# The inequality of victimisation.
# Exposure to crime among rich and poor 1984-2001

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*Abstract*
Over the past decade, western societies have witnessed an increasing divergence in the living standards of different social groups. The central question examined in this article is that of whether increased differences in living conditions are reflected in an increased inequality in the area of victimisation. Using data from Statistics Sweden's Surveys of Living Conditions (1984-2001) the study shows that exposure to violent and theft crimes have followed different trends for poorly-resourced and well-resourced groups respectively. The proportion experiencing victimisation, first and foremost in the form of violence and threats, but also to some extent in the form of residential burglaries, is significantly greater among the poor than among the rich. Furthermore, the difference between these two groups has become greater.

## Introduction

Over the past decade, society has witnessed an increasing divergence in the living standards of different social groups. The Swedish level-of-living surveys show for example that in general, single parents, immigrants, youth and those living on low incomes have experienced an unfavourable trend in the areas of health, employment, their financial situation and political participation relative to other segments of society (Palme et al 2002; SCB 2003). Inequalities in levels of disposable income have also become more pronounced. Following decades of decline in income differentials, this trend was reversed during the 1980s and 1990s both in the relatively 'equal' welfare states of Scandinavia and in the majority of other western countries (Gottschalk & Smeeding 2000; Fritzell 2001). Although levels of inequality in Europe have yet to reach parity with those of the USA, a polarisation is becoming discernible in many European countries (e.g. Great Britain, Holland, France, Germany and the Scandinavian countries) whereby the poor are losing ground as the wealthy become wealthier still (Gottschalk & Smeeding 2000).

In the field of welfare research, economic resources and income are viewed as central indicators with regard to the assessment of people's living conditions and the opportunities available to them. The validity of this view has been confirmed by empirical analyses showing that economic resources are closely related to conditions in other areas of welfare such as health, employment, social capital (Fritzell & Lundberg 2000) and fear of and exposure to crime (Estrada & Nilsson 2003; 2004). The fact that different welfare problems and resources tend to be related to one another means that aggregate differences between individuals and groups become even more marked (Erikson 1993; Nilsson 2002; Estrada & Nilsson 2004). Against this background, it is not surprising that both the distribution of incomes in general, but particularly trends in the level of inequality associated with this distribution and its effects, have today become a central issue for the research community.

What is somewhat surprising, by contrast, is that this interest has to date not been shared by those active in the field of criminological research. This is the case despite the fact that both classical criminological theories and modern works in this area emphasise the importance of poverty and class-based resource differentials for an understanding of differences in levels both of participation in crime and of criminal victimisation (Merton 1938; Shaw & McKay 1942; Currie 1997; Hagan & McCarthy 1997). The issue of how crime is affected by

economic change and cyclical factors has also been the subject of a considerable amount of attention in the criminological literature. Different theoretical perspectives have argued that periods of economic decline or recession and increased inequality lead to increases in crime. The theoretical perspective most directly associated with this assumption is anomie or strain theory (Merton 1938). Whilst the importance of poverty and inequality in relation to crime has been questioned, since the post-war increase in crime levels occurred in parallel with a massive increase in welfare for the majority of the population (see e.g. Wilson & Herrnstein 1985), this view misses the fact that it is relative, rather than absolute deprivation that is viewed as the most important factor (Merton 1938:680f; see also Young 1999). In the area of victimological research a great deal of interest has been focused on the question of the distribution of criminal victimisation and the fear of crime. Explanations of the differences found between different social groups emphasize amongst other things the limiting effect that poverty at both the individual and neighbourhood level has on people's ability to affect their life situation (Hindelang et al 1978; Smith & Jarjoura 1989). A number of studies have also examined the relationship between victimisation and inequality (see e.g. Mawby & Walklate 1994, and Levitt 1999, for a brief review). These studies have almost without exception been based on cross-sectional data. The literature in this area indicates the existence of a clear correlation whereby the most economically vulnerable groups are also those most often exposed to violent crime[1], whereas the relationship is not so clear in relation to theft crime (Mawby & Walklate 1994; Currie 1997; Levitt 1999; Westfelt 2001).

Given the above, it is remarkable how little research has been conducted into *trends in the inequality of victimisation.* Slightly over ten years after Meier & Miethe (1993:470) identified this gap in the research, only a small number of studies have been published on how differences in levels of exposure to crime between poorly and better resourced groups have developed over time. The objective of the present study is to analyse trends in exposure to violent and theft crime among the poorest and most wealthy segments of the population. The central question examined is that of whether increased income inequalities and increased differentials in living conditions are reflected in a corresponding increase in the levels of

[1] There are however studies that question the correlation between social and economic conditions and violent victimisation among women. The Council of Europe have published a report on domestic violence stating that: "It should be stressed, that poverty and lack of education are not significant factors. It's even proved that the incidence of domestic violence seems to increase with income and the level of education" (Council of Europe 2002:9). Against the background of much of the other research published in this area, this conclusion appears quite remarkable (for a review of previous research see e.g. Mawby & Walklate 1994:46; Kaufman Kantor & Jasinski 1998:25f; Engström 1999. See also Estrada & Nilsson 2004).

inequality found in relation to victimisation. Can a trend towards an increased polarisation be discerned even in relation to levels of exposure to crime?

## Existing research

The trend towards an increase in victimisation-related inequalities was noted earlier in Great Britain than it was elsewhere. Studies by Trickett et al. (1995) and Hope (1996) have shown that the substantial increases in crime witnessed during the 1980s in parallel with increased income inequalities, were for the most part restricted to certain residential neighbourhoods. Between 1982 and 1988, there occurred a concentration, first and foremost of theft offences, to the ten percent of neighbourhoods that were already subject to the highest levels of crime. Young & Matthews (2003) argue that this trend towards an increased level of exposure to crime in poorer areas has continued during the 1990s despite a general decline in crime levels. Levitt (1999) arrives at somewhat similar conclusions in the context of his analysis of trends in the USA between 1974 and 1994. Levitt's study was also conducted against a background of increased income differentials. Levitt argues that exposure to certain types of theft crime is becoming increasingly concentrated to poor neighbourhoods and low-income groups. By contrast, Levitt argues that the situation with regard to violent victimisation is characterised by the reverse tendency, with the wealthiest groups found to be those whose level of victimisation has increased the most. This latter finding is refuted by Thacher (2004), however, who conducted new analyses with the same data (NCVS – i.e. the American victim surveys). Thacher's analyses confirm the increased concentration of theft offences among the poor during the period 1974 to 2000, but he is also able to show that the general *reduction* in levels of exposure to violence reported in the surveys is not distributed equally. The reduction has been greatest among the wealthy which means that exposure to violent crime has also become increasingly concentrated among the poorest twenty percent of the population (defined on the basis of self-reported household income). It is nonetheless worth noting that even poorer groups in the USA report a reduction in levels of exposure to both theft and violent offences during the period covered by the surveys.

