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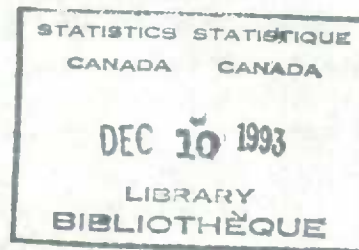
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**DEFINITIONS OF UNPAID WORK AND IMPLICATIONS FOR  
THE DESIGN OF TIME USE ACTIVITY CLASSIFICATIONS**



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Opinions expressed in this paper are those of the author, as are any errors or omissions.

## 1.0 INTRODUCTION

Time use surveys provide a primary source of information on non-market production for use in the development of satellite accounts to systems of national accounts (SNA). The motivation for development in this area is recognition that a good deal of productive activity is undertaken in the absence of monetary transactions. In addition to SNAs, accounts for non-market production provide for a more complete description and improved understanding of a nation's resource allocation and the associated production, distribution and consumption of goods and services and various links between the market and non-market sectors of the economy.

For the most part, SNAs treat households as consumer units, having little or no productive role in the economy. Production ends when "final" goods and services are delivered to the market and consumption occurs when they are purchased by households. Models of household production (Becker, 1965; Gronau, 1977) provide an alternative view, in which household purchases of "final" goods and services are actually intermediate inputs to further production processes that require household member's time and effort and household durable goods. One of the problems with these models and accounting for household or non-market production is determining when production activity ends and consumption activity begins.

National accountants denote this problem as the "production boundary problem". In the conventional SNA framework, the production boundary is established via application of the "market rule". Productive activity consists mostly of those activities for which payment is made and/or which generate goods and services for sale.<sup>1</sup> In alternative frameworks the production boundary must be re-established either by (1) dispensing with the market rule and replacing it with some alternative rule(s) (2) retaining the market rule and developing additional inclusion rules or (3) by retaining the market rule and identifying exceptions to it on an *ad hoc* basis.

By definition a productive activity yields some output, so that the boundary can be established by identifying either a set of outputs or by identifying the set of activities that generate those outputs. In practice, the former approach is not feasible as there is a paucity of data on the outputs of non-market productive activity. Time use surveys provide information on a variety of productive (market and non-market) activities and, in principle, the boundary problem can be resolved by partitioning activity classifications into two mutually exclusive sets of productive and all other activities. Activities that are not classified as productive are not deemed to have no value. Indeed, a basic premise of economic models of time use is that all activities are valuable because time is a scarce resource.

The following section provides several definitions of unpaid work<sup>2</sup> and discusses various criteria embedded within them. One common thread to the definitions is the so-called "third person criterion". This criterion is increasingly accepted, particularly among national accountants, as the preferred rule for defining the boundary between productive and all other



activities (Chadeau, 1992, p. 89). The next section provides a more in-depth consideration of this criterion. The final section summarizes the implications for the design of activity classifications and provides some examples of how various criteria are reflected in the time use activity classification used in the 1992 General Social Survey (Statistics Canada, 1993).

## **2.0 DEFINITIONS OF UNPAID WORK**

### **2.1 Select definitions**

Several definitions of unpaid work are listed below. The list is intended to be indicative of the types of definitions found in the literature and to cover several criteria used in the identification of unpaid work activity.

"....work at home (like work in the market) is something one would rather have somebody else do for one (if the cost were low enough), while it would be almost impossible to enjoy leisure through a surrogate. Thus one regards work at home as a time use that generates services which have a close substitute in the market, while leisure has only a poor substitute." (Gronau, 1977, p. 1104)

"Those economic services produced in the household and outside the market, but which could be produced by a third person on the market without changing their utility to members of the household." (Hawrylyshyn, 1978, p. 19)

"Do-it-yourself activities are, by definition, those for which a choice must exist between doing it oneself or hiring someone else." (Hill, 1979, p. 31)

".... non-market uses of time that result in the production of a good or service that could be purchased in the market." (Murphy, 1982, p. 30)

