EVALUATING UNPAID TIME CONTRIBUTIONS BY SENIORS: A CONCEPTUAL FRAMEWORK

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Abstract: In the past, considerable research in gerontology has focused on services provided to seniors. Recently, however, there has a been a growing recognition of the contributions made by seniors to their families, communities and to society. Empirical estimates have been provided by researchers to show how much these contributions are worth in terms of savings in dollar amounts. A critical review of the literature identifies unresolved issues concerning which contributions to count and how to measure and value these contributions. As yet, no clear criteria exist that readily identify the distinction between volunteer activities and unpaid work, what specifically should be counted as an unpaid time contribution, how it should be quantified, and how this unit of contribution should be monetarily valued. The market replacement approach and the opportunity cost approach that are used to assign value to unpaid work often use very different wage rates or levels of income loss. This paper reviews the relevant literature and identifies important issues in evaluating unpaid time contribution of seniors. The authors propose a framework which addresses some of the methodological shortcomings identified in previous research and which provides a guide for future research in this area.

INTRODUCTION

In western societies older people are often viewed as unproductive members of society, and a burden on younger cohorts (Carey, 1997). The aging of the population, therefore, is presented not as an accomplishment but as a problem. This line of argument rests on the premise that having more older people in society will increase our old age dependency ratio (Havens, 1996; Novak, 1997). As the older population increases in numbers and proportion, not only the needs of older people but also their contributions to society become important to examine. Recently attempts have been made by researchers, seniors' organizations and government to provide evidence that older people, in fact, contribute extensively to society by performing volunteer activity in formal organizations, helping family and friends, and making charitable donations (National Advisory Council on Aging, 1991; Lapierre, 1992). *The National Survey of Volunteer Activity* (Statistics Canada, 1987) distinguishes between formal and informal volunteer activity. Formal volunteer activity is willingly performed without pay through a group or an organization,

often on a regular or planned basis and involves commitment to the organization. Informal volunteer activity is provided spontaneously to friends, neighbours and relatives, who are not living in the same household. A few studies have attempted to measure the value of informal help by focusing on informal caregiving an example of an unpaid activity which potentially could have value in the marketplace (ARA Consulting Group, 1994; White-Means&Chollet, 1996; Max, Webber & Fox, 1995; Skrypnek & Fast, 1996).

There are numerous estimates cited in the literature on the monetary value of voluntary activity in general and more specifically, on the value of contributions by seniors (Ross, 1990; ARA, 1994; NACA, 1991) . Very large figures are cited to make claims about the value of volunteer activity to society. For example, Ross (1990) estimates the formal volunteer efforts of 5.3 million Canadians to be $12.0 billion in 1987, or approximately $13.2 billion in 1990. Recently, a newsletter for the Senior Talent Bank of Ontario refered to a survey conducted on behalf of the *Canadian Association of Retired Persons* (CARP), which found that volunteering in Toronto is an almost $100 million "industry". The newsletter also asserts that "this 'Gift to Society' would either have had to be made up by added taxes or by cash contributions from individual or corporate sources" (1995, p.2) and that many of the not-for-profit organizations served would not have survived without these formal volunteer efforts by seniors.

Not only are the values cited diverse in nature, but so are the methods used to measure and value these contributions. Currently it is very difficult to compare the results of various studies because researchers use different definitions and methodologies and make a range of assumptions about what kind of activity should be counted and how to attribute a monetary value to each activity(Statistics Canada, 1995). For example, one of the main assumptions made in research on volunteer work, in particular, is that if the volunteer has spent a number of hours on duty, then that time is counted as having some monetary value. We believe that the issue is much more complex. In order to fully understand the extent of seniors' contributions and the monetary significance of these contributions to the economy, to communities, to agencies and to families, researchers should agree on specific and consistent measurement procedures which identify what specifically should be counted (identification), how it should be quantified (measurement), how this unit of contribution should be valued (valuation) (Statistics Canada, 1995).

This paper begins by providing a brief review of the extent and type of seniors' contributions, and the rationale for the need for research and conceptualization for measuring the actual value of seniors' unpaid time contributions. This is followed by a critical review of the literature in order to delineate the conceptual and empirical issues in evaluating time contributions of seniors. The authors propose a framework which addresses some of the methodological shortcomings identified in previous research and which provides a guide for future research in this area.

EXTENT OF SENIORS' CONTRIBUTIONS

Seniors make considerable contributions to their communities, their families and to society in general. As the older population increases in numbers and proportion, not only the needs of older people but also their contributions to society become important to examine. Stone (1988) found that adults aged 55 and over gave a variety of assistance to others, including donations of money, transportation, personal care, baby-sitting, housework, yard work and dwelling maintenance, and unpaid volunteer work for organizations. Rates of giving differed for each activity. Less than 10 per cent of the seniors provided personal care, but, over half donated money to an organization or to people outside their household. Over 15 per cent of the seniors reported doing volunteer work for organizations. Ross found that volunteers 65 years of age and older spend a greater number of hours, on average, at their volunteer activities than volunteers in other age groups (1990). The time spent on unpaid activities of formal volunteer work, informal helping and household work shows much less decrease by age than does labour force participation (Herzog and Morgan, 1992). The focus of this paper is on the unpaid time contributions of seniors, this includes either formal or informal activities.

