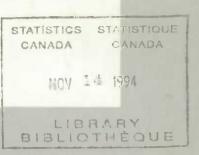
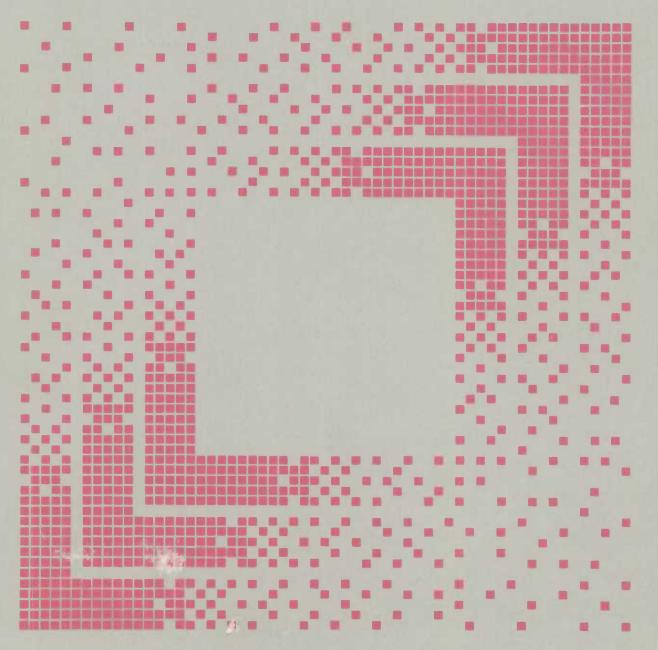
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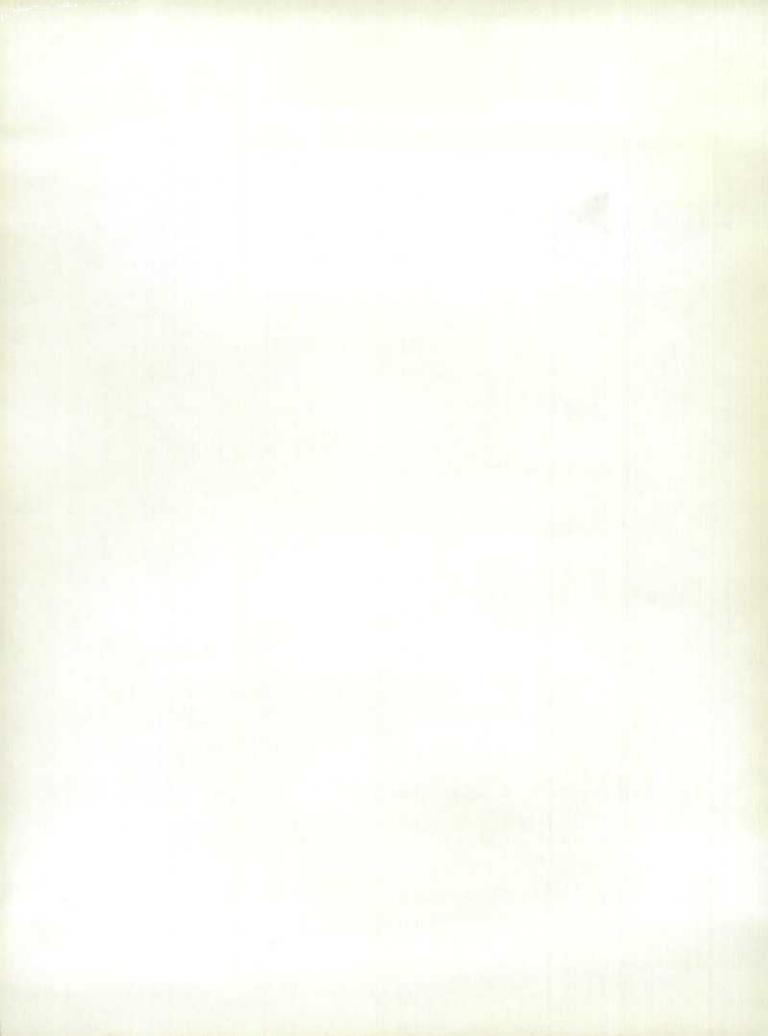
## **WORKING PAPER # 6**

ECE/INSTRAW Joint Work Session Statistics of Women April 27-29, 1992





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Working Paper # 6

Prepared for the ECE/INSTRAW Joint Work Session on Statistics of Women, April 27-29, 1992

Measuring Unpaid Work:

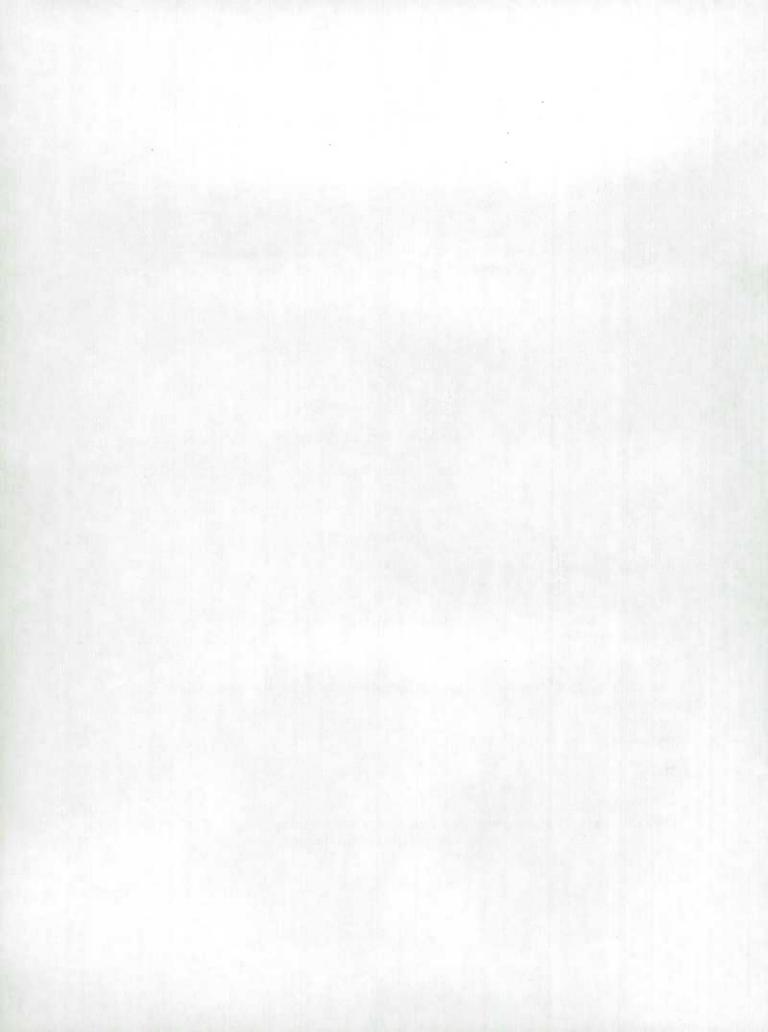
The Canadian Experience

Paper submitted by Statistics Canada

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The authors gratefully acknowledge the comments and suggestions received from colleagues in the preparation of this paper.

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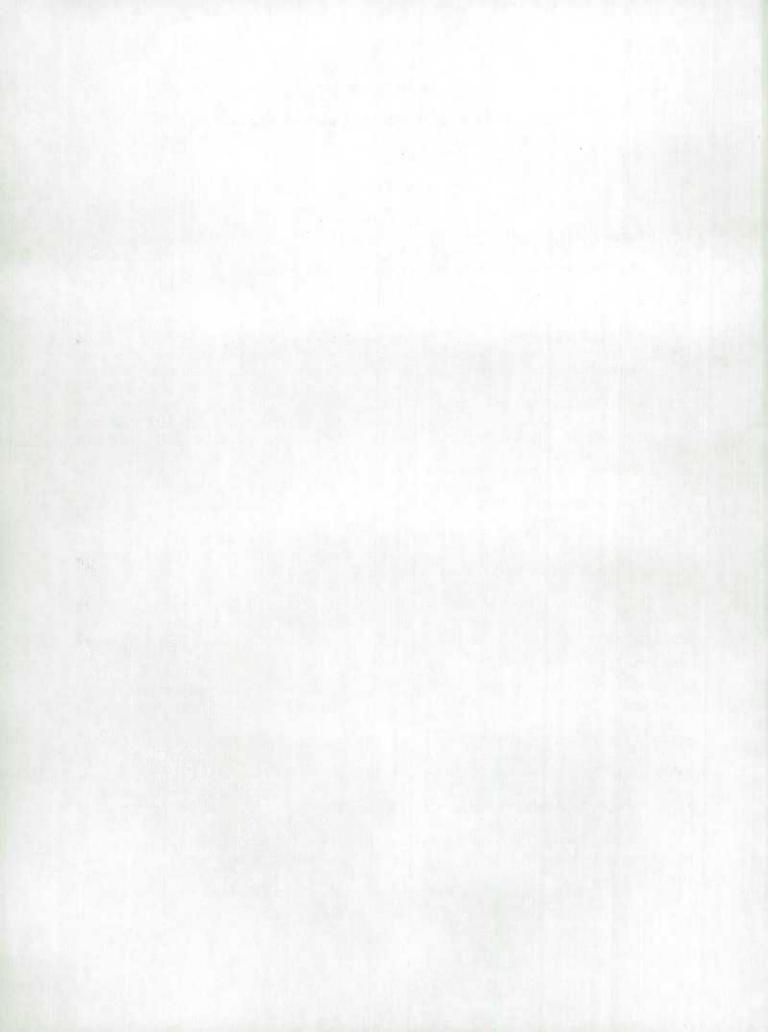


# Working Paper #6

# Measuring Unpaid Work: The Canadian Experience

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#### 1. Introduction

This paper describes new and ongoing work at Statistics Canada related to the measurement of unpaid work. Particular attention is given to the development of a time use survey to serve as a key source for data on unpaid work. In addition, there is a general discussion of some of the issues related to the measurement of unpaid work.

