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## *Sammanfattning*

Befintlig forskning visar på ett entydigt samband mellan barnfattigdom och livschanser som vuxen. De flesta av dessa studier fokuserar emellertid på utfall som har med övergången till vuxenlivet att göra. I denna rapport breddar vi fokus genom att analysera konsekvenser långt in i vuxenlivet. Hur påverkar fattigdomserfarenheter under barndomen och ungdomen socioekonomiska förhållanden för såväl unga vuxna som medelålders? Tyngdpunkten ligger på fattigdom, här definierat som socialbidragstagande, under uppväxttiden och dess konsekvenser för exkludering och inkludering på arbetsmarknaden. För analyserna har vi använt oss av ett nytt longitudinellt datamaterial – *the Stockholm Birth Cohort (SBC)* – som gör det möjligt att följa en kohort från födseln (1953) fram till 48 års ålder (2001). Resultaten visar att fattigdom under uppväxttiden är en riskfaktor för marginalisering långt senare i livet. Det är framförallt långvarig fattigdom och fattigdom under tonåren som har samband med svag arbetsmarknadsanknytning. Utbildning och sociala problem (kriminalitet och missbruk) framstår som viktiga mellanliggande variabler. Analyserna visar också att effekten av fattigdom och andra riskfaktorer ökar över tid. Detta tolkas i termer av kumulativ ofärd (*cumulative disadvantage*). I en avslutande analys identifieras utbildning och familjebildning som resurser av stor betydelse för chansen att lämna en marginaliserad position.

## *Abstract*

Research has consistently shown that poverty and economic hardship have negative consequences for children. Few studies, however, have examined whether these consequences persists into adulthood. In the present paper we broaden the focus and analyse how living conditions during childhood and adolescence structure socio-economic circumstances also in midlife. How does exposure to poverty during childhood and adolescence affect future probabilities for labour market exclusion and inclusion in early adulthood and in midlife? The data are drawn from a new longitudinal Swedish data set – the Stockholm Birth Cohort Study (SBC) – in which we can follow a cohort of Swedes from birth (1953) to the age of 48 (2001). Our results show that childhood poverty clearly has a negative impact on attainment in adulthood. Persistent poverty in the family of origin and entering poverty in adolescence are particularly detrimental for life chances. This is most salient in the analysis of exclusion in midlife. Educational achievement and deviant behaviour (criminality and drug abuse) are identified as important intervening variables. The results are interpreted as a process of cumulative disadvantage. In our final analyses we focus on those excluded from the labour market in early adulthood and their likelihood to be included in midlife. We find that that resource attainment in terms of education and family has positive effects for the chance for inclusion and may in that respect be regarded as turning points.

There is, today, consensus regarding children's rights to equal life chances. We know that poverty and other adverse living conditions not only have a direct impact on children's well-being, but also that they have salient effects on how life courses develop. Research has consistently shown that poverty and economic hardship have negative consequences for children. Few studies, however, have examined whether these consequences persist into adulthood. In the present paper we broaden the focus and analyse how living conditions during childhood and adolescence structure socio-economic circumstances also in midlife.

In a recently published article Wagmiller et al. (2006), direct attention to the dynamics of economic hardship during childhood. The authors stress the importance of recognising that not only duration, but also the timing and sequencing of disadvantage are important for understanding how and to what degree adult living conditions depend on childhood experiences. As in many other studies within this vein of research Wagmiller et al. direct their attention toward economic disadvantage (for other examples see Bynner 1999; Haveman and Wolfe 1995). Financial poverty is a central indicator of poor living conditions because of its correlation with other dimensions of living conditions such as housing, health, education, social ties etc (Fritzell and Lundberg 2000). Nevertheless, we know from previous research that financial poverty is far from perfect as an indicator of adverse living conditions, marginalisation or social exclusion. Not least have authors within the European social exclusion literature pointed to the importance of adopting a multidimensional approach (cf. Atkinson 1998; Atkinson et al 2002). In this paper our main focus is on financial poverty as well, but we also account for other aspects of adverse living conditions during childhood and adolescence. More specifically our aim is to map how the dynamics of exposure to poverty during childhood and adolescence affect future probabilities for inclusion and exclusion both in early adulthood and in midlife. This also comprises analyses of so called turning points, i.e. events or processes that can turn a negative life course positive. This is accomplished by analysing a new Swedish data set – the Stockholm Birth Cohort Study (SBC) – in which we can follow a cohort of Swedes from birth to the age of 48 (Stenberg et al. 2006).

The paper proceeds with a discussion of some theoretical issues regarding the link between childhood poverty and adulthood living conditions. The data are then presented along with the operational definitions employed in the study. The presentation of the results begins with a section focusing on how poverty, its timing and duration in the family of origin, structure risks for labour market exclusion in early adulthood and midlife. This is followed by a section

where we focus on factors contributing to chances for inclusion in midlife among those excluded in early adulthood. The paper ends with a discussion of these results.

### Theoretical considerations

An influential claim made in recent years regarding the importance of highlighting childhood living conditions is that made by Esping-Andersen (2002) in his call for a “child-centred social investment strategy”. Esping-Andersen’s core message is that we need to invest in children in order to reduce poverty and social exclusion in the future. Since poverty and social exclusion tend to be transmitted across generations, providing resources to children and families with children will equalise life chances and thereby there will be less deprivation to transmit. The reason for why such a social investment strategy must be directed at children is that “early childhood is the critical point at which people’s life courses are shaped” (ibid. p. 30).

We know for a fact that there is a correlation between childhood and adulthood living conditions. For instance, in a study of inheritance of welfare reciprocity, using virtually the same data as in the present study, Stenberg (2000) finds a clear intergenerational effect. However, less is known about the mechanisms by which adverse living conditions are transmitted from one generation to another. Why should poverty during childhood and adolescence affect social exclusion in midlife? A variety of hypotheses regarding the determinants of children’s attainments have been suggested. Theories concerning socialization and the transmission of cultural deficiencies stress the importance of parents and peers as role models. Their behaviour, aspirations and values are assumed to be transmitted to the children, and affect distant outcomes such as status attainment. Within this domain we find, for example, the notion of a “culture of poverty” (Lewis 1968). Other theories focus on resources, or resource deficiencies, and differences in opportunities. Haveman and Wolfe (1995) suggest a framework where the attainments of children are viewed as dependent on three primary factors: the social investment in children, parental investment in children and the choices that children make given the investments made and opportunities available to them. In accordance with a resource perspective individual resources and circumstances can in this respect be seen as determining the opportunities available to a given individual. People are regarded as active agents whose access to resources and capacity to make use of them determine their levels of opportunity and chances in life (Johansson 1970; Erikson and Åberg 1987).

