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ECONOMIC CAPABILITY AND THE TIME COST OF CHILDREN

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Abstract

The capability approach to human advantage is known from several papers by Martha Nussbaum and Amartya Sen. It has not hitherto been applied in mainstream analysis of income and wealth. Capabilities are capabilities of functioning in important respects. The approach stresses constraints on choice rather than the outcomes of choice stressed in welfarist analysis. In the capability approach, individual welfare is one of several possible outcomes of choice given a certain level of capability. The present paper sketches a capability approach to measuring income. It proposes extended full income as a measure of economic capability. Extended full income is Beckerian full income extended to include economic rights in social security, and corrected for constraints on time. Available time is a constraint on full income. Time needed to care for children (and other dependants) is a constraint on available time. Rather than analysing parents' actual behaviour (actual choices), the capability approach will seek to identify the moral and legal constraints on their time due to the presence of children. The paper also argues that the capability approach avoids several problems inherent in welfarism.

1 Introduction: some problems of welfarism

One purpose, and perhaps the main purpose, of analysing the distribution of income is to investigate whether the distribution is a just one. In order to make sense in such a connection, the analysis should be related to a theory of justice. In particular, the variable to be analysed, income, ought to correspond to a magnitude whose distribution is relevant to justice. In empirical analysis of income distribution, it is invariably taken for granted that the underlying variable of interest, the *distribuendum* of justice and of economic policy, is welfare, sometimes limited to something called 'economic welfare' or 'material well-being'. In the political and moral philosophy of distributional (social) justice, this position is called *welfarism.*[1] Amartya Sen writes:

> Welfarism in general, and utilitarianism in particular, see value, ultimately, only in individual utility, which is defined in terms of some mental characteristic, such as pleasure, happiness or desire. (Sen 1992: 6)

[1]The term welfarism was apparently coined by John Hicks (1948 and 1981). Amartya Sen introduced into more recent philosophic debates.

The majority of modern (contemporary) philosophers do not accept welfarism as a proper basis for distributional and social justice.

In this paper I shall discuss how the concept of capability can be made the basis of defining and measuring income. I shall call this concept *economic capability*, and argue that the appropriate measure of economic capability is a modified version of full income, which includes leisure and constraints on time.

Income, as conventionally defined, is in any case a poor measure of welfare. It is based on the absurd assumption that all people have the same preferences - except, perhaps, for corrections for 'demographic composition' of households. There is, furthermore, the arbitrary concept of something called 'material welfare' or 'material well-being', supposedly depending on income only and separable from non-material welfare. Non-material welfare includes inter alia welfare deriving from leisure and - sometimes - welfare derived from having children.[2]

Household income poses particular problems. The concept of welfare is essentially an attribute of the individual, as seen from Sen's definition of welfarism above. While the concept of household income makes sense, household welfare does not. The welfare of a household cannot be a feeling, subjectively defined. Welfare in household terms must be the set of the individual welfares of the household members. If these are unequal, household income is not well defined in welfare terms. And the widespread assumption of equal division of consumption within the household is not sufficient to ensure equal welfare. For adults, there are advantages in having an independent income, independently of parents or partner. Therefore, individual incomes should at least be analysed on an equal level with household incomes.

The income concept I shall advocate in this paper is in many respects an improvement on the standard definition on income within the welfarist approach. It is in the definition and measurement of the cost of children that I advocate a complete break with the welfarist tradition.

The paper is organised as follows: In section 2, I describe the capability approach. Section 3 discusses the relationship between capabilities and income, section 4 reviews and discusses the conventional, Hicksian, definition of income, while full income is reviewed in section 5. In sections 6, 7 and 8, I suggest how full income can be extended and modified to become a suitable measure of economic capability, and in particular how to take the cost of children into account. Section 9 sums up the definition of economic capability, while section 10 introduces the economic capability of a household. In the last section, I return to the advantages of the capability approach to

[2]See e.g. Smeeding, T. M, and D. H. Weinberg (2001)

measuring income as compared with the welfarist approach.