In recent years, an important trend of requiring non-profit service agencies to do program evaluation in order to secure future funding has emerged. Since many service agencies rely heavily on volunteers, in order to fully assess the costs and the benefits of the services they provide, agencies need to have a methodology to assess the value of unpaid time contributions. Statistics Canada's extensive publications in the area of households' unpaid work notes the

important uses of information on unpaid work, such as: to provide information on what types of work is being done, what is the output, the costs and benefits and to whom; as improved national accounting and link between market and non-market activity and accurate description of resource use; and to help in the development of public policy (Statistics Canada, 1995).

Even the people who participate in unpaid work are uncertain about the value of their contribution (Freeman, 1996). For example, if caregiving is viewed as one important example of unpaid help, some researchers have identified important policy implications related to the value of this area of unpaid help. Although few studies have attempted to quantify the economic burden of caregiving to Alzheimer patients, Max et al. (1995) point out the importance of considering informal costs of care as part of the national cost estimate so that policy makers can make informed decisions about allocating resources for this disease. In his study of the economic dimensions of volunteer work, Ross (1990) reported that the total number of volunteer hours spent caring for Alzheimer patients (in the U.S.), if converted to full-time positions (person years), would amount to 617,000 full-time jobs. These studies highlight how essential families are in providing unpaid help to their elderly members and thus delaying the need for formal organizations to take on the responsibility of providing care (Ozawa & Morrow-Howell, 1993;Max et al.1995).

It is evident that older adults contribute significantly to society. However, there is a need to better understand the extent and value of unpaid time contributions and the method of evaluating these contributions becomes vitally important. Questions about evaluating the unpaid time contributions can be grouped into three major issues: (1) identification, (2) quantification, (3) valuation. We will now explore these three issues separately.

IDENTIFICATION: WHAT SHOULD BE COUNTED?

There are several conceptual issues concerning what specifically should be counted, before measuring and assigning a value to the activity. In other words, some clear distinctions need to be made in terms of what types of time contributions by seniors should be counted before they can be assessed to have monetary value. The two key questions we need to ask in order to identify

what to count are: should we count only volunteer work or all unpaid work and secondly, should we count the time contribution only if it benefits someone and from whose perspective do we assess the benefit?

Count only volunteer work or all unpaid work?

As a starting point for our conceptual framework then, we suggest that not all volunteer work is done freely and that some work which appears voluntary may in fact be involuntary, done out of a sense of obligation or in response to social pressure. Researchers conceptualize volunteer work in three ways: work done for an organization, work done for [unrelated] individuals and work done for family members (Fischer et al., 1991). These kinds of endeavours are usually classified into two categories: as formal and informal volunteering. Although Vaillancourt (1994) and Chappell and Prince (1997) acknowledge that volunteer work can be defined more or less broadly, they chose only to use data on formal volunteer work, which Vaillancourt defined as work in health institutions, schools, religious organizations and other voluntary associations, rather than informal volunteer work, such as minding a neighbour's children or helping neighbours with domestic chores. Although it may be tempting to simplify the definition by restricting volunteer work to formal organizational activities, Fischer et al. (1991) caution that this practice would mean that much contributed time, in the form of informal help would never be counted.

Fischer et.al. suggest that some researchers disregard informal help to family members in their concept of volunteer work because they consider it more as a family obligation than an act of true volunteering (1991). In their analysis of seniors involvement in formal volunteer activity, Chappell and Prince (1997) found that obligation is an important reason for explaining why seniors volunteer.

In addition, when defining the concept of volunteer work, it is also important to consider whether individuals receive any type of monetary compensation in exchange for the service they provide. Generally, it is agreed among researchers that volunteer work is classified as such by the fact that individuals are not getting paid to perform this work. (Sundeen, 1988; Freeman,1996). One could argue however, that if individuals receive less that normal

compensation" for their service equivalent to the fee/price one would get in the marketplace, some individuals are in fact "volunteering" their services. For example, if an accountant offers to help an organization by volunteering to handle the bookkeeping for the organization and charges them $10/per hour instead of $100/per hour which may be his normal fee, we would argue that doing work for a reduced fee could be considered as an important contribution. This approach goes beyond the traditional definition of volunteer work. We do not know the extent to which this kind of "volunteerism" currently takes place, and this a challenge we present for future data collection.

