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On whom does the burden of crime fall now? Changes over time in counts and concentration

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Abstract

A recent publication (Ignatans and Pease, 2015) sought to examine the changed distribution of crime across households in England and Wales over a period encompassing that of the crime drop common to Western countries (1982–2012). It was found that while crime against the most victimised households declined most in absolute terms, the proportion of all crime accounted for by those most victimised increased somewhat. The characteristics associated with highly victimised households were found to be consistent across survey sweeps. The pattern suggested the continued relevance to crime reduction generally of prioritising repeat crimes against the same target. The present paper analyses the changed distribution of crime by offence type. Data were extracted from a total of almost 600,000 respondents from all sweeps of the Crime Survey for England and Wales (CSEW) 1982–2012 to determine which types of victimisation became more or less concentrated across households during the overall crime drop. Methodological issues underlying the patterns observed are discussed. Cross-national and crime type extension of work of the kind undertaken here are advocated as both intrinsically important and likely to clarify the dynamics of the crime drop.

Keywords

Victimisation, crime drop, crime concentration, quantitative criminology

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Introduction

Understanding the distribution of crime across individuals and households is crucial for formulating a strategy and tactics of reduction, and perhaps for understanding the causes of the cross-national crime drop of the last two decades. Our recent paper (Ignatans and Pease, 2015) contended that the prevention of repeat victimisation against the same target had become both more important and more feasible. Put colloquially, the bad news is that crime has become *proportionately* more concentrated on those already victimised. The good news is that this allows for better targeting as policing and other relevant resources diminish. To be applicable, analysis of concentration must be disaggregated by crime type.

To date, 20 sweeps of the British Crime Survey (BCS) have been carried out. Representative samples of adults were asked about their experiences of victimisation by crime during a recall period of roughly one year. The Survey was recently rebadged as the Crime Survey for England and Wales (CSEW). Data for the present study come from the combined total of close to 600,000 BCS/CSEW respondents over the Survey's lifetime (to date) of 30 years. The Survey has coded many key variables consistently over the period, or in ways that can be reconciled across sweeps. While this consistency was primarily to permit comparison with counts of crime recorded by the police, its consequent advantage was to make analysis of the kind reported here feasible.

In BCS/CSEW, victimisation counts may be taken from either the BCS/CSEW screener questions in the main questionnaire (completed by all respondents) or from forms completed only by those identified as victims by the screener questionnaire. The justification for choosing the conventional latter option is that some respondents report events falling outside the designated recall period, or may include events which turn out not to be crimes after closer questioning. Against that, the screener questions do provide the fuller count of victimisation experiences unconstrained by the artificial maxima on the extent of multiple victimisation mentioned below (Farrell and Pease, 2007).

Perhaps the greatest controversy attending victimisation surveys concerns the way in which multiple events against the same victim have been counted. In essence, the debate centres on how one deals with the responses of those who report being victimised many times. Official analyses set a low limit (five) on the maximum number of events in a series and the number of separate offences resulting in interview with a victim, contributing the capped information in the form of victim form data. In the view of the present writers, this represents the triumph of statistical convenience over criminological substance, yielding more stable crime rates over time. Alternatively, the imposed victimisation report cap can be seen as another limitation of survey methodology and this calls into question the general suitability of the method in regard to its effectiveness in analysing those victimised the most. The clustered sampling method deployed by BCS/CSEW is most efficient in providing information about population segments whose victimisation distribution is approximately normal. This is not the case for the outlier population of those experiencing the majority of victimisation, attention to whom forms the core interest of the current article.

A few researchers have addressed the multiple victimisation issue. One study placed a cap on screener series incidents (i.e. those offence series of the same type and probably by the same perpetrator) at 51, and used a value of 60 incidents where the respondent said there were too many incidents to remember (Walby and Allen, 2004). This practice was adopted by Farrell and Pease (2007). In the present paper the problem was approached empirically. A cap of 49 was applied for each crime type. The decision was made after examining the frequencies of each offence type for two sample years. This showed that a miniscule proportion of events (less than one tenth of one percentage) were affected by exclusions of respondents reporting 50 or more events.

