



**Measuring Work-Life Balance and Degrees of
Sociability: A Focus on the Value of Time Use Data in
the Assessment of Quality of Life**

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EPAG Working Papers

Number - 32

The European Panel Analysis Group (EPAG) is a consortium of European social and economic researchers who have been collaborating since 1990 in the development and analysis of household panel surveys in the European Union. Most recently it has been engaged in the study of flexible labour and its impact on earnings and poverty under a Eurostat contract, and a programme of research on social exclusion as part of the EU's Targeted Socio-Economic Research programme. The group has set up new comparative datasets based on five-year sequences of the British, German and Dutch national household panels, and is analysing the early data from the European Community Household Panel (ECHP). Most of the research to date has been in the fields of family formation, employment, household income and 'deprivation'.

The group was awarded a grant under the EU's Fifth Framework Programme "Improving Human Potential and the Socio-Economic Knowledge Base" to undertake studies of the processes of change in the domains of family structure, employment, household income and living standards. This project - "The Dynamics of Social Change in Europe"- began in March 2000, and is based primarily on the quantitative analysis of ECHP data.

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Acknowledgements:

This research was funded by the European Foundation for the Improvement of Living and Working Conditions, and originally formed part of an illustrative report of the Consortium of Living Conditions and Quality of Life for the EFILWC in 2002.

Data from the European Community Household Panel Survey 1994-8 are used with the permission of Eurostat, who bear no responsibility for the analysis or interpretations presented here.

The research was carried out as part of the work of the European Panel Analysis Group (EPAG) on 'The Dynamics of Social Change in Europe' (HPSE-CT-1999-00032) under the programme 'Improving the Human Research Potential and the Socio-Economic Knowledge Base' of the EC's Fifth Framework

Readers wishing to cite this document are asked to use the following form of words:

Fisher, Kimberly, and Layte, Richard. (October 2002) 'Measuring Work-Life Balance and Degrees of Sociability: A Focus on the Value of Time Use Data in the Assessment of Quality of Life', EPAG *Working Paper* 2002-32. Colchester: University of Essex.

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ABSTRACT

This paper investigates the role which time diaries can play in the study of work-life balance. The paper first briefly reviews concepts relevant to defining a work-life balance, then draws on three data sets to explore options for measuring this concept: the Multinational Time Use Studies (MTUS), UK 2000-2001 National Time Use Study, one component study of the Harmonised European Time Use Studies (HETUS) project, and the European Community Household Panel Study (ECHP). The paper considers three sets of measures of work-life balance: 1) proportion of free time; 2) the overlap of work and other dimensions of life; and 3) time spent with other people.

We first compare aggregate time spent in paid work, unpaid work, attending to personal needs, and free time across seven countries using the MTUS. Over the last four decades, people in Denmark and The Netherlands had more free time than people in Canada, Finland, Norway, the UK, and the USA. Having a child caused a loss of free time. The proportion of free time people enjoyed in these countries increased from the 1960s through the 1980s, but then receded in the 1990s.

We then measure the overlap of work with other activities in three ways. First, we map the timing of episodes of work over the day, and overlay these maps onto maps of leisure time. A social group can be said to have a work-life balance if their peak periods of different activities do not overlap substantially. Second, we consider the degree to which people in the UK worked split shifts – that is had multiple episodes of work at divergent times of the day. The more shifts people make into and out of work mode, the more work can dominate their lives. The presence of split shifts does not in and of itself indicate damage to quality of life (indeed some workers prefer to arrange their work time in this manner), but split shifts can be damaging when overlapping with other strains on quality of life. Only a small percentage of the sample, 5.4% of men and 4.5% of women, worked split shifts. Our third strategy is the measure the total time spent performing multiple activities at the same time, and to compare periods of multi-tasking where work is the main focus while other

activities occur simultaneously with multi-tasking where work occurs alongside another activity that is the main focus of the diarist's attention. Men in the UK spent an average of 14 minutes each day doing something else while working, and 15 minutes where work intruded into another activity. British women spent an average of 11 minutes doing something else while working, and 14 minutes where work intruded into another activity.

People do not communicate with many members of their social networks on a daily basis. Consequently, to get a full picture of sociability, time diary data needs to be considered in conjunction with questionnaire data examining contact with social networks over longer periods of time. This paper demonstrates that the patterns of sociability vary across European Community member states, and that the association between limited sociability and poverty risk is complex. In 1998, the Irish, British, and people in Southern European countries tended to spend more time seeing other people, and Danes were most likely to be members of clubs and organisations. Diaries compliment measures of sociability by revealing what people are doing when alone and with other people. People who felt rushed or were unsure if they were rushed spent more time alone than people who reported feeling rushed sometimes or always. In part this finding reflects the fact that people caring for adults or children spent less time alone and were more likely to feel rushed, though many diarists feeling rushed were not carers. Contrary to the observations Putnam has made in the USA, most British people ate with other people, usually eating with family at home and with friends in restaurants and cafes. The two activities which British people most often performed alone were care of pets (which is not really alone) and commuting to work.

All analysis is broken down by sex and age. There are many qualifications on these results, and the results in this paper are exemplary of what can be done rather than definitive findings.

NON-TECHNICAL SUMMARY

Most people aspire to achieve a balance between their commitments at work, commitments at home, and free time for themselves. This paper examines how data collected from time diaries can help us determine the extent to which groups in society succeed or fail to achieve this balance. This paper draws on a combination of time diary studies and household surveys. First, we consider the proportion of days taken up by work, domestic chores, personal needs, and free time. We use data from seven countries from the 1960s to the 1990s. Over the last four decades, people in Denmark and The Netherlands had more free time than people in Canada, Finland, Norway, the UK, and the USA. Having a child caused a loss of free time. The proportion of free time people enjoyed in these countries increased from the 1960s through the 1980s, but then receded in the 1990s. We then consider the pattern of activities in the day to see what times of day people are working and relaxing. Men and women scheduled their paid work at similar times in the UK, but men worked longer hours. Additionally, we consider times when people are working and doing something else at the same time (such as working while listening to the radio), or doing something else while also completing a task for work (like watching television while doing paperwork for your job). Finally, we consider time spent with other people. Researchers need to ask people how often they have contact with friends, family, neighbours, and colleagues over a month or year basis as well as to collect time diary information. In the time diaries, people record what they do with whom on an average day. Patterns of time with other people vary across European countries. In 1998, the Irish and British, as well as people in the Southern European countries tended to spend the most time seeing other people in person, and Danes were most likely to be members of clubs and organisations. People who felt rushed or were unsure if they were rushed spent more time alone than people who reported feeling rushed sometimes or always. In part this finding reflects the fact that people caring for adults or children spent less time alone and were more likely to feel rushed, though many people who felt rushed were not carers. The two activities which British people most often performed alone were care of pets and commuting.

The term “work-life balance” appears widely in the popular parlance. Stories of a threat to quality of life from increasingly pervasive demands of work hold resonance in many industrialised countries at the start of the twenty-first century. These stories share a common theme that paid work and routine chores have a place in the daily schedule, and that if these activities expand beyond their proper place, they will poison other areas of life, thus creating an unhealthy imbalance. Curiously, popular mythology does not suggest that the contagion effect works to the same degree in reverse – and few fear free time spoiling their work. Equally curiously, while the balance of work and life is mythologized as a holy grail, the other elements that balance with work are not as clearly understood. The dynamics of the discourse of work-life balance revolve around issues of the timing of work and other activities in people’s daily, weekly, and life course schedules, and this paper now turns to the question of how the elements of work-life balance might be measured, with a particular focus on the contributions time diary data can make to such research. First, we consider the challenges of defining work-life balance. Then we assess techniques for measuring three concepts: 1) the proportion of paid work, unpaid work, personal needs time and free time; 2) the overlap of work onto other activities and other activities onto work; and 3) time with other people. We demonstrate that time diary data make a substantial contribution to measuring the first two concepts, but that diaries need to be combined with standard survey data when considering time with other people.

1. The Problem of Work-Life Balance

Before we discuss data, we first address the main issues around work/life balance. Certain people, particularly some of the people who have succeeded in such professions as music or natural sciences, draw more life satisfaction from their work than from free time activities. Work can be a welcome relief for people experiencing difficulties at home or for people who find the routines of home life unstimulating. The workplace is the main venue of social interaction for some people, and certain people draw a sense of self worth from their work. Such people can become distressed by a forced reduction in their work hours or departure from the workforce

when they retire, develop a disability, or are made redundant.

At the same time, some free time activities are evolving to resemble employment activities. Meeting up with friends for a casual drink increasingly relies on the coordination of schedules. People increasingly answer work-related calls on mobile phones while in restaurants, out shopping, or even using the toilet. Checking e-mail often entails a combination of answering work-related and personal messages, even when e-mail is accessed at home or on holiday. Consequently, it is important to remember that work and life do not always sit in opposition in people's lives, and the dividing line between work and free time is not distinct. Working fewer hours will not necessarily improve quality of life.

Academics and official statistical agencies have yet to develop common standards for measuring the quality of leisure (Gershuny and Fisher 2000). While leisure industries maintain statistics of consumption (number of mountain bikes sold, number of people purchasing memberships for zoos or museums, etc.), purchase statistics do not reveal the extent to which people actually use the objects, tickets or membership privileges they possess. Mere possession can be a status symbol. People who feel that they may need a lifestyle change (like losing weight) may purchase a membership or object to feel that they have taken a positive step toward making such a change (such as signing up with a gym or buying an exercise bicycle), but not get around to making much use of their new possession (Gershuny and Fisher 2000).

Researchers have also examined employment in leisure industries, which has been steadily increasing in industrialised countries (Gershuny and Fisher 2000). Nevertheless, there is doubt as to whether a rise in the number of security staff employed at football games to help reduce hooliganism among fans or a rise in the number of fast food outlets really represents an improvement in the quality of leisure experiences on offer in a society.

Social science questionnaires often include series of participation questions (in the last four weeks, have you seen a film in a cinema, attended a party, played tennis, and so forth). While the results of these questions provide a broad indication of

relative engagement of groups with social and leisure events, they do not provide a straightforward measure of social activity or quality of life. A person can go to the cinema or a restaurant alone. Having done something does not necessarily mean that the participant enjoyed the activity. A person temporarily posted in a town whose inhabitants she or he does not like may go to the cinema on a regular basis because this person perceives there is nothing else interesting to do with her or his free time rather than because this person likes the cinema experience. A person who is highly dedicated to a particular activity, whether playing a sport or pursuing a hobby, may devote such extensive time, energy, and financial resources to the activity that other dimensions of their life suffer – in other words they may achieve an imbalance similar to the imbalance that can arise from working excessive hours. People with higher income may be able to afford to engage in a higher number of different free time activities, but this does not mean that more wealthy people get more from their free time activities than less wealthy people who spend more time performing a smaller number of activities. Consequently, participation rates do not reveal much about the degree to which people have achieved balanced lives.

Theoretical understandings of leisure likewise do not give a clear indication of how the balance of paid work, unpaid work, and free time might be measured. At the end of the 19th century, John Stuart Mill, and later John Maynard Keynes proposed that improvements in technology would increase the efficiency of production at a rate that would ultimately allow enough goods to satisfy people's wants to be produced in fewer hours, allowing people more time away from work to enjoy other pursuits.¹ This argument was answered by Karl Marx, who suggested that the capitalist classes powerful economic position required the continued exploitation of workers through (in part) long working hours. Marx suggested that one of the material and moral benefits of overthrowing the capitalist system would be the reduction of working hours. Thorstein Veblen offered a third vision, that improvements in technology would increasingly provide workers with the means to emulate the leisure patterns

¹ Keynes also suggested that the working classes would need to be better educated so that they could make good use of their expanding leisure time.

of the superordinate classes, and that the desire to improve social standing would lead to a diffusion of patterns of leisure down through society. In the 1960s, Bertrand Russell and Joffre Dumazedier proposed that the evolution toward post-industrial society would lead to an inevitable expansion of time for leisure (these positions are summarised in Gershuny and Fisher 2000). The key measures suggested by each of these theories are the total hours devoted to work and total hours over which people have discretionary control.