Ungerson believes that symbolic payments for informal volunteering or unpaid work do not alter the conception of this as volunteer work and notes that the worlds of paid and unpaid work are drawing closer together (1995). She argues that when we talk about work, we need to put formal and informal care together and develop policy about waged care (Ungerson, 1995). Although her results are not meant to imply that all aspects of work should be paid, Daniels (1987) argues that the concept of work should include "all work in the private world of the home, the volunteer work in the public sphere, and the emotion work in both the public and private world… [because] all of these activities involve real work - only it is work that is sometimes difficult to fit into a commonsense perspective that focuses only on remuneration for effort" (p. 412). The concept of paid volunteer work is an issue that will need to be addressed at some point as a public policy issue. It is clear that research in the actual value of unpaid work is needed to support policy development in this area.

To begin our discussion on identifying which contributions to count, we distinguish between fully paid, partially paid, and unpaid work and between the obligatory and non-obligatory nature of work. We argue that we should count all unpaid work, done for obligatory or non-obligatory reasons, and that some work can be partially paid and still be considered volunteer work, although we may not know the extent of this type of contribution. Figure 1 illustrates the conceptual issues raised up to this point. The matrix in Figure 1 shows the types of work which should and should not be counted. The columns represent paid, partially paid and unpaid work, the rows represent obligatory or non-obligatory work. The table cells portray the intersection of these categories. Cells A and B are both fully paid work, which may be performed for non-obligatory or obligatory reasons. We would not count these two cells, because fully paid work

could be considered the traditional form of work which is already counted as productive work in the Gross Domestic Product. Cells C and D could be considered work , because they are both partially paid. If it is done for non-obligatory reasons, it could also be considered volunteer work (Cell C). As suggested earlier, someone who receives a nominal fee to do something for which he/she could get paid considerably more in the market would qualify as making a partial contribution of volunteer activities in this model. If it is done for obligatory reasons, it could be considered work but full compensation is not received (Cell D). But we do not have a clear definition of volunteering or work which would lead us to decide whether to count this kind of a contribution of reduced payment. The important point to recognize here is that this type of a contribution needs to be acknowledged but the relative sizes of the two cells (C and D) are unknown and therefore present a major challenge for data collection.

Figure 1

	Fully Paid	Partially Paid	Unpaid
Non-obligatory	***A*** Work	***C*** Work/Volunteer Activities	***E*** Volunteer Activities
Obligatory	***B*** Work	***D*** Work/Non Volunteer Work	***F*** Non-Volunteer Work

Volunteer work is viewed as non-obligatory, performed without social pressure and is done without pay (Cell E). Non-volunteer work is work done for no pay, but may be done for obligatory reasons (Cell F). Unpaid work can be conceptualized as occurring on a continuum of voluntary to non-voluntary; for the purposes of illustration, however, we categorize it here. From the matrix presented above, we would certainly count Cells E and F as "unpaid time contribution". We are suggesting that it does not matter what the motives or incentives might be to do unpaid work, but all "unpaid time contribution" should be counted. Unpaid work then, could be any activity the older person performed to help someone, either an organization or an individual, voluntarily or involuntarily, but for which he/she did not receive

any monetary compensation.

Before we move to the next section, let us give you an example which we can use throughout the discussion to illustrate our conceptual framework. Mrs. D., aged 71, who has been retired since she was 65, now goes to help regularly at the local nursing home. She feels obligated to perform these volunteer duties because her husband who has Alzheimer's Disease is a resident there. She feels her husband would get better care if she contributes some of her time to the nursing home in a volunteer capacity. So at this stage, we would argue, that even though Mrs. D. may be doing the work out of a sense of obligation, it should still be counted as an unpaid time contribution.

Whom should the unpaid work benefit in order to be counted?

We have suggested that all work which is unpaid could potentially be counted. But is all unpaid work beneficial? If it did not benefit anyone, perhaps it did not need to be done. Should we not first assess whether it actually benefitted someone before we decide to count it? Did the work in fact do some harm? If so, should it still be counted? Whose perspective should be used to assess the benefit?

Past research has attempted to better understand the value of unpaid work by analyzing the benefits generated by volunteer efforts. In their study of the effectiveness of informal volunteer programs, Osterkamp & Chapin (1995) found that such analysis involves an examination of the program's goals, objectives, operating characteristics, and success in meeting the need it was designed to address (Chambers, 1993). However, depending on who assesses the benefits, very different assessments will be reached. There are four different perspectives from which one could view the benefits of unpaid work, these include: society in general, the agency which utilizes volunteers, the individual recipient of informal service or product, and the provider of the service/producer of the product.

The benefits of unpaid work to society in general include many indirect benefits with far reaching implications. For example, the unpaid work of informal/family caregivers delays or prevents the institutionalization of disabled older adults. This, it is argued, indirectly

reduces the government's spending for health care. In their study of community-based volunteer home-repair programs, Osterkamp & Chapin (1995) stress the preventive aspects of the program by "comparing costs of home repairs provided to estimated health care costs of falls or injuries older clients might have sustained without these repairs, or to estimates of nursing home care clients might have required" (p. 72). Programs such as friendly visiting and respite care also make claims about the money they saved by using volunteers and preventing premature institutionalization (Skrypnek & Fast, 1996). It has also been argued that unpaid workers do benefit society by staying healthier and happier by keeping busy and active. The individual could remain independent longer and not need as much help or care in the long run. It is important to acknowledge these potential contributions and benefits to society and a complex study design could assess their value.

