

MASS MEDIA, LEISURE AND HOME IT: A PANEL TIME-DIARY APPROACH

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ABSTRACT

The impact of the Internet is put into the context of long-term, time-use trends in the United Kingdom, taking advantage of almost 40 years of time-diary studies. The trends in time use that emerge challenge several popular beliefs about how society has been changing in the wake of new technology and other social changes since WWII. The main focus of the analysis is on a unique set of panel data in which respondents in nearly 1000 households completed full-week diaries in 1999 and 2000, making it possible to distinguish changes in three groups: prior Internet users, nonusers at both time points and new Internet users. No notable changes in media use or other activities were found in any of the three groups across the span of the study, indicating little support for the hypothesis that Internet users had significantly altered their styles of life.

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*Much of the evidence described here comes from the **Home-Online** study, conducted by the Institute for Social and Economic Research (Lacohee and Anderson 2001). Both the study's fieldwork and analysis were supported by British Telecom.*

The 1950s and 1960s in Western economies represented a new sort of industrial revolution, a *service sector revolution* that involved an important shift in the paradigm of production and consumption. The way the production/consumption paradigm worked was simple: connect households to the infrastructure; then use home equipment and software to produce final services. Instead of buying labor-intensive services, under this new production/consumption paradigm, households bought so-called “labor-saving” domestic equipment (“white goods,” automobiles, televisions) and produced the final services (domestic, transport, entertainment) themselves. Since the costs of the products fell continuously and the skills required for their use were not high, their wide diffusion promoted a considerable democratization in specific areas of service consumption (Gershuny [1978, 1984 [2000, pp.16-28 and 222-229]).

In this analysis, an analogy is drawn between today’s IT revolution and the transformations in daily life that happened over the mid-twentieth century. That transformation led to a new bundle of technologies in the 21st century—microprocessors; cheap, reusable data storage; and increasingly flexible, broad bandwidth telecommunications networks—that together constitute today’s “IT revolution.”

Data from the British Household Panel Survey (Taylor *et al.* 2001) show that on an *individual* basis, 45 percent of people by early 2001 are in households with home computers. However, two-thirds of those in households above the mean income have access, compared to less than a quarter of those in below-mean income households—evidence of a substantial “digital divide” in the UK.

Virtually all of the growth is at the top end of the market. It is clear that the traditional “diffusion curve” approach to the analysis of domestic computing equipment is not the right way to think about this new technological paradigm. The IT revolution is plainly not merely a matter of the installation of computers in homes. Just as with the 1950s technologies, one cannot really understand the innovation process without some idea of how the technologies are being *used*. To get a proper hold on the nature of the putative IT revolution, one needs to see how the computers, software and the Internet are actually being used in the home—how they relate to ongoing changes in the pattern of daily life.

TIME-DIARY DATA

Little of daily life is captured by traditional social and economic indicators. Yet about half the total work of the society is done on an unpaid basis in private households and community organizations. Understanding daily life means accounting for the full range of activities—paid and unpaid work *and* leisure. Evidence for this activity can only come from a very specialized sort of survey materials, from large random samples of the population who keep a complete diary continuously over a randomly chosen day (or preferably a week).

Survey data of this sort, though vital for research into the use of technology in the home, are expensive to collect and, as a result, not very widely available.

Researchers in the UK are fortunate in having access to previous sources of evidence of time-use patterns, collected by diary methods for quite a long time. Surviving evidence from these studies allows one to put together some quite representative statistics for the UK, going back to the early 1960s. The BBC Audience Research Department actually conducted time-budget surveys as far back as the 1930s; the 1961 and 1975 mean hours reported in Table 1 below come from reworked materials from this source (BBC 1964, 1977). Starting from the early 1980s, the UK Economic and Social Research Council (ESRC) has supported a number of national-scale, time-use surveys; the 1987 data in Table 1 come from the time-diary survey element of the ESRC's "Social Change and Economic Life" research initiative (Gallie 1994). The 1999/2000 results below come from a British Telecom-funded study that is described in the next section of this article.