In the context of an earlier analysis of the consequences of the economic crisis witnessed in Sweden during the 1990s, we described trends in victimisation among those segments of the population that had experienced the most unfavourable trends in levels of welfare – namely single parents, youths and persons born abroad (Nilsson & Estrada 2003). The results of this

analysis showed that the levels of exposure to theft and violent crime differed from those of the remainder of the population in a negative direction. We also showed that the same was true of groups that reported having experienced financial problems over the course of the previous year. Our findings with regard to the trends experienced by the poorest twenty percent of the population and the wealthiest twenty percent respectively (defined on the basis of registered disposable household income) are very much in line with those presented by Thacher. One important difference by comparison with the situation in the USA, however, is that no general reduction in the level of criminal victimisation was found in Sweden. Instead, the Swedish trend during the 1990s has been towards a manifest polarisation in victimisation whereby certain groups have experienced stable or even falling levels of exposure to crime whereas others have been subject to substantial increases (Nilsson & Estrada 2003). Given that our analysis showed that certain demographic groups have experienced a less favourable trend than others, we also examined the significance of changes in the demographic composition of the different income groups. Thacher (2004) also emphasises that this factor may explain different trends in different income groups. Both Thacher's study and our own show that there were some such compositional effects, i.e. that the segment of the population characterised by the lowest levels of income has over time come to include a larger proportion of persons from groups characterised by higher levels of victimisation (e.g. youths and single parents). At the same time, however, both the Swedish and American studies show that this factor is not sufficient to fully explain the findings. Significant tendencies towards polarisation remain even when controls are included for the compositional effects described.

The above research shows that even if the problem of criminal victimisation has not increased in terms of the proportion of the population affected, the situation may nonetheless have deteriorated among marginal groups, and the distance dividing them from the rest of population increased. Thus at the level of the individual, increased inequality and an increasing concentration of social problems may involve increased levels of victimisation for weaker groups in society, whereas levels remain the same or decline within the remainder of the population. These studies are valuable in that they highlight the fact that certain vulnerable groups are also having to shoulder an increasingly large part of the crime problem. Thacher (2004) describes well the significance of this research. Firstly, analyses of inequalities in victimisation trends may facilitate an integration of this area of research with the broader field of sociological and economic research into inequality and social stratification, which has often seen its principal task as being that of describing and

understanding trends in inequality. One important question in this area is that of the importance of the fusion of different problems, i.e. to what extent exposure to crime interacts with other factors affecting inequality (Nilsson & Estrada 2003; Estrada & Nilsson 2004). Secondly, from a theoretical perspective, it is not always the case that the factors which explain distributional differences from a cross-sectional perspective also explain changes over time. Analyses of changes over time are therefore of value in themselves in relation to attempts to understand why different groups are differentially exposed to victimisation. Thirdly, Thacher points out that knowing whether levels of inequality are greater or less substantial than previously is of fundamental importance to the interpretation of the distribution of victimisation at a given point in time. As both Trickett et al. (1995) and Young & Matthews (2003) have also pointed out, this factor is clearly very significant in the political context.

*Objectives and research questions*

In this study, our objective is to further specify and develop the analyses we have previously conducted into trends in the inequality of victimisation (Nilsson & Estrada 2003). The central research question addressed focuses on the issue of concentration effects in relation to criminal victimisation, i.e. it looks at whether trends differ across different social groups specified according to their social position. Can the trend which we previously related to the economic crisis experienced during the first part of the 1990s be traced back further to the years when Sweden was experiencing economic growth? Has the trend continued subsequent to the economic recovery of the late 1990s? We will also be looking more closely at the possible significance of this polarisation for different types of violent and theft offences, a question which has only been examined to a limited extent in earlier studies.

The article continues with a presentation of the Swedish level-of-living surveys, of which the crime-victim surveys constitute a part. The subsequent presentation of results begins with a general description of exposure to crime at the national level during the period 1978 to 2002. The presentation then moves on to describe victimisation in relation to various categories of violent and theft offences. The presentation of results concludes with a number of multivariate analyses which control for differences and changes in the composition of the groups comprising the wealthy and poor segments of the population.

## Data

The descriptions and analyses of victimisation among different segments of the population are based on Statistics Sweden's (SCB's) surveys of Swedish living conditions (the so-called ULF surveys). These are based on personal interviews with a representative sample of the population aged between sixteen and eighty-four years. Approximately 6,000 individuals are interviewed annually. The level of unit non-response lies at approximately twenty per cent for the ULF surveys.[2] The objective of the ULF surveys is to illuminate the issue of the distribution of welfare and of changes over time, correlations between problems in different areas of welfare and differences between different population groups. The interviews include a large number of questions relating to different areas of welfare, such as health, housing, social relations, political resources, the financial situation, education and employment. Questions on safety and exposure to crime have been included since 1978. Alongside the information collected at interview, the material also includes register data relating to individuals' incomes and benefits. The ULF database constitutes a central resource within the field of Swedish social research and provides a point of reference for social debate and reform work (see e.g. Erikson 1993; Palme et al. 2002; SCB 2003).