Also, we do not really know the extent of the benefits to society resulting from one particular's senior's contribution to unpaid work. It could be that five other seniors provide unpaid help because they saw one senior as a role model. We need to establish boundaries in terms of assessing the benefits and consider the practical and methodological limitations in measuring indirect benefits (Statistics Canada, 1995).

A second perspective from which to analyze the benefits of unpaid work involves assessing the benefits from the point of view of the agencies which utilize volunteers. However, "despite the importance of volunteers in public service delivery, research has rarely examined the economic costs of volunteer involvement in government, let alone the cost effectiveness of this approach to service provision." (Brudney & Duncombe, 1992, p. 474). In an effort to explain this lack of research, Hawrylyshyn (1978) suggests that "agencies place little emphasis on how they benefit financially from volunteer help" (p. 49). It is assumed that most individuals participate in unpaid work for altruistic reasons. If the financial rather than the humanistic aspects of their work are emphasized, individuals may feel undervalued and choose not to continue volunteering. Daniels (1987) agrees that "assigning monetary value too explicitly to acts which after all, do contain spontaneous and altruistic elements, does dampen one's enthusiasm about them" (p. 412). Despite this, we suggest atht we should count benefits to organizations who receive/use unpaid help.

A third perspective on assessing value of unpaid work focuses on the benefits obtained by those who receive services through unpaid help. Obtaining assessment of the value of unpaid work from the recipients' perspective presents severe methodological challenges in that it is very difficult to obtain accurate accounts of the benefits that care-recipients feel they gain through the informal help they receive. Osterkamp & Chapin (1995) note that "clients are reluctant to complain about work done by volunteers even when the job was not done satisfactorily" (p. 66). Because care-recipients are so appreciative of the efforts by volunteers who assist them, few care-recipients feel justified in complaining about what they regard as a 'free' service. Another challenge with this approach is researchers' inability to measure the intangible satisfaction and love care-recipients receive along with the tangible help from informal volunteers. Although many volunteers feel that the help they provide is greatly appreciated by those they assist, (Patchner & Finn, 1987; Denton, et.al., 1996), future research is needed "to investigate whether such satisfaction will translate into the enhancement of mental health of the clients and the prevention of premature institutionalization of the frail elderly" (Ozawa & Morrow-Howell, 1993, p. 158). Due to the inability to place a value on the emotional contributions caregivers provide to care-recipients, it is difficult to attempt an analysis of the monetary value of unpaid work from this perspective. Four main questions arise here: (1) Would the person be willing to pay , if they could, for the service or help they received from the unpaid worker; (2) If they had to pay, would they want all the hours presently being provided or the kind of work which was being done? (3) Would the price of the service be the main factor in the decision to purchase the service? (4) Are there some services provided by family, friends and neighbours, which include a component of love and kindness, which can not be bought in the market under any circumstances? Certainly if love and kindness received during the course of receiving other more tangible help is beneficial to the recipient, then that should be counted.

The fourth perspective examines the benefits of participation in unpaid work from the worker's viewpoint. Individuals volunteer for many different reasons, which are easily translatable into either altruistic, social or material benefits. Studies find most older people volunteer because they want to fill meaningful roles in society and to fill gaps in their social lives, wanted to advance their careers or obtain satisfaction, enhance self-esteem and well-being, fulfill a citizenship duty (Morrow-Howell & Mui 1989, Kuehne & Sears,1993, Patchner

& Finn ,1987). These findings indicate that the positive benefits of participating in unpaid work do not go unrecognized by the volunteers and that these benefits influence their decision to participate in unpaid work.

Some researchers have recently proposed that analyzing the benefits that volunteers receive from participating in unpaid work may be an ineffective way to measure the true value of unpaid work because it overlooks the costs that volunteers incur (Murnighan et al., 1993). Individuals weigh costs and benefits of volunteering and choose to engage in unpaid work only when the benefits outweigh the costs. Watters (1995), however, proposes that individuals may actually choose to volunteer because of or in spite of the costs. If so, how are researchers able to accurately assess the value of an informal volunteer's contribution if their research focuses only on the benefits and does not include the costs incurred. As a further complication, it has even been proposed that some volunteers only choose to participate in unpaid work when the costs of this volunteering are very high because they feel true volunteer behaviour should involve self-sacrifice. Using the concept of "effort justification", Watters (1995) proposes that "if volunteering is portrayed as being difficult or time-consuming, individuals may be more attracted to it than if it is portrayed as being easy" (p. 754). Based on our current knowledge, it is difficult to assess what portion of the volunteering experience leads to positive benefits for the volunteer and what portion is actually a negative benefit or viewed as a personal cost by the volunteer.

