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Resources, Deprivation and the Measurement of Poverty

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RESOURCES, DEPRIVATION AND THE MEASUREMENT OF POVERTY

1. Introduction

This paper is concerned with the conceptualisation and measurement of poverty. Its objective is to explore some new approaches to measurement, based on a widely-used definition of poverty, and in doing so to highlight some central issues about how poverty is conceptualised and defined. The data employed are from the ESRI Survey of Income Distribution, Poverty, and Usage of State Services carried out in 1987. For the first time, the full range of data obtained in that survey on household incomes, life-styles, subjective assessments, and savings and assets can be brought together, allowing the relationship between resources and deprivation to be analysed and the implications for poverty measurement teased out.

In previous research based on the 1987 survey, in particular in *Poverty, Income and Welfare in Ireland* (1989), a number of different approaches to measuring poverty employed in the international literature were described and applied. Most emphasis was placed on relative income poverty lines, which were considered to be particularly valuable for certain purposes, such as making comparisons over time or across countries. Consensual income poverty lines, based on subjective assessments of minimum income needs, were also estimated. Information on patterns of living was also used to develop a set of deprivation indicators, and the variation in

these indicators over the income distribution was examined. The complexity of the relationship between deprivation and current income, in particular the need for a dynamic rather than static perspective on the way in which deprivation is produced, were emphasised and highlighted as a priority for further research.

One element in this further research is based on the (limited) panel data obtained through re-interviewing a sub-set of the 1987 sample in 1989, allowing the extent to which their situation had changed over that period to be analysed. This will be a valuable complement to the other element, dealt with in this paper, which is based on exploiting the range of data gathered in the 1987 survey itself. Estimates of annual income and measures of savings and assets have been developed, allowing consideration of resources available to households to be extended beyond current income (Callan, 1991, Nolan, 1991). At the same time, the nature of the deprivation indicators and the most satisfactory ways in which they can be employed have been explored in some depth (Whelan and Hannan, Creighton, 1991). Thus the relationship between resources and living patterns can now fruitfully be examined, and both resources and deprivation can be taken into account in a new approach to measuring poverty.

In Section 2, the starting-point for the paper in terms of the international literature and the general approach adopted here are sketched out. In Section 3, the use of

indicators of deprivation is discussed and the preferred measures for current purposes described. In Section 4, a way in which income and deprivation can be combined in measuring poverty is outlined. In Section 5, the results are compared with those produced by focusing on current income or deprivation only, and the results used to illuminate the relationship between current income, deprivation and broader resources. In Section 6 the implications of the analysis for the conceptualisation of poverty and use of poverty measures are considered.

2. Measuring Poverty

In the "Poverty" entry in the *New International Encyclopedia of the Social Sciences*, Hobsbawm (1986) states that it is "always defined according to the conventions of the society in which it occurs". Indeed Ringen (1988) asserts that no-one has ever suggested anything else - "There never was such a thing as an absolute concept of poverty and no one has argued that there should be".¹ Without necessarily going that far, it suffices for present purposes to reaffirm that poverty is to be seen in the context of the standards of the particular society being examined, it is in that sense relative (as discussed at length in Callan, Nolan, *et al.*, 1989, Chapters 1 and 2).

Given this starting point, the concept of poverty to be employed must still be developed and made concrete. The definition which has been widely adopted was put forward by Townsend (1979) and is worth reproducing in full:

Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged, or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual that they are, in effect, excluded from ordinary living patterns, customs and activities.²

Poverty is thus seen as *exclusion* arising from *lack of resources*. Despite its widespread acceptance, empirical studies have failed to adequately reflect these two elements in their methods of measuring poverty.

The range of approaches to measuring poverty in economically-advanced societies will not be described here (for a review see Callan, Nolan, *et al.*, 1989, Ch. 2, Callan and Nolan, 1991). Most - whether based on budget standards, "official" lines, purely relative lines, the consensual approach etc., - distinguish between the poor and the remainder of the population on the basis of current income, the difference being the way in which the income poverty line is derived. This has led Ringen (1988) to assert that there is a fundamental problem in such research, in that poverty is *defined directly* in terms of deprivation in consumption, but *measured indirectly* in terms of resources. The method of measurement, he argues, is thus not derived from or justified in the theoretical definition.³

This applies even to Townsend's own work, it should be noted. He obtained information on a wide range of indicators of style of living, as well as detailed data on not only

income but also savings and other assets. A "summary deprivation index" was constructed using twelve style of living items: absence of an item added 1 to the deprivation score. This deprivation score was not used directly to identify the poor, though: rather it was the basis for deriving an income poverty line, representing an income threshold below which deprivation scores "escalated disproportionately". While the evidence was acknowledged to be inconclusive, Townsend felt it "suggests that such a threshold may exist" (p. 255).

Others have not agreed with this interpretation, questioning the procedure employed by Townsend to identify a threshold (see Piachaud, 1982; Mansfield, 1986; the defense by Desai, 1986 and further critique by Piachaud, 1987). More generally, the weakness of the observed relationship between deprivation scores and income has been highlighted - a significant number of low income households have low deprivation scores, while high scores are seen for households with relatively high incomes. Some have argued on this basis that observed differences in style of living reflect diversity in tastes rather than simply resource constraints, and therefore cannot serve as reliable indicators of poverty (Piachaud, 1987). Others see the weakness in the deprivation/income relationship as undermining the notion that income can satisfactorily reflect welfare and serve as a basis for distinguishing those experiencing deprivation/exclusion (Ringgen, 1988).