The *initial* analyses reported below are based on responses to *screener* questions. To preclude criticism, supplementary analyses will be based on victim form responses. A cap of 49, as described above, was applied for each crime type when calculating the total number of offences per household. Keeping the cap high was felt to be crucial so as to incorporate the experience of those who suffer crime very often. The alternative of placing no cap on the counts would render the writers vulnerable to the criticism that the results were unduly shaped by outliers. Placing a cap on counts was done with reluctance because of its implication that we question the veracity of those reporting more offences. We believe that the national crime profile is indeed shaped by outliers. Victimisation surveys were introduced to provide a victim-centred representation of crime. It feels wrong for an arbitrary limit on crimes suffered to be placed by bureaucrats and researchers who know nothing of the respondents' circumstances. The issue requires a change of CSEW methodology to clarify; specifically, follow-up interviews are needed with a sample of the outlier respondents. Occasionally cases are reported by the media where, for example, a chronic victim commits suicide. Such cases incline the present writers to the presumption that people reporting above-cap frequencies of victimisation probably do suffer with the regularity which they claim. The intention for departing from the principled view implied in that position, to the extent of imposing a high cut-off point, represents an attempt to buy credibility for our analyses, albeit at the cost of abandoning strict adherence to first-hand victim accounts.

Having agonised and reached a decision about how to treat multiple victims, the next issue was how to measure and display crime concentration. Various measures of inequality were considered, and the simplest chosen. This involved ranking households by number of victimisations suffered, dividing the ranked households into percentiles and calculating mean number of victimisations per household and the proportion of a BCS/CSEW sweep's total victimisations suffered by households in each percentile. The approach has similarities with previous single year analyses (Trickett et al., 1992; Tseloni and Pease, 2005). It yields, for example, the proportion of all victimisations suffered by the 1, 5 or 10% of the sample surveyed. Because the majority of respondents were thankfully crime-free over the year they were asked about, it would not have been instructive to use 0–100% as the range on the abscissae of the figures in the paper, and the reader is hereby alerted to note the figures on the abscissae, which were chosen to give the clearest possible representation of concentration over the most informative part of the range.

Results

Figure 1 depicts the vehicle crime drop by victimisation percentile. It will be seen that no crime was captured by the Survey in the first seven deciles. Interestingly, the percentiles up to 83 have non-zero values *exclusively in the early sweeps*. In recent sweeps these percentiles were crime-free (insofar as that was revealed by CSEW samples). Clearly a *population* survey would reveal some crime. The last decile especially shows a massive reduction in mean crimes per household over time. The most victimised 1% of households, suffering more than eight crimes per household in 1981, now suffer around four. In absolute terms, those most victimised by vehicle crime have benefitted most from the crime drop.

The fact that the most victimised have seen the greatest absolute decline in crime suffered is consistent with either a decline or increase in crime concentration. If the absolute decline in the most victimised count represents a greater *proportion* of crime hitherto suffered by them than was the case for the less victimised, concentration would *reduce*. If the decline was proportionately less for the most victimised (notwithstanding its greater absolute extent), concentration would *increase*.

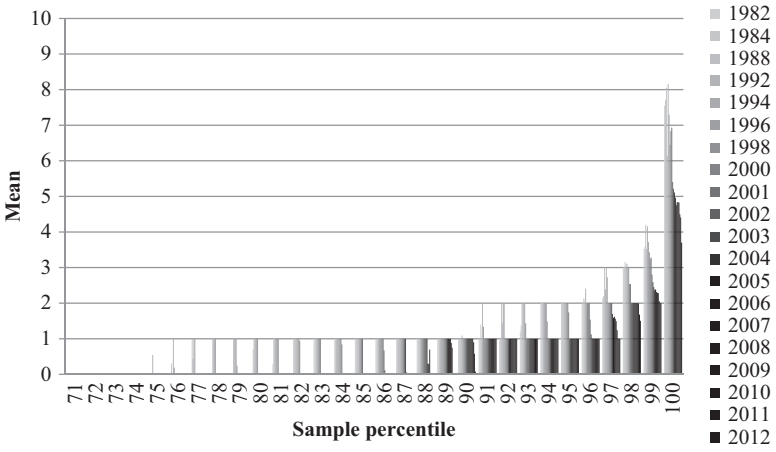

Figure 1. Mean vehicle victimisation per household by percentile, CSEW sweeps 1982–2012.