These theories of the rise of leisure have been challenged since the 1970s by theorists who speculate that people are losing control over their time. Joan Vanek researched the activities of middle class housewives in the United States, and concluded from her work that time-saving technologies were not living up to their name and actually making women more busy (1974). The reason for this effect was that devices, like automatic washing machines and dryers, and technological improvements, like wrinkle free fabrics which need not be ironed, changed the economics of domestic chores. Vanek argued that new technologies made home production (washing and drying clothes with machines at home) more cost-effective than hiring domestic help or outside contractors to perform the same work. Nevertheless, these women spent more time using machines to accomplish domestic work than they had previously spent contracting out work – resulting in domestic work time increasing rather than decreasing. Other scholars, like the economist Juliet Schor (1993) have contended that patterns of expanding hours of work have cut leisure opportunities for all Americans, and particularly for women, who have faced an increasing dual burden of performing more hours of work while retaining most of the responsibility for child care and domestic work. This paper now turns to discussion of the time taken by paid work, unpaid work, other necessary work, and free time.

2. Measuring Hours of Paid Work, Unpaid Work, and Free Time

Policy makers and academics have a long-standing interest in collecting statistics on contracted hours of paid employment and usual hours of work. Recent changes in employment legislation at both the European level and the national level of many EU

member states reflect a general concern among policy makers that long hours of work can have damaging social consequences (Lourie 1996). Conventional questionnaire surveys, such as labour force surveys, have asked people such questions about how many hours they generally work (in main and second jobs), how many hours they worked in the last week, how many hours of paid and unpaid overtime they usually work, how many paid and unpaid hours are worked at home, and average times spent commuting. Hours of work have a relation to quality of life to the extent that the greater proportion of the day and week that is devoted to work, the less time remains for the enjoyment of the fruits of that labour. Nevertheless, there are shortcomings to the conventional 'hours of work' approach.

First, the accuracy of estimates of time at work is in doubt. Jonathan Gershuny and John Robinson have compared the actual hours of paid work recorded in time diaries and estimated hours worked made by the employed people who completed the diaries, and found that the estimated time is often inaccurate, for some types of work underestimated, and for others overestimated – with overestimation being far more prevalent (1994). The reasons for the inaccuracy arises as people do not have an in-built stop watch keeping track of time spent in each activity. Except in cases where working hours are rigidly controlled, people do not keep exact track of hours. Unless they carefully reconstruct their actions for a day, people have difficulty estimating actual time spent in an activity - a phenomenon that also arises for housework, other unpaid work (such as chauffeuring children to school and activities, or helping an elderly parent with medical care), time in vehicles, and time with other people as well (Gershuny 2000). Further, time at the work place is not the same as time on the job, as people may attend to non-work-related matters while at work (Robinson and Godbey 1997). We return to the question of the overlap between work and other activities in the next section.

At the same time, considering the influence of work on the balance of needs in people's lives requires a broader definition than hours worked. Time which is not paid, but which is taken up by a focus on work (such as time spent waiting for a work activity to begin, commuting, or engaged in unpaid preparation for a work

event) precludes the possibility of a focus on other areas of life. Nevertheless, time spent in these activities is relevant to measuring work-life balance. Further, the concept of a balanced life must also take account of unpaid activities necessary to maintain quality of life (from arranging for repairs around the home, to paying bills, to buying supplies and goods for the household, to child care) but which in themselves are not conducive to relaxation, quality time with family and friends or intellectual challenge. Conventional measures of contracted hours or hours worked last week miss out on these dimensions of work-life balance.

Time diaries, in which people record what they do during the day (and usually also note where they are, how they travel from place to place, and who else is with them during activities), offer the advantage of collecting information on the spectrum of issues relevant to measuring balance of needs in life. Diaries collect information on actual hours worked, time spent at the workplace or in other contexts that make work the focus of those periods of the day, time in unpaid work activities, time in personal care, and time in varying types of free time engagements.

The best source of future information on time use in Europe will be the Harmonised European Time Use Studies project (HETUS), co-ordinated by EUROSTAT, but including participants which are European Union Member States, EU candidate countries, and countries which are not presently candidate countries as well. This project has produced guidelines for time use data collection and coding, though these guidelines have been implemented to varying degrees across the participating countries. Harmonised basic tables are likely to be published on the EUROSTAT web site by the end of 2002, and the cross-national time use data file will likely become available from the end of 2003. Most HETUS participating countries hope to conduct future time use studies at five to ten year intervals, though funding for this aim is not guaranteed. Table 1 displays the current status of participation in the HETUS project.

In the mean time, the best source of harmonised cross-national time use data is the Multinational Time Use Study (MTUS). The MTUS project, funded in part by the European Foundation for the Improvement of Living and Working Conditions in its

early phase, has harmonised data from 44 studies conducted in 21 countries² from the 1960s through the mid-1990s into a single dataset (Gershuny 2000).

The data are weighted so that each study is treated as having 2000 diary days (so that larger studies do not overwhelm smaller samples in the results), so that the number of diaries produced by men and women reflect the sex balance in the national populations, and so that the distribution of diaries completed on each day of the week is balanced. Once weights are applied, the data set covers around 150,000 diaries from 80,000 diarists. At this time, the MTUS covers only aggregated main activity data (the sum of minutes spent in 40 activities), though in future releases, more detail will be included (Gershuny 2000). Given the nature of the data presently available, an overall sense of work life balance can be derived from comparing the total time in necessary activities (paid work + unpaid work + personal care time) with remaining free time. Figures 1 to 3 compare the grand mean (average time spent across all studies) in each of these four broadly-grouped activities with the data from a selection of countries, each time period, and basic demographic characteristics.

Table 1 - Participation in the Harmonised European Time Use Survey
Project
Conducted a Pilot Survey – 20 countries
Albania, Bulgaria, Estonia, Finland, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Turkey, United Kingdom
Participation in the Main Stage HETUS Survey – 22 countries confirmed
Completed Field Work – 14 countries
Belgium, Denmark, Estonia, Finland, France,* Germany, Hungary, the Netherlands,* Norway,* Portugal, Romania, Slovenia, Sweden, United Kingdom
In the Field – 2 countries
Bulgaria, Italy
Fieldwork to Transpire at a Future Date – 6 countries
Macedonia, Poland, Slovak Republic, Spain, Switzerland, Turkey

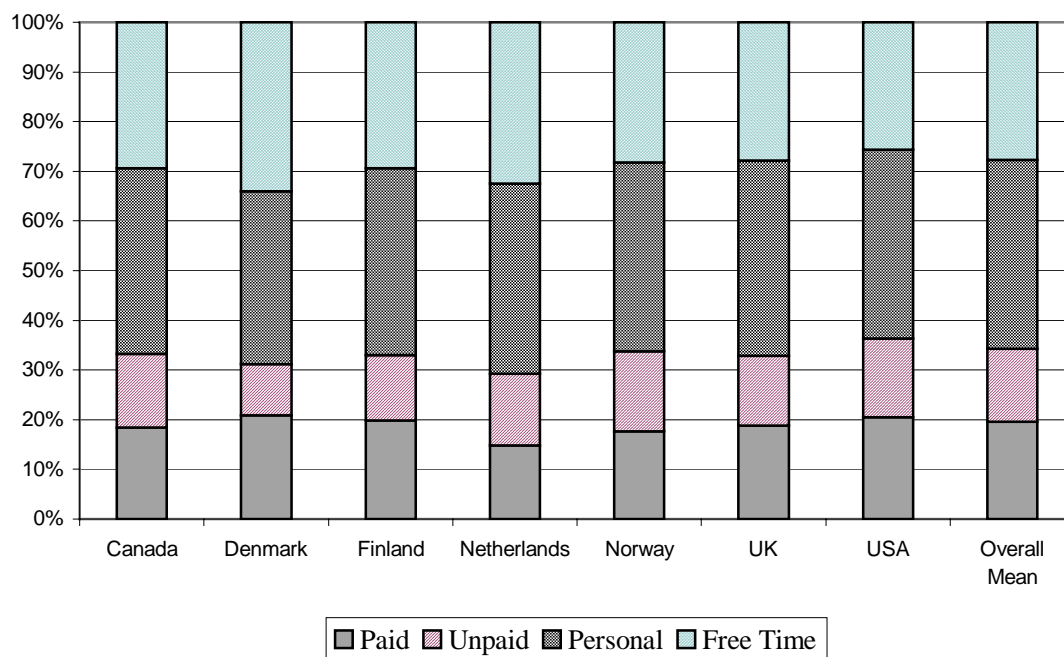
*did not generally follow the guidelines but cloned national data into HETUS format

² Details of all the studies are available in Fisher 2002b.

This table was compiled by Dr. Kimberly Fisher during discussions with people participating in the collection of HETUS data during a project funded by EUROSTAT developing proposals for the data distribution phase of the HETUS project.

Figure 1 shows that Danes and the Dutch enjoyed relatively higher levels of free time than people in the other countries covered in the MTUS. These two countries also demonstrate that there are multiple means to the same end. Danes worked relatively long hours but performed less unpaid work, while in the Netherlands, people worked relatively shorter hours and performed more unpaid work.

Figure 1 - Time Use Across Countries

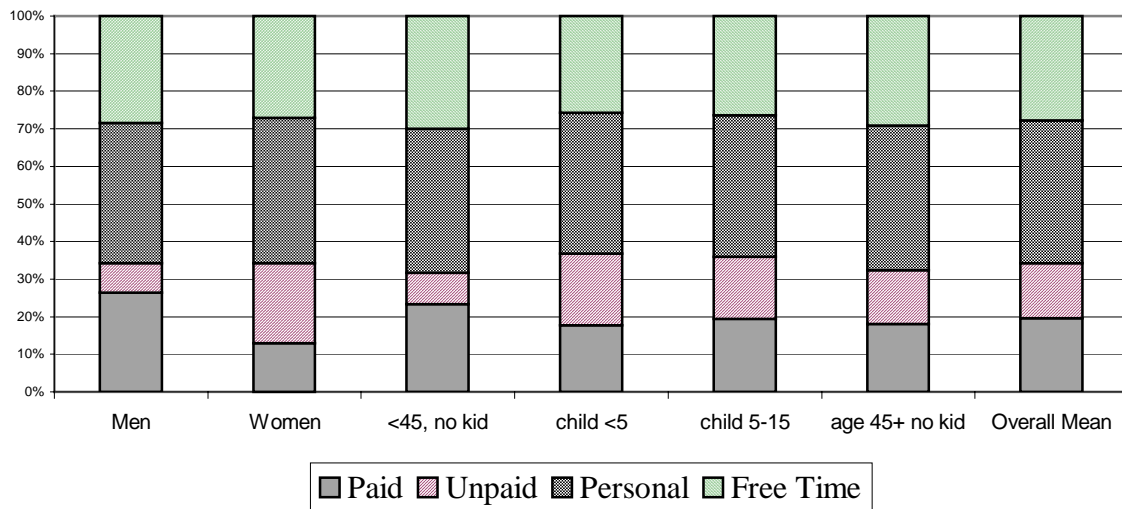


Source: The Multinational Time Use Study (MTUS) version 5.0.1

Figure 2 considers the demographic details of diarists. Men and women enjoyed comparable levels of free time and performed similar levels of personal care. Men and women also perform similar levels of total work, though men primarily perform paid work and women primarily perform unpaid work. This distribution of activities creates unequal ability to make choices during free time, as men control more of the finances available for use during free time activities than women. Having children decreases free time and increases total work time (paid + unpaid work), though paid work is lower when the diarist has a child aged less than five, and increases once all children are aged 5 to 15.