Life courses are not determined and predictable and this is why we need to take a probabilistic standpoint and speak of “risk” and “risk factors” instead of “determinants” (cf. Bynner 1999). The notion of risk trajectories, which has also been labelled e.g. “unfavourable life careers” (Bäckman and Palme 1998) “cumulative disadvantage” (Blau and Duncan 1967; Laub and Sampson 2003; Diprete and Eirich 2006), or “social heredity” (Jonsson 1967), is in line with such a standpoint. Whatever their labels, these views can all be embraced within a resource perspective: Resource deficiencies in the family of origin may sparkle off a risk trajectory. For instance, poverty during childhood affects intervening variables such as educational achievement, health outcomes and delinquency, which in turn increases the risk for low paid jobs, unemployment and in a worst case scenario social exclusion in adulthood. The cumulative disadvantage perspective predicts that the effects of risk factors accumulate over the life course (Blau and Duncan 1967; Diprete and Eirich 2006).

However, most life course analyses focus on childhood, adolescence and transition into adulthood. This practice seems to implicitly suggest that once adults our fate is inevitable. Esping-Andersen (2002) goes as far as to say that supportive efforts aimed at adults are likely to be ineffective, unless these adults have acquired sufficient cognitive and social skills in childhood. However, within the cumulative advantage/disadvantage literature calls have been made for systematic studies on mechanisms that “shut down” these processes (Diprete and Eirich 2006). Moreover, Laub and Sampson (2003) have stressed the importance of recognising the whole life course in order to reach an understanding of how individuals develop. This is of particular importance in the study of turning points, they argue. Childhood is a critical point at which life courses are shaped, but we must not stop there. According to Sampson and Laub, who followed delinquent boys to the age of 70, exogenously induced changes are ever present.

These theoretical fragments may be summarized in a couple of testable hypotheses. The unfavourable life career perspective predicts that exposure to disadvantages during childhood, in our analyses poverty, is transmitted by a number of factors and thus indirectly leads to a greater risk for exclusion in adulthood. Thus, provided that we are able to control for these mediating factors, the effect of childhood poverty would disappear when these controls are made. Cumulative disadvantage suggests a path by which childhood risk factors are transmitted as well, but also that at every step of the life course the already disadvantaged fare

worse than others, which in turn implies that the effect of childhood poverty on exclusion should increase as we move along the life course. The culture of poverty hypothesis would, on the other hand, predict firstly that effects of childhood poverty are stable across the life course, and secondly, that there are remaining effects of childhood poverty when intermediate factors are controlled for.

We have also recognised that the temporal aspect of poverty exposure must not be ignored. The first hypothesis in this regard is obvious and predicts that longstanding poverty in the family of origin have the most detrimental effects on adulthood risks for exclusion. However, for the effect of the timing of poverty there is no consensus in the literature. On the one hand there are authors like Esping-Andersen (2002) and Duncan et al. (1998) who tell us that it is poverty in early childhood which is most detrimental, whereas e.g. Wagmiller et al. (2006) and Stenberg (2000) claim that, with respect to timing, it is poverty in adolescence that matters. Thus, we have two competing hypotheses as far as timing is concerned. Of course there is a third alternative as well, where poverty is detrimental irrespective of the child's age.

Lastly, we have acknowledged claims made by e.g. Laub and Sampson (2003) that in order to reach a more full understanding we need to analyse whole life courses. Following a resource perspective we expect events or processes that improves resource accessibility to have positive effects throughout the life course. In this paper we will focus on family relations and education.

## Data

The Stockholm Birth Cohort Study was created in 2004/2005 by a probability matching of two comprehensive and longitudinal data sets. The first of these, The Stockholm Metropolitan Study, consists of all children born in 1953 and living in the Stockholm Metropolitan area in 1963. The total number of individuals in the cohort was 15,117. The second data set, the Swedish Work and Mortality Database 1980-2002 (WMD), consists of all individuals living in Sweden in 1980 or 1990, and born before 1985. Since the two data sets are de-identified a probability matching was conducted. The matching procedure resulted in 14,294 matched observations, corresponding to 96% of the individuals still alive in 1980.<sup>1</sup> The resulting database, SBC, provides a 50 year follow up of the original 1953 birth cohort. The initiative to

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<sup>1</sup> The matching procedure is described in Stenberg et al (2006).

create SBC was taken by Denny Vågerö at the Centre for Health Equity Studies at Stockholm University/Karolinska Institute and Sten Åke Stenberg at the Swedish Institute for Social Research, Stockholm University.

The Stockholm Metropolitan study covers the period 1953-1984 (when all data collection was interrupted and thereafter de-identified) and contains survey- as well as routine registry data that refer both to the family of origin and the cohort members. It contains information on individual characteristics, such as attitudes, health, school performance, income, family composition and criminal record. The part of WMD that we have been able use contains date of death (1980-2002) and register data on income, work, education and unemployment (1990-2002). In the analyses we have excluded those who went to a “class for backward children” or to a class for hard of hearing or partially sighted. We have also excluded those who during childhood only temporarily were living in the metropolitan area (see below). This gives us a sample of 13,743 children (6,979 boys and 6,764 girls).

## Operationalisations

### *Dependent variables*

The dependent variables measure labour market exclusion at three time points: 1981/82, 1990/91 and 2000/01. In the construction of these variables we have been inspired by a model for measuring labour market attachment developed by Kindlund and Biterman (2002) and Bäckman and Franzén (2007) which uses income data for categorisation. In the present study income across two years determine in what category a person is placed. The categorisation proceeds in two steps. We start by dividing the sample into three categories based on annual earnings recalculated into price base amounts (PBA).<sup>2</sup> The PBA is an amount used by the government to calculate benefits in various social insurance programs. It is linked to the consumer price index and is thus not eroded by inflation. In 2007 one PBA equals SEK 40,300 ( $\approx$  € 4,400). The core work force consists of those earning at least 3.5 PBA.<sup>3</sup> The

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<sup>2</sup> Annual earnings consist of income from work and work related social insurance programs such as sickness cash benefits and parental insurance, but not pensions and unemployment insurance.

<sup>3</sup> 3.5 PBA is considered the lowest annual income that can sustain income maintenance for one person. In the 2000s it is also approximately an annual full-time income for the lowest paid jobs in Sweden.

unstable work force includes those with earnings amounting to at least 1 PBA, but not 3.5. Outside the work force are those earning less than 1 PBA.<sup>4</sup>

In order to increase the validity we have also created a student and a homemaker category. Students are those that earn less than 3.5 PBA and who according to other registry data are enrolled in some kind of educational program that year (1981/82)<sup>5</sup>; or have received student loans and/or benefits amounting to at least 0.87 PBA (approximately the maximum amount for half a year of full time studies; 1990/91 and 2000/01). We have created the homemaker category in order not to include parents (primarily mothers) who stay home more or less voluntarily among the excluded or in the unstable work force. Thus, those with children at 0-3 years of age and who earn less than 3.5 PBA form the homemaker category.

In the next step we construct dependent variables indicating labour market exclusion at the respective time points. A person is defined as excluded if he or she at least one of the two years that constitute each time period belongs to the outsider category and in the other year belongs to at the most the unstable labour force, or if he/she is a disability pensioner at any of the two years.<sup>6</sup>

In the final analysis where we focus on turning points the 2000/01 dummy is reversed and thus indicating “included”.