The broad approach to the measurement of welfare employed by the ULF surveys creates very good conditions for studying both the social patterning of victimisation and variations in this patterning. A further advantage is that victim surveys of the kind included in the ULF data set are not affected by changes in levels of tolerance for crime or in the propensity to report offences to the same extent as official crime statistics. The surveys are subject to a number of other limitations, however. These relate to missing data, difficulties associated with the study of more serious types of crime and under- and over-reporting. This last factor relates to the discrepancy between actual and reported exposure to crime. Questions relating to criminal victimisation may be perceived as being quite sensitive. This is particularly true in relation to the question of domestic violence or sex offences, incidents which are therefore assumed to be subject to under-reporting (Walby & Myhill 2001; Häll 2004). A further

[2] Generally speaking, differences between missing cases and the respondents interviewed are adjudged to be of relatively minor significance in relation to the estimates made on the basis of the ULF data. In order to reduce the risk of the unit non-response having too major an effect on the results produced, the data are subject to post-stratification. An individual weight has thereby been constructed in each of the different waves of the survey on the basis of the variables sex, age, region of residence and marital status. The objective is to compensate for over-sampling and variations in the non-response. We have ourselves conducted analyses with both weighted and unweighted data. Since weighting has only produced marginal effects, we have chosen to present the unweighted analyses, thereby leaving the number of observations unaffected.

problem is that those groups which we know to be subject to particularly high levels of victimisation – e.g. the homeless, convicted offenders, drug and alcohol abusers – tend to be less well-represented than others in surveys of this kind (Nilsson 2002). These are groups that are small in relation to the population as a whole, and to the extent that they are included in the sample, they are more likely to end up among the unit non-response. This factor should not have any major effect on the general picture of victimisation within the population at large, however, precisely because these groups are relatively small.

*Study period and sample*

The years 1984/85, 1992/3 and 2000/01 constitute years when the survey's focus on questions of safety and victimisation has been extended. The respondents were asked even more questions relating specifically to their experiences of exposure to crime in these years. For this reason, the present study is primarily based on the data collected in these six years. These survey years are also particularly interesting for another reason, since they represent times when the economic situation in Sweden was quite different – economic boom, recession, recovery. In the mid-1980s, Sweden was at the start of a period of economic boom with a low rate of unemployment (3%) and also relatively low levels of income inequality (SCB 2003). In 1992 and 1993, Sweden found herself in the middle of an economic crisis that inter alia involved a threefold increase in unemployment to historically high levels, and many groups experienced a reduction in levels of disposable income (Palme et al. 2002). By the beginning of the 21st century, the crisis was over. The economic recovery has not seen the rate of unemployment return to the levels of the mid-1980s, however, and levels of income inequality have also increased. The financial and social situation experienced during the years 2000/01, particularly among those groups that are most financially vulnerable – e.g. single parents, young people and immigrants – remained substantially worse than it had been during the period prior to the economic crisis (SCB 2003). This means that the recovery of welfare resources has taken place to a different extent across different social groups.

The analyses have been limited to the years of the ULF survey when more detailed questions on victimisation were included, and to persons aged between 20 and 64, giving a total of 27,568 individuals.

*Operationalisation*

In order to define the groups comprising the rich and the poor respectively we have employed a combination of register data and interview data on financial resources. On the basis of register data on household disposable income, we have constructed a variable for each year of the survey that distinguishes the 20 per cent of 20-64 year olds with highest and lowest levels of income respectively subsequent to standardisation for the number of household members (consumption units). The ULF surveys also include interview items focused specifically on the respondent's financial situation. One question that is often exploited in studies of living conditions relates to individual access to what may be termed a 'cash safety margin', i.e. whether one would be able to lay one's hands on a specified sum of money in the event of an unexpected situation arising, and if so how – by using one's own money, and bank withdrawals or by borrowing. The sum involved is corrected for inflation in each annual data collection wave. In the 2001 survey, the sum was specified at 14,000 SEK (approx. 1,500 Euro).

On the basis of these indicators of household disposable income and access to a cash safety margin, we have defined the 20 per cent with the lowest incomes, and who also lack access to a cash safety margin in the form of their own assets, as constituting 'the poor'. The rich, on the other hand, have been defined as comprising the 20 per cent with the highest incomes and who also have access to a cash safety margin without having to borrow. The advantages of this measure are that on the one hand those with low registered incomes, but who have access to cash should they need it need not be counted among the poor, and on the other those with high levels of registered income but who lack access to a cash safety margin are not counted among the rich. By combining register data on incomes with an interview item more directly focused on financial difficulties, we have thus created a more valid indicator of whether a given individual has or lacks access to financial resources. Over the course of the entire period covered by study, 16.2 per cent of the sample are counted among the rich, as defined in this way, and 11.6 per cent among the poor. The proportions of both rich and poor are somewhat larger at the end of the study than at the beginning.[3] The survey items and operationalisations employed to measure exposure to crime are presented in connection with the findings.

[3] 1984/85: 11.2% poor, 14.9% rich. 2000/01: 12.6% poor, 17.2% rich. The central pattern in relation to the findings presented below is stable in the sense that they are confirmed by alternative operationalisations, using a categorisation into the same three income groups but without employing information relating to access to a cash safety margin, or using 50 per cent of median income as the cut-off point for the measure of poverty.

## Findings

*The general trend*

All of the ULF surveys conducted since 1978 have included four principal questions relating to exposure to violence, focusing on different degrees of seriousness. The first question relates to the most serious form of violence and reads: *During the last twelve months, have you personally been the victim of a violent act or acts that have lead to injuries requiring you to visit a doctor, dentist or nurse?* The respondent is then asked about violence which caused visible marks or physical injury, violence that did not lead to visible marks or physical injury and whether he or she has been threatened with violence in such a way as to be frightened (Häll 2004). Unlike the questions on violence, the items focusing on theft or vandalism relate not only to the individual respondent but also to his or her household; the principal item here reads: *Have you, or has anybody else in your household, been the victim of one or more of the following crimes during the last twelve months?* The offences referred to in the survey item are theft or vandalism at the respondent's "principal place of residence; in a loft-space, cellar-space, or other storage space; in the respondent's weekend cottage; of their car; of something from their car; of a bicycle, moped, motorcycle or of parts thereof; other thefts, e.g. at the respondent's place of work, in connection with travel, of a boat etc."