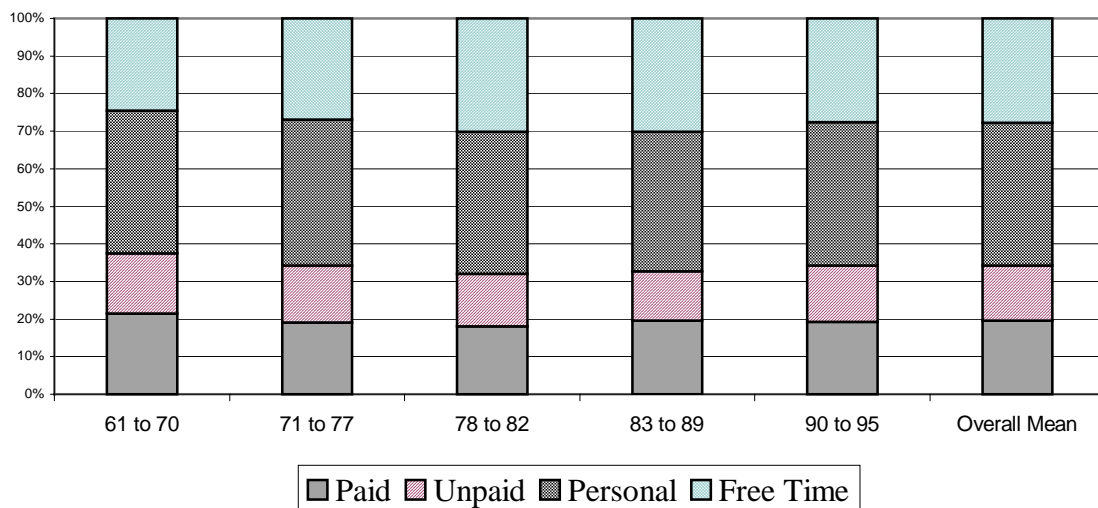
Figure 3 shows that total work time declined across the countries between the 1960s and early 1980s, then began to rise again by the early 1990s. The proportion of free time expanded from the 1960s to the 1980s, then shrunk slightly by the 1990s, though in the 1990s, people still enjoyed more free time than they enjoyed in the 1960s.

Figure 2 - Time Use by Sex and Family Status



Source: The Multinational Time Use Study (MTUS) version 5.0.1

Figure 3 - Time Use by Time Period



Source: The Multinational Time Use Study (MTUS) version 5.0.1

The reader should keep in mind that time use data do not, in and of themselves reveal the full range of processes involved in the dynamics of change in time use.

Geographic, economic, social policy, and social power factors impose varying constraints on people's daily schedules. Campaigns encouraging men to spend more time with their sons during the work/school week may well have less effect on men who live long distances from their workplace than on those who work near to home. Policies encouraging single mothers to spend more time improving their employment skills while their children are young will not be effective if affordable child care is not located near the homes or places of study of these mothers. Public policy must consider which groups will have the greatest and the least opportunity to change their behaviour in response to any given initiative. What time use data do provide is an indication of the effects the various key forces have on the way people allocate their time during the day.

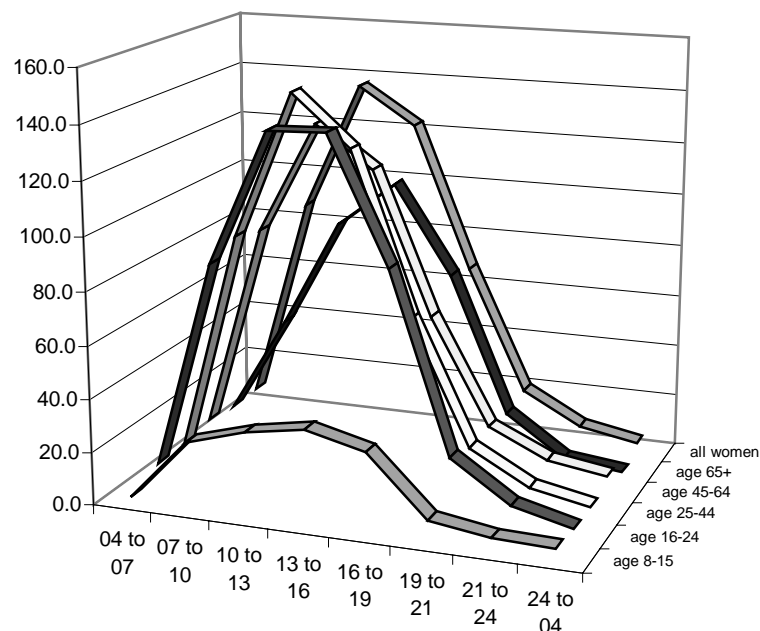
Time use data thus serve as one measure of the effectiveness of policy change; but time use data also best measure long-term, not short-term, change. People do not readily alter their habits, and consistent information and incentives must be applied over the long term to have significant effects on behaviour. For instance, in spite of pressure, first from feminist campaigners, and more recently from public agencies, to equalise the performance of both paid and unpaid work by men and women, women continue to perform the majority of unpaid domestic work (Gershuny 2000). Men have increased the time they spend doing housework and child care, but by a small amount. By 2000, men in Finland performed an average of 12 more minutes per day of domestic work than they had performed in 1987 (Niemi and Pääkkönen 2002: 95). Between 1961 and 1995, British men increased their average time performing household cleaning and child care by 47 minutes a day (Gershuny and Fisher 2000).

3 The Overlap of Work and Leisure

Aggregated time use information does not reveal the full story. People often perform more than one activity at the same time, and people who lead different lifestyles make different rates of transitions between activities. Relaxation and rest require time to let a person's mind and body shut down from other activities. Likewise, achieving a work-life balance can be defined by the ability to keep work in its place

in the daily cycle and to prevent work from intruding into other activities. Time diaries are particularly suited to measuring both the timing of work and level of intrusion of work into other activities. As noted in the previous section, the study of work-life balance can include the analysis of both paid and unpaid work together. Nevertheless, as this area of research is relatively new, this section concentrates on the overlap of paid work and other activities, using data from the British National Time Use Study of 2000-01.³

Figure 4 - Women's Working Time by Time Slot in the UK (for Work Day Diaries Only)

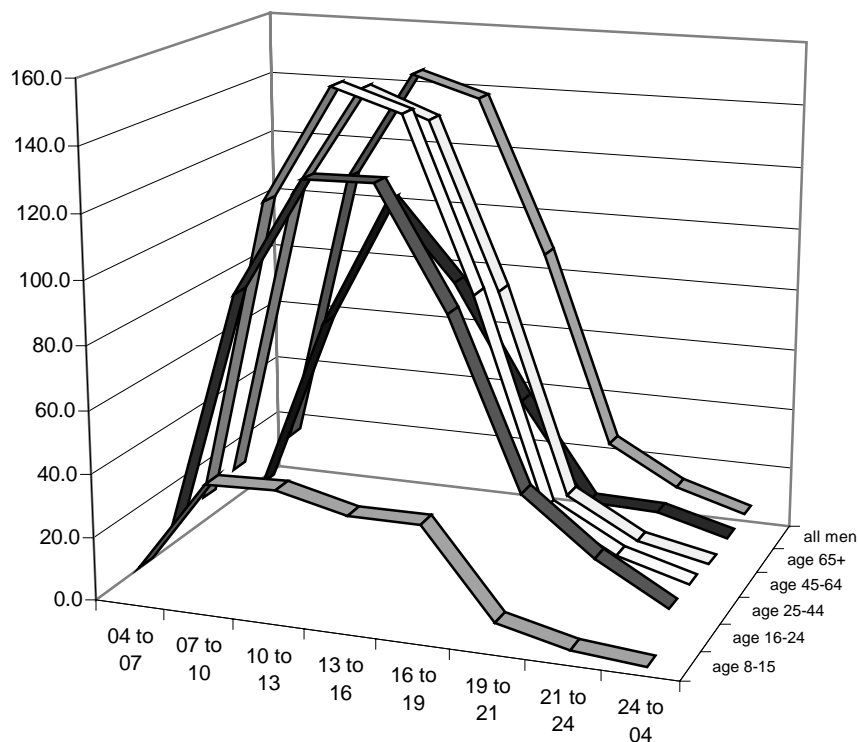


Source: Office for National Statistics (London), National Time Use Study, 2000-01

³ The study, which is the UK element of the HETUS project, collected diaries from June 2000 to August 2001 from all people aged 8 and older (11,700 people) in 6,500 households randomly selected for England, Wales, Scotland, and Northern Ireland. The data include 21,000 diaries, roughly half collected on week days and the other half collected on weekend days. The net diary response rate (completed diaries for sampled households) was 45% (Fisher 2002b). The data used are weighted. Missing values were not imputed. Diaries containing fewer than 22 hours and 30 minutes of valid information (approximately 8% of the collected diaries) were excluded.

One way of conceptualising the work life balance is to think of work, social activity and family life, and personal needs having their place in the day. Figures 4 and 5 show that men and women in Britain follow similar patterns in their scheduling of working hours during the day. As a higher percentage of men than women work full-time, men's average hours are longer than women's average hours and women's highest density of work hours peaks before men's highest density of work hours. An exception arises for people aged 65+ who work. Older men start and end work earlier than older women.

**Figure 5 - Men's Working Time by Time Slot in the UK
(for Work Day Diaries Only)**

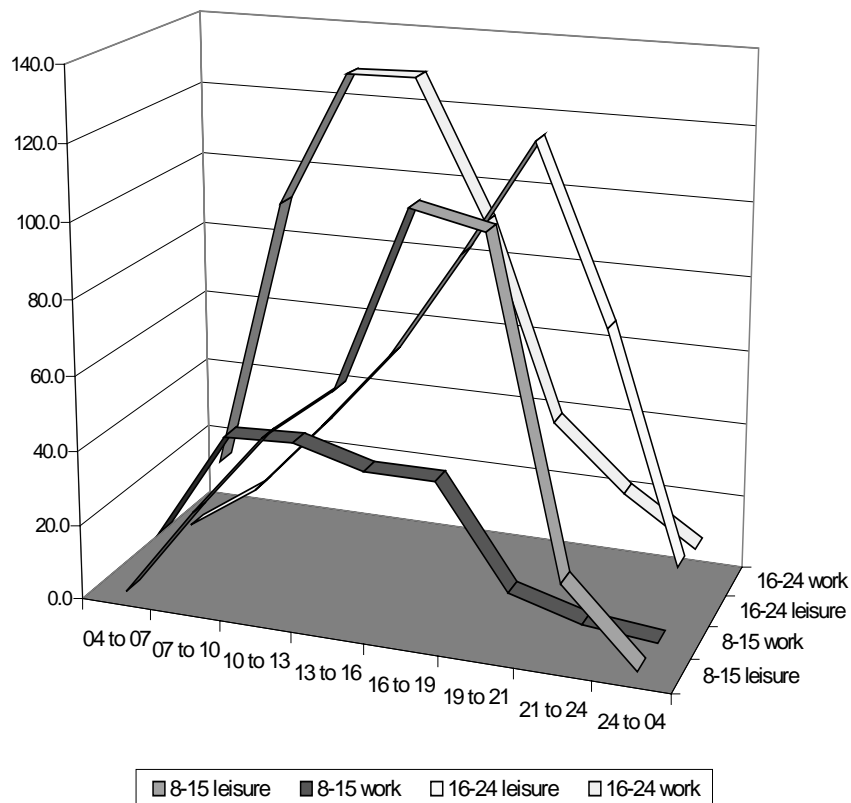


Source: Office for National Statistics (London), National Time Use Study, 2000-01

There are three ways that data such as these can be used to measure work-life balance. Similar to the examination in the previous section, one can consider the total proportion of the day in which work takes place. The higher the percentage of the population which works during a high proportion of segments of the day, the

less opportunity there is for a work life balance.⁴ Over 32% of men worked during 5 or more three-hour segments on an average week day work day. On Saturdays 22% of men and on Sundays 20% of men work during 5 or more segments of the day.