Of course the really surprising feature of Table 1, given recent discussions in the press, is that there is no long-term evidence for the widely discussed "time congestion" phenomenon. Even for working-age adults, one finds a notable and unexpected *growth* in leisure time. Despite the growth of television and other electronic home leisure, there is no concomitant decline in outward turning and potentially sociable leisure. On the contrary, much of the growth in television viewing time over this long period might be set against the similarly scaled decline in "other home leisure" (which is mostly a reduction in home-based hobbies, such as sewing and similar activities for women).

The long-term, time-use evidence of an overall privatization of leisure and consumption in general, in the UK at least, is entirely lacking. On the contrary, one might speculate that the effect of television in particular was to expose a wide population to a range of information about the availability of new or previously unconsidered leisure options, which led eventually to an increase in the level of participation in these options. Thus, if the impact of television on leisure was indeed in this sense a positive one, might not the impact of the wider ranging, and more interactive, Web-based leisure-related applications be similarly positive for sociable leisure pursuits? What follows provides a basis for structured speculation on this question.

For the purposes of the current analysis, one should particularly note the relatively low level of diary time devoted to home computing overall—hardly two hours per week for working-age men, around one hour per week for working-age women. There is a very strong social status gradient in the amount of time used: highest class women spending on average three hours per week in this activity, highest class men four hours, and lowest class men and women have on average just one hour per week. The digital divide in home computer access translates directly into a digital divide in home computer activity.

TABLE 1: HISTORICAL CHANGE IN TIME USE (HOURS PER WEEK)

	UK men aged 25-65				UK women aged 25-65			
	1961 BBC	1975 BBC	1987 ESRC	1999/ 2000 BT	1961 BBC	1975 BBC	1987 ESRC	1999/ 2000 BT
Necessary Time								
Paid work	47	38	34	34	15	15	21	22
Unpaid work at home	9	7	11	10	33	26	18	16
Child and adult care	0	1	2	4	3	3	3	7
Shopping	1	2	3	3	5	5	5	5
Sleep, personal care	64	65	65	63	64	66	67	65
Eating at home	10	9	8	6	12	10	8	7
Travel	3	7	9	7	2	5	8	6
Leisure Time								
Church, volunteer, etc.	1	0	1	1	1	0	2	1
Active leisure	4	7	4	4	3	5	3	4
Eating out of home	1	2	3	4	0	1	2	3
Radio, TV, etc.	16	17	17	19	14	15	14	16
Other home leisure	11	12	10	10	15	17	13	13
Other free	1	1	2	1	2	1	4	2
Home computing	0	0	0	2	0	0	0	1
Total Free Time	34	39	37	41	35	39	38	40

The time-use data put the questionnaire-based studies of the effects of the Internet into an appropriate perspective. Plainly if there are *any* observable effects of the Internet, they are going to be small ones. One or two hours makes only a small dent in the 168 hours of the week, and there have been much larger changes (e.g., reductions in women's unpaid work time, overall growth in leisure time) over the period covered by Table 1. Moreover, Internet-related activity (Web-browsing plus email) is just one part of home computer use. Are there any discernible consequences of this recent emergence of this new, and small, category of time use, for the other things people spend their time on?

METHODOLOGICAL ISSUES

While the main focus of this article is the impact of IT on social life, there is a methodological problem. To get a picture of the *consequences* of IT diffusion, one cannot just compare, for example, those who have IT in their homes with those who do not. As noted above, there are some other very important differences that go along with home IT access. For example, it is known, on the basis of the BHPS data, that those with home computers are on average considerably richer, probably rather better educated, and somewhat more likely to have jobs, than those who do not.

Thus any attempt to assess the consequences of IT through a simple comparison between the activity patterns of those with and without computers is likely to be very misleading. It will, in particular, lead to confusion between the effects of the acquisition of home computers on, for example, leisure patterns, with the leisure effects of those external factors (themselves having nothing whatsoever to do with IT). These factors led to or allowed those households to buy home computers in the first place.

Suppose for example that one should find that people who use home computers watch TV considerably less than those who do not. Would this mean that using home computers *leads to* less TV use? One knows that members of richer and better-educated households are both *more* likely to have and use home computers and to use different forms of mass media. It's quite likely, *a priori* that this association between more computer use and less TV use is not a causal one.