Rather than simply dismissing either style of living or income as indicators of poverty, it is more fruitful to try to understand the complex relationship between them, and see if the information each is providing can be valuable in measuring poverty. One study which has gone some distance in combining both deprivation indicators and income to measure poverty is Mack and Lansley (1985). This represented a significant departure from Townsend's approach in three respects:

- (i) the life-style items to be included in the deprivation index were selected on the basis of views in their sample about what constituted a "necessity" - only items viewed as such by over half the sample, taken to be "socially-defined necessities", are included;
- (ii) in order to control for the influence of tastes, those lacking a given item were asked whether they "would like but can't afford" it; this information was used to help distinguish those whose lack of an item was "enforced" by resource constraints rather than reflecting choices;
- (iii) the deprivation index rather than income was used as the basis for distinguishing the poor - those experiencing "enforced lack" of three or more items (out of 22). Income did however play a part in deciding whether lack of an item was enforced, in that households in the top half of the income distribution were taken to *not* be experiencing enforced lack (even if they stated they would like but couldn't afford items) while those in the bottom 40 per cent and lacking items were taken to be experiencing enforced lack (even if they said they wouldn't like/could afford the items).

Mack and Lansley's choice of a particular cut-off on the deprivation scale is arbitrary, and the way in which they combine actual life-style information, subjective assessments

and income to produce a poverty measure is also rather ad hoc. Further, no account is taken of the complex ways in which the relationship between possessions/activities and income or wider resources may vary across different types of items. As discussed in detail below, simply adding together items relating to everyday activities with those related to the possession of consumer durables or the quality of housing may be unsatisfactory as a measure of current living standards/resource constraints. While Mack and Lansley's study broke important new ground, then, it does not provide a satisfactory model for the bringing together of indicators of deprivation and resources in measuring poverty. It also fails to elucidate how the observed deprivation/income pattern comes about, how the two are in fact related, which is necessary if we are to understand the implications of what is being measured.

Our objective then is to build on this, rather limited, literature to explore how information on living patterns, income and wider resources could best be used to measure poverty, and in the process increase our understanding of the relationships between them. In doing so, our central concern is to relate the empirical procedures as closely as possible to the conceptual starting-point, which is Townsend's definition of poverty: thus both exclusion *and* lack of resources are to be incorporated. The approach adopted is to proceed in turn, through the following steps:

- (1) attempt to identify a set of items or activities which most people regard as necessities which could be taken as representing a societal consensus;
- (2) examine the relationship between the different items, and between them and income; decide which should be included in a summary deprivation index;
- (3) using both deprivation scores and current income, identify those who are *both* below income poverty lines and appear to be experiencing enforced deprivation;
- (4) look at the characteristics of those households who either (a) report low incomes but not enforced deprivation, or (b) report high incomes and enforced deprivation; use information on income over a longer period, labour force experience and savings and assets to broaden the measure of resources beyond current income.

As we proceed through each stage, a variety of issues which have arisen in the literature will be addressed, and the value of a coherent theoretical framework emphasised.

3. *Measuring Deprivation*

The first step in the analysis is to identify, if possible, a set of items or activities widely regarded as necessities, which can be satisfactorily employed as indicators of deprivation. In the 1987 ESRI survey, respondents were given a list of 24 items or activities and asked which ones they believed were "Necessities, that is things which every household (or person) should be able to have and that nobody should have to do without". They were then asked which items they did not themselves have/avail of, and which of these they would like to have but had to do without because of lack of money.

The items selected for inclusion in the survey were for

the most part taken from previous studies such as Townsend and Mack and Lansley. Here we exclude four items which were specific to households with children, and Table 1 shows the sample responses for the remaining 20 items. As discussed in Callan, Nolan, *et al.*, (1989), the more widely possessed items also tended to be more generally regarded as necessities - with, for example, a fridge, heating for the living rooms, indoor toilet and bath or shower possessed by most and felt by nearly all respondents to be necessities. There were some notable exceptions, though, with most people stating that being able to save was a necessity but less than half saying they could do so, while 80 per cent of households had a TV but only 37 per cent thought it was a necessity. Thus selecting items as deprivation indicators on the basis of *views* in the population as to which are necessities (Mack and Lansley's approach) will not give exactly the same results as using actual possession by a majority/most people (Townsend's procedure).

Using a summary index comprising the 14 items both possessed and regarded as a necessity by a majority of the sample, Callan, Nolan, *et al.*, also illustrated that there was a good deal of variability in the deprivation scores recorded by households at similar levels of current income.⁴ A significant number of households below income poverty lines had low deprivation scores, while some households above those lines had high deprivation scores. Counting only those cases where the household stated that they would like but could not

afford the items, the relationship with income was stronger but considerable variability remained, which was consistent with Mack and Lansley's findings for Britain.

Here we will employ, in addition to the 20 items in Table 1, a further four:

- (i) whether there was a day during the previous two weeks when the respondent did not have a substantial meal at all - from getting up to going to bed;
- (ii) whether they had to go without heating during the last year through lack of money, i.e., having to go without a fire on a cold day, or go to bed early to keep warm or light the fire late because of lack of coal/fuel;
- (iii) whether the respondent has not had an afternoon or evening out in the last fortnight, "something that costs money", and this was stated to be because they had not enough money;
- (iv) whether the household has experienced debt problems in terms of *any* of the following:
 - (a) it is currently in arrears on rent, mortgage, ESB or gas;
 - (b) it has had to go into debt in the last 12 months to meet ordinary living expenses (such as rent, food, Christmas or back to school expenses);
 - (c) it has had to sell or pawn anything worth £50 or more to meet ordinary living expenses;
 - or
 - (d) it has received assistance from a private charity in the past year.

For (i) and (ii) the respondent was the household manager (the person who "buys most of the groceries" for the household), while for (iii) it was the household head. The percentage "doing without" was 4 per cent, 6 per cent, 16 per cent and 14 per cent for items (i)-(iv) respectively.