Figure 6 - Timing of Young British Men's Work and Leisure



Source: Office for National Statistics (London), National Time Use Study, 2000-01

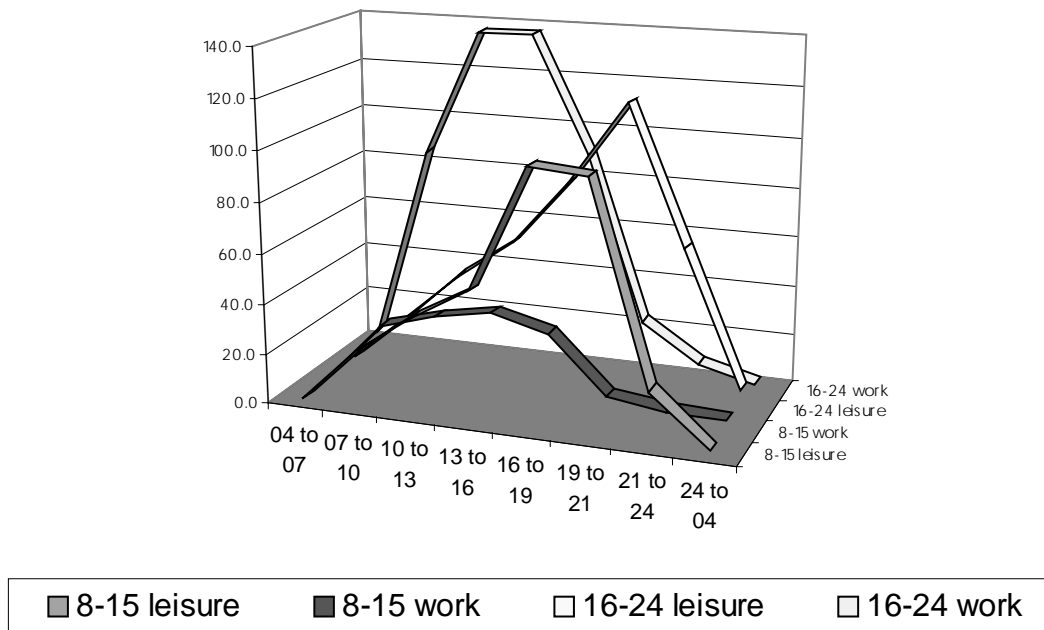
Roughly half the percentage of women as men work for pay during 5 or more three-hour segments of the day. As with men, more women (15.5%) work over a large proportion of week days than weekend days. Nevertheless, the percentage of women who work during most segments of the day increases on Sundays (11%) compared to Saturdays (9%).⁵ Considering the proportion of the day touched by work, women in the UK have more potential opportunity to achieve a work-life balance than men, though this is primarily because women are more likely to work

4 In this sample, 3 people worked during all 8 3-hour periods, and 40 people worked during 7 of the 8 3-hour periods.

5 These differences are statistically significant, Pearson's Chi Squared 2-sided $p < .000$.

part-time than men (though as a consequence of continued wage differentials between women and men, women have fewer financial resources to spend in their free time than men) (Fisher 2002a). A high percentage of both men and women devote a large proportion of their work days to work.

Figure 7 - Timing of Young British Women's Work and Leisure



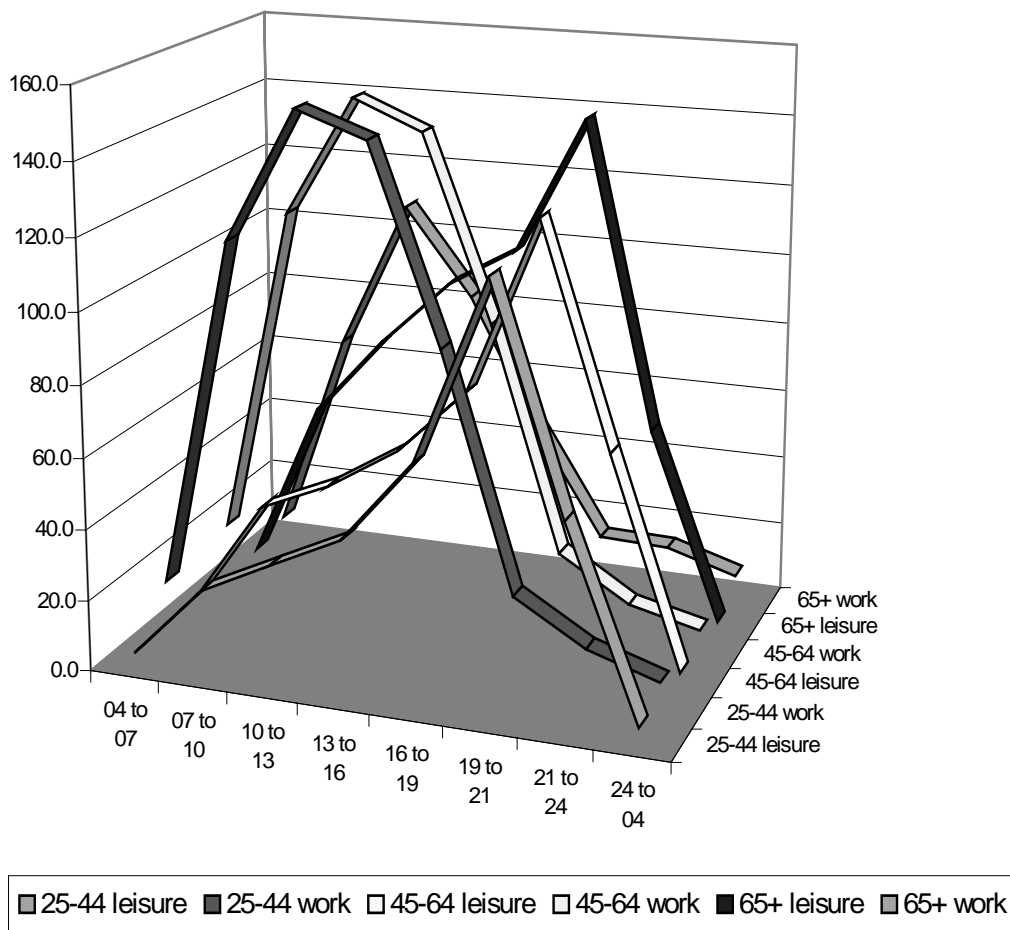
Source: Office for National Statistics (London), National Time Use Study, 2000-01

Not all people who worked over a large segment of the day necessarily failed to achieve a work-life balance. It is possible that some people live in households where work is concentrated in small numbers of days to allow for larger concentrations of other needs and pursuits to be accomplished on other days.

Nevertheless, the greater the concentration of work on any particular work day, the more constraints (such as restoring energy after the drain of working long hours, or co-ordinating the timing of days off with friends and family members) a person must overcome to achieve a work-life balance. Consequently, in aggregate, lower numbers of people in a country working over most or all segments of the day would suggest a relatively higher possibility for people to achieve a work-life balance. An alternative way of measuring the same concept would be to determine if each dimension of life peaks for demographic groups at different times of the day. If

people in a demographic group have similar general patterns of leisure, then they also have opportunities to socialise with other people in their peer group. Likewise, if periods of leisure peak at similar times for the different generations in families, then families are experiencing more opportunity to spend time together (whether family members actually meet together during leisure time when they have the opportunity or whether they engage in separate activities is the subject of the next section).

Figure 8 - Timing of Older British Men's Work and Leisure

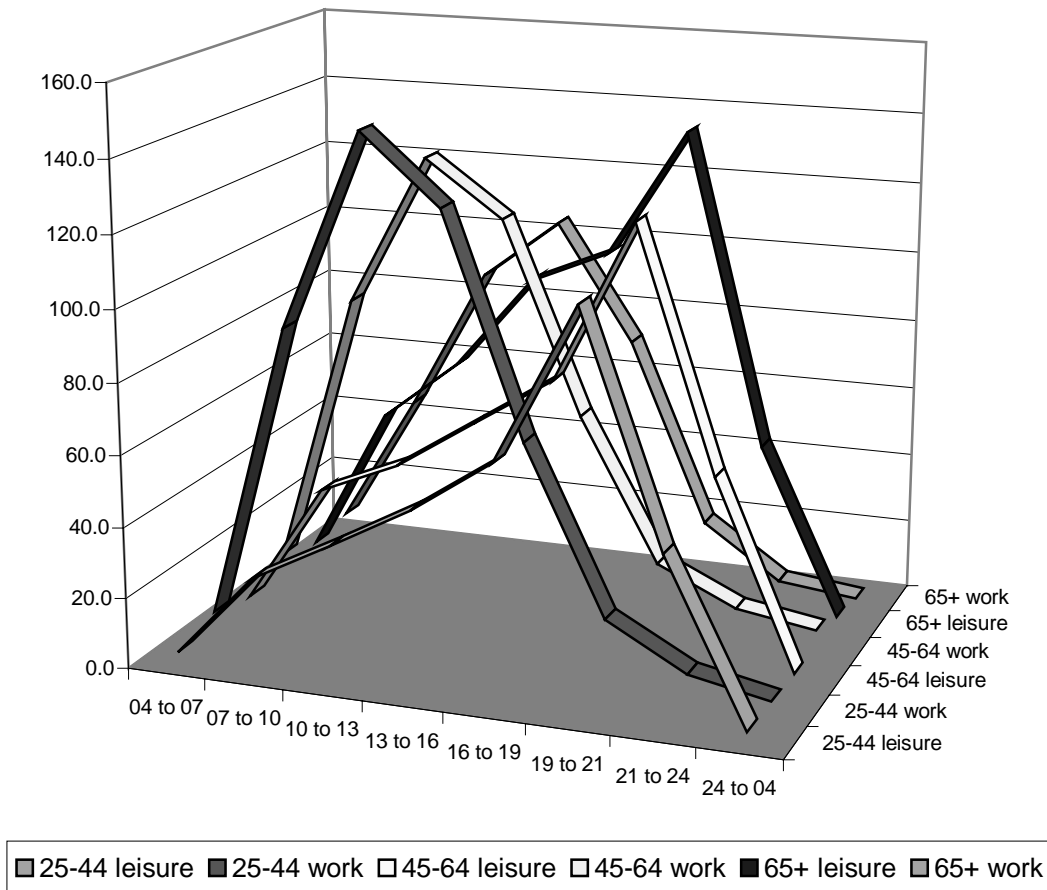


Source: Office for National Statistics (London), National Time Use Study, 2000-01

Figures 6 to 9 compare the timing of activities related to paid employment and leisure activities (social time, participation in sports and other leisure-based physical exercise, playing games or engaging in hobbies, reading, watching television, videos and DVDs, listening to the radio, tapes, records and CDs) for men and women of different age groups in the UK. These figures show that leisure time peaks for

women and men of all ages between 16:00 and 21:00, which indicates that most Britons enjoy opportunities to enjoy social time with both their families and their peer groups.

Figure 9 - Timing of Older British Women's Work and Leisure



Source: Office for National Statistics (London), National Time Use Study, 2000-01

As would be expected, men and women aged 8 to 15 and aged 65 and more engage in more leisure than employment activities, while men and women aged 16 to 64 engage in more work than leisure. Men's total time in employment is higher than women's time in employment (though women spend more time performing housework, child care and other unpaid domestic work than men, but the domestic work is not shown here). The peak work period for men and women aged 8 to 24 plateaus over a longer period than for older workers, and young people's leisure time plateaus over a longer period than the peak leisure time of adults.

Overall, these figures suggest that most people in the United Kingdom have a reasonable opportunity to enjoy a work-life balance. Nevertheless, as this is a short illustrative exercise, these figures are necessarily simplistic. Sleep and personal care time and necessary unpaid activity are not included to keep the figures clear, and more pronounced differences emerge when the figures are broken down by such factors as region, employment status, and industry of work.

More significantly, there are qualifications on the quality of work and leisure time that do not emerge in figures displaying total time in activities. Some of these qualifications will now be discussed further.