### *Independent variables*

In the first analyses our focus is primarily on material poverty during childhood and adolescence and how the timing and duration of poverty affect future life chances. We study this by investigating the effect of the categorical factor, where each category represents a certain seriality of poverty during upbringing. We use information on means tested social assistance benefit take-up in the family of origin to measure poverty. Means tested social

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<sup>4</sup> For the first time point (1981/82) we do not have as detailed data on income as this model normally assumes. Thus for these years we have to use additional information in order to categorise people into the respective categories. For the second and the third time point we have also been able to exclude people with income from capital from the low income categories. This was not possible for the first time point.

<sup>5</sup> This operationalisation is based on information of educational level 1980 and 1983. Those who have raised their educational level between these years are defined as students. By this operationalisation we are not able to catch some of those still enrolled in some educational program in 1983 and who have not yet raised their educational level.

<sup>6</sup> In 1981/82 11 percent of the excluded are disability pensioners. The corresponding figure for 1990/01 is 26 percent and for 2000/01 49 percent.

assistance benefits are supposed to provide an ultimate safety net for those experiencing temporary economic shortfall. To be eligible for benefits all members in a household claiming benefits must have exhausted virtually all their financial assets. Although benefits are supposed to be of a temporal character many recipients become dependent on them for quite long periods and it can easily be argued that such people live in very scanty circumstances (cf. Bergmark and Bäckman 2004). As a consequence it has been argued that extensive social assistance take-up is a more direct measure of poverty than traditional income poverty measures such as e.g. 50 or 60 percent of median income (Gustafsson, Zaidi, and Franzén 2007; see also Halleröd and Westberg 2006).

Information on social assistance take up has been gathered from the Social Register, which is kept by each municipality. Since registers outside the metropolitan area could not be searched, members of the cohort are out of risk to be included until they arrive at the area or when they leave the area. In order to control for time under risk we have excluded those cohort members that only lived in the metropolitan area during the second time period (when the cohort was defined).<sup>7</sup>

The social assistance data are divided into three time periods: 1953-59 (0-6 years of age), 1960-65 (7-12), and 1966-72 (13-19). For each of these periods we have information on how many years the family received benefits. On the basis of this information we have created a seven category indicator, the construction of which is found in Table 1.<sup>8</sup>

*Table 1.* Construction of a categorical indicator on the temporality of poverty in the family of origin. Number of years of social assistance take-up in three time periods.

	Number of years with social assistance benefits		
	Period I	Period II	Period III
None poor	0	0	0
Temporary poor <sup>1</sup>	0/1	0/1/2+	0/1
Out period 2	2+	0/1	0/1
Out period 3	2+	2+	0/1
In period 3	0/1	0/1	2+
In period 2	0/1	2+	2+
Permanently poor	2+	0/1/2+	2+

<sup>1</sup> At least one year with take-up.

<sup>7</sup> Those not living in the area during the first time period and who have received social assistance during both time period two and three have been categorized as permanently poor. The same holds for those moving out of the area in time period three with take up during the first and the second period.

<sup>8</sup> In our original construction of the factor we used nine categories. However, it turned out that two of these contained too few observations to be used in analyses. We have therefore collapsed the first of these – those with two or more years in the second period only – with the temporary poor category. The second – those with two or more years in the first and the third period, but not in the second – we have collapsed with the permanently poor category. This adds very few observations to the temporary and permanently poor categories.

In the final analysis we direct attention to factors that increase the likelihood that people in a marginal position will be established at a later point in time, here labelled “turning points”. The turning points that we focus upon here concern family and education. We use three indicators: a dummy variable assigned unity if the person has increased his/her educational level between 1983 and 2000 according to registry data; a dummy variable indicating whether or not the person has become parent or had an additional child between 1983 and 2000; finally we have constructed a factor indicating the development of his/her marital status. The latter factor is constructed of measurements at three time points: 1980, 1990 and 2000 at each of which we register if the person was single/divorced/widowed or married/cohabiting. In theory that would give us eight categories, but again some of these are too small to be used in the analysis, forcing us to collapse a few of them. Table 2 shows the construction of this indicator.

Table 2. Construction of a categorical indicator on marital status across 1980, 1990, and 2000.

	1980	Marital status 1990	2000
Stable, married	married/cohab.	married/cohab.	married/cohab.
Stable, single	Single	Single	Single
si/md/co_co_md	Single/married/cohab.	married/cohab.	Divorced
si/md/_co_co	Single	married/cohab.	married/cohab.
si/md/co_si/md_co	Single/married/cohab.	single/divorced	married/cohab.
co_md_md	married/cohab.	divorced	Divorced

The control and intervening factors have been separated into different blocks. The first of these covers other problematic circumstances in the family of origin besides poverty. A dummy variable indicates if the child ever was the subject to a decision in the local child welfare committee due to problems in the family (not because of the child’s own behaviour). From The Social Register we have also used information on parent’s alcohol and psychological problems. The variable “parents psych” indicates if any of the parents were registered for showing symptoms of mental illness and psychiatric problems. The variable “parents alcohol” indicates, in the same way, abuse of alcohol. Finally, we include a variable indicating the father’s criminality. It is a dummy variable which assumes unity if the father is found in criminal records during the period 1953-72. The rationale for including these factors is that since our primary focus is on the effects of material poverty and we know from other studies that the social assistance take up indicator captures other social problems in the household (e.g. Vinnerljung et al. 2007). By including these variables we try to isolate the poverty dimension of the social assistance indicator.

The second block includes two factors: The socio-economic status of the family is a four level categorical factor measured in 1963. In the vast majority of cases it is the occupation of the father which is used for coding. We also include a dummy variable indicating whether or not the family was headed by a single parent. Taken together, the factors in the first two blocks, aim at covering basic resource availability in the family of origin, besides material resources.

The third block aims at covering basic abilities. Here we use two indicators. The first, mental test score is a combination of tests of spatial, verbal and numeric abilities at 12-13 years of age (1966). The second, "Hospital" is a dummy coded health indicator based on the in-patient discharge register. The dummy variable is coded as unity if the person had at least one spell of hospital care during each of three time periods: 1969-73, 1974-78, and 1979-83. By including these variables in the analyses we try to control for innate obstacles to gain from the resources at hand. Since measures of ability, such as mental test scores and health, are potentially influenced by social background, we have chosen first to control for socio economic status and other circumstances in the family of origin besides poverty (Lundberg 1993).

The fourth block contains intervening variables concerning the individual him/herself. These are measures of criminality, alcohol and drug abuse, teenage parenthood, marks in the 9<sup>th</sup> grade and educational level. We label these as "intervening" since they are included to pinpoint processes by which scarcity of resources in the family of origin can be transmitted into precarious living conditions in adulthood. Individual level analyses show that poverty during childhood has a negative effect on all these factors. This is particularly salient when poverty is measured in a way that captures a persistent experience of poverty (see e.g. Farnworth et al. 1994; Jarjoura et al 2002, Nilsson 2002). Studies have also shown that these are all factors that make the transition to a job more difficult. A criminal record, as well as drug abuse, has negative effects on labour market outcomes, and this in turn increases the risk for continuing deviant behaviour. Criminal careers, and exclusion, can thus be regarded as outcomes of a cumulative disadvantage process (Krohn et al 1997; Laub & Sampson 2003). Studies have also shown that those with less education will experience poorer employment outcomes later in life (e.g. Erikson and Jonsson 1993).