Table 1: *Indicators of Actual Style of Living and Socially Defined Necessities*

<i>Socially defined necessity</i>	<i>Percentage lacking</i>	<i>Percentage experiencing enforced lack</i>	<i>Percentage stating necessity</i>
Refrigerator	5	3	92
Washing machine	20	10	82
Telephone	48	31	45
Car	38	22	59
Colour TV	20	11	37
A week's annual holiday away from home	68	49	50
A dry damp-free dwelling	10	9	99
Heating for the living rooms when it is cold	3	2	99
Central heating in the house	45	30	49
An indoor toilet in the dwelling	7	6	98
Bath or shower	9	7	98
A meal with meat, chicken or fish every second day	13	9	84
A warm, waterproof overcoat	13	8	93
Two pairs of strong shoes	16	11	88
To be able to save	57	55	88
A daily newspaper	45	16	39
A roast meat joint once a week	24	13	64
A hobby or leisure activity	33	12	73
New, not secondhand, clothes	10	8	77
Presents for friends or family once a year	24	13	60

If we simply construct an index from these 24 items, the mean scores for households ranked by current equivalent income decile is shown in Table 2. The mean score varies little across the bottom three deciles, then falls steadily as we move up towards the top of the income distribution. Again, there is a good deal of variability in scores within

each decile, and some low income households have most of the items while some high income ones lack a considerable number.

Table 2: *Scores on 24-Item Life-Style Index by Household Equivalent Income Decile*

<i>Equivalent Income decile</i>	<i>Mean score on index</i>	<i>Percentage with index score</i>	
		<i>≥10</i>	<i>≤5</i>
1	8.1	34.8	30.7
2	8.1	36.0	31.0
3	8.1	29.8	27.5
4	6.6	20.6	42.9
5	5.8	15.9	52.7
6	5.0	11.9	65.4
7	3.8	4.8	75.3
8	3.9	7.6	72.5
9	2.7	3.2	87.3
10	2.1	1.7	92.3

Despite the absence of a one-to-one relationship between these income decile and the aggregate life-style measures, the observed correlation reaches .47. Correcting for attention due to less than perfect reliability in our measure of life-style, we get $r = .51$. This is a considerable improvement upon the average correlation of .11 between income measured continuously and individual life-style items found in both Townsend's and the ESRI study. Clearly simply improving the reliability of our indicators allow us to make considerable progress in resolving apparent contradictions. In any event we do not expect that current disposable income will be the sole predictor of life style - other elements such as stage in the life cycle and experiences and resources

over a longer period will also play a central role.

Previous research employing deprivation indicators has generally relied on summary indices of this type. The relationship between the different indicators has been given little attention - in effect, a single underlying dimension of deprivation has been assumed. The first stage in the analysis is therefore to systematically examine the dimensions of deprivation, using factor analysis.⁵ This was applied to the 20 items in Table 1 - concentrating on absence which was stated to be due to lack of resources - plus the four additional items, and the results are fully described in Whelan and Hannan, Creighton (1991). Briefly, these revealed that the items did cluster into distinct groups or factors. Three underlying dimensions of deprivation were hypothesised:

- (i) primary life-style deprivation - consisting of basic items such as food and clothes;
- (ii) secondary life-style deprivation - consisting of items such as leisure activities and consumer durables;
- (iii) housing deprivation - consisting of items related to housing quality and facilities.

Informed by the results of the factor analysis, the 24 items available in the survey were grouped into these three factors in the manner shown in Table 3. Eight items are counted as indicators of primary deprivation, 9 as indicators of secondary deprivation and 7 as indicators of housing deprivation. Level of absence and enforced absence of the items are generally low for the first and third group, much higher for the secondary deprivation items. The housing items

are overwhelmingly regarded as necessities, with the exception of a TV. Four out of the five primary items for which this information is available are also regarded as necessities by more than three-quarters of the sample, the exception being a roast joint or equivalent once a week which about two-thirds state is a necessity. The items included in the secondary deprivations group, on the other hand, are

Table 3: *Dimensions of Deprivation*

PRIMARY DEPRIVATION

New not second-hand clothes
 A meal with meat, chicken or fish every
 second day
 Two pairs of strong shoes
 A warm waterproof overcoat
 A roast meat joint or its equivalent once a
 week
 Debt
 No substantial meal in a day
 Do without heating

SECONDARY DEPRIVATION

A week's annual holiday away from home
 (not with relative)
 A daily newspaper
 To be able to save some of one's income
 regularly
 Telephone
 A hobby or leisure activity
 Central heating
 Present for friends of family once a year
 Afternoon/evening out

HOUSING AND HOUSEHOLD CAPITAL DEPRIVATION

Heating for the living room when it is cold
 Bath or shower
 A dry, damp-free dwelling
 Indoor toilet
 Washing machine
 Refrigerator
 Colour television

regarded as necessities by much lower percentages, with the exception again of being able to save regularly.

The sample evidence thus suggests that it is useful to distinguish these three dimensions, rather than simply aggregating items across the factors into a summary index - rather different households or types of household are lacking each type. How then should these factors be employed? For some purposes it will be valuable to look at each, but here, given our objective, we concentrate on what we have termed the primary deprivation items. The secondary deprivation items do not appear appropriate as indicators of exclusion from ordinary living patterns, because:

- (a) they are not actually possessed by most households, and
- (b) they are not overwhelmingly regarded as necessities.

These items can be seen as representing a middle class or perhaps comfortable working class life-style, and not being able to afford them would not appear to be unambiguously regarded as exclusion from the ordinary life of the community.

The housing items, on the other hand, are possessed by most people and regarded as necessities by almost everyone (except the TV). However, it will be seen below that they do not relate to the *current* resources and extent of exclusion of the household in the same way as the primary items. We will argue that - though providing valuable information about one aspect of living standards - the housing items are less

relevant to current exclusion and command over resources than the primary items. Returning to this issue in Section 5, we proceed by concentrating on the primary items.

We now construct a "primary deprivation index" based on these eight items. For five of the eight, households were asked directly about whether absence was due to the fact that they could not afford the item. For these items, households score 1 on the index for each item which is *both* lacked and the household says that absence is in that sense enforced. This may be regarded as an unduly stringent condition. Some households could have very low expectations, and/or may be unwilling to acknowledge or state that they could not afford such basic necessities.⁶ However, a comparison of those lacking the five primary items who say this is enforced by lack of resources with those who say they didn't want the item reveals that the latter do have significantly higher incomes on average - their average incomes are closer to the households who do possess the items. Further, those who claim to be doing without a particular item voluntarily display levels of deprivation on the other primary items which are little different to those who possess the item, well below those stating they can't afford the item. This suggests that, for the most part, those who say they are doing without primary items voluntarily are indeed choosing to go without.