Labour force and other labour market surveys in Canada provide detailed information on paid work, but as in other countries, little information is routinely collected on domestic and other unpaid production activities, such as housework, child care, elder care and volunteer work. As in many other countries, however, the demand for such information has risen sharply since the 1960s with increasing emphasis on quality of life issues along with a resurgence of the women's movement and its emphasis on the importance of non-market activities.

In 1974, Ann Oakley published a ground-breaking study entitled <u>The Sociology of Housework</u>. Since that time there has been a growing demand to legitimize domestic work by having it measured and included in estimates of the country's productive activities. Women, especially, recognize that the social invisibility of their unpaid work has serious consequences for their place on the social and economic agendas of governments. Both INSTRAW (United Nations International Research and Training Institute for the Advancement of Women) and the U.N. Statistical Office have worked on these issues (see United Nations, INSTRAW (1989) and United Nations (1990 and 1991)). The case for including non-market work within the Gross Domestic Product (GDP) framework has also been made, perhaps most strongly, by Waring (1988).

Canada has been a pioneer in the attempt to value housework in monetary terms. Methodologies to value housework were developed in the mid-1970s and have been used to produce estimates for 1961, 1971, 1981 and 1986 (forthcoming).

In addition to Canada work on valuing housework is also underway in a number of other countries, including Australia, France, Germany and New Zealand.

Besides the demand to recognize and value household work in a national accounting sense (Clift and Wells, 1989), there are other important reasons to broaden the concept and measurement of work to include all types of non-market work as productive work. In a recent editorial in the <u>Canadian Journal</u> on Aging entitled "Women, the Welfare State and Care-Giving", Myles (1991) argued:

"In 1961, one-earner couples made up 65 per cent of all Canadian families. By 1986, one-earner couples accounted for just 12 per cent of all families. ... The economy and society as a whole obviously benefit from the additional labour time families put into the market and the pursuit of equality for women depends upon it. But as over a decade of research has shown, the costs to women are high. Women's "double day" of paid work and unpaid domestic labour is now a well-documented fact of modern life. Neither men nor public policy have changed to accommodate this new reality. The result is that at the end of the 20th century society faces a crisis of care-giving, a direct result of the "time crunch" that now characterizes the female life course."

Referring to the feature article by Walker (1991) in the same issue, Myles continues:

"Walker also warns, correctly in my view, that the problem of care-giving ... - and especially the sexual division of caregiving work - needs to be reformulated at all levels

of society. He points to the need for change in the organization and linkages between ormal and informal care-giving networks, in the attitudes and professional values of the formal caregiving sector, and, I would add, in the organization of work place norms and personnel practices that regulate the lives of the majority of care-givers, male or female."

Detailed information on both paid and unpaid work activities is required to address the wide-ranging issues related to care giving, and the more general issues related to balancing family and paid work responsibilities.

#### 2. Measurement of Time Allocation

Any attempt to measure unpaid work will involve the measurement of time allocation to various activities. As Juster and Stafford (1991) indicated in a recent article "...one of the characteristics of data on the allocation of time among the population is that valid measurements are both difficult and costly to obtain".

Two different approaches are commonly used to measure time allocation. First, the direct approach of asking individuals to recall the amount of time per day, week or month spent on various activities, such as housework or child care. The second approach is to collect data through a diary that requests individuals to describe their daily activities including the time spent on each.

#### 2.1 The Direct Approach

In the direct approach, individuals are asked how much time they spent on specific activities over a certain time period. The reference period may vary depending on how frequently the activity occurs. This approach has raised a number of concerns. First is the need for an a priori decision by the surveyor on the categories that will be included in unpaid work, e.g. housework, child care and volunteer work. The list of categories collected may not be exhaustive. In addition, the population of respondents is not likely to have a common understanding of the type of activities the various categories encompass. However, the respondents are left to define what to include in housework, child care, etc. Furthermore, many individual household activities are short episodes (e.g. sorting the laundry, watering the plants, comforting a child) making it difficult to accurately report aggregate time spent on household work, especially over an extended reporting period, such as a week or a month.

There is also a tendency to double count activities which occurred during the same time, (e.g. meal preparation and caring for children). With double counting, the aggregation of all activity times would sum to more than 24 hours.

Another bias with the direct approach is the respondents' tendency to report more/less time at activities that are more/less valued by society. Studies have shown that activities such as working out at a health club get overreported, while activities like watching television get underreported. Misreporting can also be due to the shifting of activities into or out of the reference period. For example, socially desirable activities that happened earlier may be moved into the reference period. While this may be a problem with the diary approach, the problems are likely fewer since the requirement to report recent activities chronologically constrains individuals.

Tests of direct questions on housework and other unpaid work for for the Canadian Census of Population produced unreliable results. In a pretest for the 1981 Census, respondents were asked the number of hours they had devoted to housework or other work around the house in the previous week. Respondents had the option of ticking a "none" box or entering a number of hours. Results showed that respondents had difficulty calculating the hours.

In 1987, the testing program for the 1991 Census included three direct questions on the number of hours spent during the previous week: on volunteer work; on unpaid child care; and on unpaid housework, yardwork, maintenance or repairs to the home. Again, in all cases, the direct question provided the respondents with the option of entering "none" or the appropriate number of hours.