We suggest that to assess the benefit of unpaid work, we need to recognize the benefit to society, to the unpaid worker, and the recipient (the organization or the individual). Figure 2 illustrates a framework to determine what should be counted. We suggest that we should count the unpaid work if it benefits the recipient or society positively (Cells 1,2 and 3). If the work entails neither positive or negative benefit (neutral) to the recipient, society and the unpaid worker, then it should be counted (Cells 4 and 5). We would suggest that it is also necessary to count Cell 6 because it has a negative benefit to the unpaid worker and literature discussed earlier certainly leads one to lean in the direction of counting this cell. In theory, a case can be made to argue that something of negative benefit to any party should be part of the equation in assessing total value of unpaid work. So for example, if the worker is doing harm, or if the work is of "negative benefit" to the recipient, then it most certainly should be

counted (Cells 7,8,9) as a negative benefit, and included in the equation.

Figure 2

Benefits to Unpaid Worker

	+	N (neutral)	_
+	1	2	3
N (neutral)	4	5	6
_	7	8	9

We began our discussion on the conceptual framework by addressing the issue of what should be counted and suggested that all unpaid work could potentially be counted. We further suggested that the work has to be assessed as beneficial by the someone in order to be counted, or at least not be perceived by someone as doing any harm. Let us illustrate the conceptual framework to date by going back to our example of Mrs.D. While she is at the nursing home, Mrs. D. decides to rearrange some furniture and small items around in one of the resident's rooms because she thought it might look better. The resident did not perceive this to be of any benefit to him. It did keep Mrs. D. busy and she spent three hours doing it. The nursing home staff believed the rearrangements were very useful because they may prevent injuries so they preceived it to be of great benefit. We would argue that this time contribution should be counted since it benefitted Mrs. D society. Now let us assume, Mrs. D needed something to do so she rearranged some things in the room while she was visiting with the resident. The resident was very grateful to Mrs. D. For what she did for him and he felt that she showed genuine care and concern for him. Both Mrs. D. and the resident benefitted. In the conceptual framework, we would suggest counting this unpaid time contribution. However, after Mrs. D left, the nursing home staff had to reorganize the room because of safety concerns. We would argue that this extra time of staff needs to be included in the equation when deciding what to count. The question we raise is should we count the unpaid time of Mrs. D when in fact it created a negative benefit for someone else?.

QUANTIFICATION: HOW TO MEASURE THE UNPAID WORK?

The issue of quantification is a fairly simple one. It raises the question : How many

hours were spent on the task and how much of the time relates to the work that needed to be done. We do not have sufficient data which specifies how much time exactly was spent doing specific tasks. For example did Mrs. D spend one hour rearranging the room and two haours conversing with an old friend and yet would we say she was in he facility for three hours so she performed three hours of volunteer activity. The challenge for data collection is to get as detailed and accurate description of the activity and the time spent on the activity. The literature on measurement suggests that counting input is the most practical unit of measurement (Statistics Canada, 1995).

VALUATION: HOW TO VALUE THE UNPAID TIME CONTRIBUTIONS

The most complex aspect of the conceptual framework is the valuation of unpaid time contribution. The kinds of questions which need to be addressed in order to develop a conceptual framework are: Should all the unpaid hours provided be counted, if the recipient found them beneficial? Does one use the time it took to do the work by the unpaid worker or does one count the time it would take an expert to do the same work? In other words, is it enough that something that was done, or does it matter whether it was done efficiently? Do you only count the hours of work that a third party can? If the work could be bought in the market, would the current recipient be willing to purchase it and demand the same quantity or would they be just as satisfied with fewer hours or none at all? Would the price determine how much was purchased? Does one only count the final output/product or service which was done and not be concerned about the input, particularly the time which was used to provide the service? We will now address these questions in more detail.

The issue of valuing is a complex one because it deals with attributing unit costs. The value one assigns the unit to be counted and the rationale for it are crucial when arriving at an accurate estimate which reflects the value of specific contributions of seniors.

Does the third party criterion apply?

One way one can assess the value of work is by asking the question, "can a third party do the work"? Can all types of unpaid work be replaced by someone else? We would argue that there some aspects of unpaid work which may not be replaceable by someone else. The love and kindess and emotional support some unpaid workers provide during the time they are carrying out some other task, may not be replaceable. In other words, some recipients may say the benefit they receive from this type of caring can not be provided by a third party, whom they do not know or trust. We concede that some work indeed can not be replaced even though it is important and beneficial in recipient's view. The quantification issue then is to assess which aspects of the work can be done by third party and count only that part of the time contribution needed by a professional to perform the task. The rationale for this argument will be discussed in a later section.

Does willingness to pay matter?