Crime data is obtained from the official police register, which contains records of offences that lead to an official report to the Child Welfare Committee or to a conviction. We include

two dummy variables indicating criminality. The first is coded “1” if the person appears in the criminal records through 1971, the second if he/she has been registered for crime in the period 1972-80. Drunken driving is used as an indicator of heavy alcohol consumption.<sup>9</sup> This is motivated by the fact that the individual’s alcohol consumption is strongly related to his or her propensity to drink and drive (Norström 1981). Since drunken driving offences are separated into two categories according to the driver’s blood alcohol concentration we use a three level categorical variable as an indicator, where the first category consists of those never convicted for drunken driving and the other two represent the two juridical levels. The indicator on drug abuse is based on information from the police, in-patient register, and social welfare authorities. It indicates drug abuse through 1983 (Torstensson 1987).

We use two indicators on educational achievement. The first is school marks in the 9<sup>th</sup> grade, which is entered as a continuous variable. The second is an indicator of educational level and it is divided into four categories: compulsory school only, two years of secondary schooling, 3-4 years of secondary schooling, and college or university education.

Finally, we include a dummy variable indicating teenage parenthood. Anglo-American studies have shown that teenage parenthood has clear associations with adult social exclusion (Hobcraft & Kieman 2001). The corresponding relationship in Sweden has been less explored.

In the appendix a cross-tabulation of the independent and dependent variables is found.

## Results

### *Multivariate analyses*

Since our dependent variables are dichotomised we use logistic regression to estimate the multivariate models. In logistic regression we analyse the risk expressed as odds for belonging to a certain category.<sup>10</sup> In the tables we report the odds ratios, i.e. the relative deviation in odds for given group compared with a reference group which is assigned an odds ratio of one. Table 3-5 report the results from logistic regressions on the risk for labour market

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<sup>9</sup> Since we have used drunk and drive as an indicator of alcohol abuse we have not included traffic crime in our indicator on criminality.

<sup>10</sup> Odds are defined as the risk for belonging to a category divided by the risk for not belonging to that category.

exclusion at three points in time, 1981/82, 1990/91, and 2000/01. Let us first consider Table 3 where risk for social exclusion in 1981/82 is analysed, i.e. when the cohort members are at 28-29 years of age. In the first of these the poverty indicator is included in the model, alongside sex. First of all we can establish that the parameter estimates indicate that in all poverty categories there is an excess risk for labour market exclusion in 1981/82, but not all of these are statistically significant. Those temporarily poor during childhood and adolescence, those leaving poverty in the second period, those entering poverty in the third period, and the permanently poor all have significantly higher risks than those never poor to be marginalised in their late twenties. The highest excess odds are found for the permanently poor and those entering poverty during adolescence.

As argued above, the poverty indicator alone is likely to capture many other aspects of poor living conditions and that we therefore should try and control for those aspects as far as possible since we primarily aim at modelling the effect of material poverty. In Model 2 these controls have been made and the results clearly indicate that a substantive part of the effects in Model 1 are due to these other aspects. Now the poverty factor turns insignificant and of the separate categories only that of moving into poverty in the third period stays significant at the five percent level. Still, of the control factors only the effect of the child welfare committee indicator is significant. Parent's psychological problems, parent's alcohol problems, and father's criminality show no effects.

In Model 3 single parenthood and the socio-economic status of the household are entered. Neither of these are significant at the five percent level and the effect of poverty does not change, but there are still some interesting observations to be made. The parameter estimates of socio-economic status are quite at odds with what we would expect, where the highest excess odds is found for salaried employees in high positions. As can be seen in appendix there are virtually no differences in risks for exclusion in 1980/81 between the socio-economic categories in the bivariate case. But when we look at risks for exclusion across both socio-economic class and poverty categories we find that among those never poor it is those from unskilled worker families that deviate by running the lowest risks for exclusion (results not shown). This indicates some kind of heterogeneity within socio-economic classes that we have not been able to capture. It should be noted that the same pattern prevails if we use educational level instead of socio-economic status. Note also that, if anything, the pattern is

strengthened in Model 4 and 5. In part this could be attributable to our potential failure to single out all students from the labour market exclusion category (see footnote 5).

Table 3. Results from logistic regressions (odds ratios) on the odds for labour market exclusion in 1981/82 (n=12,232). P-values in brackets.

	1981/82				
	1	2	3	4	5
Woman	1.30 ***	1.30 ***	1.30 ***	1.20 *	1.66 ***
None poor	1	1 (n.s.)	1 (n.s.)	1 (n.s.)	1 (n.s.)
Temp. poor	1.33 *	1.23	1.25 †	1.20	1.12
Out per 2	1.48 *	1.32	1.34 †	1.29	1.20
Out per 3	1.33	1.11	1.10	1.05	0.98
In per 3	1.61 *	1.45 †	1.50 *	1.41 †	1.23
In per 2	1.43 *	1.20	1.20	1.13	0.95
Perm. Poor	1.69 **	1.36	1.37	1.28	0.98
Child committee		1.31 *	1.29 *	1.24 †	1.11
Parents psych.		1.17	1.16	1.14	1.09
Parents alcohol		1.01	1.05	1.02	0.97
Crim father 1953-72		1.09	1.11	1.10	1.03
Single parent			1.20	1.19	1.15
Father unskilled worker			1 (n.s.)	1	1
Skilled worker			1.25 †	1.27 *	1.25 †
Salaried empl. low pos			1.19 †	1.26 *	1.30 *
Salaried empl. hi. pos			1.37 *	1.53 ***	1.59 ***
Mental test score				0.98 ***	0.99
Hospital				1.99 ***	1.56 ***
Crim ind. -1971					1.20
Crim ind 1972-80					2.55 ***
Drugs					2.87 ***
No drunk driving					1
Drunk driving 1					0.91
Drunk driving 2					1.07
Marks					0.91
Compulsory school					1
2 years 2nd school					0.72 *
3-4 years 2nd school					1.01
In college/univ. educ.					1.11
Teenage parenthood					0.70
Constant	0.06 ***	0.06 ***	0.05 ***	0.08 ***	0.06 ***
-2LL	6,457.57	6,450.45	6,441.08	6,441.08	6,140.70
LLR	37.12 ***	7.13	9.36 †	40.22 ***	260.16 ***

\*\*\* p<.001    \*\* p<.01    \*p<.05    † p<.10    (n.s.) = not significant at 5 % level.

In Model 4 we include the two ability factors mental test score and in-patient hospital care. The estimates of both these factors are clearly significant. Their parameter estimates suggest that one unit higher score on the mental test reduces the odds for labour market exclusion by two percent, whereas three or more periods of hospital care double the odds. The excess odds of the poverty categories are slightly reduced at the introduction of these factors, suggesting that mental test scores and/or health are unevenly distributed across these categories.

Table 4. Results from logistic regressions (odds ratios) on the odds for labour market exclusion in 1990/91 (n=12,003). P-values in brackets.