For the volunteer question, comparison with results of the Volunteer Survey conducted in conjunction with the Labour Force Survey (Duchesne, 1989) showed that the extent of volunteer work was underreported. The Volunteer Survey contained 22 questions. The additional questions produced a much more complete and more accurate estimate of volunteer work.

Analysis of the question on unpaid child care showed that respondents did not share a common understanding of what hours and types of activities to include and also about the age of children receiving child care.

With the third question on unpaid domestic work, again, respondents appeared to have had difficulty calculating the hours and determining the activities to include. For many the distinction between housework and child care was not clear.

Experience has shown that survey respondents have far greater difficulty in responding to questions about unpaid work done in the home than they do in answering questions on paid work. The reasons are related to the two dimensions in measuring work, be it paid or unpaid. One dimension is whether or not a given respondent was engaged in work during the reference period; and two, how much time was devoted to it.

Respondents can unambiguously answer a question on paid work simply because it is paid. The "pay" makes it possible for them to accurately say "yes" or "no" regardless of the kind of work that they do. However, for unpaid work, there is no characteristic equivalent to "pay" linking all of the different kinds of unpaid work. More importantly perhaps, there is nothing analogous to "pay" to enable the respondents to distinguish unpaid work from the non-work activities they do in the same place.

This would not be a problem if the population of respondents had a common understanding of the term "unpaid work". Faced with a question, such as "Last week, did you do any unpaid work around the house?", some respondents may have difficulty in deciding what is the correct answer. Such uncertainty may arise for either of two reasons: one, respondents may not have a clear conception in their own minds whether or not they "worked"; and two, regardless of their own conceptualization of what constitutes "work", they may wonder whether or not, according to the survey, what they did was "work".

As for the second dimension, that is, the amount of time engaged in "unpaid work", the same problems arise but in even more extreme forms. In the case of paid work, again, the existence of payment makes understanding the question easy. It amounts to asking, "How many hours did you spend doing the things for which you are paid?" The composition of the activities is immaterial as long as they are paid. In addition, the fact that the world of paid work provides many clues for the respondent facilitates an answer. Most paid workers work a standard length work-week, with a fixed schedule, the duration of which they are well aware. Because taking time off requires permission, and extra time worked generally results in extra pay, the respondent easily recalls these exceptions to the standard work-week.

In the case of unpaid work, these clues or cues are lacking. If the respondent did any of the activities considered to be unpaid work by the survey, then a "yes" response to the "did you do any unpaid work question" is correct. However, in order to be able to report on the number of hours of unpaid work performed, the respondents must be aware of all of the activities regarded as unpaid work by the survey, how many hours they devoted to each of these activities, and how many hours this represents in total. The problem is compounded by the fact that in the world of unpaid work there are seldom the fixed schedules that facilitate reporting on paid work. The hours during which the activities are done vary from day to day, from week to week, and some of the activities may not be done at all during a given day or even week.

However, compared to the diary approach discussed below, the direct approach does have one distinct advantage. It permits identification of the multiple roles that individuals perform in their daily lives. Since the direct approach covers more than one or two days, there is a greater probability of capturing multiple-role and other less frequent activities. The capture of multiple-role activities is particularly important to investigate the demographics of individuals with paid work and family responsibilities (Stone, 1991a).

#### 2.2 The Diary Approach

Juster and Stafford (1991) also cite a number of time allocation studies examining measurement issues. They report:

"The conclusion from these studies is that some form of diary instrument that records the chronology of various time uses over the day is the only valid measurement of time use, and less expensive substitutes are of substantially lower quality and gave systematic biases of a major sort."

The great strength of the diary approach is that respondents are requested to describe their daily lives; they are not asked about specific activities. Respondents do this chronologically, for that day or the previous day. They are, therefore, more likely to report what they actually did and not their perception or recollection of what they think they did in a prior time period. Respondents are less likely to cast their activities in a more favourable light by reporting a more idealistic or usual day. Using a diary approach, all activities are subsequently coded to a detailed classification system which may be used as the basis for defining work activities.

While Juster and Stafford argue strongly for a diary approach, Herzog et al. (1989) used a set of direct questions to measure time allocation and compared the results with time use data. They found estimates of paid work and unpaid housework to be quite close, while estimates for occasional activities, such as home maintenance, were lower. On the other hand, estimates for simultaneous activities, such as child care were higher.

Over the past decade, interest in time use surveys has steadily grown. The statistical offices of a number of other countries have undertaken national time use studies during the 1980s. Time use survey

methodology has received considerable attention. Time use collection methodologies, classification standards and uses were discussed at the Conference of European Statisticians Working Party on the Framework for the Integration of Social and Demographic Statistics (Ninth Session, May 1987).

The valuation of time use for integration in a social accounting matrix was discussed at the 20th Conference of the International Association for Research in Income and Wealth (Rome, August 1987).

Methodological development has also been a focus of concern of the International Association for Time-Use Research. Guidelines for time use data collection were considered at a number of international meetings in the late 1980s (Harvey, 1990). Juster and Stafford also discuss many measurement issues in their review paper. Some of these issues are discussed below.