A second method for measuring work-life balance might be by examining the timing of work during the day. The more times people have to shift into and back out of work mode during the day, the greater the drain work can make on each person, and the more restricted their time to interact with others becomes. This concept is measured in the UK time use data by identifying instances split work periods. Split periods are defined here as work taking place during one three-hour time slot, not taking place during the next sequential time slot, but taking place again during a later three-hour time slot. 310 people (5% of the sample, 5.4% of men and 4.5% of women) worked in split periods during the day.⁶

Both men and women are more likely to work over split periods on weekend days than on week days.⁷ Men in routine and manual professions are more likely to work over split periods, and men in managerial and professional occupations are least likely to work over split periods. By contrast, women in both routine and managerial/professional occupations are equally likely to work over split periods,

⁶ 4 people had two breaks of at least 3 hours between periods of work during the same 24 hour day.

⁷ 5% of men and 4% of women work during split periods on week days; 7% of men work over split periods on Saturdays; 8% of women work over split periods on both weekend days; and 10% of men work over split periods on Sundays. These differences have a Pearson Chi-Squared 2-sided significance of $p < .002$ for men and $p < .01$ for women.

while women in intermediate professions are least likely to work over split periods.⁸ For Britain, the percentage of split period workers is small.

One must exercise some caution in defining all split period working as undesirable. In some households, people may find that they are better able to juggle the needs of their household (such as looking after a child with special needs) when one person works over split periods. The key issue for quality of life is whether the individual works over split periods out of personal choice or because they are compelled to work such patterns. Issues of concern for policy makers would be both the degree to which employers force employees to work split periods, and also the degree to which the marginally employed who rely on multiple part-time jobs to make ends meet are forced to work split shifts by a lack of alternative job opportunities.

The third way to measure work-life balance using time diary data is to consider the degree to which work overlaps with other aspects of the day. People periodically perform more than one activity at the same time. For instance, people may listen to the radio while driving or supervise the children doing their homework while cooking dinner. Most time diaries collect information about the main focus of people's attention as well as activities they are doing at the same time. In this study, men who worked on their diary day spent an average of 8 hours and 54 minutes in work related activities as their main activity.⁹ For an average of 14 minutes of this time, men did another activity at the same time as work, and for an additional 15 minutes, men performed a non-work activity as their primary focus while also doing something related to paid work. Women spent an average of 7 hours and 20 minutes in work related activities, and in 11 of these minutes, women did something else in addition to work. For a further 14 minutes, women worked simultaneously

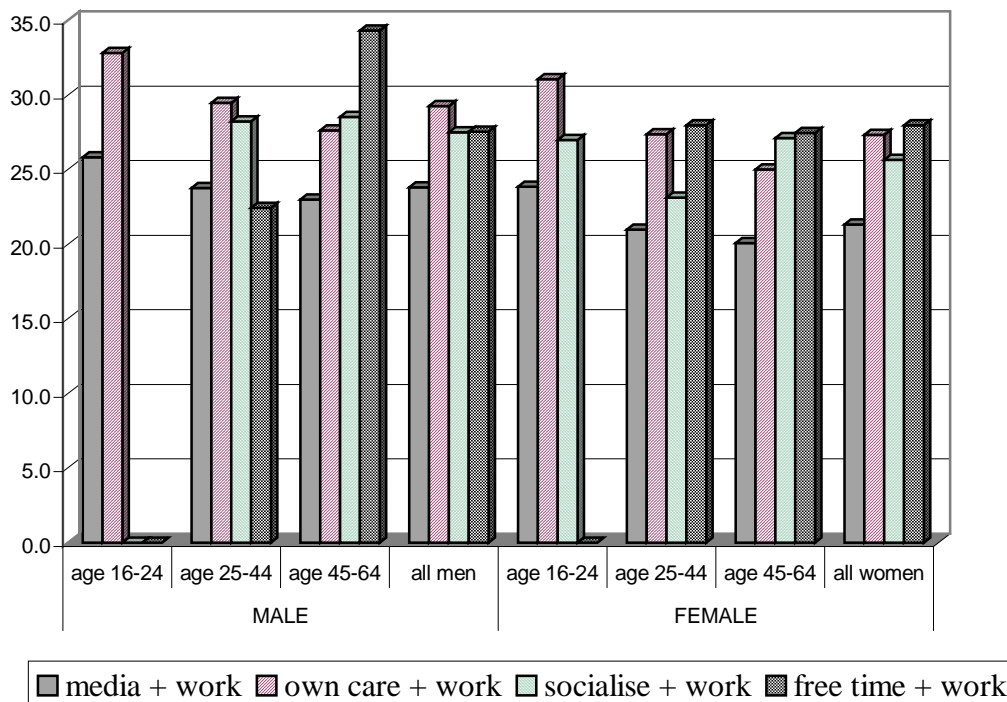
8 For men, 8% of routine and manual workers worked over split periods; as do 5% of men in intermediate occupations and 4% of men in managerial or professional occupations (Pearson Chi Squared 2-sided significance $p < .000$). For women, 5% of routine and manual workers as well as professional and managerial professions work over split periods, while 2% of women in intermediate occupations work over split periods (Pearson Chi Squared 2-sided significance $p < .001$).

9 Work related activities are defined as working for pay, waiting for a work event (meeting, building to be opened, etc.) to start, commuting, applying for a new job, interviewing for a new job.

while doing something else as the main focus of their activity. Figure 10 show the average time that these joint activities take for those people who performed each joint activity.

There are four main categories of activity into which work intrudes, as shown in Figure 10. Media with work covers watching TV, reading, and listening to the radio or music while working (such as reading while commuting or arranging invoices while watching TV). Own care with work primarily consists of taking a business call on a mobile phone while using the toilet or eating lunch while continuing to work at one’s desk. Socialising plus work covers discussing business with others at a party or public event, or taking business calls on a mobile phone while eating out or visiting friends or family.

Figure 10 - Work Time Intruding on Other Activities For People Who Mixed Work With Other Activities



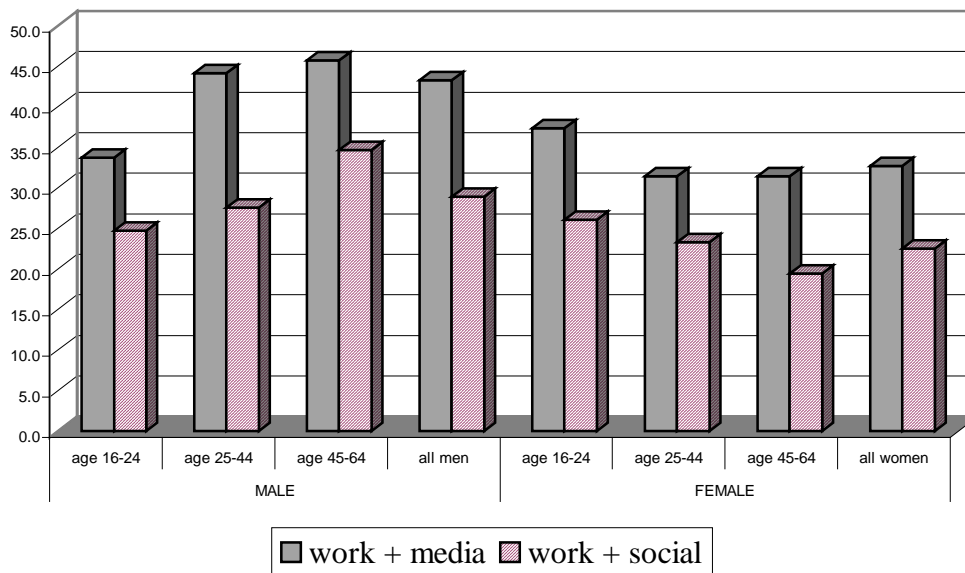
Source: Office for National Statistics (London), National Time Use Study, 2000-01

Free time plus work covers the mixing of work with other free time activity (excluding media use and social activities). For all people, engagement with work

while using the media or performing personal care decreases with age. For men, the intrusion of work into other free time increases with age.

The degree to which work overlaps other activities has implications for quality of life and work-life balance. The nature of conversation can vary depending on the time available for the conversation. Some people may find it hard to express something they consider to be of pressing importance if they know that they likely have only a few minutes before you will take a business call. Some children in particular can feel less valued if they never attract the undivided attention of their parents. Conversations can lose their dynamic when interrupted. Further, there are qualitative differences between leisure experiences which are purely leisure (sitting back on a sofa with a glass of wine to listen to a new CD) and activities where work overlaps leisure (listening to a few minutes of the new CD on the train until the mobile phone rings).

Figure 11 - Other Activities Intruding on Work For People Who Mixed Work With Other Activities



Source: Office for National Statistics (London), National Time Use Study, 2000-01

As with the prevalence of split period working, one cannot simply define the intrusion of work into private life as always undesirable. The key issue, again, is whether a person experiences work intrusions by choice or against their wishes.

Nevertheless, even though some people choose to allow their work and private life to routinely overlap, a general increase in work intrusion into private life across broad population groups would represent cause for concern.

Intrusion works the other way as well, as many Britons also do some non-work activity while working as shown in Figure 11. Two groups of activity principally occur during work: media use (listening to music or the radio while working) and socialising (joking or making social plans with colleagues at the office). For men, media use and socialising while working increases with age, while for women, secondary activity while working decreases with age. Half of people who worked on their diary day combined work with another activity for at least part of their work day. The time of overlapped work reaches an average of 49 minutes for British workers. When work intrusion and overlapped work are taken together, working and non-working life overlap significantly for a large proportion of the British population.

4 Time With Other People

Social contact plays an important part in the concept of quality of life. In the United States, joining a social group has been associated with a drop in the risk of death in the next year (Putnam 2000). Unemployed British people with close social contacts are more likely to find a job than those who do not have such contacts (Hannan 1999). The UK Office for National Statistics now considers time diary information an important component of measuring social capital (Office for National Statistics 2002).¹⁰ Researchers in the United States have made initial explorations in the use of time diaries to measure social capital (Robinson and Godbey 1997: 56). This paper now considers means by which social interaction might be measured to monitor quality of life.

Social surveys regularly include batteries of questions about the frequency with which people see their friends and neighbours and also the frequency with which they perform social activities. Such surveys also often ask respondents whether they

are members of organisations, and how often they participate in the activities of organisations to which they affiliate. Social capital also has been measured by examination of membership lists and attendance data collected by voluntary and civic organisations – with one prominent example being voter registration lists and voter turnout.¹¹

Indeed, the conventional social survey approach has a particular advantage for capturing some elements of social contact over the time diary. As the diary is a cumbersome instrument to complete, time diary researchers face a trade-off of lower response rates for each additional day they ask people to keep a time diary (Gershuny 2000). Some dimensions of social interaction may be very important for an individual, but also may not be very frequent. The less often a person attends social group events or sees friends, the less likely that they will do this activity on an individual diary day. Thus, to get a full picture of sociability at an individual level, diary data needs the compliment of survey questions covering a longer time frame. For this reason, we now give attention to standard survey prevalence of activity questions. As the European Community Household Panel (ECHP) already makes available data from many countries, the next few subsections resume an international flavour before we return to the diary data, which at present, is only available for the UK.

4.1 Contact with Friends and Family

Social surveys such as the ECHP regularly include questions asking people how regularly they see family members and friends. Figure 12 shows the proportions

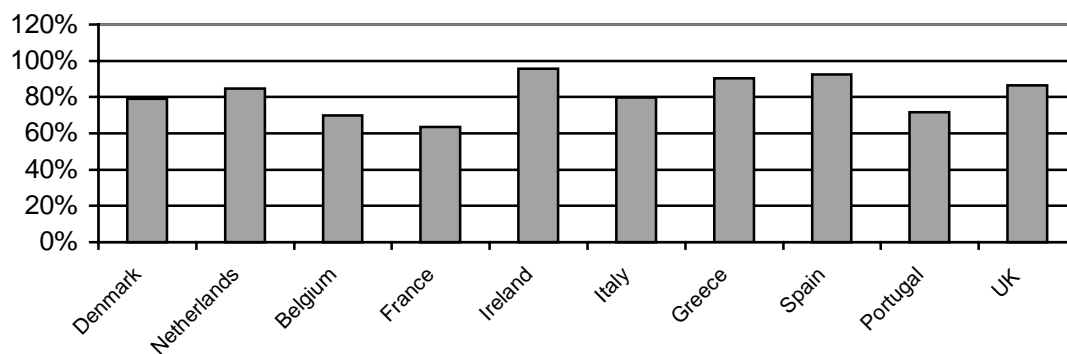
10 The ONS plans to pursue future research into using time diaries to measure social capital, examining questions such as whether busy people have more or less social capital than people whose activities are less dense.

