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ITALIAN TIME USE DIARY AND COMPUTER BASED EDITING

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The data quality of the daily diaries is of fundamental importance for the Italian Time Use Survey. This is characterized, for it's amount of questionnaires and diaries, by a long process of data editing. In the past (02/03) and current editions (08/09), it has been optimized, reaching a high level of data editing quality, throughout different procedures and applications.

Among these, two SAS/AF frames have permitted to correct all the residual data which hasn't been corrected throughout all the deterministic and probabilistic procedures because of their excessive inconsistencies, incompatibilities, and impossibility to be corrected by generalized rules.

The first frame, introduced in the 2002/2003 edition, has been developed for the non-automatic correction of the daily diaries; the correction has been possible because of the visualization of the whole diary, other individual and household information, and also the day diaries of the rest of the household.

The second, introduced in the current edition, for the correction of all of the dates on the diaries and questionnaires. The determination of the effective compiling day of the daily and week diary is of fundamental importance for the calculation of the weights. The novelty of this frame, is the possibility to visualize interactively all the information about a household necessary to correct the variables indicating dates; both the daily diary and the weekly diary can be checked out to reconstruct the dynamics of the day/week, and interactively with the ones of the other members of the household; in this way we can also recover missing information with the help of all the questionnaires/diaries, and of all the members of the household. Therefore, also dia-

ries which seemed impossible to correct have been recovered, and the one by one diary correction has let the Time Use Survey improve and reach a better data quality throughout the various editions.

The third edition of the Italian multi-purpose Time Use Survey has been carried out in 2008-09, interviewing a sample of 18,250 households. The data has been collected by using a PAPI technique and the survey instruments used to gather the information have been the daily diary, the week diary, the individual and household questionnaire. All of the survey instruments contain a very detailed and complex quantity of information, related to a household and it's components, a day diary and a reference week of working time.

For the high level of detailed information contained in the day diary, the data quality of the daily diaries is of fundamental importance for the Italian Time Use Survey, since the indicators of measurement of the durations of the various activities are very sensitive to any change or correction. Furthermore, the coherency of all the dates and information reported on all the questionnaires and diaries is necessary to reconstruct the dynamics of the Italian population and to have a realistic picture of the Italian society. The quality of data is considered one of the main objectives of the official statistics, and is pursued in order to obtain a reliable representation of data, access and exploit a file of coherent information and guarantee a high quality of the esteems.

Therefore, the Italian TUS is characterized, for it's amount of questionnaires and diaries, by a complex process of data editing. In the past (2002-03) and current editions (2008-09), it has been optimized, reaching a high level of data editing quality, throughout different procedures and applications.

This paper illustrates the correction process of the day diaries, and of the dates of all of the survey instruments throughout a deterministic process of editing first, and afterwards with the exploitation of two tools developed in the SAS/AF language.

The correction of the day diary

The information gathered by the day diary concerns the main activity, the parallel activity, the activity's locations, the modes of transport, the with whom codes, and the ancillary codes, which are created during the codification phase to individuate incoherent situations.

Though the language is subject to shared rules, it expresses meanings that can change depending on the context. Hence, at times, the description of the activities is not enough for their codification; it becomes necessary to read the context where the activity was carried out (see Bolasco, 1997; Camporese et al., 2001; Romano, 2004a).

Therefore, the correction process concerns not only the main activities, but also the parallel activities, the locations and the persons with whom the activities were carried out.

Moreover, the lack of coherence in the sequence of activities leads to the necessity of developing procedures that take into account the global vision of the diary.

Only part of the diaries has been corrected by the automatic correction, by using SAS procedures throughout rules that compare the main activities, the parallel activities, the locations and the with whom codes on the same record, and, when necessary, the sequence of the episodes in order to maintain a code consistency among and within records. A before-after report permits to check out the editing performed on the data. Only the accurate analysis of this report permits the validation of the correction rules. The report is organized to point out the episodes with errors and the successive corrections, and it also shows the two previous and two following episodes , in order to keep under control not only the singular correction, but also the accuracy of the episodes' sequence. (see Baldazzi e al. 2004)

The rules of automatic correction can be very complex, taking into account a high number of variables, comparing more than one preceding episode with more than one following episode. Also textual information is considered, retrieving strings from contiguous episodes enables to compare the activities of the preceding episodes with those of the following. The consistency checks are so numerous that the plan of editing includes up to 950 rules.