2 The Capability approach

The capability approach is a theory of defining the quality of life, of human advantage, independently of the preferences of the individual. In common with the Rawlsian concept of primary goods, the capability approach makes the individual responsible for her own preferences, and hence also for her own welfare. Both approaches also include the possibility that the final good of human existence may not be personal welfare; indeed, it is up to each citizen to determine what is the final good, the goal, of *her* life. Therefore, the responsibility of the government is not to secure the welfare of citizens; that is their business. The responsibility of the government, and hence the aims of public policy, is to secure for each individual citizen the *capability* to achieve her own goals, which may or may not be her own happiness or welfare.

The two originators of the capability approach are Martha Nussbaum and Amartya Sen. They describe capabilities as capabilities to achieve valuable functionings. The qualifier valuable here is important, since there are, conceivably, a great many desirable functionings. Examples of valuable functionings are adequate nourishment and social participation. Sen uses the example of lack of nourishment to illustrate the difference between a capability and the corresponding functioning. A starving person lacks the capability to nourish herself. A person who fasts, does so voluntarily. She has the capability of nourishment, but has chosen not to achieve the functioning.

Apart from these and some other examples, Sen has consistently refused to propose a list of valuable functionings and their corresponding capabilities. Nussbaum, on the other hand, has worked out a list of types of capabilities, without, however, suggesting how they are to be measured. Her list is in any case a list of minimum or threshold, capabilities, applicable to developing countries.

Sen argues that the capabilities to be targeted by public policy in a given society should be decided on after and by means of open democratic deliberation. This attitude is very much in the spirit of John Rawls, who argues that the goods to be distributed according to the difference principle should be

> ..a practical and limited list of things (primary goods) which free and equal moral persons, ... can accept that they in general need as citizens in a free society. (Rawls 1982: 183)

On the other hand, Rawls and Sen disagree in their views on income and wealth as objects of distributional justice. Rawls proposes 'income and wealth' as one of the primary goods to be distributed in accordance with the difference principle. Sen maintains that the important thing is '... the alternative combinations of things a person is able to do or be – the various "functionings" he or she can achieve.' (Sen 1993: 30)

There are, as I understand it, two sides to Sen's thinking here. One is that capabilities sometimes depend on what your income is relatively to that of other people. In the paper 'Poor relatively speaking' (1984), Sen distinguishes between to kinds of capabilities. Some, such as adequate nutrition, are obtained by an absolute quantity of commodities. Some, such as social participation, depend on being able to acquire commodities in the same quantity and quality as other members of society. As Sen writes:

> The temptation to think of poverty as being altogether relative arises partly from the fact that the *absolute* satisfaction of some needs might depend on a person's *relative* position vis-a-vis others. (Sen 1984: 333)

The fact that satisfaction of needs often depends on one's relative economic position, is in my view a powerful argument for economic equality. It implies that certain capabilities are better secured by redistribution than by economic growth. The implication also is that economic growth, opulence as Sen calls it, is not something to be pursued for its own sake. A Pareto improvement in terms of income may be harmful to other persons' capabilities. This line of thinking will not be pursued in the present paper. It may explain why Sen accuses Rawls of being a 'commodity fetishist'; a harsh characteristic of an otherwise fairly mild seeming disagreement.

The other aspect of Sen's argument is that people have different needs, and that therefore equality of income does not imply equality of capabilities. Needs must here be understood as different from, and less subjective than, preferences. We are responsible for our preferences, but not for our needs. I shall return to this argument in section 6 below, where I shall argue that the problem is far from being intractable.

Robeyns (20xx) argues that the capability *approach* is and should be just that - an approach to analysing the quality of life where different capabilities and functionings will apply according to context. I shall discuss the concept of economic capability more or less in this spirit. It is hard to see how any analysis of distribution, or indeed, any theory of distributional justice, could avoid treating access to economic goods in one way or another. I therefore feel that a concept of economic capability is of interest whichever other capabilities one deems valuable, and in whatever context.

3 Capabilities and income

The relationship between capabilities and income does not seem straightforward. Sen clearly thinks of commodities - and hence also income, which buys commodities - as inputs into capabilities, as seen by his often used example of pregnant women needing more food. On the other hand Nussbaum has the right to own property and to engage in paid work on her list of minimum or threshold capabilities. This right seems to correspond to a capability of earning an income, or, in Sen's terms, of acquiring commodities.

While commodities create capabilities, there also exists a capability to acquire commodities. There is no paradox or contradiction here: one capability may well be an input into another capability.