The question regarding willingness to pay for services which the recipient finds helpful may not be an important method of valuing unpaid time contribution. Past research has failed to address the reasons why help-recipients choose not to pay for the services that were formerly provided to them as unpaid work. If the help-recipient is not willing to hire someone to do the job that an unpaid person is currently doing for them, one could ask whether or not the unpaid person is performing a 'vital' job. If a job is deemed unnecessary, the value of its contribution will decrease significantly. But we do not know whether individuals refuse to continue using a service when they are asked to pay for it because they do not value the service or simply because they are financially unable to pay for that service. Consequently, it must be questioned whether the value of a service is reduced simply by one's inability to pay for it rather than due to the shortcomings of that service. One other possible explanation if a recipient chooses not to pay for a particular service may be that the recipient recognizes that the benefits to be accrued from the help are beyond the planning horizon of the recipient.

What are the standards for measuring hours of work?

It has been argued that volunteers, being less experienced than paid professionals, are less efficient and therefore the value of their work is smaller (Hawrylyshyn, 1978), whereas,

Brudney & Duncombe (1992) hypothesized that paid staff, as a result of their training and experience, may be more productive and provide higher quality service than unpaid workers. Many researchers disagree with the viewpoint that unpaid workers are unproductive and use their findings to argue for the high productivity levels of unpaid workers. Herzog & Morgan (1992) suggest that household work and volunteer work are at least as productive as paid labour, even though homemakers and volunteers do not command a market wage in the regular economy. In addition to recognizing that there are many activities that are not paid which meet the criterion of being productive, Herzog, Kahn, Morgan, Jackson & Antonucci (1989) assert that informal volunteers who perform unpaid work have always been overlooked because there is no nationally representative data set that measures the major forms of unpaid productive activity in the U.S.

The above discussion raises a number of important points. We would argue that given the type of activities normally involved in unpaid time contributions by seniors, the issue is not one of productivity but efficiency. The question is should we count the number of hours it took a unpaid worker to do the task or should we count the number of hours an expert or a paid professional would take to do the task?

Let us go back to the hypothetical example mentioned earlier about Mrs. D. She was asked by a resident to move her furniture and belongings around to make them more accessible for the resident. It took Mrs.D. approximately three hours to rearrange things in the resident's room. Let us assume a paid staff member could have completed the task in two hours. Now both of these people have done something productive but the paid worker did it more efficiently. We argue that in order to avoid underestimating or overestimating the hours of unpaid work by seniors, we need to develop some standards for meauring the number of hours needed to perform various tasks and not just count all the hours used by an unpaid worker. As suggested by Hawrylyshyn, productivity and wage rates of efficient workers should guide us in the valuation process (1978).

Should input and/or output be unit of valuation?

The next issue involves whether the input (the time /hours of work) or the output (the

end product or service) should be the unit to value. For example, if a recipient received a meal prepared by an unpaid worker, if we count the input, we would count the number of hours it took to prepare the meal and resources. If we count output, we would consider the meal as the unit of measurement. With the input approach, we would still need to ask what the standards for the task are if done by a professional (e.g. meal preparation by a cook vs an unpaid worker). If we measure only the output, we need to judge the quality of the output. Which standards would we use to determine whether the meal is worth $8.00 or $20.00? Is it even possible to set an objective standard for the value of food?

The extensive work by Statistics Canada on measurement and valuation of households' unpaid work suggests there are so many different alternatives in the market to any particular output (goods or services) that output valuation would not be useful(1995). Other researchers have also supported the methodology of measuring the market value of unpaid work by measuring input as opposed to output costs. In particular they suggest focussing only on the aspects of unpaid work that are replaceable in the market (Hawrylyshyn 1978; Statistics Canada, 1995).

However, recently, Stone (1994) has argued that output is a very important variable in determining whether work has value. "Work of economic value exists if the work has an identifiable output whose consumption may be said to have utility for the consumer and the output can be purchased in the marketplace" (Stone, 1994, p. 1). Instead of concentrating research efforts on the characteristics of volunteers who perform unpaid work or how long it took them to complete the job, Stone argues that the emphasis should be on estimating how much the end product is worth to the person it is meant to serve. Of all the measurement theories proposed, this one incorporates, to the greatest extent, the valuable aspects of unpaid labour discussed in this paper. However, the output approach implies that the recipient would have to place a value on the end product which may again bring us back to the question of whether ability to pay and willingness to pay influences what we assess as having value.

Approaches to Assigning Monetary Value

Past research places great importance on the ability to convert volunteer contributions

into something that can be bought or sold in the market place. That is why approaches like opportunity cost and market replacement cost are used so often in analyses (Hawrylyshyn, 1977; Muurinen, 1986; Osterkamp & Chapin, 1995). There is some lack of agreement on which measurement approach is most useful. The "opportunity cost approach" implies that the value of a service is the income which could be earned by the person if he/she were not providing "free" service. The opportunity costs to individuals for unpaid services is assessed in terms of “next best alternative use”. It could be the income foregone for paid work, including not only current or yearly earnings but future income losses related to reduced pension and loss of promotional opportunities or leisure time. The "market replacement cost" approach takes as a measure the costs of those wages which would have to be paid to a worker in the paid labour force for completing a task currently being done by an unpaid worker (Jackson, 1993).