The only way to deal with this crucial problem of research methodology is in fact to combine the time-diary studies with household panel studies. Panel studies involve repeated surveys, with the same individuals being interviewed again and again at successive points in time; household panel studies follow all household members in successive years. It is only with this sort of technique that one can appropriately control for the full range of life circumstances in order to isolate the unique consequences of particular changes—such as the impact of the acquisition of a new technology.

DATA SOURCE

The evidence comes from the first two waves of a national time-diary household panel study, the Home-on-Line (HoL) study, which focuses specifically on IT use in the home (Lacohee and Anderson 2001). It is believed to be the first such national study conducted anywhere in the world (although a medium-scale, locality-based panel study used for a similar purpose is reported in Kraut *et al.* 1998). All members (aged 10+) of 1000 randomly chosen British households were interviewed in 1999; *all* of the adult members were asked to keep a detailed diary for 7 days, and about 60 percent of the questionnaire

respondents did. Some 740 of this same group of respondents subsequently completed a similar diary instrument again in year 2000.

This quantitative data collection, then, takes the form of a time-use diary for completion by all individuals over age 16. The panel was initiated in summer 1998 through a research contract placed with a commercial market research agency via the Institute of Social and Economic Research (ISER) at the University of Essex. This contract covered the recruitment of the panel and the first two waves of longitudinal data collection. The adult time-use diary forms (see Appendix A) divide each day into 15-minute segments and ask respondents to record which of a range of 35 pre-determined categories of activities they engage in during that time segment. The diaries are one week long, and thus provide estimates of the *total* 168 hours these panelists spent on all their particular activities during that week. Further details of the methods can be found in Anderson *et al.* (1999).

Wave 1 of the panel study consisted of computer-aided personal interviews (CAPI) in the respondent's home, whereas Wave 2 involved an initial telephone (CATI) interview. Each wave consisted of a multistage investigation, consisting of an initial household interview with a randomly selected household informant. The seven-day, self-completion, time-use diary was left behind for all adults, with a request to complete a diary entry at least once per day and to then mail the entire diary back at the end of the designated week. Rules for inclusion in the subsequent waves follow those of the British Household Panel Survey; broadly, all members of Wave 1 respondent households, plus all current co-residents, are interviewed in the subsequent waves.

The Wave 1 questionnaire response rate was a barely respectable 57 percent. Only 66 percent of the Wave 1 respondents completed the Wave 2 questionnaire; no doubt the extremely onerous requirement to complete a full, continuous seven-day diary contributed to this poor result. Because of the high attrition rate, a fresh sample was drawn in Wave 2, providing similar response rates.

Because just over 62 percent of the Wave 1 questionnaire respondents successfully completed diaries, a major issue of concern is the possibility of systematic bias in the diary sample. Several approaches were established to determine whether the diary sample is in fact biased. The particular hypothesis is that busy people do not keep diaries. Three distinct sorts of questionnaire evidence were used to test this hypothesis. On the basis of the generally small, mainly non-significant differences on these three measures, the conclusion was that non-completion (or non-return) of the diary instrument was unrelated to the relative busyness of respondents. So, as against the "crowding-out" hypothesis, one might counterpose an "inertial hypothesis"—that busy people fit more in, including completing their diaries. This sort of result is frequently reported in relation to panel time-use studies, as in Gershuny (1990) and Robinson and Godbey (1999).

RESULTS

Table 2 shows the initial differences between respondents who used IT during the diary week and those who did not. In terms of the more prominent initial bivariate differences, IT users report six hours more work and commute time and almost five hours less housework time. They also spend three hours less time on personal care, but three hours more time on education-related activities.

Free-time differences are divided into three categories in Table 2, the first being social activities, for which the differences are insignificant and offsetting (e.g., IT users go out to eat and drink slightly more, but they also report an hour less active and passive visiting).

In Table 2, the bottom two categories of free time show more prominent differences, with the 5.4 hours higher IT use of users being almost matched by the 4.1 hours lower time spent on mass media and other leisure.

These, then, are the initial raw differences between users and nonusers. As such, Table 2 shows fewer differences than might be imagined, but even the differences that are found remain ambiguous. For example, IT users report more paid work and education offset by less housework and personal care. This could be due to gender differences, because these are the same activity differences that could distinguish men (more work, education) from women (more housework, personal care).