The incompatibilities among codes are also individuated by using ancillary codes indicating strange situations. Nevertheless, although the correction rules manage a consistent number of errors and inconsistencies, there are some that create ambiguous corrections (for example, the singular correction can appear right, but the episodes' sequence is contorted), or cannot correct the data because the correction is based on the analysis of the contextual information.

The day diary correction frame

The non-automatic correction process has been introduced to correct all the residual errors, not otherwise corrected by the automatic procedures. The presence of generic inconsistencies and missing information in the diary have made necessary the visualization of all of the information, inherent the day diary and fundamental to carry out the corrections.

Introduced in the 2002-03 edition, a SAS/AF frame has permitted to navigate among:

•   the whole diary

•   the individual and household information of the diarist

•   the day diaries of the rest of the household

By checking out the diaries of the other household members, and by visualizing the contextual information, the reconstruction of the reality of the diary has been possible and, therefore, the insertion and the editing of the missing information. The diaries to correct have been extracted according to generic rules individuating major inconsistencies or incompatibilities. In correspondence to the episodes with missing round trips to/from work, school, and other places, empty records have been inserted to reconstruct the dynamics of the travelling. The visualization of the sequence of the episodes of the day diaries has enabled the editing, which has been carried out by following the standards agreed upon per each kind of error and incompatibility. In order to keep under control the editing process, a summary with a synthesis of the diaries'

correction indicates the total number of diaries to correct, the total number of the corrected diaries and the total number of diaries still to correct.

Therefore, with the synthesis of the diaries correction, the monitoring of the correction phase has been possible and all the diaries have been corrected.

Automatic editing versus non-automatic editing of the day diary

The correction process is considered an integration between the automatic editing and the non-automatic editing; they interact in a different way, the first cannot substitute the second because its correction is punctual and concerns only part of the diary, meanwhile the non-automatic correction can be broader taking into account the entire context of the diary. In this way, the correction process is complete considering all of the aspects and information contained in the diary. The statistics about the corrected diaries demonstrate the strong interaction between the automatic editing and the non-automatic editing (Table 1):

Table 1

	Frequency	**%**
Number of diaries corrected at least once	50377	98
Number of diaries corrected only by the automatic procedures	14936	30
Number of diaries corrected by both procedures, automatic and non - automatic	34917	69
Number of diaries corrected only by the non-automatic procedure	524	1
Number of episodes corrected at least once	574857	37
Mean number of corrections per corrected diary	15,6	

Source: Italian Time Use Survey 2002-03, own calculations.

In simple terms, each diary is composed of an average of 30 episodes, and at least one episode of almost all the diaries have been corrected.

The correction of the variables indicating dates

The Time Use Survey's instruments of data collection include, other than the day diary, also the week diary, an individual questionnaire and a household questionnaire. More than one date is surveyed on the questionnaires, and this is necessary to be sure that the dates indicated for the diaries' compilation have been respected and are coherent among themselves.

The variables provided by the questionnaires indicating the dates, and implicated in the correction process are 14:

(1)   Theoretical date provided in the sample (date indicated in the sample for the compilation of the diaries)

(2)   Theoretical day of the week provided in the sample (kind of day indicated by the sample for the compilation of the diaries)

(3)   Effective date of compilation of the day diary recorded in the diary (real date in which the day diary was filled out and reported on the diary)

(4)   Day of the week calculated from the effective date recorded in the diary

(5)   Day of the week recorded on the day diary

(6)   Date of the first compilation day of the week diary recorded in the diary (date of the first day of the week in which the week diary was filled out and reported on the diary)

(7)   The 7 dates recorded in the week diary

The first two dates are not on the questionnaires and are only provided by the sample; they cannot change and are fundamental to correct all of the other information about the dates. Besides the importance the dates' concordance assumes in the evaluation of the type of day the activities are carried out, the correction of the dates is important for many other reasons.

For instance, the determination of the effective compiling day of the daily and week diary is of fundamental importance for the calculation of the weights, and, as known, the weights are necessary for the esteems of the durations of the activities of the population.

Depending on the presence of the daily diary and/or of the weekly diary, we have individuated the cases of correct compilation. 55 correction rules have been formulated to correct automatically the inconsistencies or individuate definitively when the rules of compilation of the diaries haven't been respected.

