

## Background to the methods used in the Time Budget Survey (TBO)

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The SCP's Time Budget Survey (TBO) uses time budget study methodology. This entails a specific method of measuring time use. Time budget research is research in which respondents are asked to record the precise moments and duration of all events of a predefined type within a specific period of time (cf. Pronovost 1989: 76). Generally the time use during an entire day, part of a day or number of days is measured in its totality, but this is not essential: a time budget study could equally well measure only the time spent working or reading, for example; this could be referred to as a partial or semi-time budget study. The key factor in all time budget research is that a note is made of when each individual activity begins and ends. In contrast to 'normal' surveys, respondents are not asked to look back in general at a collection of activities (how often have you been swimming in the last year, how many hours per week do you work, etc.), but rather to note down the precise times and dates of every activity on a diary-like form.

The strength of time budget research lies in the fact that the researchers attempt to monitor time use from as close at hand as possible, and then to draw a comprehensive picture from those observations. Keeping a diary minimises the need for respondents need to rely on their - selective - memories. The risk of deliberate or accidental overestimation or underestimation of activities is thus also kept to a minimum. Because of the 'closed' recording system used, in which a period of 24 hours really does consist of no more than 96 fifteen-minute periods, the information contained in the diaries relates fairly directly to the actual time use during the respondents' daily life. This makes time budget research the most reliable indicator of time use, especially for informal, fairly mundane and regularly recurring activities (e.g. household tasks, informal social contacts, reading). (Juster en Stafford 1985; Robinson 1985; Harvey 1984, 1993; Niemi 1993; Stoop & Oudhof 1988; Knulst & Van Beek 1990; Kalfs 1993; Keuzenkamp et al. 2000). The time budget research method is also ideally suited to analyses concerning the timing of activities and the distribution of activities over the day and the week (Gershuny & O'Sullivan 1998).

### **Background and international context**

The survey carried out by Bevans in 1913 of how manual workers spend their leisure time is generally seen as the first application of the time budget method for studying social issues (Knulst & Van Beek 1990:127, Beckers & Mommaas 1991:14). The technique became popular in the Soviet Union in the 1920s and 30s, where time budget studies were used for planning purposes and to measure progress since the Revolution. Large-scale time budget studies were conducted in United States several times in the 1930s, including by the Russian exile Pitirim Sorokin (Sorokin & Berger 1939).

The method retained its popularity after the Second World War; in the Soviet Union alone, more than a hundred time budget studies were carried out in the period between 1958 and 1968 (Pronovost 1989:74). Time budget research also received a major boost from international comparative research by the United Nations, which began in 1964 and involved 12 countries (Szalai 1972). Since then it has been an established research method. The institutionalisation of the method is reflected among other things in the establishment of an internationally recognised community of time budget researchers (*IATUR, International Association of Time Use Research*, [www.stmarys.ca/partners/iatur/iatur2.htm](http://www.stmarys.ca/partners/iatur/iatur2.htm), led by the Canadian Andrew Harvey and, as

research committee RC-13, forming part of the *International Sociological Association*) and an international databank for time budget research (*the International Time Budget Archive*, [www.iser.essex.ac.uk/mtus](http://www.iser.essex.ac.uk/mtus), under the responsibility of the Briton Jonathan Gershuny). For some years now there has also been a Research Network on Time Use (*RNTU*; [www.uni-lueneburg.de/timeuse](http://www.uni-lueneburg.de/timeuse)) where, under the leadership of the German Joachim Merz, an inventory is being compiled of time use research and researchers.

At European level, *Eurostat* (a collaborative venture of national statistics offices in the EU) has developed initiatives for streamlining time budget research in order to make individual country studies more easily comparable. Among other things, Eurostat's guidelines mean that fieldwork is not conducted at individual level but at household level, that it covers weekdays and weekend days, and that respondents use their own words to describe their main activity per 10-minute interval. Several countries have implemented the Eurostat guidelines in recent years (e.g. France (1998), Belgium, Finland and Portugal (1999), Norway, Great Britain and Italy (2000), Sweden and Germany (2001)). The Eurostat guidelines are not applied in research at national level in the Netherlands, though a small-scale survey (136 households, 284 persons) carried out in 1997 in and around the town of Nijmegen was based on the Eurostat system (Huysmans 1999).