	1990/91				
	1	2	3	4	5
Woman	0.92	0.92	0.92	0.81 **	1.14
None poor	1	1	1	1 (n.s.)	1 (n.s.)
Temp. poor	1.27 †	1.12	1.07	1.00	0.86
Out per 2	1.57 *	1.30	1.23	1.15	1.03
Out per 3	1.35	1.01	0.93	0.87	0.81
In per 3	2.19 ***	1.87 **	1.79 **	1.65 *	1.40
In per 2	1.34	1.02	0.87	0.85	0.62
Perm. Poor	2.45 ***	1.74 **	1.60 **	1.46 †	1.08
Child committee		1.54 ***	1.50 **	1.42 **	1.24
Parents psych.		1.17	1.19	1.16	1.07
Parents alcohol		1.14	1.13	1.10	1.03
Crim father 1953-72		1.18	1.18	1.16	1.09
Single parent			1.14	1.13	1.05
Father unskilled worker			1 (n.s.)	1 (n.s.)	1 (n.s.)
Skilled worker			0.98	1.01	0.97
Salaried empl. low pos			0.91	1.00	1.06
Salaried empl. hi. pos			0.81	0.96	1.13
Mental test score				0.97 ***	1.00
Hospital				2.37 ***	1.69 ***
Crim ind. -1971					1.01
Crim ind 1972-80					2.36 ***
Drugs					4.04 ***
No drunk driving					1 (n.s.)
Drunk driving 1					1.41 †
Drunk driving 2					1.11
Marks					0.82 **
Compulsory school					1 (n.s.)
2 years 2nd school					0.76 †
3-4 years 2nd school					0.69 *
In college/univ. educ.					0.81
Teenage parenthood					1.04
Constant	0.06 ***	0.06 ***	0.07 ***	0.13 ***	0.09 ***
-2LL	5,446.88	5,431.85	5,427.92	5,365.63	5,040.89
LLR	44.65 ***	15.03 ***	3.93	62.29 ***	324.75 ***

\*\*\* p<.001    \*\* p<.01    \*p<.05    † p<.10    (n.s.) = not significant at 5 % level.

The final model in the analysis of the risk for labour market exclusion in early adulthood includes indicators on delinquency, teenage parenthood, and educational achievement of the individual him/herself. We find that delinquent behaviour is a salient risk factor, in particular criminal activity after the age of 18 and drug abuse, whereas drunken driving has no effect. Educational achievement has a protecting effect: the higher the marks in the 9<sup>th</sup> grade the lower the risk. Also educational level has some effect. Teenage parenthood does not appear to

be a risk factor in this cohort. We also see that the effect of the poverty factor is further reduced in the model. This indicates that the relationship between material hardship during upbringing and labour market difficulties in early adulthood is to an extent mediated by delinquent behaviour.<sup>11</sup> Thus, material poverty tend to increase the risk for delinquent behaviour in adolescence and early adulthood and this is one reason for why poverty is transmitted from one generation to another.

Table 4 shows the results from the regressions on the risk for exclusion in 1990/91, when the cohort members are at 37-38 years of age. In Model 1 we see that the effects of poverty are stronger than in the 1981/82 analyses. Although the effects are reduced the excess odds for both those entering poverty in adolescence (period 3) and the permanently poor remain significant in Model 2. As in the former analysis, of the additional indicators of poor living conditions only the child welfare committee indicator renders a significant effect. In Model 3 neither single parenthood nor socio-economic status reaches significance. However, in this model the effect of the socio-economic indicator goes in the expected direction. The effect of the poverty indicator remains quite stable in this model. Again, hospital care and the mental test score show salient effects and there is a slight reduction of the effect of poverty at the entry of these variables.

In Model 5, where the intervening factors are entered, the poverty indicator loses virtually all of its effect. The effects of the intervening variables are reminiscent of those in Table 3, with some small deviations. For instance the effect of drug abuse is much stronger and the parameter estimate associated with the “Drunk driving 1” indicator approaches significance. The effects of educational achievements are slightly stronger as well.

In Table 5 we analyse the risk for labour market exclusion at 47-48 years of age. In the first model we see that the effect of being permanently poor has increased further as compared to the corresponding model in Table 4, while there are no changes in other estimates. For instance, the estimate for entering poverty in the third period is at parity with that in Table 4. This pattern is even more pronounced in Model 2 where the indicators of other detrimental circumstances in the family of origin are included.

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<sup>11</sup> Analyses not shown here reveal that it is the indicators on delinquency rather than educational achievement that produce this result.

Table 5. Results from logistic regressions (odds ratios) on the odds for labour market exclusion in 2000/01 (n=11,712). P-values in brackets.

	2000/01				
	1	2	3	4	5
Woman	1.05	1.05	1.05	0.92	1.32 ***
None poor	1	1	1	1	1 (n.s.)
Temp. poor	1.35 **	1.22 †	1.17	1.09	0.92
Out per 2	1.65 ***	1.44 *	1.39 *	1.27	1.15
Out per 3	1.47 †	1.19	1.13	1.03	0.95
In per 3	2.13 ***	1.85 ***	1.79 ***	1.64 **	1.36 †
In per 2	1.40	1.15	1.08	0.96	0.69
Perm. Poor	2.97 ***	2.30 ***	2.17 ***	1.93 ***	1.53 *
Child committee		1.22 †	1.21 †	1.13	0.98
Parents psych.		1.28 †	1.29 *	1.28 †	1.22
Parents alcohol		1.19	1.17	1.13	1.02
Crim father 1953-72		1.12	1.11	1.08	0.99
Single parent			1.07	1.05	0.98
Father unskilled worker			1 (n.s.)	1 (n.s.)	1
Skilled worker			0.94	0.97	0.96
Salaried empl. low pos			0.93	1.05	1.17 †
Salaried empl. hi. pos			0.81 †	1.01	1.31 *
Mental test score				0.95 ***	0.99 †
Hospital				2.52 ***	1.95 ***
Crim ind. -1971					1.18
Crim ind 1972-80					2.48 ***
Drugs					2.77 ***
No drunk driving					1
Drunk driving 1					1.57 **
Drunk driving 2					1.39
Marks					0.77 ***
Compulsory school					1
2 years 2nd school					0.68 ***
3-4 years 2nd school					0.61 ***
In college/univ. educ.					0.64 ***
Teenage parenthood					1.31
Constant	0.09 ***	0.09 ***	0.10 ***	0.27 ***	0.21 ***
-2LL	7,418.25	7,407.84	7,403.81	7,270.22	6,829.79
LLR	85.15 ***	10.41 *	4.03 (.403)	133.59 ***	440.44 ***

\*\*\* p<.001    \*\* p<.01    \*p<.05    † p<.10    (n.s.) = not significant at 5 % level.

The poverty effect is slightly reduced in the next model as well, where the additional indicators of living conditions are included. However, neither of these are significant. The reduction continues in Model 4 and as in the two previous analyses both mental test score and hospital care have salient effects in the expected direction.

In the final model of Table 5 where the intervening variables are included, the poverty effects are further reduced. However, as opposed to previous analyses the effect of the permanently

poor category stays significant in this model. The effects of the intervening variables look pretty much the same as in Table 4. However, both the drunken driving factor and the educational level factor are significant in this model.