Even more important, as noted above, are pre-existing, life-style differences that could explain the results. This confounding is the common problem of “unobserved homogeneity” factors on which IT users differ from nonusers—before or independent of having access to IT. To control for those factors, the analysis now turns to the unique results available from a panel-study analysis.

PANEL ANALYSIS

Table 3 contrasts the Wave 1 and Wave 2 differences for those in the HoL study who were not users of computers at home during the week covered by the 1999 study, but who had started to use them at home by the time of the second (year 2000) wave of data collection. It thus contrasts their time-use patterns in 1999 before they started with their 2000 time use as “new users” of home computing.

Table 3 shows that these “new users” spend 3.4 hours/week on the computer—including 1.3 hours online, for the Web or email. Because everyone in this world has precisely 168 hours each week, the extra time spent home computing must come from somewhere. One sees that the “new users” in 2000

TABLE 2: COMPARISON OF IT USERS AND NONUSERS IN OVERALL TIME USE (HOURS PER WEEK): HOME-ON-LINE STUDY WAVES 1 AND 2 COMBINED (UK 1999 AND 2000)

	IT nonusers (1207 weeks)	IT users (467 weeks)	Difference
Necessary Activities			
Paid work at work place	17.2	21.1	+3.9
Paid work at home (not using a computer)	0.9	0.9	0.0
Travel (to/from work, shops, school, cinema etc.)	5.0	7.1	+2.1
Cooking, food preparation	4.1	3.2	-0.9
Clean house, tidying, clothes wash/iron/sew etc.	6.2	4.3	-1.9
Maintenance, odd jobs, DIY, gardening, pet care	3.5	3.3	-0.2
Care of own children or other adults in own home	4.6	3.1	-1.5
Shopping, appointments (barbers/doctors etc.)	4.1	3.8	-0.3
Washing, dressing	5.7	5.2	-0.5
Sleeping, resting	60.2	59.0	-1.2
Eating, drinking at home	8.0	6.8	-1.2
Study at home (not using a computer)	0.5	1.6	+1.1
Courses and education outside home	0.9	2.9	+2.0
Leisure Activities			
Social Activities			
Vol. work, church, helping people (not in own home)	1.0	0.9	-0.1
Going to concerts, theatre, cinema, sports, clubs	1.4	1.4	0.01
Eating out, drinking, (pubs, restaurants)	2.9	3.4	+0.5
Visiting (or meeting) friends or relatives	4.7	4.0	-0.7
Being visited by friends/relatives in own home	1.9	1.6	-0.3
Receiving telephone calls	0.5	0.5	0.01
Making telephone calls	0.6	0.7	+0.1
Media and Non-Social Activities			
Radio, TV, video, etc.	20.6	16.2	-4.4
Reading	3.2	3.0	-0.2
Hobbies, games	1.1	1.2	0.1
Play sports, walks, outings	2.4	2.5	0.1
Doing nothing, other	2.1	2.2	0.1
IT Use			
Personal Computing—games/games console	0.0	1.4	+1.4
Personal Computing—email (write, read or send)	0.0	0.6	+0.6
Personal Computing—browsing the Web/ Internet	0.0	0.5	+0.5
Personal Computing—study at home	0.0	0.9	+0.9
Personal Computing—paid work done at home	0.0	0.8	+0.8
Personal Computing—Other	<u>0.0</u>	<u>1.2</u>	<u>+1.2</u>
Total IT	0.0	5.4	+5.4

TABLE 3: “NEW USERS”: EFFECT OF CHANGE IN IT USE ON TIME ALLOCATION

Hours/week UK	Nonusers in 1999, Users in 2000		
	1999-Wave 1	2000-Wave 2	Change
Necessary activities			
Paid work	23.7	23.2	-0.5
Study, courses	4.8	3.9	-0.9
Unpaid work (+volunteering)	22.4	21.3	-1.1
Sleep and personal care	64.2	64.6	0.4
Eating at home	6.7	6.7	0.0
Travel	7.1	6.8	-0.3
Leisure activities			
Social			
Social life	4.1	4.6	0.5
Visits/being visiting	6.0	6.4	0.4
Telephone calls	1.1	1.0	-0.1
Media and leisure			
Radio, TV, video, etc.	16.5	16.6	0.1
Reading	3.0	3.1	0.1
Hobbies, games	1.7	1.1	-0.6
Playing sports, walking, outings	2.7	3.0	0.3
Doing nothing, other	4.0	2.3	-1.7
IT use			
Computer games, etc.	0.0	0.8	0.8
Email, browsing Web	0.0	1.3	1.3
Work on computer	0.0	1.3	1.3
Total Free Time	39.1	41.5	+2.4