"Household production consists of those unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods, or paid services if circumstances such as income, market conditions and personal inclinations permit the service to be delegated to someone outside the household group." (Reid, 1934, p. 11)

"The purposive activities of the household that result in goods and services which contribute to the functioning of the living unit." (Walker, 1980, p. 124)

## 2.2 Criteria for defining unpaid work

The **market replaceability criterion** is present in various forms in all but Walker's definition. In Gronau's definition it is reflected in the notion that "one would rather have somebody else" undertake the activity and that work at home generates goods and services that "have a close substitute in the market". There are two distinct versions of "replaceability" here: either one can replace the time inputs to non-market production (input-replacement) or one can replace the outputs of non-market production (output-replacement) through the market. For example, Murphy uses the output replacement version and Hill uses the input-replacement version. While it is not clear that this distinction has any practical importance (in terms of included/excluded activities), the former is more appropriate when using time use data and the latter is more appropriate when using data on the outputs of unpaid work. The input-replacement version of the replaceability criterion is similar to, but more restrictive than, the **third person criterion** (TPC). The former requires consideration of market alternatives while the latter does not (see below).

There is some question as to whether replacement **actually can** take place or **conceivably could** take place (Walker, 1980, p. 124). It is clearly the case that what is possible and what might be possible are two different things, the latter yielding a more comprehensive set of activities and one that would tend to be compatible over time and across countries.

Gronau's definition makes the important, but controversial, point that "close substitutes" can be found in the marketplace. In general, goods and services produced in households are customized to their particular tastes and preferences so that perfect substitutes are not available. The controversial implication is that goods and services produced in households for which there are no market substitutes would be excluded by the definition.

Reid's and Gronau's definitions contain a **sensitivity to prices criterion**, reflecting the economist's premise that economic activities are responsive to economic variables. Kravis (1957, p. 350) proposed a similar criterion and an associated sensitivity measure for separating economic and non-economic activity. This criterion does not appear to have any implications for the design of activity classifications. Nor does it seem appropriate that definitions of unpaid work should depend upon prices or empirical tests.

Reid's definition is the only one to state the obvious criterion: unpaid work is **unpaid**. In practice, the distinction between paid and unpaid work is unclear. For example, time use surveys presumably capture activity occurring in the "barter economy", although typically it cannot be identified as such.

The **utility equivalence criterion** of Hawrylyshyn's definition is intended to separate those activities done primarily for the goods and services yielded from those done primarily for the process benefits (eg. enjoyment or satisfaction) derived from the activity itself. In conjunction with the third person criterion, utility equivalence rules out all activities where the benefits would be lost to the third person.<sup>3</sup> The criterion has important practical implications.



Hawrylyshyn excluded "hobbies and crafts" from household work, presumably because he viewed the benefits as mostly process benefits and the utility equivalence criterion would not be satisfied. Murphy included "hobbies and crafts" in household work, presumably because similar outputs could be found in the market.

The **by and for members of the household criterion** of Reid's definition is quite important and is used to separate "household work" from other non-market work activities such as volunteer work.

### 3.0 THE THIRD PERSON CRITERION

As mentioned earlier, the third person criterion is gaining acceptance among national accountants as the preferred rule for redefining the production boundary. The criterion itself is quite straightforward: **An activity is work if it could be delegated to another person.** Any paid work activity satisfies this criterion by virtue of the fact that the activity has been delegated - someone does something for someone else in exchange for payment. As such, the TPC provides for a logical extension to the set of paid work activities: from those that are delegated (for pay), to those that could be delegated. Activities such as doing the laundry, house cleaning, looking after children, and grocery shopping could be delegated and would be classified as productive. Sleeping, eating, exercise, day dreaming, watching TV cannot be delegated and would not be classified as work.