Most part of the rules considers only the dates, using the criterion of the prevalent of consistent information. In these cases, the editing of the missing dates is performed by using the prevalent dates in which the diaries and questionnaires were filled out.

Anyhow, the complexity of some situations implies the necessity of visualizing all of the information present in the day and week diaries; not only the ones of the individuals with inconsistent dates, but also the ones of the other members of the household.

The dates' correction frame

The second frame has been introduced in the current edition of the survey, for the correction of all of the residual errors, not otherwise corrected by the automatic procedures, regarding the dates on the diaries and questionnaires.

The novelty of this frame, is the possibility to visualize interactively all the information about a household necessary to correct the variables indicating dates; both the day diary and the weekly diary can be checked out to reconstruct the dynamics of the day/week, and interactively with the ones of the other members of the household.

The data about the household members are all treated contemporarily; this in order to compare the dates of the diaries' compilation of each member. In case the general and household information is not enough to reconstruct the reality of the dates, the corresponding day and week diaries of all the members of the household can be checked out. The day diary can indicate the kind of day the diary was filled out, for example on a weekday, Saturday or Sunday. The day diaries of the other members of the household can be checked out to understand if they were compiled on the same day or other. This is all fundamental for a coherent correction of the dates of all the members of the household.

Automatic editing versus non-automatic editing of the dates

In synthesis, in the tables below we can summarize the amount of edits made on the dates of the various diaries and questionnaires (Table 2). The number of individuals with inconsistent dates of the diaries and questionnaires are 14,8%; 11,5% of the individuals' diaries have been corrected by deterministic rules, another 3,3%, the ones with excessive inconsistent information, has been corrected by the SAS/AF frame.

Table 2

Time use survey 2008-2009	N
Respondents to the questionnaire	44606
Day diaries	40944
Week diaries	37610
Respondents that have filled in at least one diary	42590

Source: Italian Time Use Survey 2008-09.

Table 3

The situation of the dates	N	%
Individuals with correct dates of the diaries	36278	85,2
Individuals with inconsistent dates of the diaries	6312	14,8
Checked with deterministic rules	4917	11,5
Checked with SAS/AF frame	1395	3,3
Total individuals with at least one diary	42590	100,0

Source: Italian Time Use Survey 2008-09, own calculations.

This indicates that also diaries which seemed impossible to correct have been recovered, and the one by one diary correction has let the Time Use Survey improve and reach a better data quality throughout the various editions.

In conclusion, the integration of the automatic correction of the Time Use data with the two tools of non-automatic correction has improved the process of data editing. By exploiting all of the available information about the diaries, and by using a human point of view to reconstruct

the reality of the diaries it has been possible to live again the diarist's day and bring the proper corrections to the unfolding of the daily activities; this in the case of the day diaries, but also of the dates.

Furthermore, the strategy of data editing has been text-driven; the recording of strings in a prior stage and the use of textual information has been fundamental for the Time Use editing process, and for the quality of data on the whole.

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NEW APPROACHES OF THE 2009 KOREAN TIME USE SURVEY

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The 2009 Korean Time Use Survey will be the third survey involved in collecting information on how Koreans spend their time. This survey is conducted every 5 years beginning in 1999. The purpose of the survey is to provide information on how Koreans spend their time and when they conduct certain behaviors. The results of the survey provide information for the evaluation of life style and quality of life of Koreans. Data on time spent on unpaid household work can be used to evaluate household work of women. Data on time spent on other various activities can be used in academic areas and public policies related to labor, welfare, culture, education, and transportation.

Description of the survey

Sample design

The sample for the Time Use Survey can be defined at four levels: a sample of enumeration districts (EDs), a sample of households, a sample of individuals and a sample of diary days. EDs totaling 540 from the survey population and 15 households from each sampled ED were selected by the stratified sampling method and simple random sampling, respectively. Within each household, all household members aged 10 years or older were included in the sample of individuals. The diary days were pre-assigned according to the order in the household address file.

Design of questionnaires and diaries

The 2009 Time Use Survey includes three parts : a Household Questionnaire for the household representative, Individual Questionnaire for respondents 10 years old and over, and the Time-Diary.