#### 3. Canadian Time Use Surveys

In Canada a number of small urban time use studies were undertaken during the 1970s and 1980s. The largest of these was a 1981 pilot study (Casserly and Kinsley, 1983) conducted in 14 Canadian communities. The larger survey did not occur.

In the early 1980s, Statistics Canada recognized the need for an innovative, periodic survey which would provide information on a number of emerging social and socio-economic issues. The result was the initiation of a General Social Survey (GSS) Program which would cover a cycle of five core topics, one topic per year for five years, and then repeat. An important objective is to monitor key social trends over time. (For a description of the GSS see Norris and Paton, 1991.) Time use is one of the core topics of the GSS. The GSS conducted the first national time use survey in late November and early December of 1986.

#### 3.1 1986 Time Use Survey

The target population of the 1986 Time Use Survey consisted of all persons 15 years of age and over, excluding the territories and full-time residents of institutions. The survey conducted telephone interviews using random-digit-dialling techniques. One person in each contacted household was randomly selected for an interview. Nearly 10,000 individuals responded (approaching an 80% response rate).

Respondents reported their activities for one entire 24-hour day, normally the day preceding the interview. Interviewers collected information on primary activities only. Activities were coded to 96 categories (see Appendix A) based on the classification system used by the multinational study in the mid-1960s (Szalai, 1972). A detailed description of the survey, as well as initial analysis of the results, is presented in Harvey, Marshall and Frederick (1990).

Table 1 shows a breakdown of time spent on paid and unpaid work by sex. In this table, unpaid work has been defined conventionally to include the major activity groups of domestic work, child care and shopping. Results are similar to those found in many other studies. Overall, females and males divided total work almost equally. However, males accounted for 64% of paid work while females accounted for 69% of unpaid work. From another perspective, unpaid work accounted for 46% of total work; unpaid work was 62% of total work for females and 29% for males.

#### TABLE 1

#### TOTAL PAID AND UNPAID WORK, CANADA, 1986

Sex	Paid Work	Unpaid Work	Total Work
	Millions of Hours Per Week		
Total	489.6	416.9	906.5
Female	175.5	288.0	463.5
Male	314.1	128.9	443.0
Male	314.1	128.9	443.0

#### Percent of Paid Work and Unpaid Work

Total	100.0	100.0	100.0
Female	35.8	69.1	51.1
Male	64.2	29.9	48.9

#### Percent of Total Work

Total	54.0	46.0	100.0
Female	37.9	62.1	100.0
Male	70.9	29.1	100.0

#### 3.2 1992 Time Use Survey

The second time use survey is currently ongoing. A major objective of the 1992 Survey is to improve the quality and reliability of measures of unpaid work. A significant improvement is accounting for seasonality in the estimates as the GSS is conducting the new survey monthly throughout the year.

Again, the survey will collect a 24-hour diary from respondents, following the approach used in the 1986 survey. The activity coding structure has been expanded to derive estimates for the main categories of work outlined below while retaining comparison with the 1986 survey. Improving the measurement of unpaid work carried out for persons not living in the household was a principal goal.

### Paid Work Unpaid Work - Housework

- House maintenance
- Child care
- Transportation and shopping
- Personal care for others
- Help with forms, correspondence, etc.
- Volunteer work for organizations
- Other unpaid work

Another change from the 1986 survey is an attempt to overcome, at least partially, the problem of collecting only primary activities (i.e. the activity the respondent identified as demanding the most attention if s/he was doing more than one task at a time).

A pilot survey conducted in the summer of 1991 tested the collection of secondary activities by asking "Were you doing anything else at the time?" Child care activities, typically not reported as the dominant activity, were of particular interest. The pilot survey revealed irregular reporting of secondary activities which was partially influenced by the approach taken by individual interviewers. Aside from child care, little unpaid work was reported as a secondary activity. Most often reported were television viewing, listening to the radio and conversation.

Since the reporting of secondary activities was not providing improved estimates of various forms of unpaid work, the survey has been restricted to primary activities. However, a supplementary module focusses on child care activities. The new question is essentially a diary reporting the times the respondent was "caring" for her/his child(ren) even though s/he might have been doing other activities at the same time.

In addition to the data collected in the 24-hour time diaries, the survey has also included a set of direct questions on housework, household maintenance and child care done for household members and for others. The reference period for the direct questions varied according to the frequency of the activity; less frequent activites have a longer time period. The reference period was a week for the three main household activities and a month for all other unpaid work activities.

The two-pronged approach (i.e. diary and direct questions) being used in the 1992 Time Use Survey to measure unpaid work will allow comparison between the estimates produced from both sources. Another innovation for the 1992 Time Use Survey is the inclusion of a module of questions measuring respondents' perceptions of their use of time. Robinson (1991) calls this the "Time Crunch".

The 1992 survey will also have special content on sports and cultural activities.