11 The UK Office for National Statistics is also investigating how perceptions of local areas and also the degree of trust people have in public officials, professionals, friends, and other people might be included in the assessment of social capital (ONS 2002). Nevertheless, this potential element of the broad concept of social capital would be difficult to measure in a way that would allow valid cross-national and cross-time analysis. Consequently, this dimension of social capital is not the focus of this paper.

across European countries who told ECHP interviewers that they meet friends and relatives more than once a week in 1998.

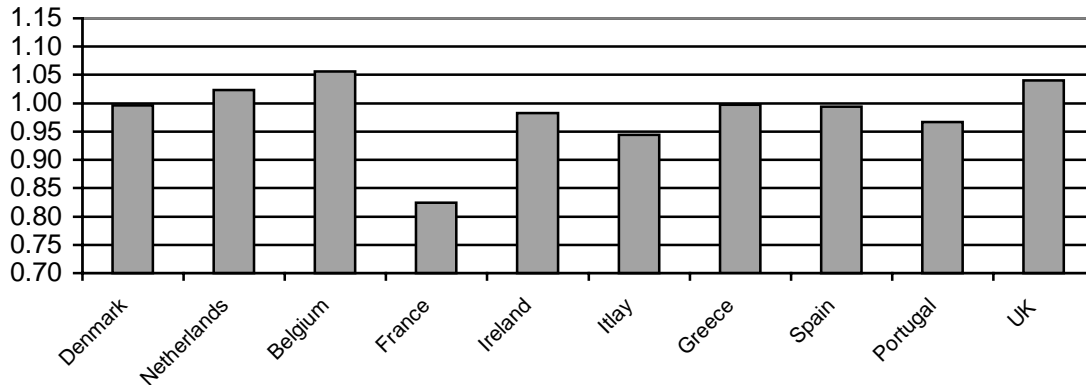
Though the average level of contact varies, over 60% of respondents across these countries report seeing friends and relatives more than once a week. In Ireland, over 95% of people reported such frequent contact. Regularity of contact varies with the age of the individual (analyses not shown), with younger people meeting friends more often than older and particularly the 45-64 year olds, but frequency increases again after age 65. The question is however, do more disadvantaged groups have lower levels of contact?

Figure 12 - Proportion Meeting Friends and Relatives More than Once a Week



Source: ECHP UDB data 1998

Figure 13 - Odds Ratio of Proportion Poor Meeting Friends and Relatives More than Once a Week by Non-Poor (60% Median)

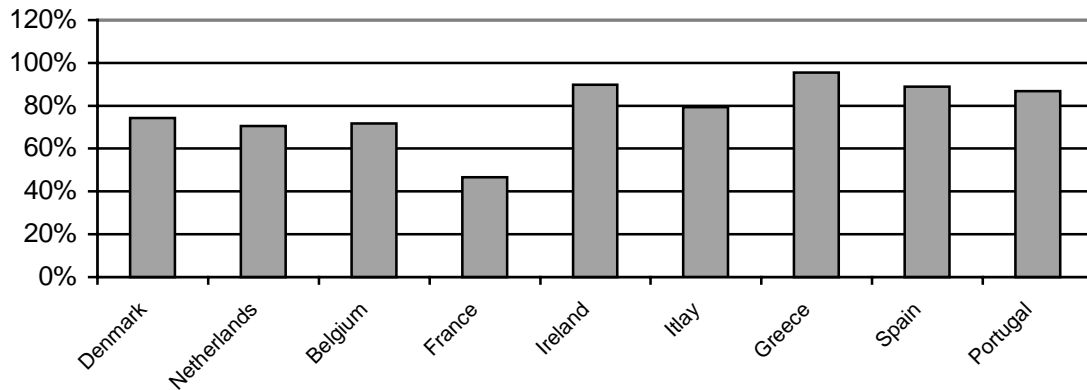


Source: ECHP UDB data 1998

Figure 13 shows an odds ratio of the proportion of those in a household below 60% of median income poverty who meet friends or relatives more than once a week to those above the poverty line. If the odds ratio is less than one this means that the poor are in contact less often than the non-poor and could indicate detachment. In fact, Figure 13 gives a rather mixed picture with France, Ireland and Portugal having ratios of less than one, whilst the Netherlands, Belgium, Greece, Spain and the UK have ratios greater than one suggesting that the poor actually socialize more. In fact, only in France could it be suggested that the poor are at risk of becoming 'detached' from society in general.

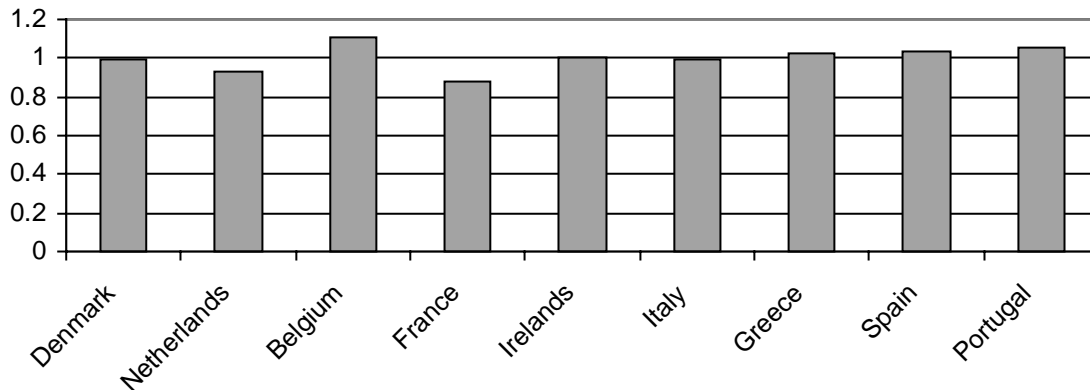
4.2 Talking to Neighbours

Figure 14 - Contact with Neighbours at Least Once a Week



Source: ECHP UDB data 1998, (data for the UK also are not available on this question)

Figure 15 - Odds Ratio of Proportion of Poor Talking to Neighbours at Least Once a Week by Non-Poor (60% Median)



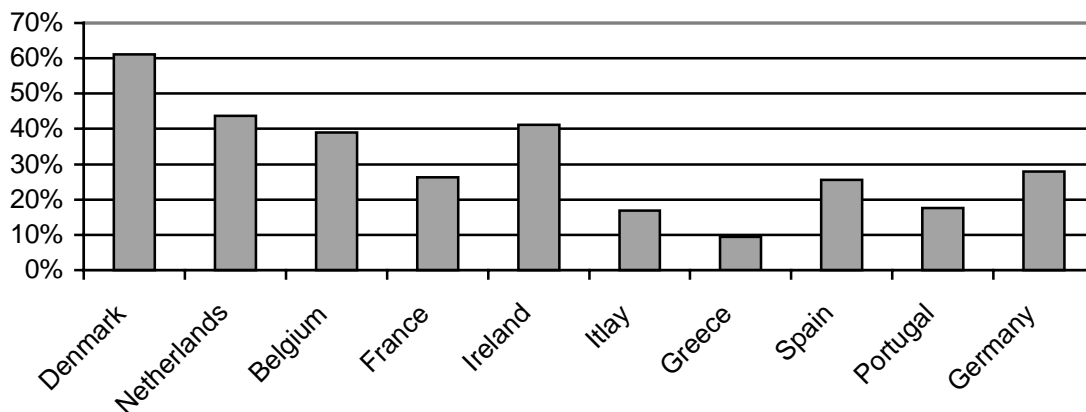
Source: ECHP UDB data 1998, (data for the UK also are not available on this question)

Finally, in Figure 15, we see an odds ratio between the poor and non-poor for the proportion talking to neighbours at least once a week. In all the countries except In Figure 14 we move on to an analysis of the probability of talking to neighbours at least once a week and see an interesting pattern of differences across nations with the Southern European countries and Ireland being more sociable on this measure. In these countries over 80% of respondents would talk to neighbours almost everyday (95% in Greece) whilst in Denmark, Belgium and the Netherlands this

proportion drops to between 65 and 75%. In France this proportion drops to around 45%, though this may be due to the use of a different wording in the French questionnaire. In France, we see the poor actually being more sociable than the non-poor, though the difference is marginal.

4.3 Being a Member of Clubs and Organisations

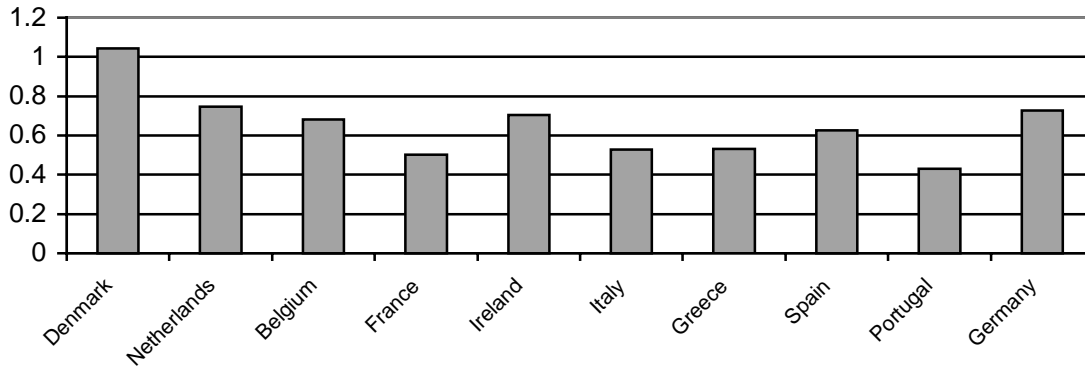
Figure 16 - Proportion Who Are a Member of an Organisation



Source: ECHP UDB data 1998 (data for the UK are not available on this question)

Figure 16 shows overall country statistics for the proportion who are a member of an organization such as a sports or social club. The results vary greatly across country from Greece where barely 10% of the population interviewed were a member to over 60% in Denmark. Interestingly however, Figure 17 shows that the poor are less likely than the non-poor to be a member of such a club in all countries except Denmark. The differences in the odds of being a member vary from almost 60% less than the non-poor in Portugal and Greece to around 30% less in the Netherlands.