found the extra half hour by reductions in time spent in study at home, unpaid work (including shopping) and in “doing nothing” at home. In the first two of these cases there may have been some direct substitution of a computing for a non-computing activity. So, for example, their Web browsing might well have involved acquisition of study materials and e-shopping.

What does not emerge—unlike the findings of previous research that used a less carefully designed study methodology—is that home computing led to a loss of TV use (contrast, for example, Nie and Erbring 2000). On the contrary, the new users actually watched the same amount of TV, did the same amount of reading and played the same amount of sports. What they decreased was their time doing nothing, engaging in hobbies and games and going to classes.

These “new users” are compared with the “nonusers” (i.e., people who used the technology neither during the 1999 nor the 2000 study weeks) in Table 4. One point particularly to note is the nonuser group’s TV time is some three hours longer (19.5 hours) than that (16.5 hours) of the “new users.” Had these two groups simply been compared cross-sectionally, one would have quite likely drawn the entirely incorrect conclusion that computing time is inversely related to mass media use. Unlike the new users, nonusers decreased their TV time slightly, offset mainly by more time in sports. Note that the “doing nothing” time (2.3 hours) of nonusers remained the same, while that time for new users was reduced by same amount. This suggests that new users were using computers to fill in the time they had nothing to do.

One can see the clearest evidence of the development of new skills and the discovery of new applications, as users gain experience. Many of the old users started out with much time devoted to playing computer games—but now as they find more interesting and useful things to do with their computers, their game playing declines from an hour and three-quarters to an hour and a quarter per week. Their Internet/email usage, by contrast, almost trebles from 36 minutes per week to 106 minutes (one hour and 46 minutes). Perhaps the small reduction in the “work on the computer” category represents in part a small shift to more interactive, remote-working practices.

One might notice in particular the evidence of the gradual nature of the process of diffusion of IT skills. The new users and the old users both substantially increase their time on the Internet during the single year spanned by the study: this represents a really major change in the life of the nation as a whole. But plainly the old users still have a lead (1.7 hours/week of Net use) that the new (with 1.3 hours) have not yet caught up with. The old users, it may be, have more skills and knowledge that allow them to use the Internet to better effect than the new ones. It will, however, never be possible to entirely disentangle the extent to which this difference reflects micro-sociological learning processes from the macro consequences of the overall growth in use of the Internet over this same period. Note also that this is the group in which a decline in TV use is found, possibly to accommodate their new computer use. The initial process of diffusion differs for household computing equipment and television. With television, all the domestic consumer had then to do was to locate the “on” switch. However, with the home computer, the more complex and important processes of diffusion—of (at the micro level) the skills required to use this equipment, and of (at the macro level) the development of new applications for the system as a whole—take place over an extended period. Given the general-purpose nature of the new technological paradigm, these skills and applications might well continue expanding for many years to come.

TABLE 4: "NONUSERS" CHANGE IN TIME ALLOCATION

Hours/week UK adults	Non-IT Users Either Year		
	1999-Wave 1	2000-Wave 2	Change
<u>Necessary activities</u>			
Paid work	21.1	23.5	2.4
Study, courses	1.0	0.8	-0.2
Unpaid work (incl. voluntary)	27.6	25.0	-2.6
Sleep and personal care	65.6	65.0	-0.6
Eating at home	7.8	8.2	0.4
Travel	5.0	5.5	0.5
<u>Leisure activities</u>			
Social			
Social life	4.1	4.2	0.1
Visits	6.5	6.0	-0.5
Telephone	11.6	11.5	-0.1
Media and other leisure			
Radio, TV, Video, etc	19.8	19.1	-0.7
Reading	3.1	3.3	0.2
Hobbies, games	1.1	1.1	0
Playing sports, walking, outings	2.2	2.7	0.5
Do nothing, other	2.1	2.3	0.2
IT use			
Computer games, etc	0.0	0.0	0.0
Email, browsing the Web	0.0	0.0	0.0
Work on the computer	0.0	0.0	0.0
Total Free Time	44.9	42.3	-2.6

Table 5 finally considers the "old users," those who engaged in home computing during both the 1999 and 2000 study periods. Here one might pay specific attention to the difference in computer use between the old and the new users. One can see that in each of the three categories of home computer use, old users do more home computing than the new ones.