We acquire commodities in various ways. They can be received in kind, as when foods and other consumption goods are shared in a family, or as handouts of rations in famine relief. We can produce them ourselves, as in subsistence farming or unpaid housework. But the most widespread way of acquiring commodities in the modern economy is by earning an income and using the income to buy commodities; this is in any case true for adult men.

These ways of acquiring commodities are not of equal worth. Women's struggle for economic emancipation from their husbands, or brothers, or fathers was not - at least, not only - a struggle to obtain more consumer goods. It was a struggle for economic independence and power, for economic autonomy. Being able to earn your own living by means of a socially acknowledged contribution to society is also an important part of what John Rawls calls 'the social bases for self-respect', a primary good. Therefore, the capability approach to income should measure the *capability to acquire an income*, not the income itself.

Economic capability must measure economic options, a set of feasible choices, not outcomes of choice. The capability is made of legally enforceable rights to economic goods. Within a framework of ethical individualism, these rights must, as Nussbaum stresses, be individual, not those of a family or a household.

In addition to legal rights, security is an important aspect of economic capability. Security may be thought of as insurance against loss of job or working capability, in other words social or private insurance against unemployment, sickness, disability and old age. Such insurance may or may not be included in ordinary wages. While accumulated rights in social security is a part of the individual's wealth, contributions to such rights from the employer or the government are part of income.

The closest approximation I can find to economic capability as I have defined it is individual full income, determined by available time, the wage rate and by non-labour income; and extended to include contributions to social security from employer and government. The non-labour income part consists of capital income and government or private transfers guaranteed by law. Handouts from charity are not included.

4 The conventional definition of income

The standard definition of income in economic literature is due to, among others, the English economist John Hicks:

> The purpose of income calculations in practical affairs is to give people an indication of how much they can consume without impoverishing themselves. Following out this idea, it would seem that we ought to define a man's income as the maximum value that he can consume during a week, and still be as well off at the end of the week as he was at the beginning. (Hicks 1961: 172)

I want to discuss three aspects of this definition.

Firstly, it connects income and wealth. they are two of a kind, both being means of financing consumption (commodities). Wealth independently owned is of course an important part of economic capability not only through the income it generates, but also as a means of acquiring commodities. The concept of wealth will, however, not be discussed in the present paper.[3]

Secondly, the definition emphasises income as *possible* consumption; in this sense the standard definition measures options.

Thirdly, the definition implies that any person who consumes *ipso facto* receives an income. That consumption implies income is explicitly stated in a famous quote from Vilfred Pareto:

> Even the poorest man must be regarded as having sufficient income to keep him alive. It doesn't matter whether this sum comes from the fruit of his work, or whether it comes to him from charity, or indeed whatever source, legal or illegal.[4]

According to Hicks and Pareto[5] then, the child, the thief and the beggar all have an income, as does the housewife who receives pocket-money from her husband. The conventional definition of income does not distinguish between the passive receiving of commodities and the active earning of an

[3]See e.g. Bojer (2003), Chapter 9: Income and wealth for a sketch of how income and wealth can be combined in a single measure.

[4]Quoted after Brown 1976: 75

[5]Note that both Hicks and Pareto assume that the receivers of income are men.

Figure 1: Full income and the allocation of time

income. The standard measure in distributional analysis is household income corrected for household size, usually called income per equivalent adult. This measure ascribes equal 'incomes' to all household members. It is a measure of possible consumption assuming equal shares within the household, but not of the options of the individual household members. Therefore, the conventional definition of income is not suitable as a concept of individual economic capability.

Nor is the problem solved by measuring individual income instead of household income. Hicksian income measures options in regard to material commodities, but not options regarding time use, for instance the choice between work and leisure. Therefore, Hicksian income also cannot encompass constraints on time use. This is where the concept of full income is useful.

5 Full income

The concept of full income is not new; it was introduced by Gary Becker (1965). Full income as a theoretical concept is widely applied in labour market economics and fertility analysis, but has not to my knowledge been empirically measured and applied in analysis of economic distribution. The difference between full income and standard income is that full income includes leisure as an item of consumption. In symbols:

$$FI = wT + MI \tag{1}$$

where w is the wage rate, MI is non-labour income and T is available time, say 24 hours a day.

Available time is divided between three different pursuits: paid work (L), unpaid work (H) and leisure (F). The hours spent in paid work, together with non-labour income, determine the person's options when it comes to acquiring market commodities. Ignoring saving:

$$FI = wT + MI = C + wH + wF \tag{2}$$

Equation 2 shows that the trade-off between leisure (F) and cash consumption, C, is the wage rate w.