Adopting the general approach of erring, if anything, on the side of caution, for these five items we therefore count only what are stated to be items lacked due to absence of

resources. For the other three items this information is not available. The basic nature of these items, certainly "heat" and "food" deprivation, suggest that lack is likely to be enforced in that sense in most cases. For these items, simply experiencing deprivation adds to the primary deprivation

Table 4: *Distribution of Scores on Primary Deprivation Index*

<i>Score</i>	<i>Percentage of households</i>
0	68.0
1	14.7
2	6.7
3	4.5
4	2.7
5	1.7
6 or more	1.7
All	100.0

index. The distribution of scores on this index for the sample is shown in Table 4: 68 per cent of households score zero, 15 per cent score 1, and 17 per cent are experiencing enforced lack of two or more primary items.

We now turn to the way in which these primary deprivation scores relate to current resources, and how deprivation and income may be combined to measure poverty and exclusion due to lack of resources.

4. Primary Deprivation, Current Income and Poverty

As already emphasised, the widely-used definition of relative poverty relates to exclusion due to lack of

resources. Establishing who is experiencing primary deprivation, in terms of the eight-item index, should be seen as only a first stage in identifying households who would be regarded as poor in that sense. The households concerned clearly regard the lack of items as enforced by lack of resources, but as Table 5 shows some of those households are on relatively high incomes. We explore the nature of those particular households below, but the central point to be made here is that enforcement due to lack of resources needs to relate to *societal* rather than individual standards and expectations, and needs to be taken into account directly if the poverty measure is to be fully consistent with the definition.

Table 5: *Primary Deprivation Scores by Equivalent Income Decile*

<i>Current equivalent disposable income decile</i>	<i>Households with a primary deprivation index score of:</i>	
	<i>≥1</i>	<i>≥2</i>
	<i>Per cent</i>	
1	17.2	21.2
2	17.9	23.4
3	16.3	18.2
4	12.5	9.4
5	8.3	7.3
6	8.9	8.4
7	6.6	5.3
8	5.6	3.2
9	3.6	2.5
10	3.1	1.2
All	100.0	100.0

This provides the rationale for focusing on those households which are *both* experiencing primary deprivation *and* at relatively low income levels. Such a focus was in fact justified by Ringen (1987) - though not put into practice in his empirical illustrations - in the following terms.

General deprivation cannot be measured with either resource indicators or way of life indicators alone... Resource indicators alone can only say something about the probability of deprivation in way of life. Low income, for example, may represent only a temporary and atypical situation which does not force the person to change his life style - he may for a while live off savings - and there may be ways of avoiding life in deprivation such as to live on someone else's income. To ascertain poverty we need to identify directly the consequences we normally expect to follow from low income. On the other hand, to rely on way of life indicators alone, that is, to go all out for direct measurement, is also insufficient since people may live as if they were poor without being poor ... We need to establish not only that people live as if they were poor but that they do so because they do not have the means to avoid it.

In measuring low income, we use a set of thresholds related to average equivalent disposable income in the sample; lines going from 40 per cent to 80 per cent of that mean are employed for illustration. Table 6 shows the percentage of households in the sample falling below each of these income thresholds *and* experiencing deprivation of at least one primary item, and the percentage below each line and deprived of two or more items. The percentage of households involved varies substantially. Whereas only 2 per cent of sample households lack two or more items and have incomes below 40 per cent of the average, 23 per cent of

households are experiencing enforced lack of at least one item and are below 80 per cent of mean income.

Table 6: *Percentage of Households Below Relative Income Thresholds and Experiencing Primary Deprivation*

<i>Below relative income line</i>	<i>Experiencing enforced deprivations of:</i>	
	<i>At least one primary item</i>	<i>Two or more primary items</i>
	<i>Per cent</i>	
40 per cent	3.3	2.0
50 per cent	9.8	6.6
60 per cent	16.0	10.7
70 per cent	20.9	12.7
80 per cent	23.2	13.8

How can we narrow down the criteria which are to be applied? The first issue relates to the deprivation measure: should a score of 1 item lacked suffice to indicate exclusion for current purposes, or should only higher scores be taken? Here it is essential to emphasise that the presence or absence of a particular item in itself is not crucial. The set of items measured are intended to serve as indicators of pervasive exclusion from ordinary living patterns: Cronbach's alpha, which we use as a measure of reliability in our index, can be interpreted as the correlation between an index based on this particular set of items and all other possible indices containing the same number of items which could be constructed from a hypothetical universe of items that measure the characteristic of interest. Given the strategy we have adopted we would suggest that variation in the size of

the alpha coefficient can also provide evidence relevant to the validity of our measure. As we impose increasingly stringent conditions in order to ensure that the items are lacking because of resource constraints we would expect that the increased reliability of our measure should be reflected in the size of the alpha coefficient. This is indeed what happens. When we focus simply on absence of the items the alpha coefficient is .71; restricting our attention to what is stated to be enforced absence raises this to .76; finally as one imposes income conditions employing the 70 per cent, 60 per cent and 50 per cent line respectively the coefficient increases from .80 to .82 and finally to .85.

The range of items employed provides consistent validity for the index in the sense of providing a reasonable range of type of item which one could expect *a priori* to form part of an index of poverty. Inevitably though, an assessment of the adequacy of our measure will ultimately be based on this construct validity, i.e., the extent to which it relates to other measures in a manner consistent with theoretically derived hypothesis. It is on conceptual grounds that we argue that genuinely enforced deprivation of even one socially different necessity should constitute poverty. The difference made to the results by concentrating on those with a score of two or more nevertheless merits consideration.