Thus far we have not commented on the effect of gender. In the first analysis there is a significantly increased risk for women throughout the consecutive models. This is not the case in the analyses in Table 4 and 5. Probably, the most important reason for this pattern to emerge is that we have not managed to fully capture exclusion among women in the 1981/82 indicator. It is likely that despite our efforts to “clean” the exclusion category, some women which we have defined as excluded are housewives or in other positions where they do not earn enough money to be defined as “insiders” in our terminology, but where they still cannot be regarded as being at the margins of society. We also know from previous studies that exclusion in early adulthood is on average not as permanent as such positions later in life (Bäckman and Nilsson 2007) and this may be more pronounced among women than among men. In Table 3 and 4 the effect of gender is insignificant in all but two models. These exceptions are Model 4 in Table 4 and Model 5 in Table 5. In the former we find a significantly lower risk for women. This is because women run a much higher risk than men to have been in hospital care and when we control for this the net risk for exclusion among women is reduced.<sup>12</sup> The tendency that the risk for women is reduced in the fourth model is present in all three analyses. The tendency that the odds ratio increases for women in Model 5 is present in all analyses as well. This is due to the fact that criminality is far more frequent among boys and when this is controlled for the net risk for boys is reduced. As a result the relative risk for women as compared to men will increase. Despite these differences, separate analyses for men and women show surprisingly similar results (not presented).

With regard to our hypotheses the results presented here are mixed. The unfavourable life course hypothesis receives some support in the sense that the effect of poverty in the family of origin obviously is mediated by other factors, in particular those that we have labelled “intervening”. Still in Table 5 the effect of permanent poverty remains also in the final model, indicating that in this case we have either a true remaining effect of poverty which would be contrary to what is maintained by the hypothesis. But there is also the possibility that we have not been able to control for all mediating factors.

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<sup>12</sup> This holds when we exclude hospital care due to pregnancy and delivery, as well.

According to the cumulative disadvantage hypothesis the effect of poverty should grow stronger as we move along the life course. At least if we inspect the effects of the permanently poor category this seems to be the case. For other categories it is less obvious.

The culture of poverty hypothesis suggests firstly that there should be remaining effects of poverty when other risk factors are controlled for and, secondly, that the effect should remain stable across time. Neither of these predictions receives support in the analyses. There is of course the remaining effect of permanent poverty in the last of models, but the general pattern still falsifies this hypothesis.

It should be emphasised that these three hypotheses are not competing, but rather complementary. All of these mechanisms can be present simultaneously, but it is still a fact that we find no evidence in support of the last of them.

We also suggested hypotheses regarding the temporal effect of poverty on the risk for exclusion in adulthood. The first of these predicted that longstanding or permanent poverty would be more detrimental than other less enduring temporal patterns. The second and the third were competing hypotheses where one predicted that exposure to poverty during the pre-school is more damaging than at other ages, while the other predicted that it is poverty during adolescence that is most detrimental. Of these two it is clear that only the latter receives support in the analyses. In fact, the effect of poverty during adolescence is so strong that it is not possible to confirm the first hypotheses about longstanding poverty, since we cannot tell on the basis of these results if one is more detrimental than the other.

### *Turning points*

Having settled that poverty increases the risk for a precarious labour market position both in early adulthood and midlife, we now turn to the question of what can turn such a negative course of life positive. In this analysis we select those excluded from the labour market in 1981/82 and analyse the likelihood that they will be more firmly established in 2000/01.

Table 6. Results from logistic regressions (odds ratios) on the odds for leaving labour market exclusion between 1981/82 and 2000/01 (n=670).

	1	2	3	4
Woman	1.27	1.26	1.26	0.97
Raised educ. Level	1.76 **	1.78 **	1.80 ***	2.08 ***
Stable, single	1	1	1	1
Stable, married	3.59 ***	3.50 ***	3.45 ***	2.66 **
si/md/co_co_md	2.42 *	2.40 *	2.37 *	2.05
si/md/_co_co	2.75 ***	2.75 ***	2.71 ***	2.41 **
si/md/co_si/md_co	1.67	1.74	1.71	1.80
co_md_md	2.23 †	2.43 *	2.65 *	2.59 †
Had children	3.00 ***	2.91 ***	2.97 ***	2.37 ***
No soc. ass.		1 (n.s.)	1 (n.s.)	1 (n.s.)
1 year soc. ass		0.93	0.96	1.29
2+ years soc. ass		0.56 *	0.59	0.82
Child committee			1.16	1.46
Parents psych.			0.68	0.61
Parents alcohol			0.50	0.56
Crim father 1953-72			1.80	1.95
Mental test score				1.01
Hospital				0.58 †
Single parent				0.88
Father unskilled worker				1 (n.s.)
Skilled worker				1.06
Salaried empl. low pos				0.81
Salaried empl. hi. Pos				0.85
Crim ind. -1971				0.83
Crim ind 1972-80				0.46 **
Drugs				0.44 *
No drunk driving				1 (n.s.)
Drunk driving 1				0.96
Drunk driving 2				1.39
Marks				1.11
Compulsory school				1
2 years 2nd school				3.13 **
3-4 years 2nd school				2.75 *
College/univ. educ.				1.49
Teenage parenthood				1.46
Constant	0.62 **	0.64 *	.68 *	0.56
-2LL	792.00	724.16	718.34	651.92
LLR	108.88 ***	4.84 †	5.42	66.81 ***

\*\*\* p<.001    \*\* p<.01    \*p<.05    † p<.10    (n.s.) = not significant at 5 % level.

The analysis includes 670 persons. We run it in four steps. The first include only the turning point indicators (and sex). These are raised educational level, “Had children” and the marital status factor described above which combines marital status in 1980, 1990, and 2000 into a number of categories.

In the second step an indicator of social assistance take-up in the family of origin is entered into the model. Due to the small sample size in this analysis we must use a simplified factor in this analysis. This means that we cannot separate between timing and duration here. Instead we measure the extent of take-up by a three level categorical variable. In third model the factors used earlier as controls for other aspects of poor living conditions are entered. Finally, in the fourth step we include all control variables that were used in the previous analyses.

The results are presented in Table 6. In Model 1 we see that all turning point indicators have significant effects on the chance for leaving the marginalised position. Raised educational level and having a child both increase this likelihood. Especially the latter has a strong effect with an estimate indicating that having a child during the period increases the odds for inclusion threefold. The marital status factor also contributes significantly to the fit of the model. However, here the turning point effect is less clear. The strongest deviation from the reference category (stable singles) is found for those in stable marriages. The odds of this group are three to four times as high as that of the stable singles. But also all other groups except the fifth category have significantly higher odds for gaining foothold in the labour market. The fifth category is dominated by those single at the first two time points and married/cohabiting at the third. Thus, it seems as if being long term single is the prime risk factor here. We know from previous research that single men in particular are a typical risk group for various social problems (cf. Bergmark 1991) and although we capture some of these problems by the control factors in Model 3 and 4, this is probably what we see here.

These effects remain fairly stable through the models. In Model 2 it is shown that being raised in a family with at least two years of social assistance reduces the odds nearly by half. This effect is reduced in the third model and disappears in the fourth when all other control factors have been included. Of the control factors only criminal activity after 18 years of age, drug abuse and educational level show significant effects.