The rationale underlying this criterion has been discussed at length by Hill. His basic point is that a delegatable activity admits the possibility of a transaction between a producer and a consumer. In the absence of this possibility, "there can be no markets, no specialist producers, no industries, no division of labour, and whatever it is hoped to achieve by engaging in the particular activity in question it is not the production of goods and services." (Hill, 1979, p. 32)

The TPC is a technical criterion, strictly related to the possibility of delegation and not any other characteristics of the activity or the availability of market alternatives. Being a technical criterion, the set of activities satisfying the TPC is clearly dependent upon technology. For example, changes in reproductive technology over the last two decades make the delegation of "child-bearing" a real possibility. As a result, the set of activities classified as productive via the TPC can change over time, even in the absence of any change in the intrinsic nature of activities. This suggests that the TPC is a necessary, but not sufficient, condition for the identification of work activity.

It is apparent that a considerably broad range of activities satisfies the criterion, many of which would not be considered as "work". For example, activities such as washing, bathing, shaving, grooming and feeding oneself, some conversational activities (eg. communicating a

piece of information can be delegated, idle conversation cannot) and mental activities (eg. problem-solving can be delegated, day dreaming cannot) satisfy the criterion. However, what is considered to be "work" is conditional upon social norms and customs, institutional settings, and the intended uses and purposes of measures of productive activity. Strict adherence to the TPC is not to be expected as there may be a number of legitimate reasons for narrowing or even expanding the set of activities under consideration. The TPC provides a starting point to identifying the set of productive activities. Subsequent departures from this point and the reasons for them should be noted.

### 3.1 Some irrelevant considerations

While the third person criterion itself is relatively straightforward, actual application of the criterion is difficult. Part of the difficulty is associated with consideration of issues that do not matter. Several of these are listed below.

- Goldschmidt-Clermont has correctly pointed out that the TPC does not require that the third person be paid to undertake the activity in question. It is enough that someone else could undertake the activity. <sup>4</sup>
- It doesn't matter if the activity under question **would** be delegated, only that it **could** be delegated. In other words, application of the TPC should not be guided by consideration of factors that influence decisions to delegate work activity such as tastes and preferences, market prices, social norms and customs, or institutional settings. Application should be guided only by consideration of the technical possibility of delegation.
- Hill and Goldschmidt-Clermont, among others, have argued that whether or not activities are enjoyable is irrelevant in separating work from other activities. The TPC does not require consideration of utility or the process benefits associated with undertaking any particular activity. <sup>5</sup>
- The outcome of an activity may be an uncertain event. "Shopping for a new coat and returning empty-handed" or "tending a vegetable garden" that is subsequently destroyed are examples. The TPC does not require consideration of whether or not the intended outcome is realised.
- Reid's definition of household production suggests that the "third person" is someone outside the household. The TPC does not require consideration of who the "third person" might be.



## 4.0 SUMMARY IMPLICATIONS AND IMPLEMENTATION

Application of the **third person criterion** is facilitated if activity classifications are designed so as to separately identify delegatable activities. One activity where delegatable and non-delegatable activities are typically not separated in activity classifications is "travel via automobile". Drivers produce a transportation service, while passengers consume that service. In Statistics Canada's most recent time use survey, all episodes of "automobile travel" were classified by respondents' status as passenger or driver.

The **by and for members of the household criterion** requires either a "for whom" question on the time use diary or additional detail in activity classifications with the "for whom" dimension built into the activity descriptions. The latter approach requires additional probing on the part of the interviewer whenever it is required for correct classification. Statistics Canada's activity classification distinguishes between types of help and care given to household members (adults and children) and members of other households. The "for whom" question was not a part of the diary. Instead, interviewers clarified respondents' descriptions of help and care activities to identify "for whom" and to enable correct coding to the activity classification.

It is important to capture the distinction between **paid and unpaid** activity to permit comparisons with official employment statistics, to avoid double counting, and to classify work activities to different sectors of the economy (eg. formal, informal, barter, underground, household, etc.). A "for pay" question on the diary would be somewhat cumbersome. An alternative is to build the paid/unpaid distinction into the activity classification. For example, in Statistics Canada's current activity classification "unpaid work for a family business or farm" was separated from other paid work activities, "looking for work" and "overtime work", which had previously been classified as one activity, were also separated. As another example, the activities "hobbies" and "domestic home crafts" were both split according to whether they were done mainly for pleasure or for sale or exchange. Whenever respondents reported hobby or craft activities, interviewers were required to probe for motivation to enable correct coding.