The Household questionnaire and individual questionnaire

The Household Questionnaire collected data on household characteristics including the type of occupancy, dwellings and floor space. The Individual Questionnaire collected data on individual characteristics including relationship to the head of the household, gender, age, caring for infant children, feelings about pressure of time, the gender roles, economic activity, side job, weekly working time, industry, occupation, employment status, monthly average of income, days-off, and subjective evaluation of time pressure and tiredness.

Time-diary

In the Time-Diary, all of the household members aged 10 years and over were asked to record the main and simultaneous activities in the time diary which was structured in 10 minutes intervals for the designated two days. Afterwards, all of the self-recorded activities in the Time-Diary were coded into three-digit activity codes designating 144 different activity categories . The Time-Diary included the following main activity, with whom do you do the main activity, simultaneous activity, home or away from home and mode of transportation.

Classification of activities

All of the activities are classified into 9 first-level categories, 50 mid-level categories, and 144 third-level categories.

There are still some limitations in the Classification of Activities. Some activities do not have a clear classification within the three-digit groups.

New approaches of the 2009 KTUS

The third Time Use Survey in Korea has undergone a several changes to meet the new demands.

Methodological issues

In consideration of the various seasonal effects during the year, the KNSO conducted the survey once in spring of 2009 and again in the fall at the same year.

We determined that two observations a year on time usage provides an acceptable average for the entire year. Selection of the survey period and duration of the survey are also very important in accurately representing. In the 2009 KTUS, spring and September were selected as representative months of the year.

Questionnaire

The 2009 Time Use Survey included the phrase "with whom" in the time diary with the activities to assist in fully understanding the main activities.

We defined "with whom" as other person(s) contributed to the same responsibility for the main activity.

We divided the "with whom" categories as follows: alone, child aged under 7, spouse, other family or relatives, other(exclude unknown, audience, etc)

There are some limitations and problems in deciding the definition of "with whom". For example, At church or in a meeting, do we include the audience or crowd? Also, in the work place do we consider the work with others as" with whom" even though employed work separately at their desk without meeting. To consider the correct use of categories "with whom", we need to limit its use to major activities including 4. housework, 5. caring, 6. participants & volunteering, and 7. leisure.

Classification of activities

We developed our own classification of activities in 1999 with consideration to our cultural heritage and the present trends such as the increasing usage of computers and related technologies. We also followed the guidelines from the proposal of EUROSTAT and the UNSD. There are 9 main groups, 50 2-digit groups and 143 3-digit groups in 2009. The difference between the 2004 and 2009 classification of activities are in the 3-digit groups. To incorporate new activities, the KNSO further divided the 3-digit group from 137 in 2004 into 143 in 2009.

For example, 260 purchasing employment related goods is divided by 261 purchasing employment related goods through off-line methods(visiting store) and 262 purchasing employment related goods through on-line methods(Internet, home shopping, etc). Also, it was applied in the same way to 330. purchasing education related goods and 780 leisure activities related goods.

As there are many kinds of outlets for media in leisure activities, we clarified the new medium's groups, for example, PMP(Portable Multimedia Player) and DMB(Digital Multimedia Broadcasting). For 737 Internet surfing, the KNSO breaks it down into 737 Internet surfing for information and 738 other Internet use(Homepage, Blog management) according to the purpose of internet use.

To calculate women's time spent caring for their children under school age, we focused on time spent supervising children. The reason behind this is that supervising children and passive child care might have been under-reported in the previous survey. Time spent supervising chil-

dren would have to be obtained as a secondary activity to the main activities, such as doing housework, watching television, or meeting friend. So the KNSO included both direct care activities and indirect ones such as time for taking their child along to activities because of a lack of alternative supervisor.

As computer usage is increasing, we separately classify shopping for 2. Employment, 3. Study, and 7. Social life, recreation and leisure as shopping via the Internet and offline methods(4.Domestic activities related to shopping has already been separated as online and offline in the previous survey)

We do not separate the "pet care" activity as its own 3-digit group but the activity is included in the category of 443 other home maintenance within 44 . household upkeep.

The KNSO need to separate the "pet care" activity from the present category such as other countries since the population that owns pets is increasing in Korea.

Conclusion and suggestions

The KNSO carried out the time use survey once a year in 1999 and 2004. In 2009, the KNSO pursued a new trial for conducting the survey twice a year to more fully represent people's time use patterns during the entire year. In order to nullify the seasonal effect in the future, we need to carry out the survey four times a year or even perhaps 12 times to accurately represent the time use of people throughout the whole year.