Figure 17 - Odds Ratio of Proportion of Poor Being a Member of an Organisation by Non-Poor (60% Median)



Source: ECHP UDB data 1998 (data for the UK are not available on this question)

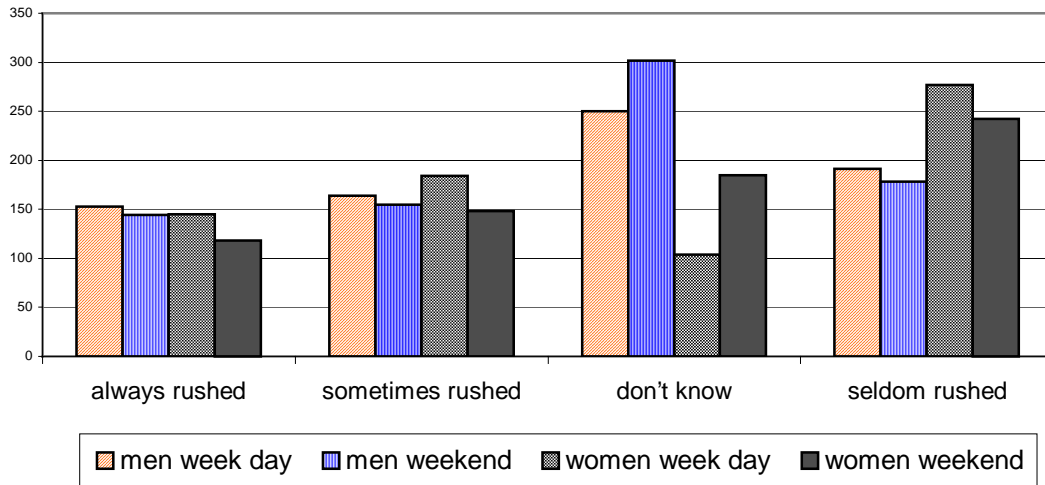
4.4 – Time Diaries and Sociability

When they do collect data on social interactions, time diaries pick up more detailed information about sociability than conventional methods. Diaries reveal who interacts with whom in households, how social encounters fit into the daily patterns of life, how long people are alone, and what people do with others compared to when they are alone (though there are some limitations in the HETUS design for these measurements which will be discussed later in this section).¹²

This data should be interpreted with some flexibility. Certain jobs, such as providing security in a building at night or working in an isolated light house, entail few hours of interaction. Some people enjoy being alone, and spending more time alone does not necessarily mean a reduced quality of life. Likewise, spending less time alone does not necessarily improve quality of life either. Time with people that one likes and time with people one loathes do not hold equal value in the quality of life stakes.

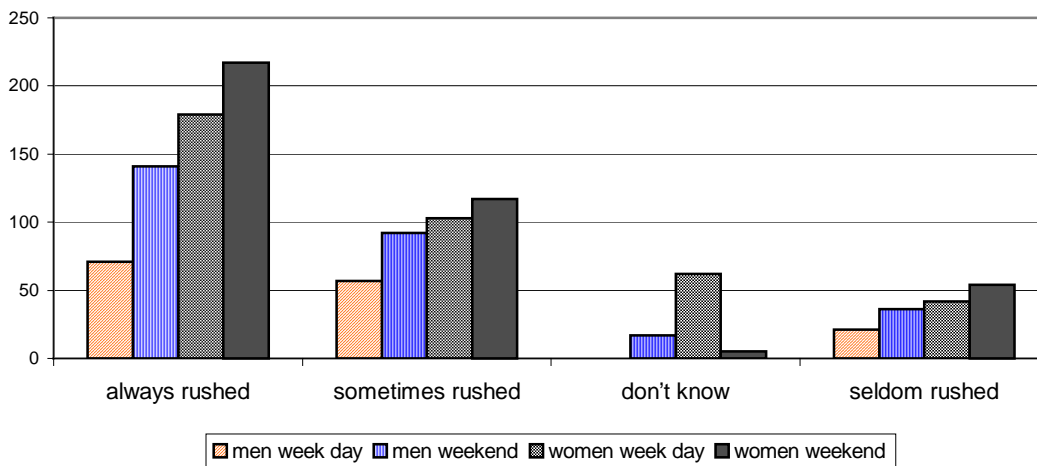
¹² Time diaries also can measure social space – where social interactions take place – in addition to social circles (with whom people interact) (Ruston 2002), though analysis of social space has not yet been linked with social capital.

Figure 18 - Adults' Time Spent Alone by Whether People Feel Rushed



Source: Office for National Statistics (London), National Time Use Study, 2000-01

Figure 19 - Adults' Time Spent with Children Aged 0-9 by Whether People Feel Rushed



Source: Office for National Statistics (London), National Time Use Study, 2000-01

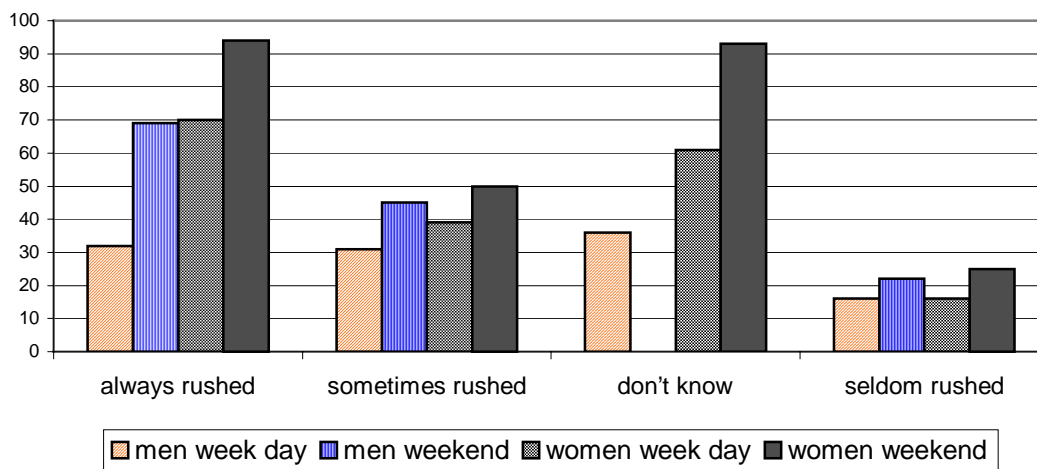
Indeed, lacking enough time for yourself can reduce quality of life. The UK 2000-01 time use data reveal that men and women who always feel rushed spend less time alone, particularly on weekends, than people who sometimes feel rushed, are unsure if they are rushed, or seldom feel rushed (see Figure 18).¹³ Figures 19¹⁴ and

13 One-way Anova F=30.577, p<.000.

20¹⁵ reveal that one key factor explaining this finding – especially for women - is that people who spend more time with children – particularly with children aged <10 - feel more rushed than people who spend little time with children. Too much time alone leads to isolation and a reduced ability to draw on social resources needed to deal with crises in life, but too little time alone also reduces the ability to enjoy life.

Alexander Szalai organised the first cross-national diary study which included columns marking who else was present during activities. This study found that in 1965 and 1966, people in the twelve participating countries¹⁶ spent between 40% and 70% of their days alone – with people in the United States spending more time alone than people in the other countries (Cesh-Szombathy 1972: 307-8). The study also found that people spent more time with friends and colleagues as the proportion of free time which they enjoyed increased (Schneider 1972: 329).

Figure 20 - Adults' Time Spent with Children Aged 10-14 by Whether People Feel Rushed



Source: Office for National Statistics (London), National Time Use Study, 2000-01

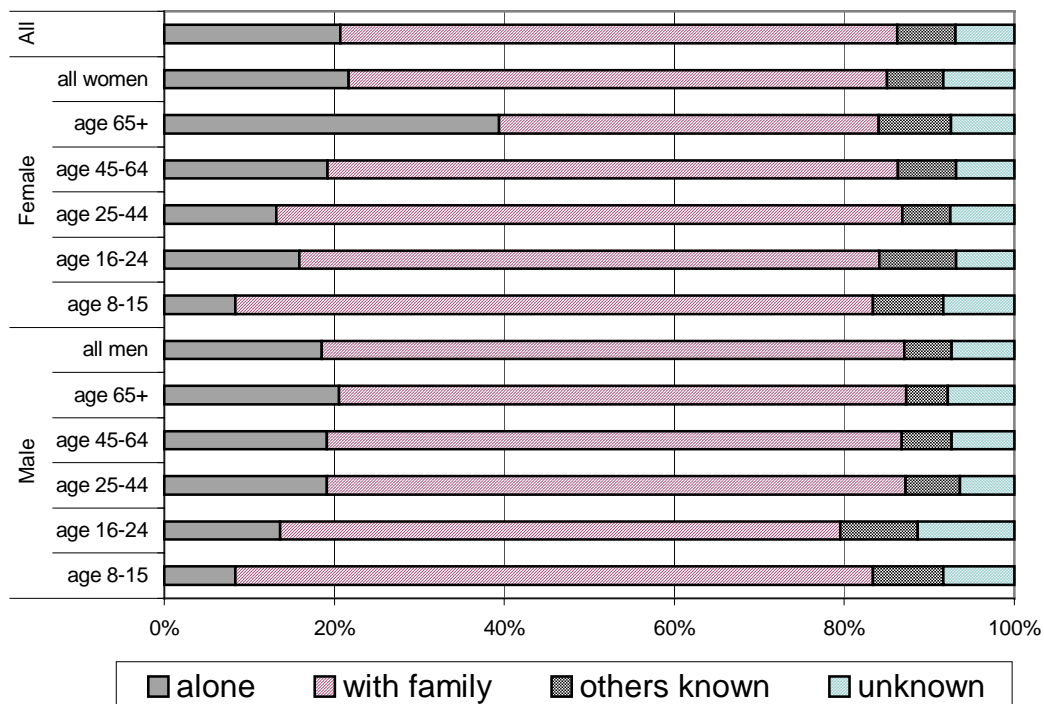
14 One way Anova F=288.220, p<.000.

15 One way Anova F=53.043, p<.000.

16 Studies following the Szalai format were conducted in Belgium, Bulgaria, Czechoslovakia, the Federal Republic of Germany, France, the German Democratic Republic, Hungary, Peru, Poland, the USA, the USSR, and Yugoslavia.

Since the Szalai study, the 'who else is present' information has been collected in a high proportion of time diary studies, notably in the HETUS project, though degree of information collected varies considerably,¹⁷ from simple alone/not alone dichotomies to complex series of columns where diarists name the people with whom they interact and also supply details about these individuals in another area of the study questionnaire.

Figure 21- Time Eating at Home in the UK



Source: Office for National Statistics (London), National Time Use Study, 2000-01

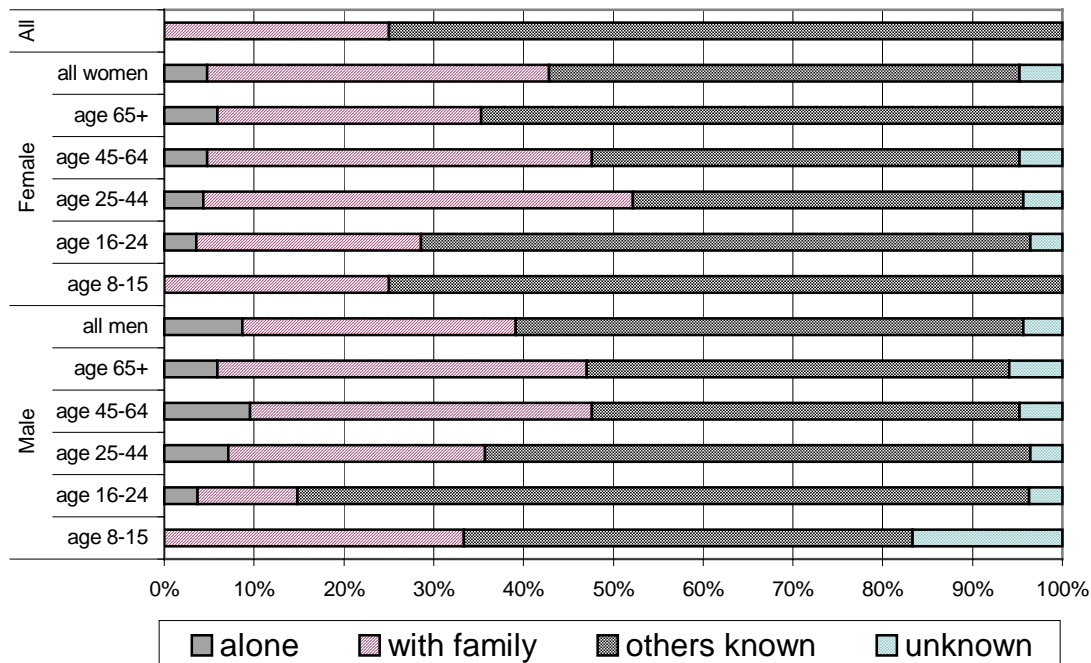
The UK HETUS study reveals that most British people have regular contact with others. On an average weekday, British people spent an average of only three-hours alone.¹⁸ Time alone drops to an average of 2 hours 50 minutes on Saturday, and drops further to 2 hours 30 minutes on Sundays.

