voor telewerkprojecten als zodanig af. De vereiste technologie en organisatorische uitgangspunten maken deel uit van reorganisatieprocessen in het algemeen, waardoor aparte aandacht steeds minder nodig is. Tegelijkertijd dringt de werksfeer steeds meer door in het dagelijks leven, waardoor de studie van de privé-sfeer belangrijker wordt. Juist in die sfeer liggen normen en waarden, gelijkheid en verschil, opvattingen over mannen en vrouwen opgesloten. Naast telewerken vergen ook andere maatschappelijk belangrijke kwesties als voedselveiligheid, energieconsumptie, individualisering en flexibilisering, inzicht in het func-

tioneren van huishoudens. Maar terwijl het belang ervan toeneemt, wordt de studierichting huishoudwetenschappen, niet alleen aan Wageningen Universiteit, maar overall in de wereld, gemarginaliseerd en ondergebracht bij andere studies als bedrijfskunde of marketing. Algemeen wordt de omkering van de productieketen – van een aanbod-economie naar een vraag-economie – beschouwd als één van de centrale kenmerken van de moderne samenleving. Deze omkering betekent ook dat de tegenstelling tussen producent en consument niet meer zo scherp zou zijn als die ten tijde van de industrialisatie was. Deze veranderingen vormen de legitimering voor de nieuwe vormen studierichtingen en kunnen er een nieuwe impuls aan geven. Huishoudkundigen zullen er echter voor moeten waken dat de verworvenheden van hun vakgebied behouden blijven, met name de kennis en vaardigheden op het gebied van de huishoudelijke arbeid en een interdisciplinaire, integratieve benadering. Deze benadering heeft altijd het hart van de studierichting gevormd en vormde ook de basis voor dit onderzoek.

Voorwoord in het Nederlands

"Weet je wat jij moet doen? Jij moet promoveren", zei mijn collega René Kapr ergens in 1994. Hij was niet de enige die dat vond. Mijn achterbuurman Wim van den Berg onderhield mij minstens eens per jaar over dit onderwerp. Ik wilde wel, maar alleen als ik een onderwerp had dat mij voldoende boeide en waar ik genoeg maatschappelijke relevantie in zag. Dat onderwerp moest liggen op het grensvlak van informatie- of communicatietechnologie en huishoudstudies. Het eerste omdat ik daar dagelijks werkzaam in was aan de School voor Communicatiesystemen aan de Hogeschool van Utrecht, het tweede omdat ik daarin ben opgeleid aan Wageningen Universiteit.

'De verandering van de huishouding als gevolg van informatie- en communicatietechnologie' was zo' n onderwerp. Maar Paul Terpstra, hoogleraar consumententechnologie en productgebruik, zei: "Ik weet niet of je wel zo oud wordt dat je dat allemaal kunt onderzoeken." ICT werd verbijzonderd tot: tele(thuis)werk; de huishouding werd ingeperkt tot huishoudelijke arbeid en met name de taakverdeling binnenshuis, vooral die tussen mannen en vrouwen. Omdat dit meer een sociologisch dan technologisch onderzoek zou worden kwam Anke Niehof, hoogleraar sociologie van consumenten en huishoudens, erbij als promotor.

Nu had ik een onderwerp, een promotor en een co-promotor. Nu nog een structuur waarbinnen dit onderzoek gedaan zou kunnen worden. Die structuur bood het project 'Onbezoldigd promoveren voor vrouwen', dat acht promovendi binnen Wageningen Universiteit de secundaire arbeidsvoorzieningen van een AIO verleent, en de status van medewerker. Daardoor kreeg ik een kamer op de afdeling en werd ik opgenomen in het groepje AIO's aldaar. De vele discussies met Arianne Baanders, Iris Keasberry, Katrien Luijkx, Gerry van Nieuwenhoven, Danny Roozmond and Diana Uitdenbogerd tijdens de lunch of de etentjes bij een van ons thuis, hielpen mij zeer bij de ontwikkeling van mijn gedachten.

Hoewel het onderwerp van mijn onderzoek niet direct voortkwam uit de behoefte van de School voor Communicatiesystemen (SvC), was er wel degelijk van synergie sprake. Ten eerste vergrootte het lezen van wetenschappelijke publicaties invloed mijn kennis, waardoor ik ongetwijfeld een betere docent werd. De colleges onderzoekstechnieken kon ik verlevendigen met voorbeelden uit de eigen praktijk. Ten tweede vond ik tijdens de verschillende congressen en andere bijeenkomsten die ik in dit verband bezocht steeds weer stageplaatsen, opdrachten voor modules van de SvC en interessante gastsprekers. In dit verband wil ik met name Kitty de Bruin, Phil Lyon, Herman Leij-

desdorff en Bert Alkemade noemen. Ten derde lag het voor de hand een student van de SvC te vragen mijn vragenlijst om te bouwen tot een Internet-applicatie. Martijn van Rooijen heeft dat voortreffelijk gedaan. Officieel bood de school niet meer dan een dag onbezoldigd verlof voor de duur van het project. Onofficieel hebben mijn respectievelijke bazen – Ben Philipsen, Djujan Bijstra and Arnoud van de Vijver – mij steeds moreel gesteund en heeft Cita Buitenhuis bij de roostering steeds rekening gehouden met mijn tweede 'baan'.