Turning to the income threshold, any particular figure will of its nature be arbitrary. However, it may be possible to apply sensible upper and lower limits to the range to be

considered. In broad terms, such a range may be bounded by the 50 per cent and 70 per cent relative lines. Below the 50 per cent line the income levels involved are lower than most of the existing social welfare rates. Further, households below the 40 per cent line show *lower* levels of primary deprivation and are less likely to state that they are having extreme difficulty making ends meet than those between the 40 per cent and 50 per cent thresholds. This is related to the nature of the households involved and in particular their resources over the longer term, as will be shown. Above the 70 per cent income threshold, on the other hand, the income levels involved are significantly higher than most of the social welfare system's support rates. Most of the households between the 70 per cent and 80 per cent lines are not experiencing primary deprivation, and the proportion reporting extreme difficulty in making ends meet is considerably lower than for households between the 60 per cent and 70 per cent lines. Taking the range from the 50 per cent to the 70 per cent thresholds, then, this would represent a lower figure of about £43 per week for a single person (in 1987 terms) and an upper one of about £60 per week. The former was about the level provided by Unemployment Benefit at the time, and the latter was approximately the level recommended by the Commission on Social Welfare (in 1986) as representing an adequate income.

Focusing on households experiencing deprivation of at least one primary item and with incomes below each of these

thresholds, the combined deprivation/income criteria would then identify between 10 per cent and 21 per cent of households as excluded due to lack of resources. Table 7 looks separately at those experiencing deprivation and below the 50 per cent line, between 50-60 per cent, and between 60-70 per cent, and illustrates the extent of their experience of primary deprivation. For the households below the 50 per cent line, 55 per cent are experiencing debt problems, and about the same percentage cannot afford two pairs of shoes, a roast or equivalent once a week, or a meal with meat or fish every second day. The table also shows that almost 80 per cent of these households said they were having

Table 7: *Experience of Primary Deprivation for Households at Different Income Levels and Lacking at Least One Primary Item*

Percentage experiencing:	Households experiencing primary deprivation:		
	Below the 50% line	Between the 50-60% lines	Between the 60-70% lines
	<i>Per cent</i>		
Debt	54.5	44.0	33.9
Main meal	17.0	13.8	11.7
Heat	27.4	23.7	11.8
Enforced lack of:			
New clothes	33.6	22.3	14.7
Two pairs of shoes	43.7	36.2	28.0
Coat	24.4	31.7	25.5
Roast or equivalent	44.7	37.2	44.4
Meat, fish or equivalent	39.9	29.7	24.5
Percentage of households experiencing extreme difficulty in making ends meet	77.7	60.9	54.2

extreme difficulty in making ends meet. There can be little doubt that those households are experiencing deprivation of a basic kind and this arises from the level of current resources available to the household.

Looking at those between the 50 per cent and 60 per cent lines and experiencing primary deprivation, lower but still very substantial numbers are experiencing debt, cannot afford new clothes or a second pair of shoes, a roast every week or meat/fish every second day. About 60 per cent stated they were having extreme difficulty making ends meet. For the final group, between 60 per cent and 70 per cent income lines, the levels of deprivation are again lower and 55 per cent say they are having extreme difficulty making ends meet. So as the income threshold is raised the level of primary deprivation declines, but even for the group between 60 per cent and 70 per cent of average income about one-quarter cannot afford a warm overcoat or two pairs of shoes.

What then are the characteristics of the households which are experiencing primary deprivation and below the income thresholds? Table 8 shows the labour force status of the household head for each of the three groups. Focusing on the central one - those experiencing primary deprivation and below the 60 per cent line - 37 per cent are headed by an unemployed person, about 16 per cent have a sick/disabled head and 15 per cent a head in home duties, about 12 per cent are headed by a farmer and a similar percentage by an employee. Very few are headed by a self-employed or retired

Table 8: *Households Experiencing Primary Deprivation and Below Income Thresholds, by Labour Force Status of Head*

<i>Labour force status of head</i>	<i>Households experiencing primary deprivation and below:</i>		
	<i>50% line</i>	<i>60% line</i>	<i>70% line</i>
	<i>Per cent</i>		
Employee	8.8	11.7	14.9
Farmer	16.7	12.4	11.1
Self-employed	2.2	2.1	2.8
Unemployed	49.5	36.5	29.9
Ill/disabled	11.9	16.6	14.0
Retired	3.8	5.6	8.3
Home duties	6.7	15.0	18.9
All	100.0	100.0	100.0

person. In terms of the *risk* of being poor based on this criterion, 51 per cent of households with an unemployed head fall into this group, 42 per cent of those with an sick/disabled head, 16 per cent of farmer headed households, 25 per cent of those with a head in home duties and only 7 per cent of those with a retired head and 4 per cent of those with an employee or self-employed person as head.

The application of criteria in terms of both primary deprivation and current income thus serve to identify a set of households which merit the description "poor" in accordance with the Townsend definition. A number of important issues remain to be addressed, - centrally, what difference does the application of the combined criteria make, why are some low income households apparently not experiencing primary deprivation when a substantial

proportion clearly are, and why are some higher income households reporting such deprivation? In the next section we explore these issues, looking at the characteristics of the households concerned and drawing on information relating to resources other than current income.

5. Income, Deprivation and Wider Resources

The Impact on Composition

Clearly it is important to first see the difference applying these income plus deprivation criteria rather than purely income cut-offs makes to the composition of the group involved. About 16 per cent of households in the sample are below the 60 per cent line and experiencing primary deprivation, approximately the same as the overall percentage below the 50 per cent income line. Table 9 compares the composition of the two groups in terms of labour force status of the household head. Farmers form a considerably smaller proportion of those below the higher income line and experiencing primary deprivation, while the ill/disabled and especially households headed by someone in home duties form a higher proportion.

