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A Review of Two Approaches to Classifying Time-Use Activities*

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1. The objective here is not to subject the two proposed activity coding schemes to microscopic analysis such that I can argue that a given category is or is not correctly placed in one scheme or the other. I believe there is a prior question concerning the overall structure implicit in the schemes and needed for the proper registering of time use, what I would call the 'skeleton' of the activity structure.

2. At the outset I believe that each of these presentations moves us significantly forward in our attempt to develop an acceptable and useful classification of activities. At the same time I believe there is a fair distance to go as I am slightly uncomfortable with both. The objectives and presentations of the two approaches before us are, in one sense, slightly different. On the one hand the International Classification for Time Use Activities (ICTUA) "proposes a classification of activities based on the System of National Accounts (UNSD,p.3). Its concern is with the use of the resulting data for the purpose of evaluating productive activity. This, of course, has input considerations related to what is captured. Hoffmann and Mata propose "An Alternate Approach to the Time Use Activity List" identified as the Alternative International Classification for Time Use Activities (ACTUA), based on an occupational classification, which they argue is "a different and...simpler approach...with the implied purpose of "describing and analyzing the world of work" (Hoffmann and Mata, 1997). Their focus, though not devoid of substantive output concerns, is focused more on the input question of how to capture and identify activities. From the substantive viewpoint it is somewhat in agreement with UNSD in wanting improved detail on work activities.

3. The information requirements of these two approaches are quite different. On the surface at least the list proposed by Hoffmann and Mata requires only that one know what is being done and the information required is limited to a verb and an object. This undoubtedly leads to a simpler list. Such a list without additional information is without meaning in terms of the use proposed by UNSD, or in fact for most uses. This point is, however, also made by Hoffmann and Mata who recognize the need for additional contextual information.

4. Both approaches are primarily interested in productive activities albeit that they use different criteria to define what is productive. That debate should not be the essence of the task before this group. As I see it, the task we face over the next three days is to move forward in the development of a coding scheme which will guide the collection and coding of time use data such that it will provide information useful for national accounting, labour accounting and for guiding educational, social and cultural policy as well. It is important for us to realize that time use reflects both economic and social life and any coding scheme developed must do justice to both.

5. It has been argued that a semantic taxonomy should comprise four things:

- (a) an initial list of lexically defined activities
- (b) a set of meanings used to classify them
- (c) a set of rules for the classification

- (d) an estimate of the degree to which the lexically defined activities are true to their meanings. (Elcardus and Glorieux, (1993).

I believe these points provide a basis for our considering the materials before us and for guiding our discussions.

6. Additionally, Elcardus and Glorieux (1993) quoting Sorokin and Berger point out that the same lexically defined activity can have:

- (a) different meanings for different actors
- (b) different meanings for the same actor depending on the context.

This point has been clearly shown by a colleague of mine who used time diary data supplemented with subjective dimensions to show that what was deemed leisure by men may be deemed work by women and vice versa, and also that the same activity was at one time work and at another leisure for the same person (Shaw, 1988)

7. Further guidance is provided, I think, by observations made by a colleague and I in a 1977 review of the multi-national coding scheme. We observed that there is a need for equal coverage for all sub-populations and equal coverage for all behavioral areas. If an activity list or coding scheme is going to stand the test of time it will need to be able to cover both. Over emphasis on the employed population, non-market workers or any other sub-population should be avoided, as should overemphasis on particular behavioral areas.

8. A third criteria, I believe, is that whatever is developed must be manageable. Data capture and registration must meet both input and output criteria. On the input side they requires respondent cooperation and knowledge and must be cost effective and processible and on the output side they must be valid, reliable, usable and flexible (Harvey and Macdonald, 1976). If respondents are unwilling or unable to provide the detail required to accurately, code the data it is of little value. At the same time if coders are unable to accurately or reliably record activities it is of little value.

9. In particular, a prime concern must be the major groupings. As the field is developing, simpler instruments are being used to capture time use data. Typically these entail aggregating activities into collapsed codes along a hierarchical dimension. More than anything else it is important to get that hierarchy right. Detailed codes can be reorganized forever but if the input is aggregated it must be lived with forever. I believe that the final list should be presentable in a scheme of 20-35 aggregated activities which will encompass all daily activity in a form that is comprehensible by respondents and which will allow them to reliably attribute each behaviour to one of the available categories.