The main finding from the analyses in Table 6 is that attaining resources in terms of education and family relations have positive effects for chances in the labour market and may in that respect be regarded as turning points. Thus, contrary to what is claimed by Esping-Andersen (2002) policies directed towards adults might be effective as well. In addition, it seems as if resource deficiencies during upbringing do not have much impact on the chance for gaining a

foothold in the labour market in midlife for those outside the labour market in early adulthood. However, deviant behaviour heavily reduces the chance to become established in the labour market.

## Conclusion

Childhood poverty and social exclusion are topical issues on the European political agenda. In this paper we have studied how the dynamics of exposure to poverty during childhood and adolescence affect future probabilities for inclusion and exclusion both in early adulthood and in midlife. We have also analysed which factors contribute to inclusion in midlife among those at the margins of the labour market in early adulthood. The main findings of the first of these analyses are that persistent poverty in the family of origin and entering poverty in adolescence is particularly detrimental for life chances. This is most salient in the analysis of exclusion in midlife. The observation that the effect of poverty on the risk of exclusion in adulthood grows across the consecutive analyses we interpret as a process of cumulative disadvantage.

Other conditions in the family of origin have only a weak impact on future labour market exclusion in the analyses we have shown here. However, this is at least partly explained by the fact that our poverty indicator (social assistance take-up) is correlated with these dimensions of resource deficiencies (single parenthood, social class, child welfare committee, etc.).

The most important intervening variables are the indicators of deviant behaviour (criminality and drug abuse) and educational level at age 25. When these are included in the analyses the effect of the poverty indicator is heavily reduced. Thus, much of detrimental effect of poverty is mediated by these factors. Well worth mentioning is also the fact that teenage parenthood is not a risk factor for future exclusion, as opposed to what has often been found in Anglo-American studies.

Even though we can establish that persistent poverty and poverty in adolescence are major risk factor, it is clear that these groups constitute a minority of those excluded in adulthood (see Appendix). The majority are included in midlife, even of those in permanent poverty during childhood. That is, at the individual level poverty in childhood is a poor predictor on adulthood exclusion.

In our final analyses we focus on those excluded from the labour market in early adulthood and their likelihood to be included in midlife. We find that that attaining resources in terms of education and family have positive effects for the chance of inclusion and may in that respect be regarded as turning points. In addition, it seems as if resource deficiencies during upbringing do not have much impact in this case.

We have in this paper shown that childhood living conditions clearly have an impact on future attainment. However, these effects do not only last up until transition into adulthood and early adulthood. Instead they seem to persist through the life course. This does not mean that a negative route in life must necessarily continue in that direction. By increasing one's resources opportunities are made available through the life course to turn it to the better.

Although these are important findings, we need more finely tuned analyses in order to properly depict life trajectories in general and risk trajectories in particular, and thereby more clearly reveal the mechanisms at work. Future research within this area should also focus more on the functioning of institutional resources and how they enhance and/or impede life chances.

## References

- Atkinson, A. B. (1998). "Social Exclusion, Poverty and Unemployment", in A. B. Atkinson & J. Hills (red.), *Exclusion, Employment and Opportunity*, CASEpaper 4, London: LSE.
- Atkinson, A., B., B. Cantillon, E. Marlier and B. Nolan (2002). *Social Indicators. The EU and Social Inclusion*, Oxford: Oxford University Press.
- Bäckman, O. and E. Franzén (2007). "Employment and the labour market (Chapter 2)", *International Journal of Social Welfare*, 16: Supplement 1 S35-S65.
- Bäckman, O. and A. Nilsson (2007). "Ung och utanför – vad innebär det på lång sikt? Arbetsmarknadsanknytning för Stockholmare födda på 1950-, 1960- och 1970-talen", in Olofsson, J and Thoursie, A (eds.), *Ungas framtidsvägar. Möjligheter och utmaningar*, Stockholm: Agora.
- Bäckman, O. and J. Palme (1998). "Social Background and Sickness Absence. A Study of a Stockholm Cohort", *Acta Sociologica*, 41: 349-362.
- Bergmark, Å. (1991). *Socialbidrag och försörjning. En studie av bidragstagande bland ensamstående utan barn*, (Diss.), Stockholm University: Department of Social Work.
- Bergmark, Å and O. Bäckman (2004). "Stuck with Welfare: Long term social assistance reciprocity in Sweden", *European Sociological Review* 20: 425-443.
- Blau, P.M. and O.D. Duncan (1967). *The American Occupational Structure*, New York: John Wiley & Sons Inc.
- Bynner, J. (1999). *Risks and Outcomes of Social Exclusion. Insights from Longitudinal Data*, London: Institute of education, University of London.

- DiPrete, T.A. and G. M. Eirich (2006). "Cumulative Advantage as a Mechanism for Inequality: A Review of Theoretical and Empirical Developments", *Annual Review of Sociology*, 32:271-297.
- Duncan, G.J., Yeung, W.J., Brooks-Gunn, J. and Smith, J.R (1998). "How Much Does Poverty Affect the Life Chances of Children?", *American Sociological Review*, 63:3, 406-423.
- Erikson, R. and J.O. Jonsson (1993). *Ursprung och utbildning. Social snedrekrytering till högre studier*, SOU 1993:85, Stockholm: Fritzes.
- Erikson, R. and R. Åberg (1987). "The Nature and Distribution of Welfare", in: Erikson R. and R. Åberg (eds), *Welfare in transition. A survey of living conditions in Sweden 1968-1981*, Oxford: Clarendon Press.
- Esping-Andersen, G. (2002), *Why we need a new welfare state*, Oxford: Oxford University Press.
- Farnworth, M., T. Thornberry, M. Krohn, and A. Lizotte (1994). "Measurement in the Study of Class and Delinquency: Integrating Theory and Research", *Journal of Research in Crime and Delinquency*, 31:389-426.
- Fritzell, J. and Lundberg, O. (2000). *Välfärd, ofärd och ojämlikhet*, Swedish Government Official Report (SOU) 2000: 41. Stockholm: Fritzes.
- Gustafsson, Zaidi, and Franzén (2007). "Financial Poverty (Chapter 3)", *International Journal of Social Welfare*, 16: Supplement 1 S67-S90.
- Halleröd, B and A. Westberg (2006). "Youth Problem: What's the Problem?", *Acta Sociologica*, 49:83-102.
- Haveman, R. and B. Wolfe (1995). "The determinants of children's attainment: A review of methods and findings", *Journal of Economic Literature*, 33:1829-78.
- Hobcraft, J. & K. Kieman (2001). "Childhood poverty, early motherhood and adult social exclusion", *The British Journal of Sociology*, 52: 495-517.
- Jarjoura, C., R. Triplett, and G. Brinker (2002). "Growing Up Poor: Examining the Link between Persistent Childhood Poverty and Delinquency", *Journal of Quantitative Criminology*, 18:159-187.
- Johansson, S. (1970). *Om levnadsnivåundersökningen*, Stockholm: Allmänna förlaget.
- Jonsson, G. (1967). "Delinquent boys, their parents and grandparents", *Acta Psychiatrica Scandinavica*, 43:195.
- Kindlund, H. and D. Biterman (2002). "Chapter 3. Work and the labour market", *International Journal of Social Welfare*, 11: Supplement S16-S40.
- Krohn, M., A. Lizotte, and C. Perez (1997). "The Interrelationship Between Substance Use and Precocious Transitions to Adult Statutes", *Journal of Health and Social Behaviour*, 38:87-103.
- Laub, J. and R. Sampson (2003). *Shared Beginnings, Divergent Lives. Delinquent Boys to Age 70*, Cambridge (MA): Harvard University Press.
- Leisering, L. and S. Leibfried (1999). *Time and Poverty in Western Welfare States. United Germany in Perspective*, Cambridge: Cambridge University Press.
- Lewis, O. (1968). *La vida, a Puerto Rican family in the culture of poverty: San Juna and New York*, London: Panther Books.
- Lundberg, O (1993). "The Impact of Childhood Living Conditions on Illness and Mortality in Adulthood", *Social Science and Medicine*, 36: 1047-52.
- Nilsson, A (2002). *Fånge i marginalen. Uppväxtvillkor, levnadsförhållanden och återfall i brott bland fångar*, Avhandlingsserie nr 8, Stockholm: Kriminologiska institutionen, Stockholms universitet.
- Norström, T. (1981). *Studies in the Causation and Prevention of Traffic Crime*, Stockholm : Almqvist & Wiksell International.