It is worth noting, though, that although the overall percentages headed by an unemployed person or employee do not change very much when we move from the income to the income plus deprivation measure, the actual households involved are not always the same. Overall, only 58 per cent of the households below the 50 per cent line are among those below

Table 9: *Households Below Income Thresholds by Labour Force Status of Head*

<i>Labour force status of head</i>	<i>Households below 50% income line</i>	<i>Households below 60% line and experiencing primary deprivation</i>	<i>Households below 60% line and not experiencing primary deprivation</i>
	<i>Per cent</i>		
Employee	8.9	11.7	16.3
Farmer	23.3	12.4	25.5
Self-employed	4.7	2.1	7.4
Unemployed	39.1	36.5	17.7
Ill/disabled	10.1	16.6	7.7
Retired	7.5	5.6	13.0
Home duties	6.3	15.0	12.3
All	100.0	100.0	100.0

60 per cent and experiencing primary deprivation. While over half of the households below the 50 per cent line and not experiencing primary deprivation are headed by a farmer, self-employed or retired person, one-quarter have an unemployed head. Thus the application of the combined income/deprivation criteria also leads to some differences *within* labour force categories in the households being categorised as poor.

Low Income Households Not Experiencing Primary Deprivation

We now focus in more detail on the households reporting low current incomes in the survey and not apparently experiencing enforced primary deprivation. Of those below the 60 per cent relative income threshold, for example, 44 per cent - or about 13 per cent of all the households in the

sample - score zero on the enforced primary deprivation index. Table 9 also sets out some of the characteristics of these households, so they can be compared with the households below that line which are experiencing enforced primary deprivation. Compared with the latter, a much higher percentage of those not experiencing deprivation are headed by a farmer or other self-employed or retired persons.

We have seen that 71 per cent of those below the 60 per cent income line and experiencing primary deprivation said that they were having extreme difficulty making ends met. The corresponding figure for those below that income line and not experiencing primary deprivation is much lower, at 37 per cent, suggesting the primary deprivation scores are indeed allowing us to distinguish between groups in rather different situations. This is also indicated by an examination of the extent of deprivation in terms of secondary and housing items: those below the income line and not experiencing primary deprivation also show much lower levels of (what they report as) enforced lack of these other types of items than do the group experiencing primary deprivation.

Why then do some of those with low current reported incomes manage to avoid primary deprivation while others experience it? To understand how this come about, the nature of the current income measures in the survey must be described and the relationship with resources available to the household explored. The current income measure relates to that received last week (or fortnight/month) for employee

income and social welfare transfers. For income from self-employment, including farming, this would introduce excessive variability and following standard practice the weekly average amount received over a twelve-month period is used instead. For either employees and social welfare recipients, or the self-employed, current income as measured in this way may not adequately reflect resources available to the household. For farmers and the self-employed, the year in question may have been an unusually bad one - and for farmers the data refer to 1986 which did in fact represent a low point in farm incomes. Social welfare recipients, particularly those away from work through unemployment or illness, may have spent much of the previous year in work. In either case, households may have built up resources over a longer period and thus able to draw on savings or increase debt when income falls, to avoid - at least for a time - primary deprivation.

Table 10 shows the average level of reported household savings in the form of deposits in banks, building societies, etc., for households below the 60 per cent income threshold and experiencing/not experiencing primary deprivation, broken down by head's current labour force status. For each labour force status, the households not experiencing such deprivation have much greater savings to draw on. As another indicator of resources available to the household over a longer period, the table also shows the average value of property in the form of housing (i.e., reported market value

of the house for owner-occupiers less outstanding mortgage) for each group. Again, those not experiencing primary deprivation consistently have substantially higher levels of house property.

Table 10: *Households Below 60 Per Cent Income Line Experiencing/Not Experiencing Primary Deprivation by Labour Force Status of Head: Deposits and House Property*

<i>Labour force status</i>	<i>Below 60% income line</i>			
	<i>Mean level of savings</i>		<i>Net house value</i>	
	<i>Experiencing primary deprivation</i>	<i>Not experiencing primary deprivation</i>	<i>Experiencing primary deprivation</i>	<i>Not experiencing primary deprivation</i>
				£
Employee	204	1,342	9,398	14,655
Farmer	790	2,208	19,677	27,060
Self-employed	397	2,681	22,537	29,284
Unemployed	45	442	5,335	16,460
Sick/disabled	360	1,741	12,481	19,222
Retired	832	3,052	11,034	22,364
Home duties	27	1,200	14,719	18,047
All	260	1,720	10,974	20,990

For some of those currently on low incomes, then current income does not reflect their previous experience over a longer period and thus broader resources available. For those currently unemployed or away from work through illness, information in the sample allows us to look at how long they have been away from work and the number of weeks spent in work (if any) in the past year. For households headed by an unemployed person below the income line but not experiencing

primary deprivation, the head has on average not been away from work as long, and spent more of the last year in work, than the heads of corresponding households experiencing deprivation. Conversely, for households headed by an employee and below the income line, those experiencing deprivation are more likely to have spent some of the past year out of work than those not experiencing deprivation. Annual income significantly higher than current income thus contributes towards the relatively high level of savings and other resources for some - though by no means all - the low-income households not experiencing deprivation and headed by an employee or someone out of work.

For those households headed by farmer or other self-employed person, current income already refers to that received over a year rather than a much shorter period. These income sources are however more volatile by nature and substantial fluctuations from year to year are common, and they are also more difficult to measure accurately in surveys than employee income or transfers. We have seen that households of this type reporting low incomes and not experiencing primary deprivation have much higher levels of savings and housing wealth than those who are experiencing deprivation. It is also the case that the average size of farm for the former is significantly higher - and farmers rather than other self-employed make up most of those low income households. Thus significant differences in longer-term income between the two groups are suggested.