TABLE 5: "OLD USERS": IT USE AND CHANGE IN TIME ALLOCATION

	1999	Wave 12000	Wave 2 Change
Necessary activities			
Paid work	24.4	26.8	2.4
Study, courses	3.5	2.7	-0.8
Unpaid work (incl. voluntary)	18.1	17.5	-0.6
Sleep and personal care	63.4	63.8	0.4
Eating at home	6.5	6.2	-0.3
Travel	7.2	8.7	1.5
Leisure activities			
Social			
Social life	4.5	5.0	0.5
Visits	5.6	4.7	-0.9
Telephone	11.0	10.9	0.1
Media and other leisure			
Radio, TV, video, etc.	16.9	15.8	-1.1
Reading	3.2	2.7	-0.5
Hobbies, games	1.2	1.1	-0.1
Playing sports, walking, outings	3.3	2.9	-0.4
Doing nothing, other	2.9	2.0	-0.9
IT use			
Computer games etc.	1.8	1.4	-0.4
Email, browsing the Web	0.6	1.7	1.1
Work on the computer	4.0	3.8	-0.2
Total Free Time	39.9	40.0	0.1

CONCLUSIONS

One can say in general that technical change has direct and indirect effects on leisure. Indirectly, technology first frees up time for leisure activities, because people can do their jobs and also shop, cook, clean their houses and care for their children more productively.

Second, the technology may itself *change the nature of leisure activities*, providing substantively new classes of leisure consumption, or change the

accessibility of the activities and hence alter the social distribution of their consumption.

However, perhaps the most direct and interesting effects of home-based computer facilities fall into the category of *social-distribution* effects of technical change on leisure activities. The only *really* substantial change in UK leisure patterns, over the period that one normally thinks of as the “TV era” of the 1960s to the 1990s (see Table 1), was the growth of *publicly* sociable activities—such as eating out and going to pubs and bars.

On the other hand, it is certainly not too fanciful to suppose that the new computing technologies of the late twentieth century may be used in the early twenty-first century to provide information on access to, and training in, the enjoyment of a far wider range of leisure and sporting activities than was previously enjoyed by the mass of the population. As in the case of publicly sociable activities, it will again involve mostly familiar and recognizable of leisure pursuits—*theatre, dance, sport and the like*—and also in the form of eating and drinking in sociable circumstances outside private homes. These are the major sorts of change, growth and redistribution of traditional consumption activities that are likely to constitute the major impact of home computing over the next two decades.

The initial cross-sectional comparison of Web users’ and non-users’ time use in Table 2 is in principle somewhat misleading. The higher levels of paid work, travel, educational activity, “eating out” and the lower levels of sleep, home visiting and television watching are in fact all suggestive of the somewhat lower average age of the users, and probably have little to do with Web use itself.

The only really concrete evidence of the *effects* of the Web, then, emerges when one takes advantage of the panel design and compares peoples’ time use across a seven-day period in the successive years. Here, the same individuals are involved in both years, so heterogeneity among those covered in the two columns of each table—measured or unmeasured—cannot explain the differences.

Consider the annual change in the time allocation of new vs. continuing Web-users in Tables 3 and 5 above. In both cases, “going out” increases, perhaps in part a result of information gained over the Web. However, very little else changes. For the continuing users, television and similar activities reduce by 1.1 hours per week whereas Web use and email increase by just the same amount, which may be plausibly explained as a learning effect. The small average increase in paid work and decrease in unpaid work among the continuing user group reflects the same increasing engagement with the world outside the home as does their growth in non-home leisure time. These preliminary results from the first two waves of the panel study certainly do not show any overall evidence of a “privatization” effect of home-based Web use.

