Introducing Time Use Research

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What is time use research?

• Study of people’s daily activities
  – What they do
  – Where
  – When (time of day, month, year, season)
  – With whom
  – Under what conditions (on smartphone or on paper, whether they pay for the activity or location someone else pays or the activity takes place as a public good, what mode of transport, what type & level of energy/resources used; how physically (in)active they are at the time)
Why care about time use

• Daily behaviour is the Sociological atom of social research (Jonathan Gershuny)
• Daily activities and routines of each person use resources & influence behaviour of others
• What people think they do & what they actually do differs
• Time is a shared resource – even though some people can buy better means to do some activities, we all have 24 hours, 1440 minutes per day
Uses of MTUS & AHTUS Include

- Adult care (valuation, time cost, who performs care but does not identify as a carer)
- Child care (valuation, trends, participation of fathers, balance of physical/interactive care)
- Education (homework, parental involvement)
- Environment (transport modes, time at home/inside)
- Leisure (trends, physical activity, quality)
- Paid work (hours of work, scheduling)
- Sleep (hours per week, deprivation, trends)
- Unpaid work (women’s total economic contribution, hours, trends, sharing in households)
- Volunteering (valuation, trends)
- Work-life Balance
Modes of collecting time use data

- Observation (in person or over video link)
- Administrative data (entry/exit records; GPS tracking of location of devices; public records of service use; formal workplace diaries)
- Experience Sampling Methods (ESM)
- Monitoring devices (wearable technology)
- Unstructured diaries (paper, blog, twitter feeds, Facebook, video)
- Structured time use diaries
Modes of collecting time diaries

- Paper & pencil/pen (left with diarist or completed with interviewer present)
- Telephone or Skype interviews
- Tablet / computer (in person or on-line)
- Smartphone / app
- Wearable technology (can be done as a stand-alone survey or in conjunction with another mode)
Analysing activity patterns

• Distinguishing activities by context (reading on a train differs from reading in bed or on a beach)
• Allows flexibility to restructure data by interest in activity domains (work, personal & household care; leisure); physical activity, environmental impact
• Multi-tasking and simultaneous activities
• Distinguish impact of sequence variation on quality of different experiences
Time use research – the early years

- Earliest surveys 1890s, early large scale surveys from 1920s
- Key early theorists
  - George Bevans
  - Hildegarde Kneeland
  - George Lundberg
  - Maud Pember-Reeves
  - Margaret Gilpin Reid
  - Pitirim Sorokin

Early countries: France, Germany, Japan, Russia, UK, USA
Radical challenges of time use

• Human behaviour occurs in cycles aligned to both natural and cultural rhythms
• To understand behaviour, you must consider activity patterns in total – the focus on isolated elements distorts and obscures the picture
• All activities by all groups of people are important research subjects
• **Challenge to prevailing policy & social science assumptions of last century**
Time Use Data Underused

• Long-standing prejudice against time use data
  – Data was difficult to process pre-1990s, myth that diary data too difficult to process persists
  – Resistance to challenges to core assumptions – particularly in fights for gender equality & environmental stewardship
  – Established, larger constituencies fighting for retention of other surveys in austerity era
  – Few time use text books or taught courses
  – Many people in field still sidelined
  – Limited accessible archives
Key time use archives

• Centre for Time Use Research
  – www.timeuse.org
  – Most comprehensive collection of time use information; included 2 harmonised datasets, the American Heritage Time Use Study (AHTUS) and the Multinational Time Use Study (MTUS)

• ATUS-X https://www.atusdata.org/index.shtml

• Consolidated Human Activity Database (CHAD)
  – http://www.epa.gov/heasd/chad.html
  – Collection of USA state & region level surveys + some national surveys
Key USA time use surveys

- Kneeland USDA 1920s & 1930s
- 1965-66 Multinational Time-Budget Project
- 1975-76 American's Use of Time: Economic & Social Accounts
- 1985 American’s Use of Time
- 1992-95 National Human Activity Pattern Survey
- 1998-01 FISCT & National Survey of Parents
- 2006 Princeton Affect & Time Survey (PATS)
- 2003-14 American Time Use Survey
Key USA time use surveys

- Presently included in the American Heritage Time Use Study (AHTUS) and Multinational Time Use Study (MTUS); being added to TUS-X

- Data being processed at CTUR for future release
  - USDA 1920s/30s; 2006 PATS, 2013 ATUS, future ATUS years also will be added
USDA 1920s/30s surveys

- Organised by Hildegard Kneeland at USDA to measure unpaid production in economy
- 1500 farm, town & college-educated women in several states, including California, Michigan, Montana & Oregon
- 7-day own words diaries; individual week summary sheets of total time in 60 activities
- Data stored in boxes as USDA & substations; CTUR collecting, digitising, & coding diaries
Multinational Comparative Time-Budget Research Project

- Part of Szalai pioneering comparative (10 East & West European countries, USA, Peru) project
- 2 samples; Jackson Michigan & contiguous states
- Collected by Univ of Michigan & Harvard Univ
- 1 diarist aged 18-64 in households with at least 1 employed person not working in agriculture
- Small (759 Jackson + 1262 national diaries)
- Own words paper diary collected 1965-1966
- 82% response Jackson; 74% national
American's Use of Time: Economic & Social Accounts

• Early & rare longitudinal survey; 4 points 1975-76, 1981 follow-up of subsample
• Contiguous state sample of 1 person aged 18+; reduced diary & questionnaire also asked of spouse when sample person in a couple
• 1st survey collecting activity category affect data
• Combination of own words paper diaries & CATI
• 72% response Wave 1; 45% response 4 waves
• 4584 main respondent diaries across 4 waves
• Univ of Michigan collected survey
American’s Use of Time

- Univ of Michigan collected survey in 1985
- 3 samples; personal interview, CATI, paper self-completion own words post-back diaries
- Post-back main part of sample, only existing episode data
- All people aged 10+ completed diaries
- Included own-words reporting & affect data
- 55% response across samples; 51% post-back
- 3339 post-back diaries
National Human Activity Pattern Survey (NHAPS)

- Survey of exposure to environmental pollutants, random digit dial sample, phone interview, 1 diarist per household, collected by University of Maryland for Environmental Protection Agency
- Main survey 1992-94; diaries from all ages (0+); omitted health, couple status, household income
- 1994-95 extension collected omitted variables from people age 18+
- 63% response; 7,514 diaries main sample
- 65% response; 1,199 diaries 94-95
FISCT and NSP

• 2 University of Maryland CATI surveys of people aged 18+ often analysed together

• 1998-99 Family Interaction, Social Capital, & Trends in Time Use (national sample)
  – National Science Foundation funding; 56% response

• 1999-01 National Survey of Parents
  – Sloane Foundation funding; 64% response
  – Sample of parents of children aged <18

• 2,351 total diaries (1,891 have actual age; age imputed in other cases)
Princeton Affect & Time Survey

- Alan Krueger & Daniel Kahneman at Princeton University designed and organised the survey, collected by Gallup Organization with funding from National Institute of Aging
- 1 person per household, 24 yesterday diary, included 6 affect questions for 3 moments in day
- 5981 diaries, 75% response from phone numbers reached by random-digit dialling sample
- Survey provided model for 2010; 2012 affect supplements of ATUS