- Stenberg, S-Å. (2002). "Inheritance of Welfare Reciprocity: An Intergenerational Study of Social Assistance Reciprocity in Postwar Sweden", *Journal of Marriage and the Family*, 62:228-239.
- Stenberg, S-Å., D. Vågerö, R. Österman, E. Arvidsson, C. von Otter, and C-G. Jansson (2006). "Stockholm Birth Cohort Study: A new tool for life-course studies", *Scandinavian Journal of Public health*, 35:104-110.
- Torstensson, Marie (1987). *Drug-Abusers in a Metropolitan Cohort*. Project Metropolitan, research report no 25. Stockholm: Sociological department, Stockholm University.
- Vinnerljung, B., A. Hjern, G. Ringbäck Weitof, E. Franzén, F. Estrada (2007). "Children and young people at risk (Chapter 7)", *International Journal of Social Welfare*, 16:S163-S202.
- Wagmiller, R.L.Jr., M.C. Lennon, L. Kuang, P.M. Alberti, and J.L. Aber (2006). "The Dynamics of Economic Disadvantage and Children's Life Chances", *American Sociological Review*, 71:847-866.

## Appendix

Table A. Percentage excluded from the labour market 1981/82 and 2000/01 by values of independent variables. Absolute counts within brackets.

		<i>1981/82</i>	<i>1990/91</i>	<i>2000/01</i>
<u>Sex</u>	Male	7.1 (490)	7.2 (488)	10.7 (702)
	Female	8.8 (588)	6.2 (408)	10.6 (682)
<u>Poverty</u>	None poor	7.3 (791)	5.9 (627)	9.2 (961)
	Temp. poor	9.0 (93)	8.1 (82)	13.0 (128)
	Out period 2	9.9 (50)	9.4 (46)	15.9 (75)
	Out period 3	10.5 (27)	9.4 (24)	14.8 (36)
	In period 3	11.8 (41)	12.2 (41)	18.3 (59)
	In period 2	11.6 (14)	8.6 (10)	14.7 (16)
	Permanent poor	12.8 (62)	14.1 (66)	23.9 (109)
<u>Child committee</u>	No	7.5 (930)	6.1 (741)	9.9 (1,176)
	Yes	12.0 (148)	12.9 (155)	18.0 (208)
<u>Parents' psych. problems</u>	No	7.7 (976)	6.4 (797)	10.0 (1,222)
	Yes	11.8 (102)	11.8 (99)	20.1 (162)
<u>Parent's alcohol abuse</u>	No	7.9 (1,041)	6.7 (861)	10.5 (1,321)
	Yes	9.1 (37)	8.6 (35)	15.9 (63)
<u>Father's criminal record</u>	No	7.8 (1,002)	6.5 (822)	10.4 (1,279)
	Yes	10.6 (76)	10.7 (74)	15.7 (105)
<u>Single parent</u>	No	7.7 (943)	6.5 (779)	10.3 (1,214)
	Yes	10.1 (134)	9.0 (117)	13.5 (170)
<u>Father's social class 1963</u>	Salaried empl. hi. pos	7.9 (186)	5.3 (122)	8.6 (192)
	Salaried empl. low pos	7.8 (463)	6.5 (377)	10.4 (590)
	Skilled Worker	8.5 (262)	7.3 (222)	11.3 (331)
	Unskilled worker	7.4 (163)	8.0 (174)	12.8 (270)
<u>Health (Hospital)</u>	No	7.5 (967)	6.3 (794)	10.0 (1,232)
	Yes	15.8 (111)	15.0 (102)	23.2 (152)
<u>Crim. record -1971</u>	No	7.2 (867)	5.8 (694)	9.3 (1,080)
	Yes	14.2 (211)	14.1 (202)	22.4 (304)
<u>Crim. record 2 1972-80</u>	No	6.5 (787)	5.2 (619)	8.5 (989)
	Yes	18.6 (291)	18.6 (277)	28.3 (395)
<u>Registered drug abuse</u>	No	7.0 (923)	5.7 (736)	9.5 (1,202)
	Yes	32.6 (155)	36.6 (160)	46.3 (182)
<u>Drunk driving</u>	<u>No drunkdriving</u>	7.6 (992)	6.3 (802)	10.0 (1,245)
	<u>Drunkdriving 1</u>	12.2 (42)	15.1 (51)	24.5 (79)
	<u>Drunkdriving 2</u>	20.2 (44)	21.0 (43)	31.9 (60)
<u>Educational level 1975</u>	College/univ. educ.	6.5 (210)	3.9 (122)	5.4 (165)
	3-4 year 2nd school	6.2 (107)	3.4 (58)	5.3 (89)
	2 year 2nd school	5.3 (90)	4.6 (76)	7.3 (118)
	Primary school	9.6 (671)	9.3 (640)	15.2 (1,012)
<u>Teenage parenthood</u>	No	7.9 (1,064)	6.7 (881)	10.6 (1,352)
	Yes	7.6 (14)	8.1 (15)	17.8 (32)
	N	13,582-13,603	13,309-13,330	12,973-12,993

Table B. Mean of mental test score at 12 years of age by values on dependent variables 1981/82 and 2000/01. N within brackets.

	<i>Mental test score</i>	<i>School marks 9<sup>th</sup> gr.</i>
Included 1981/82	23.07 (11,375)	3.17 (12,286)
Excluded 1981/82	22.21 (926)	2.99 (1,015)
Included 1990/91	23.10 (11,337)	3.17 (12,220)
Excluded 1990/91	21.60 (731)	2.83 (821)
Included 2000/01	23.21 (10,614)	3.20 (11,437)
Excluded 2000/01	21.31 (1,160)	2.80 (1,283)

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