Opportunity Cost Approach

A common method used to assess the value of unpaid work is the opportunity cost approach. Because time spent in an activity is considered to be one of the primary costs to unpaid workers (Sundeen, 1988), it is important to evaluate how else unpaid workers could be spending their time and then assign a value accordingly. This can be done either through an analysis of earning potential or through an examination of leisure time. The opportunity cost approach is different from the market replacement approach in that the opportunity cost examines the characteristics of the worker and his/her earning potential rather than the characteristics of the work being done by the worker on an unpaid basis.

Since paid labour is assumed to be the most common activity occupying an individual’s time, researchers often choose this as the variable to consider when assigning a measurement value. This method measures opportunity costs by calculating the unpaid worker’s earning potential in the labour market (Muurinen, 1986). For example, researchers have studied informal caregivers who have left paid employment in order to provide care for older relatives . The loss of income experienced by these caregivers would be the estimated opportunity cost.

In the opportunity cost approach, other issues are the selection of an income level and

the recognition of the role of gender. Most often, researchers use the average industrial wage or the minimum wage for a specific type of work. Yet, this does not take into account variables such as gender, which can seriously affect the level of wage an individual receives in the labour market. Another gender difference is that women and men do not participate equally in unpaid work. For example, Chandler (1994) found that approximately two-thirds of the time spent on unpaid household work is contributed by women. If researchers do not recognize these disparities, it is unlikely that the results that are obtained utilizing this method will be truly reflective of the contributions unpaid workers make. The estimates are likely overestimates because the average wages of males in the workforce are higher than females (Hawrylyshyn, 1978).

Alternatively, by utilizing income loss analysis as the primary way to measure the market value of unpaid work, researchers may be underestimating the true costs of informal activity. For example, Muurinen (1986), points out that, in relation to caregiving, "the income losses estimated as resulting from stopping to work are likely to be underestimated if caregivers cannot re-enter the labour force after the need for informal care has passed" (p.1015). If individuals are unable to participate in the paid labour market once their caregiving responsibilities end or forego potential promotions and employee benefits, this will represent a significant cost to their long term earning potential which will be greatly reduced.

Another problem with this method is that it fails to incorporate the unpaid workers who have never worked in paid labour or only work part-time. Max et al. (1995) assert that true opportunity cost data are difficult to obtain. "[F]or an elderly population in which many persons are retired or were never employed in the labour market, this approach would underestimate the value of time" (Max et al., 1995, p. 185). The inability to quantify such costs, however, should not result in their neglect (Muurinen, 1986). Although monetary costs of contributing their time can not be applied to such individuals, it should be recognized that they still must forego involvement in other activities while they are engaged in unpaid work.

A different means of measuring the opportunity costs is examining opportunity costs in relation to leisure time. "As older people experience a greater extent of leisure time in later life, volunteerism becomes an increasingly viable option" (Stevens, 1991, p. 33). Through

their efforts to demonstrate that informal volunteering is not costless, White-Means & Chollet (1996) confirm that "time spent providing informal care represents a real cost to caregivers and potentially affects their decisions about alternative activities" (p. S82). Unable to classify the wide range of activities individuals choose to participate in during their leisure hours, researchers often choose to exclude this type of data. As a result, the true contribution of many informal volunteers is overlooked. As the relative importance of non-work time increases and as non-economic values take on greater significance in what is often referred to as the 'leisure age', Hawrylyshyn (1978) suggests we need better definitions of what is non-market and non-economic activity and what is truly "leisure".

Perhaps the best support for not using the opportunity cost approach for valuing non-market activities comes from Buchanan, who has clearly stated that "the value placed on the option that is not chosen, the opportunity cost, must be that value that exists in the mind of the individual who chooses" (1987, p. 719). He goes on to argue that opportunity cost is subjective and "it cannot be objectified or measured by anyone external to the chooser" (Buchanan, 1987, p. 719).

Based on the above arguments, we conclude that the opportunity cost approach may not be a useful means of assigning value to unpaid time contributions by seniors because there is no unbiased methodology to assess opportunity costs related to foregoing other non paying activities.

Market Replacement Cost Approach

Another common method used to measure the economic value of unpaid work is to analyze the market replacement cost of the work done. Hawrylyshyn (1978) utilizes the concept of 'Third Person Criterion' and premises his research on the question, "What would it cost to replace the performed services with equivalent labour hired at a current market rate?" (Hawrylyshyn, 1978, p. 36). Using a similar approach, Daniels (1987) stresses that the most effective way to demonstrate the true costs of unpaid labour, such as housework, is to focus on the costs that would be incurred if these services were purchased in the market. Utilizing the replacement approach, Max et al. (1995) estimate the value of a caregiver's efforts by applying

the wage rate of a worker who could be hired to the hours of time a caregiver spends providing care. Although, this approach appears quite logical, difficulties arise because of the numerous assumptions that are made, such as the quality and type of care would be identical and valued equally by the recipient. These assumptions blur the accuracy of the results that are obtained by failing to adequately account for all of the pre-existing conditions which could influence the outcome.