## NOTES

<sup>1</sup> There are some notable exceptions to the rule, such as the imputation for owner-occupied rent (See Chadeau, 1992).

<sup>2</sup> The terms "work" and "productive activity" are used synonymously throughout the paper.

<sup>3</sup> Households presumably choose what to purchase from the market and what to produce themselves, so that any alteration to this outcome would affect their utility. Consequently, the utility equivalence criterion would be difficult to satisfy. Moreover, it is not clear how the

criterion could be operationalized, if at all.

<sup>4</sup> In studies that attempt to place a "value" on unpaid work, it is necessary to refer to the market for prices. To implement replacement cost valuation of unpaid work, one must at least be able to find people who are paid to undertake activities similar to unpaid work activities.

<sup>5</sup> There is a clear analogy to the definition of paid work here. The issue of whether or not people enjoy paid work is irrelevant in the determination of their employment status.

## REFERENCES

Becker, G.S. "A Theory of the Allocation of Time," Economic Journal, September 1965.

Chadeau, A., "What is Households' Non-market Production Worth?" OECD Economic Studies, No. 18, Spring 1992.

Dupré, M.T. et. al., "The Concept and Boundary of Economic Activity for the Measurement of the Economically Active Population," Bulletin of Labour Statistics, ILO, Geneva, 1987:3.

Goldschmidt-Clermont, L., "Monetary Valuation of Unpaid Work," in Papers and Proceedings of the International Conference on the Measurement and Valuation of Unpaid Work, held at Statistics Canada, Ottawa, April 28-30, 1993 (forthcoming).

Gronau, R., "Leisure, Home Production and Work - The Theory of the Allocation of Time Revisited," Journal of Political Economy, 1977, vol. 85, No. 6.

Hawrylyshyn, O., Estimating the Value of Household Work in Canada, 1971, Statistics Canada, Occasional Paper, Cat. No. 13-558, Ottawa, 1978.

Hawrylyshyn, O., "Towards a Definition of Non-market Activities," Review of Income and Wealth, March 1977.

Hill, T.P., "Do it Yourself and GDP," Review of Income and Wealth, March 1979.

Hill, T.P., "On Goods and Services," Review of Income and Wealth, December 1977.

Kravis, I.B., "The Scope of Economic Activity in International Income Comparisons," in Problems in the International Comparison of Economic Accounts, Studies in Income and Wealth, V. 20, 1957.

Murphy, M., "The Measurement and Valuation of Non-market Economic Activities," in C.

Hefferan (ed.) The Household as Producer, Proceedings of a workshop sponsored by the Family Economics-Home-Management Section of the American Home Economics Association, St. Charles, Mo., 21-23 June 1979, AHEA, Washington DC, 1980.

Murphy, M., "Comparative Estimates of the Value of Household Work in the United States for 1976," Review of Income and Wealth, March 1982.

Reid, M., Economics of Household Production, Wiley, New York, 1934.

Statistics Canada, Initial Data Release from the 1992 General Social Survey on Time Use, Housing, Family and Social Statistics Division, April 1993.

Statistics Canada, Measuring Household Work Activity with Time Use Survey Data, paper prepared for OECD Meeting of National Accounts Experts, July 1991.

Walker, K., "Time Measurement and the Value of Non-market Household Production," in C. Hefferan (ed.) The Household as Producer, Proceedings of a workshop sponsored by the Family Economics-Home Management Section of the American Home Economics Association, St. Charles, Mo., 21-23 June, 1979, AHEA, Washington DC, 1980.



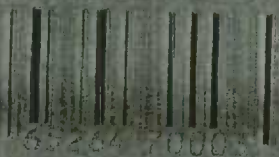
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