Figure 1 illustrates the difference between cash income and full income. The two persons, A and B, have equal non-labour incomes (MI), but different wage rates, so that $W_A > W_B$. But the relationship between their cash incomes (I) is the inverse: $I_A < I_B$ because they have different hours of paid work.

Economic theory usually treats these different outcomes as the results of free choice between paid work and leisure, determined by different preferences. But there are other constraints on choice than those represented by equation 2: constraints on time and constraints on consumption. Working hours may be fixed by the enterprise, and therefore the only choice is between having paid work full time or not at all. There are social, more or less informal but nonetheless real and strict, constraints on how both women and men should spend their time. For women, particularly mothers, having paid work may be frowned upon. Conversely, employers may expect workers to work overtime regardless of obligations to the family.

Full income is determined partly by personal endowment (human capital), measured by the wage rate, partly by social, economic and legal features of the surrounding society. These features of society determine to which extent figure 1 illustrates real choices.

I shall discuss three types of constraints on time and consumption: special needs, consumption costs of children and socially necessary unpaid work (time cost of children). The time constraint of caring for children is of particular importance as the chief constraint on women's economic capability in modern society.

6 Different needs

The standard example of different needs used by both Sen and Nussbaum is differences in nutritional needs. These are, of course, of great importance to people living on or near subsistence level. They are not, however, of importance to people with normal incomes in affluent societies.[6] But there are many other cases of different needs which are of importance at all levels of wealth: differences due to chronic illness and/or physical and mental handicaps. This is where people need different quantities and qualities of commodities in order to obtain basic capabilities like mobility or seeing.

These needs can be measured in money, namely the cost of medicines and physical equipment needed. The monetary values of commodities needed are generally already known, more or less approximately, since in many countries, the supplementary costs are covered by governmental or private insurance, at fixed rates. There is a limited, though large, number of different cases. In

[6]In Norway, the average household spends less than 20 per cent of its (monetary) income on food.

each case, the necessary sum must be deducted from FI in order to compute the individual's real options.

Medication and other medical aids may enable the person to undertake paid work, and are therefore both a result of, and an input into, economic capability.

7 The cost of children

Children cost time and money: time that the parents have to spend on their care, and money spent on the children's consumption.

There is a considerable literature on the problem of determining the consumption cost of children. The main body of this literature is devoted to computing the sums that parents actually, on average, spend on their children. But actual expenditure is an outcome of choice. The capability approach would be to estimate the constraints on parents' choice given the presence of children. Acquiring children may in modern society be a free choice. Spending a minimum of care and money on the children, once they are there, is not. Parents have obligations towards their children; moral obligations everywhere, in most societies also legal obligations. Moreover, these obligations are independent of the pleasure parents may or may not take in being parents. There is therefore no reason to distinguish between the conditional and unconditional cost of children; these concepts arise out of the welfarist approach.

The capability cost of children might well be decided on in the Rawlsian spirit of open democratic discussion; the computations of experts recommended above for special needs is not necessary since the majority of people are familiar with being parents, and all adults certainly know - or should know - what children need, having been children once themselves. I tend to be of the opinion that the cost in terms of commodities should be independent of the parents' income, and should represent societal consensus on what the minimum legal and moral obligations of parents are towards their children.[7]

The time cost of children must be treated in a different way, since it will depend on the wages of the parents. However, the time itself, the number of hours per day or days per year, necessary for the care of children, is independent of wages or income, and should be determined by methods similar to those recommended for necessary consumption. It will vary with the age of

[7] It is interesting that in the article that spawned the whole literature on conditional and unconditional cost, Pollak and Wales (197?) recommend the estimation of children's minimum requirements.

the child, from 24 hours a day for the new born infant, and decreasing with the age of the child, but never becoming zero as long as the child is a minor.

8 Unpaid work and time cost of children

Unpaid work is one constraint on available time. Now, unpaid work is, of course, sometimes chosen voluntarily, and may be difficult to distinguish from leisure pursuits (hobbies). Technically, the criterion used in empirical work to distinguish unpaid work from leisure is the third-person criterion: an activity is unpaid work if it is technically possible to hire someone else to do it for you. Baking bread is unpaid work, a work-out is leisure. Another possible criterion, more difficult to observe, is the possibility of choice: leisure is *free* time, when you have a free choice of activities. Time spent on unpaid work is, by this criterion, time when you have obligations toward others, time when you have no choice but to work.