The KNSO classified several further activities to properly reflect our life patterns. However, limitation exist in classifying some activities. We need to clarify some categories for new trends in activities, for example, the use of PC and Internet.

To get the optimal sample for the time use survey, we have to consider the inclusion of household's characteristics such as the number of families in a strata for sampling. It would be more effective to include a household's characteristics in sampling instead of considering them after stratifying for weight which has been applied to the 2009 survey.

For the non-response sample, we take the substitute method, which means if a household refuses to answer questions, we substitute another household neighborhood within the same ED. Therefore, we have over a 98% collecting rate for questionnaires. This collecting rate is very different from the response rate, so we have to prepare a solution for the non-response treatment in future.

Expert groups involved in the international classification for time-use activities need to further discuss the development of an international standard for the Classification of Activities for comparison between countries.

To overcome the problem and to develop the survey, the KNSO have to study the survey and improve it constantly. Thus, we are now considering the option of conducting the survey every 3 years instead of every 5 years.

After releasing the data for 2009, the KNSO will hold Time Use Research seminar for further analysis in time use. The KNSO will encourage users not only to analyze further time use data but also to provide some idea for the future survey's development. In the future, we would like to hold an international conference to share the information concerning time use research with the international community.

GOING GLOBAL - EXPANDING CAPACITY TO ANALYSE TIME USE DATA

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From its first incarnation as the Working Group on Time Budgets and Social Activities at the International Sociological Association meeting in Varna, Bulgaria in September 1970, the International Association for Time Use Research has had global interests and attracted a global audience. Two of the first twenty conferences took place in Mexico City (Mexico 1982) and Delhi (India 1986). Early IATUR members hailed from Brazil, Colombia, the Dominican Republic, Egypt, Kuwait, India, Mexico, Nigeria, Sri Lanka, South Africa, Tanzania, Thailand, Turkey and Venezuela. Nevertheless, until very recently, most time use surveys were collected in the more developed Northern Hemisphere countries (Fisher et.al. 2011). The overwhelming majority or time-relevant publications and papers presented at academic conferences have concentrated on daily activity patterns in Australia, Canada, the USA, European countries, and the more developed North-East Asian countries. While IATUR Regional Council Members have tended to live and work in the regions they represent, until 1992, the Council Member for Africa was based in Europe or North America. Prior to the election of co-Vice-Presidents Lara Gama de Albuquerque Cavalcanti from Brazil and An Xinli (安新莉) from China in 2011, no member of the IATUR core executive came from the global south.

The Beijing Platform for Action from the United Nations, Fourth World Conference on Women in 1995 urged more countries to collect time use data to reveal the extent of women's economic contributions, which at that time, and even now, to a large extent, remain invisible (Antonopoulos and Hirway 2010; Esquivel et. al. 2008). Since then, a number of UN agencies, including the United National Development Program (UNDP), United Nations Statistics Division (UNSD) and the United Nations Development Fund for Women (UNIFEM), have sponsored and encouraged the collection of time use statistics, though the overall impact of these initiatives have been limited to date. Statistics South Africa at present is the only country in the global south to have an official national sample time diary survey time series (2000 and 2010), though a number of countries in Latin America have collected time series recall time use questions covering a range of domestic activities (Esquivel et. al. 2008), and smaller scale survey time diary time series have been collected in Brazil, Chile, India and Pakistan. The main barriers to the wider collection of time use studies include:

- The cost of collecting data (even though time diary surveys offer value for money in terms of the overall policy-relevant research output each survey can produce, the initial cost outlay is high, and can prove prohibitive without an external support for many national statistical agencies);

- A general lack of awareness of the value of time use surveys and capacity to analyse diary data. In contrast with the wealth of text books training economists, statisticians, demographers and other social scientist to use labour force survey and household expenditure data, only a handful of text books teach the practicalities of collecting and analysing time use data, and these books are available only in English (Michelson 2005), Spanish (Durán 2007) and Portuguese (Durán 2010). Few summer schools or universities offer time use courses, and such courses as do exist have been treated as speciality subjects rather than core curriculum. Few of those courses that do exist have been offered in the global south. Some national statistical offices, particularly Statistics Norway (Gustav Haroldsen and Odd Frank Vaage) and Statistics Sweden (Klas Rydenstam), have made extensive efforts to train national statistical office staff in other countries and assisted with the collection of time use surveys, but usage of these surveys has been minimal as few academics and civil servants have had the training to make use of these resources once collected.