10. Each of the schemes before us provides a list of lexically defined activities. The UNSD material goes beyond this and provides both a set of meanings and a set of rules for the classification. These additional steps shaped by allegiance to the SNA appear to complicate the process, but not unnecessarily. No such steps are included in the Hoffmann and Mata paper but one can surmise that they would be shaped by allegiance to approaches used to frame

International Standard Classification of Occupations (ISCO) and possibly the International Standard Industrial Classification of All Economic Activities (ISIC). And then the process may become complicated.

11. The basic need, whatever the taxonomical approach taken, is to define an activity list and activity modifiers that will allow us to collect and capture time use data in such a manner that it can effectively be arranged to meet most (I hesitate to say any) demands placed on it.

12. I agree with Hoffmann and Mata that paid work has been treated as a black box. I have been pushing, among others, Statistics Canada—to try to open it. The problem is how to do so. The first step, I believe, is to get a workable classification of "work" activities. It is possible that the scheme presented by them provides an entry to doing so. I am unconvinced by those who believe it is impossible to get people to open the black box. Detail is collected on work at home. Detail can be collected on work at work. We need to do it.

13. The proposal of Hoffmann and Mata provides what appears to be a relatively unambiguous list of work activities. I say appears to be because I wonder, for example, if there is a difference between 'playing a musical' instrument or 'rehearsing on a musical instrument.' More on that later. In contrast the ICTUA in Major Group 1, Market-oriented economic activities and related activities, includes "10 Wage and Salary employment" as well as several other work classifications that provide no indication of the content of that work. At the same time, in Major Group 2, Non-market economic activities within SNA boundaries, the black box is opened. Clearly crop farming is as much a market-oriented activity as it is a non-market activity. Do we suppose that we can get better data on 'non-market crop farming' than we can on 'market crop farming?' Similarly, 'cooking' is as much a market activity as it is a household activity. And, cooking could as easily be a volunteer activity as for example preparing 'meals on wheels.' Wage and salary employment, household work and volunteering are more venues or motivations than activities.

14. Turning to the ICTUA, it provides guidance on what needs to be captured in order to use the time-use data to construct a satellite household account. The issue is not what is done. The issue is the essence of, the motivation for or the location of what is done. From a purely economic accounts approach it can depend on the institutional sector for which it is done. Growing corn is by definition a productive SNA activity. Whether it is a market or a non-market activity depends on whether it is sold in the market or consumed by household for own use. Implicit in the ICTUA is the need to know for whom/what something is done. For the first time, I see the folly of how we have been treating household services in time use studies and in constructing household accounts. The ICTUA category 803 "Organizing and hosting a gathering at home" could as easily be an economic activity in the market if a 'party organizer' had been hired and/or the gathering was a form of business promotion for the hostess/host. Playing in a band may be either a "market' or a "non-market" activity depending on the motivation, rehearsal or enjoyment (if you can separate the two).

15. As mentioned earlier, a key consideration must be the ability to provide a reasonable 'skeleton' of aggregate activities into 25-30 groupings collapsible into a smaller 10-15 classification of major areas, possible again reduced to the now widely accepted four group

breakdown roughly characterized as market work, housework, personal time and free time. This will permit the use of simpler, but reconcilable, instruments along with broader more detailed ones. We will not get all the detail we need with one instrument. What is needed is a framework which will allow for multiple instruments and/or surveys to be used in much the same way they are used in the economic statistics sphere. Different things are important to different industries and occupations. These require different instruments which are reconciled through their integration into SNA and labour force frameworks. Time use must similarly be both decomposable and additive. In this respect, I am uneasy about the scheme as organized by Hoffmann and Mata. With their scheme, and by their accounting 7-9 major groups are used to account for 25-33% of the activities of most adult workers and 1-3 groups are used to account for 70% plus of the behaviour of virtually the entire population. This appears to provide a rather distorted skeleton. What their scheme does emphasize is the need for a simple input approach which will enhance the validity and reliability of the data and provide a good approach to developing the activity list. What is needed is to keep the activity list simple, but to clarify, define and collect the information required to provide the skeleton with flesh and blood. In contrast to the Hoffmann and Mata approach the UNSD approach provides a fuller skeleton indicating the types of data that are ultimately needed. The resulting activity list should reflect both.

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