REFERENCES

- BBC Audience Research Department. 1964. *The People's Activities*. London: BBC.
- BBC Audience Research Department. 1964. *The People's Activities and the Use of Time*. London: BBC.
- Bell, Daniel. 1974. *The Coming of Post-Industrial Society*. London: Heineman.
- Gallie, D. 1994. Methodological Appendix: The Social Change and Economic Life Initiative. In M. Anderson, F. Bechhofer and J. Gershuny (eds.). *The Social and Political Economy of the Household*. Oxford: Oxford University Press.
- Gershuny, J. I. 1978. *After Industrial Society? The Emerging Self-Service, Economy*. London: Macmillan.
- Gershuny, J. I. 1984. *Social Innovation and the Division of Labor*. Oxford: Oxford University Press.
- Gershuny, J. I. 2000. *Changing Times: Work and Leisure in Post-industrial Society*. Oxford: Oxford University Press.
- Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T. and Scherlis, W. 1998. Internet Paradox: A Social Technology that Reduces Social Involvement and Psychological Well-Being? *American Psychologist*. 53(9), p. 1017-1031.
- Lacohee, H. and Anderson, B. 2001. Interacting with the Telephone, *International Journal of Human-Computer Studies*. 53(5), p. 665-699.
- Nie, N. and Erbring, 2000. *Internet and Society: A Preliminary Report*. Stanford Institute for the Quantitative Study of Society. [Online]. Available at: http://www.stanford.edu/group/siqss/Press_Release/Preliminary_Report.pdf. Reprinted in this issue.
- Taylor M., Brice, J. Buck, N. H. and Prentice, E. 2000. *BHPS User Manual*, Vol. 2. Wivenhoe: ISER [Online]. Available at: <http://www.iser.essex.ac.uk/bhps/index.php#BHPSdoc>.

Wave	Serial Number	Household No	Check No	Person No
1	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/>

HOW DO YOU SPEND YOUR TIME?

We would like you to use this diary to record how you spend your time over the next week, to help us understand the different ways people use their time.

The diary asks you to record your activities for the week of:

_____ until _____

Your interviewer will explain how to fill in the diary and will then leave it for you to complete. To ensure that the information is as accurate as possible we would appreciate it if you could fill in the diary on a daily basis. Once you have finished recording your activities for the whole week, please return the diary to us in the pre-paid envelope provided. As a token of our thanks for your help, your interviewer will leave you a gift voucher.

Many thanks for your help

This diary belongs to:

Name: _____

Interviewer to complete

1. Enter the full household ID and Person Number at the top of the front page.
2. Write in the respondent's:

	Day	Month	Year
a) Date of birth	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
b) Sex	Male	1	
	Female	2	

3. Fill in the date the respondent will start the diary
(this is the day following the interview)

Day	Month	Year
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
		1 9 9 8

4. Code the day of the week the diary will start

Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6
Sunday	7

How to complete the diary

1. The aim of the diary is to show what you are doing every day for one week. A number of activities are listed on the side of the page which should cover most things that people do. If you cannot find an appropriate code, please use the 'Other' code (35) and write in what you were doing at that time. Please try to record an activity for every quarter hour of each day.
2. We are particularly interested in your main activity during each quarter hour. If you are doing more than one thing at a time, please use a continuous line for the main activity and dashed lines for other activities.
3. If you make a mistake please just cross it out.

4. An example of a completed day is given on the next two pages. You can see that in this example the person:

Slept (code 1) between 4.00am and 7.00am

Washed and dressed (code 2) between 7.00am and 8.00am

Ate breakfast (code 3) between 8.00am and 8.30am

Travelled (code 8) between 8.30am and 9.00am

Paid work (code 9) between 9.00am and 12.30pm

.....and so on until 10.30pm when they went to bed and slept.

Sometimes it is difficult to decide which category an activity falls into. Here are a few examples of what to include in some common activities.

Care of own children or other adults in own home (code 5)

This includes playing with children or helping them with their homework.

Cleaning house, tidying (code 6) includes

Bedmaking

Washing up

Travel (to and from work, shops, school, cinema etc.) (code 8)

Include time spent commuting to and from your home to work as well as the time it takes to go to the shops, or to pick children up from school for example. Also include longer periods of travel such as driving or taking the train to visit relatives or friends for example. Code 18, 'Visiting or meeting friends or relatives' would then record the time you spent with them.