### **Time budget research in the Netherlands**

The study by Blonk, Kruyt and Hofstee of the leisure time use of labourers is generally regarded as the first time budget study in the Netherlands. In the study, 226 workers noted down their activities during a period of two weeks (Blonk et al. 1936). After the Second World War, Statistics Netherlands (CBS) carried out time several budget studies, in 1953, 1955 and 1962. In the 1953 survey (CBS 1954), respondents aged 18 and over were asked in interviews about how they had spent their time on the previous day ('recall interviews'). The scope of this large-scale survey (n = 4,002) was limited to activities such as listening to radio programmes and some supplementary information about the times at which people got up, came home and went to bed. In the 1955/56 CBS survey (n = 10,500), attention extended to use of all free time. Successive 'recall interviews' were used to ascertain the way in which people had spent their free time during the week (the interview on the Monday also related to the previous Saturday). The survey did not include all 168 hours in the week, but only the daytime periods when people were free from work and school: from 17.30 hours to 24.00 hours on weekdays, from 12.00-24.00 on Saturday and from 08.00-24.00 on Sunday. The survey was repeated in 1962/63, when attention was also given to the use of free time on Saturday mornings, which by that time were partially exempt from working and school duties (CBS 1957-1959; CBS 1964-1966). The data from these two surveys lend themselves well to comparison with the findings of the time budget survey by SCP, Intomart et al.. (Knulst en Kraaykamp 1996; Breedveld 1999).

At the end of the 1980s CBS once again carried out a survey of time use (CBS 1989 and 1990). In the meantime, other researchers had carried out a number of - less comprehensive - studies: a survey of 1,800 housewives by Phillips in 1996 (Phillips 1966), a survey of travel movements and use of space by the American population in 1968-1974 (Vidakovic 1970, 1980), and a survey in 1970 commissioned by NOS Radio and Television and STER, the advertising organisation for Dutch public broadcasting, of time spent listening to the radio and watching television (Intomart 1970). Since 1978, CBS has carried out an annual Mobility Survey (OVG) (e.g. CBS 1999a) as well as a Daytime Recreation Survey (carried out in 1990, 1995 and probably in 2002), focusing on recreational outings (CBS 1997). The two latter surveys record only a part of people's time use, and are therefore examples of partial or semi-time budget studies.

CBS took up time budget research again in the late 1990s. A module on time use was added to the Permanent Quality of Life Survey (POLS) in 1997, in which respondents were asked to divide their time use on the previous day into 32 activities. The fieldwork is spread over the whole year, so that seasonal influences can be taken into account. CBS published the results of this survey in 1999 (CBS 1999b). In the same year, the time use module was incorporated in the POLS survey once again. Data were published on the CBS 'Statline' ([www.cbs.nl/nl/statline/index.htm](http://www.cbs.nl/nl/statline/index.htm)).

So far in this brief sketch of research into time use in the Netherlands, the Time Budget Survey (TBO) by SCP, Tilburg University (KUB), the Transport Research Centre (AVV), NOS/Teleac/NOT and the media organisation Cebuco has been left out. Within the context of this sketch, the origins of this study in fact follow on from the 1970 NOS/STER/Intomart survey. In the preparations for the repeat of that survey in 1975, several organisations expressed an interest in participating, including SCP, Teleac, Wageningen Agricultural University and newspaper & magazine publishing organisations. This facilitated a considerable expansion of a survey which had initially focused primarily on the use of radio and television services.

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## References

- Beckers, T. & H. Mommaas (1991)  
T. Beckers en H. Mommaas. Het vraagstuk van den vrijen tijd. Leiden / Antwerp: Stenfert Kroese.
- Blonk et al. (1936)  
A. Blonk, J. Kruyt en E. Hofstee. De besteding van de tijd door de Nederlandse arbeiders. Amsterdam: Nutsboekerij, 1936.
- Breedveld (1999)  
K. Breedveld. Regelmatig onregelmatig. Spreiding van arbeidstijden en de gevolgen voor vrijetijd en recreatie. Amsterdam: Thela Thesis, 1999.
- CBS (1954)  
Centraal Bureau voor de Statistiek. Radio en vrije-tijdsbesteding. Utrecht: De Haan.
- CBS (1957-1959)  
Centraal Bureau voor de Statistiek. Vrije-tijdsbesteding in Nederland 1955/1956 (10 parts). Zeist: De Haan.
- CBS (1964-1966)  
Centraal Bureau voor de Statistiek. Vrije-tijdsbesteding in Nederland 1962/1963 (8 parts). Zeist: De Haan.
- CBS (1989)  
Centraal Bureau voor de Statistiek. De tijdsbesteding van de Nederlandse bevolking. Kerncijfers 1987. Voorburg / Heerlen: CBS.
- CBS (1990)  
Centraal Bureau voor de Statistiek. Alles heeft zijn uur. Sociaal-culturele berichten 1990-13. Voorburg: CBS.
- CBS (1997)  
Centraal Bureau voor de Statistiek. Dagrecreatie in Nederland. Heerlen: CBS.
- CBS (1999a)  
Centraal Bureau voor de Statistiek. De mobiliteit van de Nederlandse bevolking in 1998. Heerlen: CBS.
- CBS (1999b)  
Centraal Bureau voor de Statistiek. De leefsituatie van de Nederlandse bevolking 1997, deel 3: tijdsbesteding en maatschappelijke participatie. Voorburg/Heerlen: CBS.
- Gershuny, J. & O. Sullivan (1998)