Figure 1 presents the trends in exposure to theft/vandalism and violence or threats respectively for the population of Sweden during the period 1978-2002. It can be seen that a relatively large proportion of the violent incidents reported are comprised of threats. As regards more serious violence, the level of victimisation generally appears to be relatively stable (Estrada 2005). Two periods may be distinguished, however, where the figures relating to the aggregate proportions reporting exposure to threats or violence[4], or to theft or vandalism, lie at somewhat different levels. During the years 1978 to 1989, the total level of exposure to threats or violence lies at between five and six per cent, whereas it lies at between seven and eight per cent during the period 1990 to 2002. During the corresponding periods, levels of exposure to theft/vandalism offences lie at just under 25 per cent and slightly over 26 per cent respectively. Thus for the population at large, the victim surveys do not provide evidence of any form of continuous or substantial increase in exposure to either violence or

[4] Exposure to violence or threats includes all those who either report exposure to violence requiring some form of medical attention, or resulting in visible injury, or not resulting in visible injury, or who report having been threatened with violence in such a way that they were frightened.

theft/vandalism over the most recent decades. Given the nature of the analyses presented below, it should in conclusion also be noted that the years of the survey which included more detailed victimisation questions -1984/5, 1992/3 and 2000/1 – do not differ from the years contiguous to them in the time series.

*FIGURE 1 ABOUT HERE*

*Exposure to violence and threatening behaviour*

The dependant variables employed in subsequent analyses as indicators of violence or threatening behaviour comprise on the one hand exposure to any form of threat or violence, and on the other exposure to acts of serious violence. The latter term refers to violence that has resulted in the respondent seeking medical attention. At the general level, there are substantial differences in levels of exposure to violence between financially vulnerable segments of the population and groups characterised by higher levels of financial resources. The proportion reporting exposure to violence among the poor is almost twice as large as the same proportion among the rich. For the six years examined in the current study, the mean level of exposure to threats or violence over the course of the previous twelve months lies at 11.3 per cent among the poor, whereas the corresponding proportion is 5.2 per cent among the rich. What is most interesting in the context of the current study, however, is that this excess risk does not remain stable over time.

Table 1 shows that victimisation has undergone a marked polarisation. At the same time as the group with the lowest level of resources has experienced an increase in levels of exposure to threats or violence during the period 1984/85-2000/01, the rich only experienced an increase until 1992/93. Subsequent to this point the latter group's level of exposure declines somewhat. If the focus is restricted to the most serious violence, i.e. that which has resulted in some form of medical attention, the relative differences between the two groups become more dramatic. At the end of the period covered by the study, the levels of exposure to this form of violence lie at 2.2 per cent among the poor and 0.3 per cent among the rich. A third way of illuminating this trend in the unequal distribution of violent victimisation is to look at the proportion of all reported violent incidents, including threats, accounted for by the different groups in each wave of the survey. This analysis of the number of violent incidents also shows a polarisation whereby an increasingly large proportion of these incidents become

concentrated over time within the poorest group.[5] Within the groups, men's levels of exposure are generally higher than those of women. It is notable, however, that the women in the poorest group experience higher levels of victimisation than do well-resourced men.

*TABLE 1 ABOUT HERE*

*Threats and violence by location*

The ULF survey includes questions as to where the reported violent incidents took place. This makes it possible to study differences in the types of violence to which different groups are exposed.[6] As can be seen from Table 2, the violence experienced by rich and poor respectively tends to occur in different types of location, and the excess risk experienced by the poor is not found in relation to all types of violence. The higher levels of violence experienced by the poor are first and foremost accounted for by violence that is reported to have taken place in the respondent's own or somebody else's home. Among the women, this largely involves violence perpetrated by a male partner, and the differences by levels of financial resources are particularly large in this respect (see also Estrada & Nilsson 2004). Between 1984/85 and 2000/01 a clear polarisation takes place in this type of violence. Whilst the level of exposure experienced by the rich decreases somewhat, it rises substantially among the poor. The increase in the level of differences between the groups is particularly notable among the women in this regard. There are also substantial differences in relation to violence that occurs out of doors, often in association with public entertainments. Here there is no increase in relative inequality, however, even though the differences do become greater in terms of the numbers involved. It is also important to note that levels of violence out of doors increase in each phase of the analysis among the poor, whereas among the rich, they decline at the end of the period studied to previous, lower levels. The one category of violent acts that deviates quite clearly from this general pattern is that of work-related violence. During the

[5] The proportion of reported violent incidents accounted for by the poorest group increases even more dramatically if those individuals only reporting work-related violent incidents are excluded from the analysis. Among those only exposed to threats or violence in the course of their work, it is not unusual to report a very large number of incidents. In 2000/01, the poor account for slightly over 30 per cent of all violent incidents not directly associated with work (which produces an over-representation of 2.42). The proportion of incidents accounted for by the rich declines to slightly over seven per cent (resulting in an incidence ratio of 0.43).

[6] Follow-up questions on the location of incidents were posed in 2000/01 for up to six incidents of each type of violence (by seriousness), i.e. for a maximum of 24 violent incidents. Previously, questions had been posed in relation to a maximum of six incidents. This difference has only a very limited impact on the results since it is rare for respondents to report more than six incidents, and in those cases where this does occur, the location of the violence tends to be the same – at work or in the home.

mid-1980s, both the men and women within the poorest group experience a disproportionately low risk in relation to this form of violence. Over time, however, an evening out takes place as the levels of threats and violence at work reported by the poor increase at the same time as they decrease somewhat among the rich. This is primarily due to the fact that the men in the rich group deviate from all of the other groups examined by reporting a continuous reduction in levels of exposure to work-related violence. For the remaining groups, there is a clear increase in levels of exposure to work-related threats and violence.