- A lack of co-ordination of efforts to expand capacity to use time use surveys around the world.

Happily, these circumstances are changing. Indira Hirway, the IATUR Council Member for South Asia and the Middle East, who has championed the cause of increasing time diary research in the global south for decades, has achieved a number of recent successes. She and co-editor Rania Antonopoulos have released a seminal book documenting the policy significance of time use research in economic development (2010). She has secured funding to set up the Time Use Research Cell (TURC) in the Centre for Development Alternatives (www.cfda.ac.in). TURC hosted a workshop, Harmonization of Time Use Surveys at the Global Level with Special Reference to Developing Countries, in April 2011, and has been developing a curriculum for increasing capacity to collect and analyse time use studies in developing countries (http://www.cfda.ac.in/curriculum_development.html).

While IATUR devotes a significant portion of institutional income to the Andrew Harvey Fellowships that fund the travel of students and people from developing countries to annual conferences, the miniscule budget on which the Association operates has meant these funds are not large, and hence the participation by people from many countries has been limited to a fraction of those interested in this research field. In an effort to raise more generous travel support, IATUR President, Michael Bittman has explored options to improve IATUR income streams. At the same time, Professor Hirway, Nancy Folbre, and Valeria Esquivel (IATUR Council Member for Central and South America), who all are active members of IATUR as well as the International Association for Feminist Economists (IAFFE), with Maria Sagrario Floro and Xiaoyuan Dong (then of IAFFE – now associated with both research communities), sought funding

to promote greater gender awareness in policy in the global south. Collaboration enabled IA-TUR and IAFFE to secure funding from the Swedish International Development Cooperation Agency (SIDA) for six exchange panels (three with IAFFE members presenting work at IATUR conferences and three with IATUR members presenting work at IAFFE conferences), and for two training workshops designed to increase the capacity to analyse time use data in developing countries. The first four of these exchange panels took place at the 2010 and 2011 IATUR and IAFFE conferences, and these panels and subsequent discussions have produced a programme of training workshops, now featured on the IATUR website (http://iatur.timeuse.org/workshops).

Former IATUR President Bill Michelson led the development of curriculum for the first of these training workshops, which took place in collaboration with the National Bureau of Statistics of China in Beijing from 29 June to 1 July 2011. He, Professors Bittman, Dong, Floro, and Hirway, along with Ignace Glorieux (IATUR Council Member for Western Europe), Jiri Zuzanek (IATUR Council Member for North America), Klas Rydenstam (former IATUR Vice-President), and IATUR Secretary Kimberly Fisher (all of whom volunteered time and many of whom travelled at their own expense) delivered the first workshop to 25 people, 8 of whom work at or in collaboration with the NBS, and 17 of whom had travel funded by the SIDA grant. Participants included 11 people from official statistical offices, four working in other government agencies or for the UN, seven academics, one postgraduate student and one person working in private business. Participants came from Brazil, China, Djibouti, Hungary, India, Moldova, Pakistan, the Philippines, the Republic of Korea, South Africa, and Venezuela. In post-workshop evaluations collected by Professor Bittman, 24 of the 25 participations reported agreeing or strongly agreeing that they had learned "new things about the applications of time use data" during the workshop. All participants reported that they found the course very beneficial or helpful. A video produced by the NBS gives a visual overview of the event (http://www.youtube.com/watch?v=5ngDPpY-ohM). The majority of instructors from the Beijing workshop offered a one-day mini-version of this workshop in Oxford before the 2011 IATUR conference for 27 participants. Four people applied for every funded place at the first workshop in Beijing, and a further 30 people attending the IATUR conference expressed regret that they could not travel for a longer period to attend the follow-on workshop.