Paid work at workplace (code 9)

People who travel in the course of their work, e.g. bus, lorry, van, taxi drivers, delivery men, sales reps, should code their working hours here. Include time spent away from the workplace at meetings, conferences, training courses etc. Any time spent travelling to meetings away from your normal place of work should also be included here rather than as travel at code 8.

Shopping, appointments (hairdressers/doctors etc) (code 14) includes

Taking the car to the garage

Going to the dentist, optician, hospital etc.

Going to the solicitor or estate agent etc.

5. When you have finished your diary please post it in the pre-paid envelope provided.

Many thanks

Activity

1	Sleeping, resting	1
2	Washing, dressing	2
3	Eating at home	3
4	Cooking, food preparation	4
5	Care of own children or other adults in own home	5
6	Cleaning house, tidying, clothes washing, ironing, sewing etc.	6
7	Maintenance, odd jobs, DIY, gardening, pet care	7
8	Travel (to and from work, shops, school, cinema, station etc.)	8
9	Paid work at work place	9
10	Paid work at home (not using a computer)	10
11	Study at home (not using a computer)	11
12	Courses and education outside home	12
13	Voluntary work, church, helping people (not in own home)	13
14	Shopping, appointments (hairdressers/doctors etc.)	14
15	Going to concerts, theatre, cinema, clubs, sporting events	15
16	Walks, outings etc.	16
17	Eating out, drinking, (pubs, restaurants)	17
18	Visiting or meeting friends or relatives	18
19	Sports participation, keeping fit	19
20	Hobbies, games, musical instruments	20
21	Watching TV/Cable/Satellite TV	21
22	Watching videos/laser disks	22
23	Listening to radio, CD, cassette	23
24	Reading newspapers, books, magazines	24
25	Being visited by friends or relatives in own home	25
26	Receiving telephone calls	26
27	Making telephone calls	27
28	Personal Computer - games/games console	28
29	Personal Computer - email (writing, reading or sending)	29
30	Personal Computer - browsing the www / Internet	30
31	Personal Computer - study at home	31
32	Personal Computer - paid work done at home	32
33	Personal Computer - Other	33
34	Doing nothing (may include illness)	34
35	Other PLEASE WRITE IN	35

EXAMPLE

late afternoon, evening & night

Day

		Afternoon		Evening					Night					
		4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	00am	1am	2am	3am	
1														1
2														2
3														3
4														4
5														5
6														6
7														7
8														8
9														9
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34														34
35														35

4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	00am	1am	2am	3am
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Activity

1	Sleeping, resting	1
2	Washing, dressing	2
3	Eating at home	3
4	Cooking, food preparation	4
5	Care of own children or other adults in own home	5
6	Cleaning house, tidying, clothes washing, ironing, sewing etc.	6
7	Maintenance, odd jobs, DIY, gardening, pet care	7
8	Travel (to and from work, shops, school, cinema, station etc.)	8
9	Paid work at work place	9
10	Paid work at home (not using a computer)	10
11	Study at home (not using a computer)	11
12	Courses and education outside home	12
13	Voluntary work, church, helping people (not in own home)	13
14	Shopping, appointments (hairdressers/doctors etc.)	14
15	Going to concerts, theatre, cinema, clubs, sporting events	15
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30	Personal Computer - browsing the www / Internet	30
31	Personal Computer - study at home	31
32	Personal Computer - paid work done at home	32
33	Personal Computer - Other	33
34	Doing nothing (may include illness)	34
35	Other PLEASE WRITE IN	35

WRITE

morning and early afternoon

Night		Morning							Afternoon			
4am	5am	6am	7am	8am	9am	10am	11am	12noon	1pm	2pm	3pm	
1												1
2												2
3												3
4												4
5												5
6												6
7												7
8												8
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35												35
	4am	5am	6am	7am	8am	9am	10am	11am	12noon	1pm	2pm	3pm

late afternoon, evening & night

Day

		Afternoon		Evening					Night						
		4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	00am	1am	2am	3am		
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4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	00am	1am	2am	3am
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