#### 4. Estimates of the Value of Household Work

Statistics Canada developed methods for constructing estimates of household work in the mid-1970s. Estimates were produced for 1961 and 1971 based on data from local area surveys conducted in Halifax and Toronto. Later, estimates were produced for 1981; work is ongoing for 1986. These estimates used two main approaches to value the time spent on household work; these were the opportunity cost approach and the replacement cost approach. The opportunity cost method values household work. Two versions of the foregone earnings due to the time spent on domestic work rather than paid work. Two versions of the replacement method have been used, the total function or housekeeper replacement approach and the individual function or task replacement cost method. The housekeeper replacement method values all time devoted to household work at the hourly wage of housekeepers in the market. In contrast, the task replacement cost method values time devoted to specific household tasks at the hourly rate for individuals performing counterpart work in the market. A problem with the latter approach is that the male/female wage differential in the market for work of equal value will be perpetuated in the non-market sector, unless the same rates are used to value work by both males and females.

Statistics Canada's initial work for 1971 (Hawrylyshyn, 1978) used three alternative valuation methods and produced estimates for the value of household work ranging from 34% to 41% of Gross National Product (GNP). The project also produced estimates for 1961; these ranged between 40% and 44% of GNP (Adler and Hawrylyshyn, 1978). Swinamer (1985) obtained estimates for 1981 which ranged from 35% to 40% of GDP. A number of other countries have developed estimates in the same range; comparisons were published in an information paper by the Australian Bureau of Statistics (1990).

Work is nearing completion on estimating the value of household work for 1986 based on the 1986 Time Use Survey (Jackson, 1992). The estimates for 1981 are also being revised. A number of modifications to the definition of work and the valuation of housework have been introduced to the earlier methodology.

Plans for the future are to continue the work on the methodology and to publish estimates of the household sector on a regular basis as extensions of the current national accounts. The 1992 Time Use Survey will provide key input into this work.

#### 5. Issues in Measuring Work

Although many countries have conducted time use surveys during the 1980s, few have specifically focused on the measurement of unpaid work. An exception is the New Zealand time use pilot which concentrated in some detail on this topic (New Zealand, 1990). A number of issues must be addressed if time use surveys are to be used to measure and analyze unpaid work. A brief discussion of some of the issues follows.

#### 5.1 Conceptual and Definitional Issues

The concept and definition of work, especially unpaid work, is a main issue. It has several dimensions. First, there is the question of which activities constitute work. Even paid work, as measured by time use, has no generally accepted guidelines of what to include. This can be contrasted to the situation for the traditional labour force measurement where the International Labour Organization (ILO) has recommended an universal definition for employment.

For example, consider the classification strategy used by the International Time Use Survey (Szalai, 1972), which was modified by Canada for the 1986 survey. Many studies based on this classification used the major groups to define various types of work. According to this approach, paid work includes not only time spent at paid work but also time spent on activities related to paid work, e.g. travel to and from work, meals and breaks at work and waiting time before and after work (see Appendix A). While a case could be made for the inclusion of these activities, this gives rise to certain inconsistencies. For example, unpaid work does not include meals and breaks related to domestic work; meals are generally counted as personal care and breaks as a type of leisure time, depending on the primary activity reported.

Unpaid work activities are usually defined to include all components of three major groups: domestic work, care of children and shopping and services. The inclusion of activities related to domestic work and primary child care in unpaid work is, for the most part, unambiguous. Inclusion of activities related to shopping are more problematic; at issue is the possible classification to unpaid work or to leisure. Shopping activities could conceivably be split between the two categories using an arbitrary classification of the product (e.g. shopping for groceries would be work) or the respondent's perception of the activity.

There is also the question of how to treat education-related activities which are comparable to paid work. They could be included with paid work as a component of total productive time. A similar conceptual challenge would arise as to which activities to include (i.e. meals and breaks at school, waiting for class to begin and travel to and from school).

On the other hand, there are activities such as help and personal care to adults and volunteer work, which are coded to different major groups and, therefore, not usually included in unpaid work. In particular, the former is coded to personal care and the latter to organizational, voluntary and religious activity, a component of free time. A case could be made to include include other types of organizational activities and domestic home crafts in total work (e.g. serving on parent/teacher committees, coaching hockey or ringette, knitting a sweater). Clearly, modification of the major groups used in the multinational classification system is required to accommodate an expanded definition of work.

#### TABLE 2

## POTENTIAL COMPONENTS OF PAID AND UNPAID WORK, CANADA, 1986

				%
Activity	Total	Male	Female	Female
	Millie	ons of Hours Pe	er Week	
Paid Work	489.6	314.1	175.5	35.8
Work for Pay	395.4	251.5	143.9	36.4
Travel to Work	42.2	27.1	15.1	35.7
Other Paid Work	52.1	35.5	16.6	31.8
Housework & Repair	239.9	65.3	174.6	72.8
Housework	208.8	39.9	168.9	80.9
Home Repair &	31.1	25.4	5.7	18.3
Maintenance				
Child Care	57.2	14.4	42.8	74.8
Shopping	119.8	49.2	70.6	58.9
School & Education	112.2	56.9	55.3	49.3
Other				
Help to Adult Persons				
in Household	3.2	1.5	1.7	54.2
Volunteer Work	7.9	2.8	5.1	64.1
Other Organizational Activities (excl.				
Religious)	7.6	4.2	3.4	44.9
Domestic Home Crafts	20.2	0.7	19.5	96.5
				10.0

Table 2, derived from the 1986 Canadian Time Use Survey, shows the magnitude of possible components of work-related activities. Research is ongoing to analyze the impact of including different components in the definition of total work output. While a few of the components appear small at the total population level, these components may be more important for various subpopulations (e.g. women and the elderly).