IATUR, IAFFE, and TURC efforts are taking place in renewed global interest in time use data. UNSD has coordinated meetings to upgrade its guidelines for conducting time use studies and its harmonised International Classification of Activities for Time Use Statistics (ICATUS) over the summer and autumn of 2011. UNDP and the International Labour Organization have funded research developing alternatives to conventional income poverty thresholds, including the Levy Institute Measure of Time and Income Poverty (LIMTIP) (Masterson 2011). The UN Economic Commission for Africa has collaborated with the collection of a national sample time diary survey in Ghana (previously, round three of the 1991-92 and round four of the 1998-99 Ghana Living Standards Survey (GLSS) collected one-week stylized estimate time use questions). The first post-data collection workshop transpired in the last full week of October 2011,

with future surveys planned for Djibouti, then other African nations. The Agencia Española de Cooperación Internacional Para el Desarrollo (AECID) is co-funding a time use study in Paraguay in 2012. Annual time use conferences have taken place for two or more years in Brazil, Chile and Mexico, and the Economic Commission for Latin America and the Caribbean has sponsored a growing number of time use workshops and meetings.

The impacts of these efforts have begun to emerge. The 33rd IATUR conference, hosted by the Centre for Time Use Research at the University of Oxford (UK) from 1-3 August 2011, not only attracted participants from the widest range of academic disciplines, government agencies and other fields than any previous IATUR conference, but this event also included people from 39 countries, the widest range of any previous time-use event. Twenty-one presentations (12% of oral and poster presentations at this conference) focussed on time use in the global south. This conference included four sessions dedicated to time use in developing countries, and could have included many more sessions and papers had funding been available to assist with the travel costs. Many of these papers now are in press or under review for publication. The second of the SIDA-funded IATUR-IAFFE training workshops will take place in late 2012 in India. IATUR 2013 returns to Brazil (the first Brazilian conference took place in 2000), when the workshop training team hopes to host a 3rd event. Watch this space – there will be more to come!

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Book notes
by Kimberly Fisher

Bormans, Leo (ed.)
The world book of happiness

Contributing Authors: Contributions from 100 authors who have published research relating to happiness Publication
Publisher: Arnhem, Belgium, Lannoo Groep, and London, UK, Marshall Cavendish International
ISBN: 978-90-209-9066-9 (hardback), 978-98-143-4632-0 (paperback)
Website:
http://www.theworldbookofhappiness.com/
Languages Available: hardback: Dutch, English, French and German; Paperback: English

This popular science collection includes brief excerpts from academic in a range of disciplines as well as contributions from self-help groups and religious communities, all of which reveal some aspect of living conditions which make people happy. Some excerpts concentrate on individual-level happiness, whilst others explore what factors cheer communities, members of organisations or national populations. While the book as a whole covers a range of topics, a number of the entries are specific to time and time use.

Budlender, D. (ed.)
Time use studies and unpaid care work (2010)

Contributing Authors: An, M., Budlender, D., Esquivel, V., González, I. E., Palriwala, N. N., Palriwala, R., Shikata, M. and Y. Tamiya
Publisher: Routledge/UNRISD Research in Gender and Development, New York, USA
ISBN: 978-0415-882-248
Website:
http://unrisd.org/unrisd/website/document.nsf/%28httpPublications%29/414BA4D59E6D9AB1C125775B00480FD7?OpenDocument
Languages Available: English

This book explores the economic contribution of unpaid care work (mostly performed by women) in Argentina, India, Japan, Nicaragua, the Republic of Korea, South Africa, and Tanzania. While some similar themes emerge with care research produced elsewhere, these chapters also reveal a need to adapt diaries to local contexts. The distribution of care work in the more complex household structures in some developing countries as well as households comprised of survivors of HIV-AIDS, conflict or disasters impact the both person-level well-being as well as regional economic conditions. These authors demonstrate a need for more time use data to measure the course of development in the global south.

Conelly, R. and J. Kimmel
Time use of mothers in the United States
at the turn of the 21st century (2010)

Publisher: W. E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, USA
ISBN: 978-0880-993-692
Website:
http://www.upjohninst.org/publications/titles/tuom.html
Languages Available: English

Connelly and Kimmel make exhaustive use of the American Time Use Study to examine daily activities of mothers of children aged up to 12 in the United States. This book explores associations between mother's daily schedules and their children's development. The authors discuss how education, tax and child care policies might enable mothers to adjust the balance of paid and unpaid work, care and leisure in ways that improve the well-being of children and their parents.