J. Gershuny, & O. Sullivan. The sociological uses of time-diary analysis. *European Sociological Review*, 14(1), 69-85.

- Harvey (1984)  
A. Harvey. Analysis and description of time budget data. In: A. Harvey et al. (ed.). Time budget research. An ISSC Workbook in comparative analysis. Frankfurt/New York: Campus Verlag, 1984 (62-83).
- Harvey (1993)  
A.S. Harvey. Guidelines for time use data collection. In: *Social Indicators Research* 30 (1993) 2/3 (197-228).
- Huysmans (2001)  
F. Huysmans. Mediagebruik en de temporele organisatie van het dagelijkse leven in huishoudens. Amsterdam: Thela Thesis, 2001.
- Intomart (1970)  
Intomart B.V. Tijdsbesteding in Nederland. Hilversum: Intomart.
- Juster en Stafford (1985)  
F. Juster & F. Stafford (ed.). Time, goods, and well-being. Michigan: Institute for Social Research.
- Kalfs (1993).  
N. Kalfs. Hour by hour. Effects of the data collection mode in time use research. Amsterdam: Nimmo, 1993.
- Keuzenkamp et al. (2000)  
S. Keuzenkamp, E. Hooghiemstra, K. Breedveld, A. Merens en N. Mertens. De kunst van het combineren. Taakverdeling onder partners. The Hague: Social and Cultural Planning Office, 2000.
- Knulst en Van Beek (1990)  
W. Knulst en P. van Beek. Tijd komt met de jaren. Rijswijk: Social and Cultural Planning Office, 1990.
- Knulst en Kraaykamp (1996)  
W. Knulst en G. Kraaykamp. Leesgewoonten. Een halve eeuw onderzoek naar het lezen en zijn belagers. Rijswijk: Social and Cultural Planning Office, 1996.
- Niemi, I. (1993)  
Systematic error in behavioural measurement: comparing results from interview and time budget studies. *Social Indicators Research*, 30(2/3), 229-244.
- Philips (1966)  
Philips Nederland N.V. De Nederlandse huisvrouw. Eindhoven: NIPO / Philips Nederland N.V.
- Pronovost, G. (1989)  
*G. Pronovost. The sociology of time (book-issue of Current Sociology vol. 37-3)*. London: Sage.
- Robinson (1985)  
J. Robinson. The validity and reliability of diaries versus alternative time use measures. In: F. Juster en F. Stafford (ed.). Time, goods, and well-being. Michigan: Institute for Social Research, 1985 (33-62).
- Sorokin, P. & C.Q. Berger (1939)  
*Time budgets of human behavior*. Cambridge: Harvard University Press.
- Stoop en Oudhof (1988)  
I. Stoop en J. Oudhof. Methoden van tijdsbestedingsonderzoek. Verslag van een proefonderzoek. Antwerp: Paper Vlaams-Nederlandse studiedagen voor sociologen en antropologen, 1988.
- Szalai et al. (1972)  
A. Szalai et al. (red). The use of time. Daily activities of urban and suburban populations in twelve countries. The Hague/Paris: Mouton.
- Vidakovic (1970)  
V. Vidakovic. Kenmerken van de stedelijke verkeersstructuur. Delft: TU Delft.
- Vidakovic (1980)  
V. Vidakovic. Mens-tijd-ruimte. Amsterdam: Spatial Planning Dept. Municipality of Amsterdam; Delft: TU Delft.