An additional aspect of the conceptual problem is the treatment of secondary activities. Child care activities are particularly problematic. The concept of what constitutes child care and the concomitant time to include in work output is difficult to assess and measure. Parents are responsible for their children 24 hours a day. However, Canada appears to have a nation of neglected children when we measure child care through primary activities. In 1986, parents averaged less than two hours a day for child care. An estimate of the amount of time Canadians devoted to child care could range from 2 to 24 hours, under different assumptions. A possible compromise is the "Who With" data, which estimates the time the respondent reported they were with the child(ren). This concept, however, does not fit into the 24-hour activity day which includes only primary activities. Should child care include time when the child is having a nap or playing at a neighbour's? Quite obviously, young children restrict the activities of parents, even when they are sleeping. They are always "on call". The addition of a supplementary diary on child care in the 1992 survey should provide insight on this complex and demanding issue.

While difficult to measure, secondary activities are important for other analytical purposes. Some groups in society may be monochronic (i.e. doing one task at a time), while others are predominately polychronic. As well, in studies across time, an apparent decrease in time spent on an activity may merely be a shift in that activity from a primary activity to a secondary activity, e.g. time spent eating meals. If more respondents are watching television as a primary activity while they are eating, the reported decline in time spent on meals would be illusory. Of course, the inverse could also be true.

While analysts recognize the importance of secondary activities, little analytical output has been generated on the data that has been collected. Further work is necessary to improve the measurement of secondary activities and to explore ways of incorporating them into the measurement of work.

A third dimension of the definitional problem is related to the a priori designation of activities to work or leisure compared to the respondent's subjective perception of what is work or leisure. Clark, Harvey and Shaw used a methodology based on a time use diary to examine the meaning of work and leisure. They found activities were defined differently by men and women, and that individuals may classify the same activity to work or to leisure depending on the context and circumstances.

The authors established that employed persons identified more of their *a priori* designated productive time as leisure than did individuals keeping house. Various groups in society can appear more or less productive due to the arbitrary classification of activities to work or leisure. Obviously, subjective perceptions of activities are important to identify differences among subpopulations.

#### 5.2 For Whom the Work is Done

An added dimension in the measurement of unpaid work is the recipient of the work, e.g. household members, non-household individuals, businesses or organizations. This can be important for studying issues related to social support or the balance between paid work and family responsibilities. In addition, the flows between various sectors would be of interest in the development of satellite accounts for unpaid work. Generally, the time use approach does not differentiate among recipients of the work. One approach to this problem is to develop a classification system that would allow activities to be coded differently depending on for whom the activities are done. For example, child care for a household member could have a different code than child care for a non-household individual. The Canadian 1992 Time Use Survey adopted this approach. In modifying the classification system, correspondence with the 1986 survey was maintained. An alternative approach is to add another dimension to the recording of activities which would indicate the recipient of the work. New Zealand's pilot survey used this approach. While this approach works well when respondents complete their own diary, it is not clear how well it would work in a telephone interview when respondents are reporting retrospectively on their activities. One potential solution is to use the "Who With" and location variables that are routinely collected in the time use diary.

#### 5.3 Frequency of Measurement

A final issue is the need to develop methodologies permitting the measurement of unpaid work on a regular basis. As Ironmonger (1987) has indicated:

"We have a general hypothesis that production and employment in the household economy will move in a counter-cyclical way to production in the market economy. ... Thus the total economy, the sum of market and household, will be much steadier and have a smoother growth path than that shown by the figures we currently use to measure the total output and employment of the economy."

If we are to track total economic activity, then we must measure unpaid work on as regular a basis as paid work. One possible approach is to conduct an ongoing time use survey. Estimation of the sample size and an overall design would be required. However, this approach could prove overly complex and costly in the short run. An alternative is to use a small number of direct questions on time allocation and adjust for reporting problems by periodically benchmarking with up-to-date estimates from a time use survey. Through the inclusion of both a diary as well as direct questions, the 1992 Canadian Time Use Survey will allow for further exploration of this issue.

#### 6. Summary

More attention must be given to the issues inherent in the measurment of unpaid work. The demand to recognize and value household work can no longer be ignored. Options for including non-market work within the GDP framework are currently being explored. The time use approach offers a methodology and framework for addressing these issues, but much development work remains. The 1992 Canadian Time Use Survey will provide data which will allow some of these issues to be examined.

Clearly, we will not resolve all the conceptual issues in the near future, however, provisional agreement on concepts and definitions would further the development of work in this area. Individual countries could continue to use and define alternative classification systems for their own purposes, but consensus on a conceptual framework would enable international comparisons as work continues on the definitive solution.