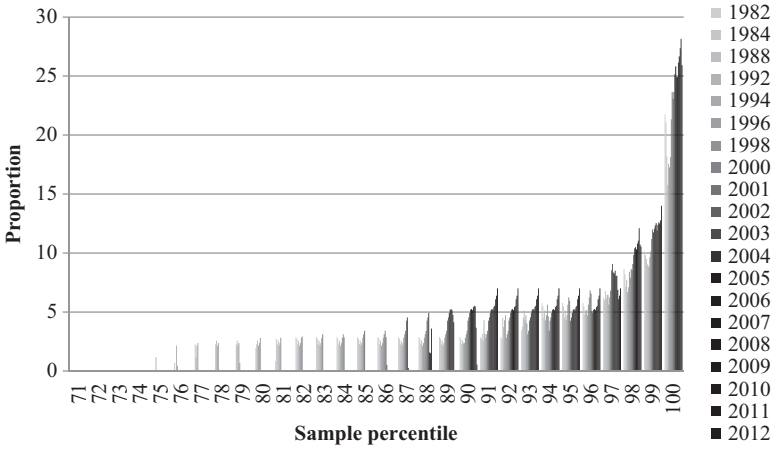

Figure 2. Proportion of vehicle victimisation by percentile, CSEW sweeps 1982–2012.

Figure 2 portrays the *proportion* of vehicle crimes suffered and shows the latter state of affairs to apply. Vehicle crime has declined most for the most victimised, but the diminished total crime has become more concentrated on the most victimised.

Figures 3–4 and 5–6 depict the same patterns for property and personal crimes, respectively.

The pattern is consistent across the three crime types. While the absolute victimisation of the most victimised percentiles has declined quite dramatically, the proportion of total victimisation suffered by the most victimised percentile has increased. After an initial decline in the 1990s, that proportion increased to just over a quarter for vehicle crimes and over a half for personal victimisation. It is probably coincidental that the initial decline coincided with the time when the prevention of repeat victimisation was a tactic in vogue and supported by central government (Pease, 1998).

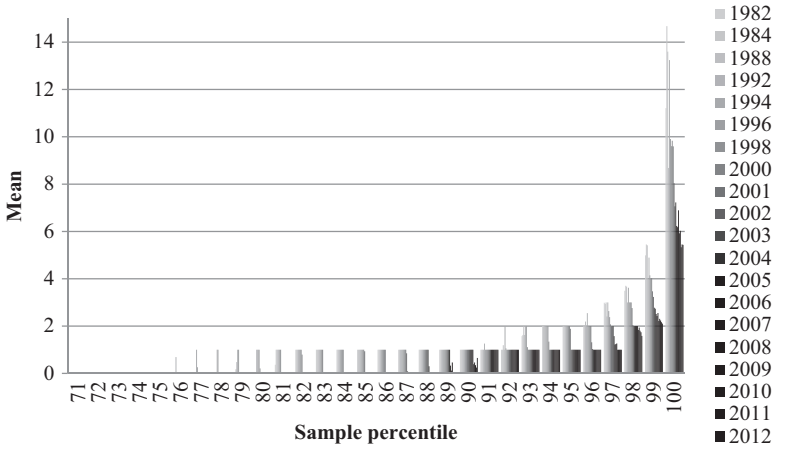

Figure 3. Mean property victimisation per household by percentile, CSEW sweeps 1982–2012.

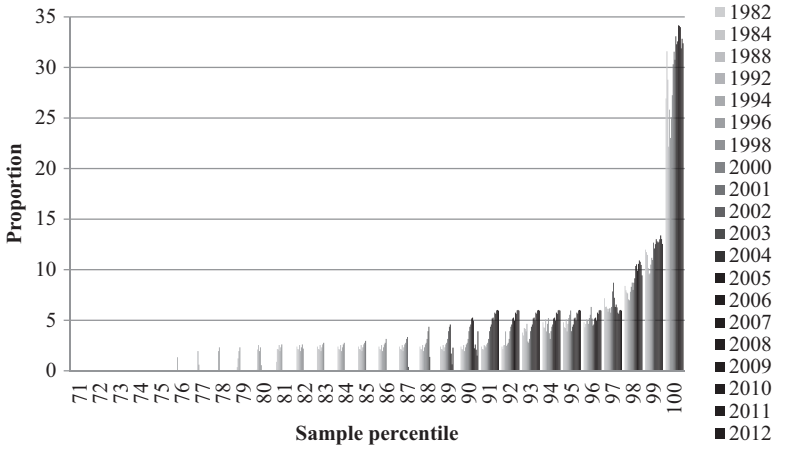

Figure 4. Proportion of property victimisation by percentile, CSEW sweeps 1982–2012.