Caring for children and infirm or sick dependants is work according to both criteria. It has to be done by somebody, whether the person cared for is able to pay for the care or not. Children, in particular, can never pay for themselves. Parents must either do the work themselves or pay someone else to do it for them. Indeed, leisure, free time, is an extremely scarce commodity for parents (mothers) in modern society.

Children's need for time measured in hours is absolute, and does not depend on the parents' income. The money value of the time will, however, vary with the real wage of the parents. Time needed for child care consists of two parts: necessary time spent by the parents and time hired from a third person (day care centre, nanny).(I have argued elsewhere (Bojer 2002) that not all care for children can or should be professional.) Both must be deducted from time available when estimating full income.

Let me assume for the moment that there is just one parent. The price of the parent's time will be his or her own wage rate. The third-person time will be priced at the market wage for child carers. This wage may, of course, be higher than the wage rate of the parent.

Now, let p be the price per hour of outside child care, w is the parent's wage rate, T_0 is necessary parent time, T_1 is third person time. The care cost of a child will now depend on whether $w > p$ or $w < p$:

$$C_T = wT_0 + pT_1 \quad if \quad p < w \tag{3}$$

$$C_T = wT_0 + wT_1 \quad if \quad p > w \tag{4}$$

Figure 2: The cost of children: time and money

The care cost can be expressed in time or in money, as shown in figure 2.

The care cost of children and other dependants, I shall call socially necessary unpaid labour. Time spent caring for healthy adults is not socially necessary.

9 Economic capability

Economic capability in the short term as measured by extended full income is the sum of different income streams:

1. Earnings capability: equals the net wage rate multiplied by available time. Available time equals 24 hours a day minus socially necessary unpaid labour.

2. Income from assets (capital income)

3. Legally based transfers

4. Government and employer contributions to social security.

5. Less the cost of special needs like medication, physical equipment and the consumption cost of children.

10 Household and individual economic capability

In the introduction, I wrote that while the concept of household income makes sense, the concept of household welfare does not. The full income of a household equals, of course, the sum of the full income of the household members. In individualistic theories of justice, the unit of interest is the individual, whether adult or child. But the economic capability of a child also does not make sense. We can only get to know the economic position of children by studying how capable the parents are of supporting their children economically. I suggest we measure their capability as the difference between the parents' total economic capability and the socially acceptable consumption and time cost of their children. This difference may well in some cases be negative, particularly for single parents.

A problem then arises that I assumed away in section 8, namely computing the time cost when there are two parents earning different wage rates. During pregnancy and the period of breast feeding, the mother's wage rate is the relevant one. Later, I suggest considering two approaches. One would be to choose the lowest wage rate. The other would be to consider, once again, moral, societal and legal constraints. Which parent has the moral and legal duty to spend time caring for the child? One answer could be that they both have, and that therefore the care cost should be computed using their average wage rate.

The economic capability of adults should be measured individually. Then, the cost of children (and other dependants) must be individually assigned.

11 Welfarist and capability approaches compared

For single people without children it makes no substantial difference whether we measure cash income or economic capability: in this group, there is very little variation in the number of working hours. The same used to be true for many married couples when the husband had paid work and the cash value of the wife's time was zero. Standard household income is defined and measured as if this were still the normal state of modern societies. But much of the variation in cash income of households is due to variations in the wife's hours of paid work. Moreover, with women's labour force participation equal, or nearly equal, to that of men, it is unreasonable to set the cash value of married women's time equal to zero.

For these reasons, when it comes to couples, the sum of their individual full incomes gives a truer picture of their combined economic capability than does the sum of their cash incomes. Full income is also a better measure of economic capability than so-called extended income. This last includes household production. But household production may be at the cost of leisure. Two households with equal extended incomes may well have different full incomes; the difference is due to different hours of leisure.

Economic capability is particularly suited to express the real difference in economic circumstances between single providers and couples with children. The couple will have twice as much time as the single provider has to divide between caring for children and earning an income. Only the concept of economic capability expresses the full plight of the low-wage single provider unable to afford paid child care.

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