*TABLE 2 ABOUT HERE*

*Exposure to theft and vandalism*

With regard to theft and vandalism, we have restricted ourselves to survey items focusing on theft or vandalism in the home, from a cellar-space, storage space, garage or other space linked to the home (dwelling-related), and to thefts of bicycles/mopeds/motorcycles, and thefts of or from cars (vehicle-related). Our interest is primarily directed at what is commonly referred to as everyday crime, i.e. offences to which people are exposed in the course of their everyday lives: at home, in their residential neighbourhood, on the way to and from home and at work. We have therefore excluded the category “other” which inter alia includes thefts and vandalism during trips abroad and thefts from weekend cottages. In each of the six years examined, six per cent of households were exposed to dwelling-related offences and nineteen per cent to vehicle related crimes. Thus the dwelling-related theft and vandalism offences constitute a relatively small proportion of the total number of crimes. Table 3 shows that both the distribution of and the trends followed by dwelling-related offences over time follow a pattern similar to that described in relation to violent offences. Differences between the various income groups were non-existent in the mid-1980s and then increased. The poor households have experienced a continuous increase in dwelling-related theft and vandalism offences, whereas by the end of the period, the highest income group is once again reporting similar levels to those of the mid-1980s. Exposure to vehicle related offences is much more common than dwelling-related victimisation and here the differences between the income groups are small both as regards the level of victimisation and the trend over time. Finally, when the focus is directed at the trend in the number of theft offences, we see that as was the

case with violent victimisation, there is a tendency towards a greater concentration of incidents of victimisation within the group with the lowest level of resources. The differences between men and women are smaller than they were in relation to violence and threatening behaviour, which is to be expected, inter alia as a result of the fact that the focus is in this instance directed at victimisation at the level of the household rather than the individual.[7]

*TABLE 3 ABOUT HERE*

## Differences in victimisation risk given controls for group composition

As was noted in the introduction, the fact that levels of financial resources vary greatly between different segments of the population should be taken into account when interpreting differences in both levels of victimisation and in trends over time.

The income groups compared in the above analyses differ in terms of their composition, not least with regard to age. The members of the poorest group are on average significantly younger then their counterparts in the rich group.[8] This is of course of significance to the interpretation of the findings presented above. In addition, the composition of the different income groups has changed somewhat during the period covered by the study. During the 1990s, single parents, persons born abroad and youths were among the losers in the area of welfare (Palme et al. 2002), and by the end of the study period they have therefore come to constitute a larger proportion of the low income group than they did at the beginning. Since these groups are exposed to violence more often than others (Nilsson & Estrada 2003), this should be taken into consideration in the context of a study examining changes in the differential risk for violent victimisation. We will therefore turn to multivariate analyses in order to study the question of victimisation risks and how these differ and have changed over time in more detail. This strategy offers the advantage of being able to control for differences in the composition of the groups examined and for the effects of other factors of importance to the question of victimisation, such as age, ethnicity and family type. In order to study differences in risk and changes in the extent of such differences, we have chosen to make use

[7] For this reason, we have also chosen to not present the incidence ratio by gender.
[8] The mean age in the poorest group is 34.9 years, and in the rich group 47.7 years.

of logistic regression models.[9] The models include controls for age, gender, country of birth (inside or outside Sweden) and family type (single, single parent, and cohabiting with and without children respectively).[10]

Table 4 presents differences in the risk for exposure to violent and theft crime respectively once controls have been introduced for differences in group composition. The analyses are conducted separately for each two-year period. The regression models are employed to study two issues: on the one hand the relationship between different groups and the differences between them in the risk for victimisation, and on the other whether changes have occurred between the groups in their relative risk for exposure to crime. Having controlled for group composition, it can be noted that the differences in levels of risk for exposure to violence become smaller, as we would expect since we have now taken into consideration the fact that the poorest group is to a larger extent comprised of youths, single parents and persons born abroad, all of which are exposed to higher levels of threatening behaviour and violence than the remainder of the population (Nilsson & Estrada 2003). As regards the trend in the inequality of victimisation over time, the picture presented above of an increasing polarisation between rich and poor is confirmed. From the beginning of the period, at which time rich and poor are subject to a similar victimisation risk, the poor become subject to a significant excess risk by the conclusion of the period under study. The differences in the victimisation risk are particularly clear in relation to serious violence and violence in the home. The exception to this pattern is found in relation to violence at work, where at the beginning of the study period, the risk for exposure among the poor was substantially lower than it was among the rich, whereas no significant differences remain between the two groups at the end of the period. As has been seen above, this evening out is primarily the result of an increase in the level of victimisation among the poor, and not, which would of course have been a more

[9] Logistic regression is a multivariate regression technique which estimates the likelihood that a certain event will occur (Menard 1995). This means that it is possible to compare the likelihood of exposure to victimisation for different groups whilst holding other variables constant. The results are presented in the form of odds ratios. In the present instance, the odds ratio is quite simply the ratio of the likelihood of victimisation calculated across different groups, expressed in terms of deviations from a reference category. The reference category assumes the value 1. An odds ration greater than one represents an excess risk for victimisation in relation to the reference category, and a value of less than one represents a lower risk than that of the reference group. The calculations have been conducted using the SPSS statistical package and the indicator function. The constant is included in the models.

[10] Age is included in the models as a continuous variable, whilst the remainder are included in the form of categorical variables. We have chosen to present the differences in victimisation risk only between the groups rich, poor and other subsequent to the inclusion of controls for the remaining variables. Complete tables of results are available from the authors upon request.

positive development, a reduction in levels of exposure among the rich to the levels experienced by the poor during the mid-1980s.

Exposure to thefts and vandalism offences is measured in relation to households and thus controls for household composition are particularly important. The results show that no significant differences between rich and poor remain in relation to dwelling-related theft and vandalism once controls are included for household composition. The rich are at greater risk of exposure to vehicle-related offences at the beginning of the study period, but by its conclusion, no significant differences remain.

*TABLE 4 ABOUT HERE*

No controls have been included in models F and G in Table 4 for the availability of attractive objects for theft. The risk of exposure to vehicle theft is of course dependent on whether or not a household owns cars, motorcycles, bicycles etc. In this regard too there are differences between rich and poor. Of the households categorised as rich, for example, 95 per cent have access to a car, whereas the corresponding figure among the poor is 69 per cent. In the context of this study of the distribution of victimisation, however, we have chosen not to include controls for the availability of objects that involve a risk of being stolen or vandalised. In part this is due to the fact that our ability to do so is limited, and in part to the fact that we have chosen to focus on victimisation per se. (It may be noted that similar arguments could be applied in relation to exposure to violence. Those who do not go out at night, as a result of fear or for some other reason, run less risk of being exposed to violence out of doors. Similarly, in order to be exposed to work-related violence, one has to have a job.) Another factor that the models do not take into consideration and that may be of significance to the trends noted and the differences between the groups is that of access to security devices of various kinds. This is an area that has witnessed rapid developments during the period covered by the study. And since the installation of electronic locks, alarms and so forth involves costs, it is also reasonable to assume that in this regard too there will be differences between poor and rich.