The next step in the present paper addresses the question of whether the attributes of heavily victimised households remain similar across time. There is already a substantial literature on attributes associated with crime victimisation (Kershaw and Tseloni, 2005; Osborn and Tseloni, 1998; Tseloni, 2006; Tseloni et al., 2010), but these tend to be analyses at single points in time. In our earlier paper (Ignatans and Pease, 2015) it was found that this was the case for total crime.

So the question is whether the same variables that distinguish the most victimised 10% of households from the rest in 1982 are the same as those that distinguish the most victimised in the top crime decile from the rest in 2012. The anticipation is that, by and large, they will be.

Table 1 summarises the analyses. Contingency table analysis was used for categorical variables and the Mann-Whitney U Test for ordinal variables. For every variable, the direction of the difference is the same in the years compared. The italicised word or phrase in the left column of Table 1

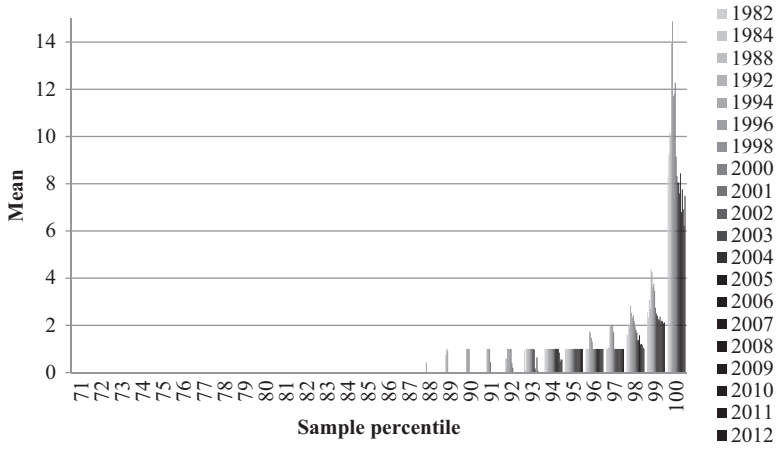

Figure 5. Mean personal victimisation per household by percentile, CSEW sweeps 1982–2012.

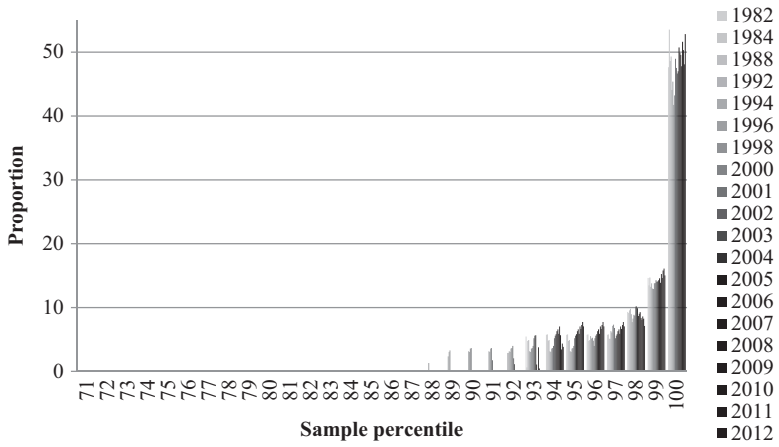

Figure 6. Proportion of personal victimisation by percentile, CSEW sweeps 1982–2012.

is the over-represented alternative. For example, households in *rental* accommodation were more victimised than owner-occupied. Cell entries are probabilities of the relationship. The conclusion to be reached is that the risk factors of 2012 are similar to the risk factors of 1982 for each of the three offence types distinguished, i.e. the same kinds of households are the most victimised across time and across deciles over the same year. This would validate continuing attention to households with the relevant attributes (Tseloni and Pease, 2014). The present analysis says nothing about area effects, which will also inform prioritisation of crime prevention effort (Kershaw and Tseloni, 2005; Osborn and Tseloni, 1998; Tseloni, 2006).

With huge ns, statistical significance matters little. The important point is the consistent direction of difference, as the characteristics associated with highly victimised households are consistent across Survey sweeps.

Table 2 was inserted as something of an afterthought, to provide a summary of information that can be gleaned from the figures only with some effort. It shows that the *decline* in mean crimes was

Table 1. Variables associated with year and decile differences in victimisation.