17 The who else is present section has proven the column with the highest degree of variation between the HETUS studies.

18 The HETUS guidelines only require diarists to note who else is present when their main activity is not study at school/university, sleeping, or working for pay. This means that the data may be available for 1/3 to 2/3 of the day, as the average Briton sleeps for 8 hours and 41 minutes.

Putnam claims that Americans spend less time eating with their families and friends, but British time use data demonstrate that this is not true in the UK. While the overall time spent eating meals at home has declined since the 1960s, this time has shifted to eating outside the home (Gershuny 2000: 206-8). The UK HETUS data reveal that this trend may in fact contribute to increased sociability (see Figures 21 and 22). In the years 2000-01, Britons ate around 20% of meals at home alone, while fewer than 5% ate meals elsewhere alone. Over 60% of meals at home and 25% of meals outside home are eaten with family members.

Figure 22 - Time Eating Out in the UK



Source: Office for National Statistics (London), National Time Use Study, 2000-01

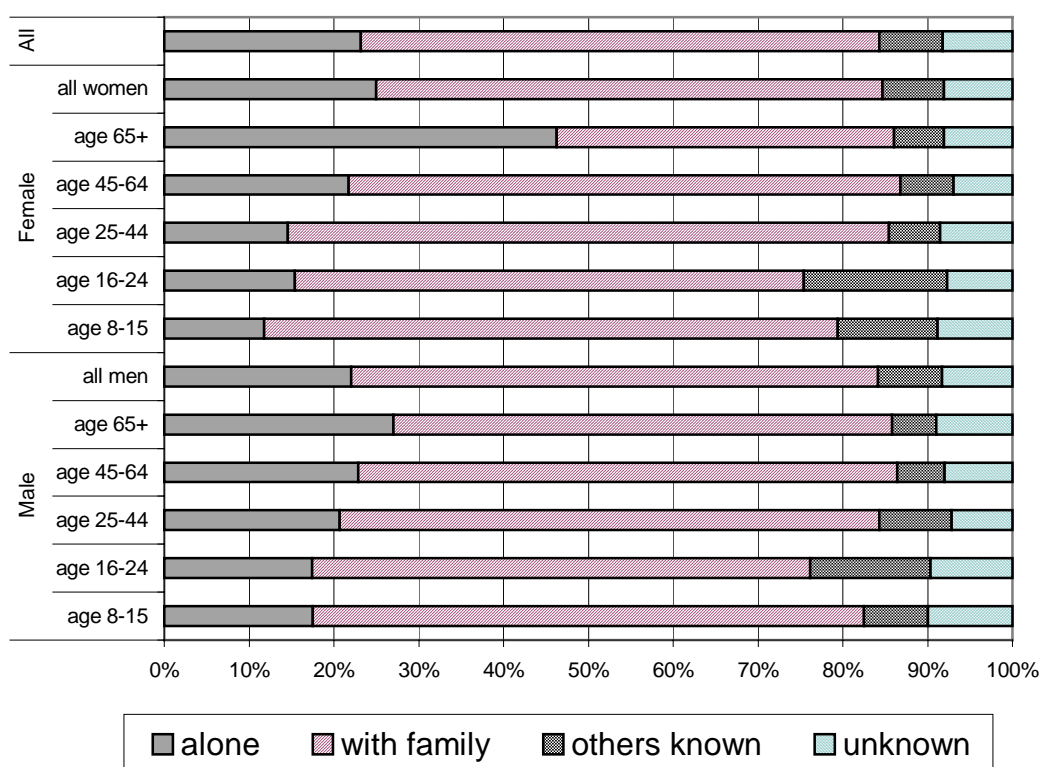
Not unexpectedly, over 90% of social time takes place in the presence of others (with phone calls accounting for much of the social time alone). Over 80% of voluntary work and exercise take place with others (though men aged 25-65 spend

Nevertheless, most British people (with the exception of people living in 1 person households) do go to sleep while other people are in the house. Most schooling involves the presence of multiple people, and while increasing numbers of British people work alone, the majority of British workers still work in the presence of other individuals for at least part of the day. Consequently, the majority of time not covered by the social activity columns for the majority of people is social time, at least in a very nominal sense of social presence.

¼ of their exercise time alone). Britons shared over 70% of their free time and even more time watching television with other people (as shown in Figure 23).

Britons spent more time alone (up to 40% of their waking time outside of study and paid work) doing housework, repairs and construction, gardening, and personal care. That such activities are more likely to be performed alone raises no cause for concern in the measurement of quality of life.

Figure 23 - Time Watching TV in the UK

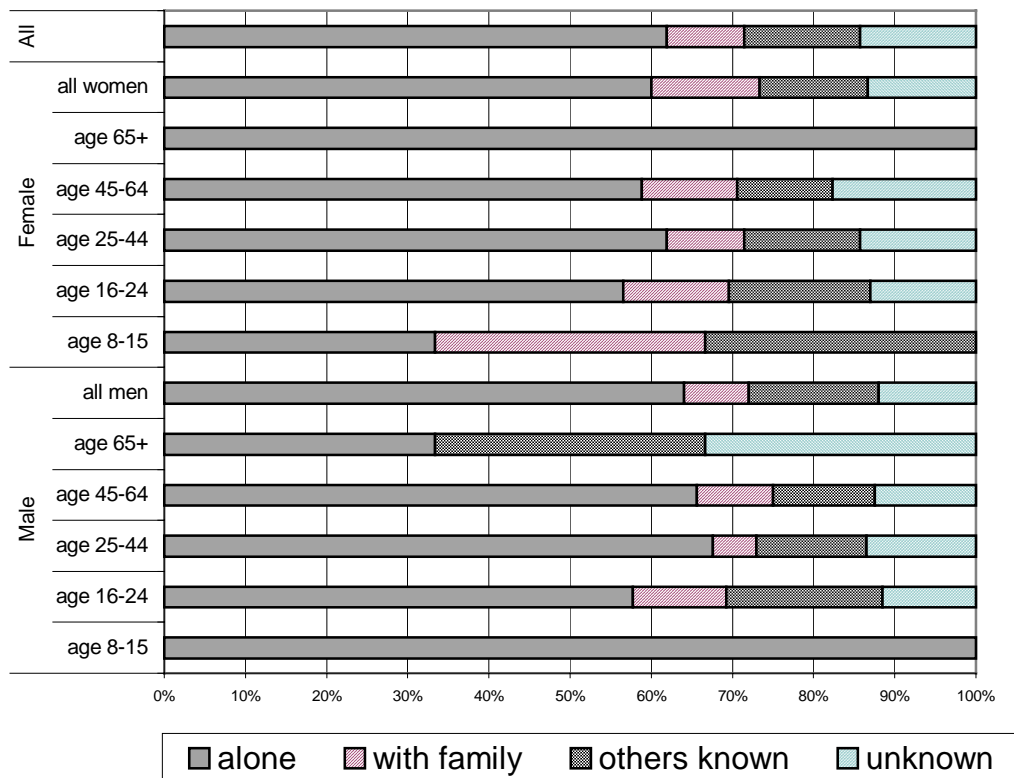


Source: Office for National Statistics (London), National Time Use Study, 2000-01

There are only two types of activity which many Britons mainly perform alone. The first of these activities, looking after pets, is not really solitary, as people are still interacting with others – even if the participants to the interaction are not people. Britons spent the most time alone travelling from place to place (up to 1/3 of travelling time not related to work, and over 60% of commuting time – see Figure 24). The high level of solitary commuting has significant policy implications for traffic congestion and air quality related to car use.

When they were with other people, Britons spent most time eating at home, in personal care, housework, repairs and construction, gardening, watching TV, and free time with family members. Most collective voluntary work, social time and exercise time is spent in the company of people from other households.

Figure 24 - Commuting in the UK



Source: Office for National Statistics (London), National Time Use Study, 2000-01

People living in one-person households face the greatest risk of spending above average time alone. Women living alone spend an average of 9 hours 34 minutes by themselves, whilst men living alone spend an average of 8 hours and 9 minute by themselves – three times the average time alone for all people in the UK. People in the poorest 12% of household incomes, aged 65+ (especially women), who are unemployed or otherwise not working, and whose households do not have a car also spend a greater than average proportion of their time alone. For women, working in a routine/manual occupation, being aged 45-64, and living in Scotland or Wales also increases the risk of spending more than average time alone. Many of the same factors associated with the risk of being alone are also associated with risks of other

dimensions of lower quality of life. Research using the ECHP, for example, has found that people living with household incomes below the poverty line¹⁹ in Northern European countries are likely to live alone (Paugman and Russell 2000: 245). The same research found that the likelihood of living alone in most European countries increases as people's employment precarity increases (Paugman and Russell 2000: 251).

It is worth noting, however, that some social contacts which have profound effects on people are renewed on an infrequent basis. People can maintain social contact through correspondence, e-mail, and web chat rooms, though the social dimensions of these activities are not always apparent in time diary data. For this reason, time diary data on sociability should be considered in conjunction with other social participation data. Even so, policy makers can use time diary data to reliably measure which groups are at the greatest risk of social isolation, as well as to monitor changes in commuting behaviour. In particular, diaries can reveal the proportion of green travel time – that is travel by self-powered means (foot, bicycle), by public transport, and in private motor vehicles when other people share the ride, in contrast to time using private motor vehicles alone.

5 Conclusions

Time diaries produce a picture of how people apportion activities over the day. From a policy perspective, diaries can track the degree to which long-term policy initiatives influence changes in behaviour. Diaries inform the work-life balance debate, not just by demonstrating the total volume of work more reliably than other existing measures, but also by revealing the timing of work in relation to the timing of other activities, the proportion of the day influenced by work, and the degree to which work intrudes into other dimensions of life. Time diaries also reveal who is at risk of lacking enough time alone, as well as who is at risk of spending too much time alone. One key issue to bare in mind is that certain patterns of time use, such as

¹⁹ Here, the poverty line is defined as 50% of mean household income, calculated using the OECD modified scale.

working split periods or spending long hours alone, may not be damaging to quality of life if they result from the voluntary choice of individuals, but can be devastating if they are imposed on individuals by institutions, social structures or social attitudes.

Nevertheless, while diaries provide informative measures of activities on a daily or weekly basis, they do not cover longer-term cycles of activity. Consequently, diaries provide an important part of the picture of the work-life balance, but not the full picture. In the case of social capital and participation, time diary data work well in conjunction with social survey data.

There are, however some drawbacks to using time diary data to measure change in quality of life across European countries. Though some countries, like France and the United Kingdom, have regularly collected time use data, national sample data have been collected infrequently or only once in most European countries, and not at all in a few. The most informative time diary studies, where people describe activities in their own words, are expensive to conduct and burdensome to respondents. Collecting such detail requires commitment from funding agencies and dedicated staff trained to persuade sampled diarists of the value of the research. Less detailed time use data (but still sufficiently detailed to complete the analysis conducted in this paper) can be collected from a light diary format, where people tick slots in a diary whose activities are predefined. The level of commitment to time diary research varies widely across European countries.

These drawbacks should not be overstated. There is now an unprecedented opportunity to use time use data from a range of European countries. The Multinational Time Use Study was developed in Europe and the expertise for post-harmonising time use data is particularly well-developed in some European countries. The Harmonised European Time Use Studies (HETUS) project is the largest scale (partially) input harmonised time use study. Nevertheless, given the burdensome nature of most time use instruments, future researchers may prefer to consider using the relatively inexpensive 'light' time diary format,²⁰ whereby people

²⁰ Examples of which are available on the MTUS table of details of time use studies (Fisher 2002b).

draw lines across a grid of minutes of the day on the x axis and pre-coded categories of time use on the y axis indicating when they performed each of the pre-coded activities, to research quality of life issues.

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