## Concluding discussion

Since 1978, annual victim surveys asking a representative sample of the population about their exposure to violent and theft offences have been conducted in Sweden. Traditionally, victim surveys of this kind have been employed either to describe general trends in victimisation within the population at large, or to illuminate differences in the levels of victimisation risk experienced by different groups at a given point in time. Significantly less research has to date focused on trends over time in the levels of victimisation of different social groups. This article has examined trends in what we have chosen to refer to as the inequality of victimisation. The central issue has been that of whether increased income inequalities and differences in living conditions are reflected in an increased inequality in relation to victimisation. The hypothesis put forward is that the increased levels of inequality that have characterised social trends in the western world over recent decades have involved an increase in levels of victimisation experienced by weaker segments of society whilst levels of exposure to crime have remained stable or declined among groups characterised by better levels of resources. Since we have been able to distinguish between different offence types, it is also possible to specify whether these trends are general or are primarily associated with changes in patterns of exposure to one particular type of crime.

The Swedish victim surveys show no continual or substantial increase in levels of exposure to crime within the population as a whole. The general picture of victimisation trends is instead one of two periods characterised by relative stability: one with somewhat lower levels of victimisation during the 1980s, and then another with slightly higher levels of victimisation from the beginning of the 1990s. By analysing trends based on data from six years of the Swedish victim surveys covering the period 1984-2001, years which are also representative of different phases of the economic cycle in Swedish society, we have been able to examine whether this general trend conceals distinctive developmental patterns within different segments of the population.

This study shows that over the past twenty years, exposure to violent and theft offences has followed different trends for groups characterised by high and low levels of resources respectively. The proportion exposed to first and foremost threatening behaviour and violence, but to some extent also dwelling-related theft offences, is significantly greater among the poor than among the rich. Furthermore, the size of the difference involved has

increased. Whereas both those on middle- and particularly high incomes have experienced a stabilisation in relation to their exposure to violence and dwelling-related thefts subsequent to the years of the Swedish economic recession of 1992/93, levels of victimisation have continued to increase among the poor.

This increased concentration of the incidence of crime within the most poorly resourced segments of society is in part explained by changes in the composition of the groups examined. During the period covered by the study, the poorest segment of the population has come increasingly to be comprised of demographic groups with a higher victimisation risk. During the 1990s, single parents, persons born abroad and young people were among the losers in the area of welfare, and therefore comprise a larger proportion of the poorest segment of the population at the end of the study period. Since these groups are more often exposed to crime than others, we have introduced controls for group composition. Even given these controls, however (for age, gender, country of birth and household composition), the principal pattern remains the same: increased risks for exposure to crime among the poor and more stable or reduced levels of risk among the rich. When controls for group composition are introduced, the significant excess risk for exposure to violence among the poor is not noted until the end of the study period (2000/01). This is not the case in relation to work-related violence, however, where the rich were at greater risk of exposure at the beginning of the period, whereas by the end of the period no significant differences remained between the groups examined. Thus levels of exposure to work-related violence have evened out, primarily as a result of an increase in these levels among the poor. A similar trend, also involving this negative form of evening out, is found in relation to household exposure to vehicle related theft and vandalism offences: an excess risk among the rich at the beginning of the study period and no significant differences between rich and poor at the end. Once controls are included for compositional factors, there were no significant differences in levels of household exposure to dwelling-related crime.

These results should be viewed against the background of a trend whereby differences in standards of living between different social groups are becoming increasingly marked in society at large. An increase in levels of income inequality and increasing differences in living conditions are also reflected in a negative evening out of differences in the area of criminal victimisation. Thus increased inequalities in income and in differences relating to living conditions are reflected in increased inequalities or in a negative evening out in relation

to levels of victimisation. This has led to groups that are already characterised by low levels of resources having to bear a larger part of the burden associated with the crime problem. The fact that increased levels of inequality in other areas are also reflected in relation to exposure to crime should be viewed against the background of what we already know about the correlations among various components of welfare (Estrada & Nilsson 2004). The Swedish level of living surveys, of which the victim surveys constitute a part, also pose questions about the respondents' situation in a number of different areas that are central to human welfare: besides crime these include health, education, housing, employment, the financial situation, political resources and social relations. Problems or resource deficiencies in these areas tend to be associated with one another.

The differences in levels of exposure to crime between rich and poor are found among both men and women. Furthermore, the inequalities are particularly pronounced in relation to more serious forms of victimisation. In this regard, the findings contradict research claiming that there is no correlation between levels of social and economic resources and exposure to violence among women (Council of Europe 2002). We have in addition been able to provide evidence of a trend towards increased levels of inequality in victimisation, whereby the extent of differences has increased over recent years to the detriment of those men and women experiencing the greatest levels of victimisation.

One area that has not been taken up in this article, but which we feel to be an important one for study, is that of the consequences of victimisation. In addition to the direct harms caused by victimisation, there are also other consequences. These may include periods of sick leave following exposure to violence, or a financial loss in relation to theft and vandalism offences. Here there is also reason to assume the existence of differences between groups characterised by high and low levels of resources respectively. Stated simply, we may assume that the consequences of exposure to crime will differ depending on the victim's level of access to resources. The economic consequences of exposure to theft or vandalism offences, for example, are dependant on whether or not the property involved has been insured. We also know that the poor more often lack insurance cover than the rich.

One limitation of the current study is that our analyses have been based exclusively on data at the level of the individual. In order to approach the question of the mechanisms underlying the unequal trends in victimisation, it would be beneficial to include neighbourhood level data

in the analyses. In order to conduct a more detailed study of the question of concentration effects, individual victimisation ought to be viewed in relation to both individual characteristics and factors characterising the individual's social context (Smith & Jarjoura 1989; Sampson et al. 2002). Since we have now been given the opportunity of adding neighbourhood level data to the individual-based survey data, we are looking forward to examining these issues in future studies.