Before leaving this group of low-income households not experiencing primary deprivation, it is important to note that they are not a homogenous group in terms of resources or other indicators of financial pressure and life-style. Table 10 suggests that substantially higher levels of resources are available to the households headed by a farmer, other self-employed or retired than to those with an employee, some in home duties, sick/ill or particularly an unemployed person. This is reflected in the extent of enforced deprivation of *secondary* life-style items, which is a good deal higher for the unemployed than for others. A higher percentage of the unemployed also report difficulty making ends meet. Although not currently experiencing primary deprivation, then, those households under the 60 per cent line with an unemployed head are clearly under greater financial strain than other households reporting similar current income levels.

Households Experiencing Primary Deprivation but Not on Low Incomes

We now turn to the group of households not on low current incomes but apparently experiencing what they regard as enforced primary deprivation. Half of those scoring 1 or more on the primary deprivation index are above the 60 per cent income threshold and 35 per cent are above the 70 per cent threshold - representing 15 per cent and 10 per cent respectively of all households in the sample. The first issue to be addressed is the actual current income levels of these

households - are they mostly on incomes just above the cut-offs used? This is not in fact the case: the average income of these households is well above the thresholds employed, and as Table 5 showed they are distributed over the (equivalent) income distributions. In the second issue we may consider the nature of the primary deprivation being experienced. Table 11 shows the percentage of the households above the 60 per cent line and experiencing primary deprivation who report (enforced) lack of each of the eight items in the primary index. This is not very different from the pattern shown in Table 7 for the households below that income line and experiencing primary deprivation. Third, we can look at the extent of their deprivation of secondary items: while lower on average than for the group below the income threshold, those above the threshold experiencing

Table 11: *Percentage of Households Above 60 Per Cent Income Line and Experiencing Primary Deprivation Who Lack Particular Items*

<i>Item</i>	<i>Percentage of households, above 60% line and experiencing primary deprivation lacking items (enforced)</i>
	<i>Per cent</i>
New not second-hand clothes	17.4
Warm coat	22.8
Roast or equivalent	34.1
Meal with meat, fish etc., every second day	21.4
Two pairs of shoes	28.6
Debt	40.4
Do without main meal	10.0
Do without heat	14.4

primary deprivation do report a relatively substantial degree of enforced absence of secondary items.

Why then are these households, with current incomes close to or above average, nonetheless experiencing such deprivation? Looking first at labour force status of the household head, Table 12 shows, that this group is dominated by employees, who make up about 45 per cent of those above the 60 per cent line but experiencing primary deprivation. The other substantial groups are the retired and those in home duties, who make up 13 per cent and 16 per cent respectively. Only 10 per cent are headed by someone away from work through unemployment or illness. In terms of demographic characteristics - age of head, number of children - the group does not appear particularly distinctive.

Table 12: *Households Above 60 Per Cent Income Line Experiencing Primary Deprivation by Labour Force Status of Head*

<i>Labour force status</i>	<i>Households above 60% line and experiencing primary deprivation</i>
	<i>Per cent</i>
Employee	44.1
Farmer	9.4
Sel-employed	5.6
Unemployed	7.1
Ill/disabled	4.5
Retired	12.9
Home duties	16.4
All	100.0

Part of the explanation may again be with the fact that current income is not always a satisfactory indicator of longer-term command over resources. In terms of annual income, an employee may have spent much of the previous year away from work and annual income may be well below that currently being received. While this is in fact the case for some of the households concerned, it applies only to a minority. Relatively high expenditure on housing, leaving less for other goods and services, also appears to be a factor for some of these households. There also appear to be significant differences in savings and other assets between the households above the income thresholds and experiencing deprivation and other households at similar income levels. Controlling for equivalent income decile, Table 13 shows that for households headed by an employee - the dominant group - those experiencing primary deprivation have much lower levels of savings and own much less valuable houses on average than corresponding households not experiencing primary deprivation.

This group clearly requires further investigation, though the analysis so far does suggest that resources over a prolonged period have a role in explaining their current living patterns. This is also indicated by the fact that over two-thirds of these households come from the manual social classes. It is not to be expected that resources would fully explain differences in living patterns, however. In the final analysis it may be necessary to accept that some households

are doing without what most regard as necessities, themselves consider this to be due to lack of resources, but by societal norms have relatively comfortable incomes and would be regarded as able to afford the items in question if they reoriented their expenditure.

Table 13: *Employee-Headed Households Above 60 Per Cent Line by Equivalent Income Decile and Experiencing/Not Experiencing Primary Deprivation: Mean Savings and House Property*

Equivalent income decile	Mean deposits		Mean net house value	
	Experiencing primary deprivation	Not experiencing primary deprivation	Experiencing primary deprivation	Not experiencing primary deprivation
	£			
4	833	1,160	15,494	18,383
5	428	1,101	11,414	18,924
6	542	1,024	15,759	20,999
7	599	1,529	14,265	24,097
8	110	1,839	15,994	25,659
9	831	2,847	21,464	25,484
10	1,713	5,434	15,995	24,120
All	666	2,461	15,442	23,428

Non-Essentials and Housing Deprivation

Finally, we may briefly consider two other issues. First, some of those at relatively low income levels and experiencing enforced primary deprivation still possess items which are not overwhelmingly regarded as necessities. Does this invalidate the contention that their deprivation is enforced? We focus on two items which have received particular attention - a car and a telephone. About 21 per

cent of the households below the 60 per cent relative income threshold and experiencing primary deprivation own a car, 36 per cent have a telephone, and 12 per cent have both. Breaking down the households involved by some relevant characteristics, Table 14 shows that those owning a car are predominantly rural, middle aged and/or have children. Those having a telephone, by contrast, are more likely to be elderly and/or widow(er)s.