Drobnic, S. and A. M Guillén (eds.)
Time use studies and unpaid care work
(2011)

Contributing Authors: Beham, B., Bygren, M., Chung, H., Dema, S., Drobnic, S., Duvander, A.-Z., Fagan, C., Ferrarini, T., Guillén, A. M., Ibáñez, Z., Lammi-Taskula, J., Rostgaard, T., Salmi, M. and P. Walthéry
Publisher: Palgrave Macmillan, Basingstoke, United Kingdom
ISBN: 978-0230-289-499
Website:
http://www.palgrave.com/products/title.asp

x?pid=488084
Languages Available: English

This edited collection explores the degree to which policy frameworks in European countries facilitate the ability of people to reconcile paid work, family and personal commitments. Some chapters use time diary surveys, but even those which do not draw on other sources of time and scheduling data. Over all, though the authors find that individuals have some capacity to adjust their schedules, and that policy interventions can favourably influence work-life balance. Even so, conditions on the job (total hours worked, flexibility of employment requirements, working conditions and other job characteristics) have the greatest influence on the capacity to reconcile work, care, and personal life conflicts. The authors find associations between higher life and job satisfaction (and potential for greater productivity) in more family-friendly workplaces.

Hagell, A. (ed.)
Changing adolescence – Social change
and its role in adolescent mental health
(2012)

Contributing Authors: Hagell, A., Giménez-Nadal, J. I., Peck, S., Symonds, J. and N. Zarrett
Publisher: The Policy Press, Bristol, United Kingdom
ISBN: 978-1447-301-042
Languages Available: English

This book draws together findings from a range of projects included in the Nuffield

Foundation's Changing Adolescence Programme to build a picture of how young people in the United Kingdom have responded to social and demographic change from the 1970s through 2000s. The book as a whole analyses a range of data sources on the mental health, behaviour, and well-being of young people as they work through transitions to adulthood, with the aim of informing debate between policymakers, academics, charities and community groups. Many chapters have indirect relevance to time use research. One chapter, Time Trends in Adolescent Time Use in the UK, makes use of the Multinational Time Use Study to compare how social institutions in different countries have shaped young people's behaviour over time. This chapter also breaks down the details of young people's social interactions, both examining inherently social activities and patterns of time with different groups of people, highlighting the complex associations between interaction patterns and mental health.

Inbakaran, C. and M.-L. van Der Klooster (eds.)
2010 Time use in Australia and Europe (2011)

Contributing Authors: Arentze, T., Beugels, S., Borgers, A., Ghassemi-Boenisch, S., Hanglberger, D., Inbakaran, C., Kemperman, A., Merz, J., Rathjen, T., Roeters, A., Van Der Klooster, M.-L. and P. Vitartas
Publisher: Deakin University, Melbourne, Australia
Languages Available: English

This collection of short methodological articles details current applications of time use data to six policy areas: a) design of urban space and physically active travel behaviour; b) working hours and scheduling of paid work during the day; c) work and family life; d) shopping behaviour; e) time and income poverty; and f) survey methods to model national activity patterns. Articles draw on surveys collected in Australia, Austria, the Netherlands, and Germany.

Nelson, M. K.
Parenting out of control – Anxious parents in uncertain times (2010)

Publisher: New York University Press, New York, USA
ISBN: 978-0814-758-533
Languages Available: English

Nelson interviewed parents in the United States to explore perceptions and expectations contemporary Americans hold of their parenting roles. She considers how parents respond to changes in education systems, workplaces, and new technologies marketed to "help" parents interact with and monitor (or spy on) their children. While she finds parents of many backgrounds experience challenges setting realistic goals and expectations for guiding children from cradle to career, she also reveals significant variations in parenting styles across class boundaries as well as among parents of more privileged backgrounds. Nelson argues 'parenting out of control' roles reflect parent's struggle to manage burgeoning opportunities as well as dangers their children face.

Vogel, H. L.
Entertainment industry economics – A
guide for financial analysis: 8th edition
(2010)

Publisher: Cambridge University Press,
Cambridge, United Kingdom
ISBN: 978-1107-003-095
Languages Available: English

This book has an indirect relevance to time use research, but includes a number of tables detailing changing patterns of participation in various dimensions of the entertainment industry. Though this book concentrates more on spending than behaviour, it nonetheless does inform the choices people make in their leisure time in the context of changes in the modes of delivery of entertainment services and changing legal frameworks governing this industry. While more analysis covers the United States, the book includes some international comparative data.