One of the areas of concern when utilizing the market replacement cost approach is the problem of finding accurate equivalents of occupational categories. Hawrylyshyn (1978) questions whether all unpaid work categories have market equivalents, and where there are market equivalents, he further questions how close the equivalence is. For example, if one wanted to find a market equivalent of transportation to a doctor's appointment, would one consider the cost of hiring a taxidriver, chauffer or unionized van driver for a non-profit company, all having different price tags? Going back to the meal preparation example, would we use the wages of a short order cook in a family restaurant or a chef's wages in an upscale restaurant? Should one use the generalist approach or the specialist approach (Statistics Canada, 1995). These issues need to be addressed if we are to come to a common method of using the market replacement approach.

CONCLUSION

The conceptual approach discussed in this paper focused on three main issues: identification, quantification, and valuation of unpaid time contribution by seniors. In terms of what to count, we suggest that unpaid work, both obligatory and non-obligatory and which either benefits society in some way, the recipient or the provider or is assessed by the recipient or a third party as not causing any harm should be counted. Any negative benefit resulting from the unpaid work, either for the recipient or the unpaid worker needs to be taken into consideration, as well as the actual monetary costs borne by individuals and organizations for providing unpaid help. In terms of quantifying, we use the input approach in order to measure the unpaid time contribution and we need to determine the specific activities performed and the exact duration of these activities. For valuation purposes, we propose that only work which can be done by a third party can be valued and acknowledge that some

benefits of unpaid work may be important and valuable to the recipient and society but can not be replaced by someone else. The second factor important here is that the number of hours should consist of what a professional would take to complete the work, not the number of hours an unpaid worker took. The conceptual framework also highlights the option of measuring output and not input, i.e. end product or service instead of the unit of time. However, in some instances, the unit of input may be the most reasonable since the value of output is subjective. Also included in the valuing stage, we need to use the market replacement approach, where we would ask the question what would the wage of the paid worker be, rather than the opportunity cost approach. The market replacement approach presents some methodological difficulties as well but it does offer a useful valuation tool.

In the 1990's, governments at all levels in Canada, face great pressure to reduce the debt by creating surpluses in their budgets instead of deficits. One of the consequences of this attempt to reduce the reliance on the public purse is to encourage the use of unpaid work in the delivery of services because of the common perception that this can decrease public sector costs (Brudney & Duncombe, 1992). "Continuing increases in volunteer service may be needed if federal policies lead to more social spending cutbacks, and social agencies need to increase dependency on volunteer efforts from the private sector" (Morrow-Howell & Mui, 1989, p. 22). Confronted with society's growing need for community programs to assist people in need and the limited funds which are available to support such programs, many community organizations are attempting to meet this need through what is referred to as "volunteer labour" (Osterkamp & Chapin, 1995). Some studies have shown that although volunteer activities are not paid for in the market, they are useful and productive in the sense that if volunteers were not performing these activities, either the community's standard of living would drop, or else their provision would have to be made by the government or the private sector (Herzog & Morgan, 1992; Ross, 1990). If governments and community agencies are relying on volunteer and unpaid help, then we need to ask "at what cost" or "at what savings" and "for whom"? The belief that all volunteer work is free and volunteers can meet the gaps created by lack of formal services can lead to policies which may not be in the best interests of citizens or communities or the volunteers themselves. We believe that the conceptual approach presented here may in fact have wider application to evaluating unpaid work and not only unpaid work of seniors.

It has been argued that perhaps the best way to ensure the continuation of the availability of "unpaid help" is to make a payment to the provider. In her research on informal caregiving, Ungerson (1995) argues that the social trends of marriage breakdown, geographic mobility and women's participation in the labour market, are likely to mean that traditional concepts of gendered kinship obligation will become looser with time. As a way to counter this trend, symbolic payments for care "are seen as a cost-effective way of mobilizing and reinforcing informal and voluntary care within the community" (Ungerson, 1995, p. 43). Obviously, the question this raises is " what would be the right amount of compensation for the informal care provider?" Do the individuals or organizations who receive unpaid help, know the value of the help they receive? As organizations struggle to evaluate the costs and benefits of the services they provide, they can more accurately assess the value of the unpaid time contributions they recieve. Perhaps, acknowledging the actual time contributions of seniors in society will go a long way in alleviating the common public perception that an aging population is a burden on societal resources.

Unpaid time contributions by the elderly is a significant area for further research and examination. Current research has shown that elderly Canadians can and do make significant economic contributions to their communities through unpaid labour. A number of critical issues have been identified in relation to assessing the value of unpaid work by seniors. We propose a conceptual framework which will address some of the methodological shortcomings identified in previous research and provide an improved guide for data collection and analysis in this area.

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