De internationale congressen, zowel op het gebied van de Huishoudkunde (Dundee, Wageningen) als met telematica en telewerken als onderwerp (Kopenhagen, Rome, Turku, Tokyo en Amsterdam) leverden mij niet alleen kennis en contacten op, maar waren vooral goed als stok achter de deur en als check of ik wel met iets zinnigs bezig was. De in Finland gewonnen '*Best Academic Paper Award*' was daar natuurlijk het ultieme bewijs van. Ik was niet alleen daarom zo blij met die prijs. Ik vond het ook een opsteker voor de huishoudstudies als geheel. De prijs vormde het bewijs dat de huishouding de moeite waard is om bestudeerd te worden en dat de huishoudkunde een bijdrage kan leveren aan de internationale discussie.

Veel dank ben ik verschuldigd aan de geïnterviewden en respondenten in de verschillende fasen van het onderzoek, die geheel belangeloos mee wilden praten of de lange vragenlijst hebben ingevuld. Zonder hen was ik nooit verder dan een literatuurstudie gekomen. De meeste van hen vond ik via de Stichting Telewerkforum, die mij voorzag van adressen en namen van contactpersonen van bedrijven met telewerkprojecten en een aanbevelingsbrief voor mij stuurde. Ook heeft Dries van Wageningen, hoogleraar facilitaire dienstverlening, mij geholpen met het zoeken naar respondenten. IDC-Benelux bood mij in 1996 de fantastische gelegenheid een aantal vragen mee te laten liften op hun grote onderzoek naar computerbezit en –gebruik. Als tegenprestatie schreef ik mee aan het door hen uitgebrachte rapport over telewerken en *mobile computing*.

De kwaliteit van dit proefschrift is voor een belangrijk deel te danken aan de waardevolle opmerkingen van Anke Niehof. Zij heeft de verschillende concepten steeds grondig gelezen en van commentaar voorzien, variërend van opmerkingen over de lay-out tot suggesties voor literatuur of de structuur van dit proefschrift. Deze opmerkingen waren steeds nuttig en verbeterden het werk. De kritische kanttekeningen van Paul Terpstra waren zeker zo waardevol. Afbakening was vooral zijn kracht. Van onschatbare waarde was de bemoeienis van Phil Lyon. Zijn commentaar strekte veel verder dan het Engels dat hij zou redigeren. Met een beleefd "*You are Anke's student, but...*" of "*I realise that I am not your supervisor and I have only a UK perspective on PhD dissertations,*" heeft hij grote invloed gehad op volgorde en inhoud van het verhaal. Bovendien bleef hij mij aanmoedigen als ik het niet meer zag zitten en vrolijkte hij mij op met zijn Internet-grappen. Phil, thank you so much for your tele-support. Het uiterlijk van dit proefschrift dank ik aan mijn Utrechtse collega Inge Schaareman, die in staat bleek om de inhoud in één beeld te vangen. Haar ontwerp stemt vrolijk en dat is goed, want tegen het eind van het project zou ik bijna vergeten met hoeveel plezier ik eraan heb gewerkt.

In de laatste fase kwamen mijn vriendinnen en vrienden, mijn burens en mijn mederedactieleden van *IJslandse Paarden* mij op verwachte en onverwachte momenten te hulp, door eten voor mij te koken of mij mee uit te nemen, door mijn ingestorte boek-

enkast en mijn heiningen te repareren, door ideeën voor conclusies aan te dragen en naar mij te luisteren, door mij midden in de nacht op te bellen en mij in slaap te praten, door taken van mij over te nemen en mij te ontzien. Zij zorgden ervoor dat ik nog enige lichaamsbeweging kreeg toen ik dreigde te vervetten, zij moedigden mij aan en spraken lovende woorden. Zij zorgden dat ik geen kluizenaar werd en boven alles: zij maakten mij aan het lachen op de momenten dat de tranen dicht aan de oppervlakte zaten. Omdat ik niet iedereen met name kan noemen en niemand te kort wil doen, hier alleen de namen van mijn twee beste vriendinnen: Roelie van Opijnen en Corrie Brussé. Jullie namen zijn verbonden met ontspanning, vooral gedurende de vele vakanties die ik met elk van jullie heb doorgebracht. Meiden, bedankt voor jullie steun en alle afleiding.

Het is jammer dat mijn vader dit niet meer mee kan maken. Kort voor zijn dood heeft hij zijn gehele niet geringe verzameling dichtbundels doorgespit op zoek naar *'The song of the shirt'*. Hij moest en zou het vinden, vooral omdat hij vond dat ik de overeenkomsten tussen telewerk en het traditionele thuiswerk te veel verwaarloosde. Zijn moeite werd beloond en het resultaat verraste hem. Het gedicht bleek meer dan een halve eeuw ouder dan hij in zijn hoofd had. Het zou hem deugd hebben gedaan om te zien dat het een prominente plaats heeft gekregen in het hoofdstuk over telewerk. Mijn moeder – met wie hij meer dan 66 jaar getrouwd is geweest – zal wel bij de verdediging van mijn proefschrift zijn, naar ik verwacht in goede gezondheid. Zij heeft zelf die doctors titel nooit gehaald, maar had dat makkelijk gekund als zij er niet voor had gekozen in de eerste plaats moeder en echtgenote te zijn. Aan haar wil ik dit proefschrift opdragen.