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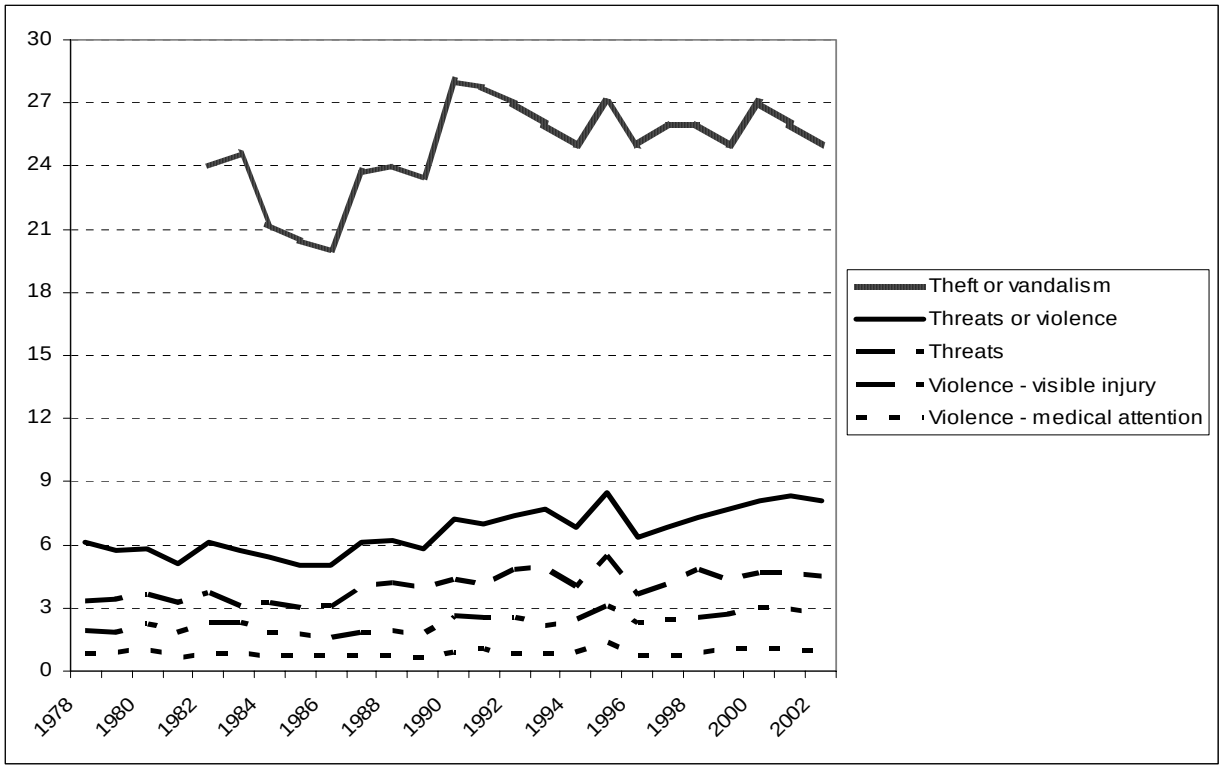


Figure 1. Proportion (%) of population from households exposed to theft or vandalism (16-84 year olds, 1982-2002) and proportion reporting personal exposure to threats or violence, the threat of violence, violence resulting in visible injury, and violence requiring medical attention (16-74 year olds, 1978-2002). Vertical reference lines denote the years employed in subsequent analyses.

Table 1. Distribution of threats or violence, violence requiring medical attention and the incidence ratio by income level and gender; 20-64 year olds. Poor (*P*), middle-income (*M*), rich (*R*). Proportion (%) reporting victimisation and relative risk (*RR*) poor/rich.

| *Type of violence* | *84/85* | | | | *92/93* | | | | *00/01* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* |
| Threats or violence: | 7.3 | 4.9 | 4.8 | 1.5 | 11.1 | 7.6 | 5.8 | 1.9 | 13.0 | 8.2 | 5.1 | 2.5 |
| *Women* | 6.2 | 4.4 | 2.5 | 2.5 | 9.8 | 6.5 | 4.7 | 2.1 | 12.2 | 7.1 | 4.7 | 2.6 |
| *Men* | 8.5 | 5.4 | 6.8 | 1.2 | 12.6 | 8.7 | 6.9 | 1.8 | 14.0 | 9.3 | 5.5 | 2.5 |
| Violence req. medical | 1.1 | 0.8 | 0.3 | 3.7 | 1.2 | 0.7 | 0.5 | 2.4 | 2.2 | 1.0 | 0.3 | 7.3 |
| *Women* | 0.9 | 0.6 | 0.2 | 4.5 | 1.5 | 0.4 | 0.4 | 3.7 | 1.2 | 0.6 | 0.3 | 4.0 |
| *Men* | 1.4 | 1.0 | 0.4 | 3.5 | 0.9 | 1.1 | 0.7 | 1.3 | 3.4 | 1.4 | 0.3 | 11.3 |
| Incidence-ratio* | 1.43 | 0.94 | 0.99 | | 1.33 | 0.99 | 0.81 | | 1.60 | 1.00 | 0.52 | |
| *Women* | 1.44 | 0.87 | 0.50 | | 1.44 | 0.94 | 0.76 | | 1.61 | 0.93 | 0.51 | |
| *Men* | 1.44 | 1.00 | 1.37 | | 1.21 | 1.05 | 0.86 | | 1.63 | 1.09 | 0.53 | |
| N | 1097 | 7281 | 1466 | | 990 | 6418 | 1473 | | 1082 | 6027 | 1474 | |

*The incidence ratio is calculated by dividing the proportion of the aggregate number of incidents of threats/violence reported by a given group by the proportion of the population comprised by the group. A ratio of 1.0 would mean that the proportion of incidents reported by the group corresponds exactly to the proportion of the population accounted for by the group's members. In order to avoid cases with extreme values exerting an excessive influence on the results, the small number of individuals reporting exposure to more than ten incidents have been coded as having reported eleven such incidents.