#### References

- Adler, H. and Hawrylyshyn, O., 1978, "Estimates of the Value of Household Work in Canada, 1961 and 1971," <u>Review of Income and Wealth</u>, December, pp. 333-335.
- Australian Bureau of Statistics, 1990, Information Paper, <u>Measuring Unpaid Household Work: Issues</u> and Experimental Estimates, Catalogue No. 5236.0.
- Casserly, M. Catherine and Brian L. Kinsley, (eds.), 1983, <u>Twenty-Four Hours in the Life of</u> <u>Canadians, Explorations in Time Use</u>, Volume 1, Employment and Immigration Canada and Department of Communications. Ottawa.
- Clark, Susan, Andrew S. Harvey and Susan M. Shaw, 1990, "Time Use and Leisure: Subjective and Objective Aspects", Social Indicators Research, 23: pp. 337-353.
- Clift, Barbara and Stewart Wells, 1989, <u>The Reliability of National Accounts Estimates:</u> <u>The Canadian</u> <u>Experience</u>, presented at the International Association for Research in Income and Wealth, Twentyfirst General Conference, Lahnstein, West Germany.
- Duchesne, D., 1989, Giving Freely: Volunteers in Canada, Labour Analytic Report No. 4, Statistics Canada, Catalogue No. 71-535. Ottawa.
- Harvey, Andrew S., Katherine Marshall, Judith A. Frederick, 1991, Where Does Time Go?, Statistics Canada, General Social Survey Analysis Series, Catalogue No. 11-612, No. 4. Ottawa.
- Harvey, Andrew S., 1990, <u>Guidelines For Time Use Data Collection</u>, Paper Prepared for International Time-Use Research Meeting, to be published as a Statistics Canada, General Social Survey Working Paper.
- Hawrylyshyn, O., 1978, Estimating the Value of Household Work in Canada, 1971, Statistics Canada Occasional Paper, Catalogue No. 13-566, Ottawa.
- Herzog, A. Regula., Robert L. Kahn, James N. Morgan, James S. Jackson, and Toni C. Antonucci, 1989, "Age Differences in Productive Activities", Journal of Gerontology, Vol. 44, no. 4, pp. 129-138.
- Ironmonger, Duncan S., 1987, <u>Research on the Household Economy</u>, Research Discussion Paper, Centre for Applied Research on the Future, University of Melbourne, Australia, p. 14.
- Jackson, Chris, 1992, Estimates for the Value of Household Work in Canada, 1981 and 1986. (Work-in-progress, Statistics Canada Unpublished Paper). Ottawa.
- Jones, Frank, 1989, <u>Elements of the Design of A Service Work Satellite Account</u>, unpublished paper, Statistics Canada.
- Juster, F.T. and F.P. Stafford, 1991, "The Allocation of Time: Empirical Findings, Behavioral Models, and Problems of Measurement", Journal of Economic Literature, pp. 471-522.

- Myles, John, 1991, "Women, the Welfare State and Care Giving", <u>Canadian Journal on Aging</u>, Vol. 10, No. 2, pp. 82-85.
- New Zealand, 1990, <u>Testing Time</u>, Department of Statistics, Te Tari Tatau, Wellington, New Zealand.
- Norris, Douglas A., and David Paton, 1991, <u>Canada's General Social Survey: Five Years of Experience</u>, Survey Methodology, Volume 17, No. 2, December, 1991, pp. 226-240, Statistics Canada, Catalogue No. 12-001. Ottawa.

Oakley, Ann, 1974, The Sociology of Housework, New York: Pantheon Books.

Robinson, John, 1991, "Your Money or Your Time", American Demographics, November.

- Stone, Leroy O., 1991a, On The Demographics of the Population That has Both Work and Family Obligations. An Exploration of the 1985 and 1990 Canadian General Social Surveys, Paper presented at Statistics Canada workshop: "Work Life, Family Life: Innovations in Human Resource Management".
- Stone, Leroy O., 1991b, <u>Revised Proposal for a Service-Work Satellite Account (SWSA) System</u>, unpublished paper, Statistics Canada. Ottawa.
- Swinamer, J. L., 1985, "The Value of Household Work in Canada, 1981", <u>Canadian Statistical</u> <u>Review</u>, March, pp. vi-xiv. Statistics Canada, Catalogue No. 11-003. Ottawa.
- Szalai, A. (ed.), 1972, <u>The Use of Time: Daily Activities of Urban and Suburban Populations in</u> <u>Twelve Countries</u>, Mouton & Co., The Hague.
- United Nations, INSTRAW, 1989, (International Research and Training Institute for the Advancement of Women), <u>Statistics on Women</u>, ECE, Compilation of Papers Presented During the Second Joint INSTRAW/ECE Meeting on Statistics of Women, Geneva, Switzerland pp. 13-16.
- United Nations, 1990, <u>Methods of Measuring Women's Participation and Production in the Informal</u> Sector, Series F, No. 46 United Nations publication, Sales No. E.90.XVII.16
- United Nations, 1991, <u>The World's Women, 1970-1990, Trends and Statistics</u>, Social Statistics and Indicators, Series K, No. 8, United Nations, New York.
- Walker, Alan, "The Relationship Between the Family and the State in the Care of Older People", <u>Canadian Journal on Aging</u>, Vol. 10, No. 2, 1991, pp. 94-112.
- Waring, M., 1988, <u>Counting for Nothing: What Men Value and What Women are Worth</u>, Allen and Unwin, Wellington, New Zealand.



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