Rhenen,
september 2001

Curriculum Vitae

Gerda Casimir was born on 2 September 1950 in Eindhoven, the Netherlands. In 1968 she completed her secondary education and went to Wageningen University, where she chose the subject area Home Economics with the specialisation household equipment. Stimulated by activities outside the study program, among other things political theatre, her attention shifted to socio-economic subjects. In 1977 she graduated with a varied set of subjects. Pedagogy and didactics was one of them.

The job at the teacher training college of the Utrecht Institute of Higher Education linked very well with this study program. From 1977 to 1985 she worked at the department of home economics, since 1983 also at information science. In 1985 she was posted at the NIVO-project, *Nieuwe Informatietechnologie in het Voortgezet Onderwijs*, a project for the introduction of informatics in secondary education. There she coordinated the retraining of teachers and edited the textbook for these courses. The project finished by the end of 1988. At that time the Institute of Higher Education prepared a project that would lead to the establishing of a new program Communication Systems. Gerda was involved in this program and worked there as a teacher and developer. Since 1995 she worked – next to her job in Utrecht – on the research resulting in this dissertation. So she combined the area in which she was educated with the knowledge and expertise in information science and communication systems. This generalistic orientation is also reflected in the list of publications below.

Curriculum Vitae

Gerda Casimir is geboren op 2 september 1950 in Eindhoven. In 1968 behaalde zij haar eindexamen gymnasium- β aan het Lorentz Lyceum in Eindhoven. Zij ging aan de toenmalige Landbouwhogeschool in Wageningen studeren en koos na de propedeuse voor de studierichting huishoudwetenschappen, met de specialisatie huishoudelijke apparatuur. Mede door activiteiten buiten haar studie, waaronder het politiek theater, verschoof haar belangstelling naar meer sociaal-economische onderwerpen. In 1977 studeerde zij af met een breed vakkenpakket. Naast de huishoudkunde waren haar afstudeervakken de woning en haar bewoning en de pedagogiek en algemene didactiek.

De baan bij de Stichting Opleiding Leraren – later opgegaan in de Hogeschool van Utrecht – sloot goed op deze vakkenkeuze aan. Van 1977 tot 1985 werkte zij bij de vakgroep huishoudkunde, vanaf 1983 ook bij informatiekunde. In 1985 werd zij gedetacheerd bij het NIVO-project, Nieuwe Informatietechnologie in het Voortgezet Onderwijs, waar zij de bijscholing van docenten coördineerde en het daarbij horende cursusboek redigeerde. Dit project liep tot eind 1988. Op dat moment was bij de hogeschool een project in voorbereiding dat uiteindelijk tot de studierichting Communicatiesystemen zou leiden. Gerda werd bij deze voorbereiding betrokken en heeft tot heden als docente en onderwijsontwikkelaar bij deze opleiding gewerkt. Sinds 1995 werkte zij naast haar baan aan de hogeschool aan het onderzoek, waarvan deze dissertatie de neerslag vormt. Hierin combineerde zij het vakgebied waarin zij is opgeleid met kennis van de informatiekunde en de communicatiesystemen. Deze brede oriëntatie blijkt ook uit onderstaande publicatielijst.

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Stellingen

behorende bij het proefschrift
The impact of telecommuting on the division of
labour in the domestic setting
Gerda J. Casimir, 2001

1. Thuiswerkers verrichten meer huishoudelijk werk; de toename voor mannen is groter dan voor vrouwen. (Dit proefschrift)
2. Een egalitaire opvatting over de verdeling van huishoudelijke taken is geen garantie voor een meer gelijke verdeling daarvan. (Dit proefschrift)
3. Naarmate het voor het werk minder belangrijk wordt waar je woont, is het mogelijk meer belang te hechten aan wáár je woont.
4. Het gaat mannen beter af om meer huishoudelijke arbeid te verrichten dan dat het vrouwen goed afgaat om meer betaalde arbeid te verrichten.
5. Naarmate de toegankelijkheid van Internet toeneemt, zal enquêteren via dat medium goedkoper, sneller en betrouwbaarder worden.
6. Het "Project onbezoldigd promoveren voor vrouwen" komt tegemoet aan de *practical gender needs* van vrouwen maar biedt geen oplossing voor hun *strategic gender needs*. (Carolyn Moser 1993: Gender Planning and Development)
7. Software-ontwerpers en inrichters van tentoonstellingen hebben met elkaar gemeen dat zij weinig oog lijken te hebben voor de visuele mogelijkheden en onmogelijkheden van hun doelgroep. (Met dank aan R. Casimir)
8. Huishoudelijk werk ter afwisseling van betaalde arbeid is een goede stressbestrijder. (Met dank aan F. Stegeman)