Table 2. Distribution of violence or threatening behaviour at different locations by income and gender; 20-64 year-olds. Poor (*P*), middle-income (*M*), rich (*R*). Proportion (%) reporting victimisation and relative risk (*RR*) poor/rich.

| *Type of violence* | *84/85* | | | | *92/93* | | | | *00/01* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* |
| Threats/violence at work | 0.9 | 1.5 | 2.5 | 0.4 | 2.2 | 2.2 | 2.6 | 0.8 | 2.5 | 3.2 | 2.3 | 1.1 |
| *Women* | 0.7 | 1.5 | 1.5 | 0.5 | 1.7 | 2.4 | 2.7 | 0.6 | 2.7 | 3.5 | 2.9 | 0.9 |
| *Men* | 1.2 | 1.5 | 3.3 | 0.4 | 2.8 | 2.0 | 2.5 | 1.1 | 2.3 | 2.8 | 1.8 | 1.3 |
| Threats/violence home | 2.5 | 1.1 | 0.8 | 3.1 | 3.3 | 1.5 | 0.8 | 4.1 | 4.4 | 1.7 | 0.5 | 8.8 |
| *Women* | 3.1 | 1.5 | 0.6 | 5.2 | 4.7 | 2.0 | 0.6 | 7.8 | 5.7 | 1.8 | 0.6 | 9.5 |
| *Men* | 1.7 | 0.7 | 1.0 | 1.7 | 1.7 | 1.1 | 1.0 | 1.7 | 2.9 | 1.5 | 0.4 | 7.2 |
| Threats/violence outside | 4.1 | 2.4 | 1.6 | 2.6 | 5.6 | 4.1 | 2.9 | 1.9 | 7.0 | 3.5 | 2.2 | 3.1 |
| *Women* | 2.1 | 1.5 | 0.5 | 4.2 | 3.4 | 2.3 | 1.6 | 2.1 | 4.7 | 1.7 | 0.9 | 5.2 |
| *Men* | 6.4 | 3.3 | 2.5 | 2.6 | 8.0 | 5.9 | 4.2 | 1.9 | 9.9 | 5.3 | 3.3 | 3.0 |
| N | 1097 | 7281 | 1466 | | 990 | 6418 | 1473 | | 1082 | 6027 | 1474 | |

Table 3. Household exposure to theft and vandalism by income group and gender. Theft/vandalism in or in association with the respondent's principal dwelling and theft/vandalism of a car, motorcycle, moped or bicycle; 20-64 year-olds. Poor (*P*), middle income (*M*), rich (*R*). Proportion (%) reporting victimisation and relative risk (*RR*) poor/rich.

| | *84/85* | | | | *92/93* | | | | *00/01* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* | *P* | *M* | *R* | *RR* |
| Theft dwelling | 5.7 | 5.8 | 5.4 | 1.1 | 8.2 | 6.1 | 6.4 | 1.3 | 9.0 | 6.1 | 5.3 | 1.7 |
| *Women* | 5.8 | 5.8 | 5.1 | 1.1 | 7.2 | 6.6 | 5.8 | 1.2 | 8.0 | 5.9 | 4.5 | 1.8 |
| *Men* | 5.6 | 5.7 | 5.7 | 1.0 | 9.3 | 5.5 | 6.9 | 1.3 | 10.1 | 6.4 | 6.0 | 1.7 |
| Theft vehicle | 16.7 | 15.2 | 15.1 | 1.1 | 21.5 | 20.5 | 20.7 | 1.0 | 21.8 | 20.3 | 18.7 | 1.2 |
| *Women* | 14.1 | 14.2 | 14.3 | 1.0 | 20.8 | 20.3 | 19.5 | 1.1 | 20.2 | 19.1 | 19.7 | 1.0 |
| *Men* | 19.6 | 16.2 | 15.8 | 1.2 | 22.3 | 20.6 | 21.8 | 1.0 | 23.8 | 21.4 | 17.7 | 1.3 |
| Incidence ratio | 1.08 | 1.01 | 0.88 | | 1.21 | 0.98 | 0.96 | | 1.28 | 0.99 | 0.84 | |
| N | 1098 | 7285 | 1466 | | 990 | 6424 | 1473 | | 1083 | 6031 | 1474 | |

Table 4. Risk of exposure to violent and theft offences given controls for compositional effects. Individual exposure to threatening behaviour or violence, violence requiring medical attention, threatening behaviour or violence at work, in the home and out of doors. Household exposure to theft/vandalism in dwelling, and theft/vandalism of a car, motorcycle, moped or bicycle. The models include controls for age, gender, country of origin, and family type. 20-64 year-olds. Odds rations (Exp(B) employing the rich as the reference category.

| | | 1984/85 | 1992/93 | 2000/01 |
|---|---|---|---|---|
| Model A: Threatening behaviour or violence | | | | |
| | Poor | 0.78 | 1.04 | 1.50** |
| | Middle income | 0.69** | 0.93 | 1.22 |
| | Rich | 1 | 1 | 1 |
| Model B: Violence resulting in medical treatment | | | | |
| | Poor | 1.30 | 0.96 | 4.53*** |
| | Middle income | 1.47 | 0.85 | 2.80* |
| | Rich | 1 | 1 | 1 |
| Model C: Threatening behaviour/violence at work | | | | |
| | Poor | 0.24*** | 0.52** | 0.75 |
| | Middle income | 0.46*** | 0.63** | 1.17 |
| | Rich | 1 | 1 | 1 |
| Model D: Threatening behaviour/violence in the home | | | | |
| | Poor | 1.54 | 2.03* | 3.41*** |
| | Middle income | 0.95 | 1.38 | 2.19* |
| | Rich | 1 | 1 | 1 |
| Model E: Threatening behaviour/violence out of doors | | | | |
| | Poor | 1.18 | 0.99 | 1.93** |
| | Middle income | 0.92 | 0.95 | 1.19 |
| | Rich | 1 | 1 | 1 |
| Model F: Theft/vandalism dwelling | | | | |
| | Poor | 0.92 | 0.96 | 1.20 |
| | Middle income | 1.02 | 0.83 | 0.99 |
| | Rich | 1 | 1 | 1 |
| Model G: Theft/vandalism vehicle | | | | |
| | Poor | 0.77** | 0.60*** | 0.87 |
| | Middle income | 0.80** | 0.71*** | 0.92 |
| | Rich | 1 | 1 | 1 |
| N | | 9980 | 8989 | 8599 |

*p<0.10 **p<0.05 ***p<0.01