Variable	Top crime decile vs remainder 1982 (Vehicle)	Top crime decile vs remainder 2012 (Vehicle)	Top crime decile vs remainder 1982 (Property)	Top crime decile vs remainder 2012 (Property)	Top crime decile vs remainder 1982 (Personal)	Top crime decile vs remainder 2012 (Personal)
Age of Household Representative Person (*younger*)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Gender (male vs *female*)	<0.001	ns	ns	ns	<0.05	ns
Marital status (married vs *non-married*)	ns	ns	ns	<0.001	<0.001	<0.001
Race (white vs *non-white*)	<0.05	ns	ns	ns	ns	ns
Number of adults in household (*fewer*)	<0.001	<0.001	<0.05	<0.001	ns	<0.05
Number of children in household (*fewer*)	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001
Employment (full-time vs *other*)	<0.001	ns	ns	ns	ns	<0.05
Employment type (self-employed vs *employed*)	<0.05	ns	ns	ns	ns	<0.05
Number of cars (*fewer*)	<0.001	<0.001	<0.05	<0.001	ns	<0.05
Number of bikes (*fewer*)	<0.001	<0.001	<0.05	<0.005	ns	<0.001
Accommodation (owner-occupied vs *rental*)	<0.05	<0.001	<0.001	<0.001	<0.005	<0.001
Accommodation type (detached + semi-detached vs *other*)	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001
Living in the area (more than 1 year vs *less than 1 year*)	ns	ns	<0.05	<0.05	<0.001	<0.001
Living in the address (more than 1 year vs *less than 1 year*)	<0.05	ns	<0.001	<0.05	<0.001	<0.001
Seen crime in last year (*yes* vs no)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Feels safe in dark (safe vs *unsafe*)	ns	<0.001	<0.001	<0.001	ns	<0.001
Worried about crime (non-worried vs *worried*)	<0.001	<0.001	<0.001	<0.001	<0.05	<0.001

Note: Categorical variable statistics are chi-square with one degree of freedom. The ordinal variable statistic is z.

Table 2. Proportional change in mean crime and concentration by crime type.

	Mean crimes suffered by sample, earliest 3 sweeps	Mean crimes suffered by sample, latest 3 sweeps	Proportional reduction in mean crimes (%)	Proportion of crimes suffered by top 6% earliest 3 sweeps (%)	Proportion of crimes suffered by top 6% latest 3 sweeps (%)	Proportional increase in concentration (%)
Vehicle	0.386	0.154	60.1	54.6	70.8	29.7
Property	0.451	0.167	63.0	64.5	73.55	14.0
Personal	0.185	0.135	27.0	89.7	96.12	7.16

greatest where the *increase* in concentration was greatest (for vehicle crime). The decline was least marked where the increase in concentration was least marked (personal crime). The figures were intermediate for property crime. At this broad level, it seems that large declines (the largest decline being in the most victimised) brings with it increased concentration and, hence, enhanced opportunities for the police to focus on those most victimised.

Discussion

The operational implications for policing of the results presented here are thought to be substantial. Our earlier paper, while demonstrating overall trends in crime (the most victimised benefitting most in absolute terms, but crime becoming more concentrated on those already victimised), did not account for the possibility of contrasting trends for different crime types. The present analyses show that the same pattern of results applies for each of the three general crime types (vehicle, property and personal) looked at. The implications are that policing and other preventive efforts directed at those already victimised are yet more important than in earlier years, and that the reduction in total crime may be, even in an era of diminished resources, no less realistic.

The implications for explanations of the crime drop in Western nations are more complex. Anxiety to tease them out does not cause us to lose sleep. Permit us a horticultural analogy: a plant's growth at any stage is limited by insufficiency in one nutrient only. The limiting nutrient in the past may not be the limiting nutrient in the future. Nitrogen deficiency can be remedied by the application of a nitrogen fertiliser, but when nitrogen ceases to be the nutrient limiting growth, no amount of nitrogen fertiliser will help. By analogy, the factors that reduced crime in the last 20 years may be different from those best suited to its reduction in the next 20. Nonetheless, it is important to know what caused the crime drop. So, as noted above, putative reasons for the crime drop per se are incidental to our interests in this paper. Central is its demonstration that crime reduction based upon attending to those already victimised is even more salient to the crime reduction enterprise than was the case when it was first mooted. A caveat should be entered that the unit of count in the analyses here concerns individual households, not areas. Drawing on, interpreting and developing the substantial extant literature so as to unpack area and household main effects and interactions will provide more detailed applicable prioritisation of crime reduction resources.

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