Table 14: *Characteristics of Households Below 60 Per Cent Income Line and Experiencing Primary Deprivation but Having Car or Telephone*

<i>Characteristics</i>	<i>Households below 60% line and experiencing primary deprivation having:</i>	
	<i>Car</i>	<i>Telephone</i>
<i>Household head aged:</i>		
< 35	25.3	18.8
≥ 35 < 55	49.4	38.3
≥ 55	25.3	42.9
Married	87.4	71.7
Widowed	7.4	23.8
Single	5.2	4.5
Female	6.9	25.2
Rural	64.9	53.7

It would not be difficult to argue that, for many of the households involved, a car or a telephone could reasonably be regarded as a necessity - and many of the households say they regard them as such. Excluding all households who possess a car would make poverty largely an urban matter, and would

certainly mean that almost no rural households with married, middle-aged heads could be classified as poor. Similarly, excluding those with telephones would mean that a considerably smaller number of elderly people would be so classified. It might, however, be worthwhile to consider the position of households which, despite current low income and primary deprivation, have particularly low overall scores in terms of secondary items lacked, and this will be pursued in future work.

Turning to the housing and housing-related items, six out of seven are overwhelmingly regarded as necessities, the exception being the TV (see Table 1). Only a relatively small percentage of households lack each, and an even smaller percentage regard this as enforced. What is the relationship between this housing-related deprivation, primary deprivation and resources, and where does it fit in to the measurement of poverty? The factor analysis itself shows that housing and primary deprivation are quite frequently experienced by different households. About 58 per cent of the households lacking one or more of the housing items also experience primary deprivation, 44 per cent are below the 60 per cent income threshold, and only 30 per cent are *both* below the 60 per cent income threshold and have primary deprivation scores of 1 or more.

Looking at the characteristics of the households experiencing enforced lack of one or more of the housing items but not both below the 60 per cent income threshold and

experiencing enforced primary deprivation, what is striking is their distinctive demographic and geographic profile. Almost 60 per cent live in rural rather than urban areas, 50 per cent are headed by either a single person or a widow(er), and 80 per cent are *either* headed by such an individual or in a rural area. About one third are elderly single or widowed persons. Quality of housing and housing-related durables for many of these households are probably determined by the combination of relatively low resources over a prolonged period and their marital status and location. These households report significantly lower current levels of financial strain than households below the income threshold and experiencing primary deprivation, and they also have substantially higher levels of savings. This may mean that, taken alone or even together with low current income, the housing items are not particularly reliable indicators of current exclusion arising from current lack of resources. Once again, this is an area for further investigation.

6. *Conclusions*

This paper has looked at the implications of taking both current income *and* measured deprivation into account in measuring poverty. It has argued that both elements are required if the poverty measure is to be consistent with the widely-accepted definition put forward by Townsend, which related to exclusion from ordinary living standards due to lack of resources. It has also argued that simply adding

together indicators of deprivation which may relate to different aspects or dimensions into a summary index may not be satisfactory. The importance of analysing the relationship between the various indicators, and between them and income/wider resources, was stressed, and the usefulness of factor analysis in this context illustrated.

Concentrating on a limited set of items referring to basic or primary deprivation, households in the ESRI sample both experiencing such deprivation and below relative income thresholds were examined. Households distinguished as "poor" in this way differ to a significant extent from those simply below current income thresholds. Households headed by a farmer, other self-employed or retired person are less important, and those headed by an ill-disabled person or someone in home duties more important, while those with an unemployed head continue to be the most substantial group. The characteristics of households at low incomes and not experiencing primary deprivation, and of those at higher incomes but experiencing such deprivation, were also analysed. The role of labour force experience and resources over a prolonged period, rather than simply current income, in determining current living standards was emphasised using sample data on annual income, savings and other assets.

Many questions for further research are raised by the analysis. The "inconsistent" groups, especially the high income households reporting deprivation, require more consideration. The best way in which to employ information on

what have been termed "secondary" items, and possession of non-essentials, will have to be examined. Likewise the relationship between housing/durables and resources, and its implications both for assessing the position of households experiencing housing deprivation and for policy, need to be examined further. All these issues arise with the framework of applying a combined deprivation plus resources approach to measuring poverty as defined by Townsend.

More fundamentally, though, following through this measurement approach raises some issues about the definition itself which must be faced. Households are only to be categorised as "poor" if they are both at low incomes - however defined - and experiencing deprivation and exclusion - again, however defined. We have seen that a very considerable number of households with current low incomes are not experiencing primary deprivation. Leaving aside the precise way in which deprivation is defined and measured, as well as the problems of measuring income accurately, it is clear that some households have current incomes which would *not* be adequate to avoid exclusion and deprivation, but manage to do so by running down accumulated resources and by borrowing/relying on help.

This makes clear first of all that measuring exclusion due to resources will be informative as to what constitutes an "adequate" income, but poverty defined in that way is by no means identical to income inadequacy. It may also lead us to consider whether Atkinson's (1987) distinction between

poverty as deprivation in terms of standard of living and poverty as concerned with *minimum rights to resources* needs to be highlighted. In terms of the latter, falling below the minimum adequate income level may be seen as poverty even if it does not always result in deprivation.

This has obvious policy as well as conceptual and methodological implications. To give a concrete example, an analysis of panel data on US households by Ruggles and Williams (1989) showed that about one third of those entering poverty - falling below the official poverty line - actually had sufficient savings to allow them to supplement income support by running down savings above that and maintain their standard of living above that line through their full poverty spell. Whether we wish to call such households "poor" or not, clearly social welfare policy will be concerned to provide income support to those with inadequate incomes even if they could not (yet) be categorised as "excluded from ordinary living patterns".

Footnotes

1. Ringen (1988), p. 353.
2. Townsend (1979), p. 31.
3. MacCarthaigh (1990) applied Ringen's criticisms of the use of "indirect" income measures with "direct" definition of poverty to the income poverty lines employed in Callan, Nolan *et al.*, (1989). The reply reiterates our view that relative poverty lines were very useful for certain purposes, and that *both* deprivation and resources would need to be taken into account (Callan *et al.*, 1990) to be fully consistent with the definition.
4. See Callan, Nolan *et al.*, Chapter 8.
5. The way in which this can be done using the 1987 ESRI Survey data was first analysed in Hannan (1988).
6. On this basis Mack and Lansley (1985) assumed that *all* items lacked by those in the bottom income deciles were due to resource constraints, even when the household respondents stated that they were doing without by choice.

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