

What Has Been Learned from Self-Reports about Criminal Careers and the Causes of Offending?

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The main aim of this report is to summarize what has been learned from self-reports about criminal careers and the causes of offending.

Knowledge about criminal careers is important as the fundamental basis of knowledge about offending and also for evidence-based criminal justice policy. Fundamental issues include the prevalence and frequency of offending, ages of onset and desistance, career duration, continuity, specialization, escalation, co-offending, motives and developmental sequences (Farrington, 1992a, 1997a). Policy issues include: How far is it true that most crimes are committed by a small minority of persistent or chronic offenders? How far can these offenders be identified in advance, prevented from starting or rehabilitated after they start offending? How many crimes can be prevented by imprisoning people? What are the monetary costs and benefits of interventions to prevent or reduce offending? (see Welsh *et al.*, 2001)

Up to the present time, most knowledge about criminal careers has been based on official records of arrests or convictions. However, it is thought that official records include only the “tip of the iceberg” of offending, and that officially recorded offences may be a biased and unrepresentative sample of all offences committed. It is argued that self-reports provide a more accurate picture of the true number of offences committed. However, there are doubts about the validity of self-reports of offending, because people may conceal, exaggerate or forget. The important topic of validity will be discussed later in this report.

What are the most important causes of offending is another key issue in criminology with both fundamental and policy implications. Because it is difficult to establish unambiguously what are causes, most research aims to identify correlates, predictors or “risk factors” for offending. Risk-focussed prevention became very important in criminology in the 1990s (Farrington, 2000b). Its basic idea is that fundamental research should identify the key risk factors for offending and then intervention programmes should be implemented to change these risk factors. For

example, if poor parental supervision is identified as a key risk factor for offending, parent management training could be implemented to improve parental supervision and ultimately reduce offending.

It is important that the results of fundamental research should inform intervention research, and vice versa. Intervention programmes should target the most important risk factors. Also, one of the most convincing ways of demonstrating that a risk factor is a cause is to carry out a randomized experiment targeting that risk factor. Intervention experiments can be important in testing causal hypotheses (Robins, 1992).

The key outcome variable in research on causes and prevention is of course offending. Hence, it is important that this outcome variable is measured accurately. The key hypothesis is that self-reports are more accurate than official records in measuring offending. Evidence relevant to this hypothesis will be reviewed in this report.

This report concentrates on self-reported offending (SRO) research in England, Wales, Scotland and Northern Ireland, as far as possible. It also reviews American research, since most of the advances in SRO research and in knowledge about criminal careers and the causes of offending have occurred in the United States in the last 30 years or so. Important SRO surveys have also been carried out in other countries (for a review, see Junger-Tas and Marshall, 1999), but they will not be reviewed here, in general.

SRO surveys have had many aims other than to study criminal careers and the causes of offending. In particular, they have been used to evaluate the effectiveness of prevention and intervention programmes (e.g. Painter and Farrington, 2001). Especially in the Netherlands, repeated national SRO surveys of juveniles have been used to measure trends in juvenile crime over time (Junger-Tas, 1996). National SRO surveys of young people have also been used to compare crime rates in different (mainly European) countries (Junger-Tas *et al.*, 1994).

This report focusses on SRO surveys of large community samples (at least

several hundred persons). It excludes surveys of prisoners (e.g. Horney and Marshall, 1991; Horney *et al.*, 1995). It also excludes the enormous literature on self-reports of drug use. The focus is on self-reports of property and violent offences such as burglary, robbery, shoplifting, theft of vehicles, theft from vehicles, assault and vandalism.

Major American SRO Surveys

For many years, survey respondents have been asked to report offences that they have committed that have not necessarily been detected by the police, in order to obtain information about “hidden delinquency”. For example, in their classic longitudinal surveys beginning in the 1920s, the Gluecks obtained this information from their subjects and from other informants such as parents and teachers (see e.g. Glueck and Glueck, 1968).

However, the use of structured SRO questionnaires began in the 1940s. (For a history of American SRO research, see Thornberry and Krohn, 2000.) One of the most influential early studies was by Wallerstein and Wyle (1947), who distributed a 49-item mail questionnaire to 1,698 adults in New York. The main thrust of this and other contemporary reports was that offending was very common: 99% of adults admitted at least one offence, and even ministers of the church admitted an average of 8 offences each. Wallerstein and Wyle (1947, pp. 111-112) concluded that:

Unlawful behaviour, far from being an abnormal social or psychological manifestation, is in truth a very common phenomenon... the solid truth remains that there is a large chance element in our administration of justice and it's the unlucky ones who are caught.

However, they also conceded that:

What is technically an offence and therefore within the scope of this study may actually be a relatively harmless act.

The major influence of SRO research on criminology really began in the 1950s with the research of Short and Nye (1957, 1958), funded by the U.S. Social Science Research Council (SSRC). Table 1 lists key features of 16 major American SRO surveys. Obviously, any selection of major SRO surveys is inevitably subjective, but I

am confident that my choice would overlap considerably with those of leading American criminologists. Most of these surveys were funded by the major federal agencies. Also, as will be explained, more objective data on publications, citations and federal funding agrees in identifying many of these surveys as very influential projects.

Perhaps the main reason why Short and Nye's SRO survey was influential was because they found no relationship between socio-economic status (SES) and self-reported delinquency. However, when they compared training school boys (not shown in Table 1) with high school boys, they found that the institutionalized delinquents came from much lower SES backgrounds. The implication, therefore, was that official processing was biased against low SES people. Given the importance attached to SES as a "master variable" by sociologists, and given the liberal beliefs of most criminologists (who were trained as sociologists at that time), this was a warmly welcomed result, and it triggered the "self-report revolution" in American criminology. Criminologists enthusiastically embraced the self-report method, often using the same items as Nye and Short. (Many SRO publications from the 1960s are reviewed in Farrington, 1973.)

The next important SRO survey was carried out in Flint, Michigan, by Gold (1970). This was important for many reasons. It was the first major SRO survey funded by the U.S. National Institute of Mental Health (NIMH), which would prove to be a major funder of these studies. The results were published as a book; the most-cited works in criminology tend to be books rather than articles (Cohn and Farrington, 1996, p.284). There was much more concern with methodological issues such as sampling; Gold (1970, p.10) carefully selected 600 children aged 13-16 at random from the population list of Flint public (state) schools, and managed to interview 522 of them (87%). Gold (1966, pp.32-33) also addressed issues of validity, by comparing self-reports with informant reports of offending. He also addressed issues of co-offending, finding that three-quarters of offences were committed with others, most commonly peers (Gold, 1970, pp.83-84). Perhaps most importantly, he showed that getting caught by the police

was followed by an increase in offending (Gold, 1970, pp.106-107). This result was later replicated in England in a more explicit test of labelling theory (Farrington, 1977; Farrington *et al.*, 1978).

The book by Hirschi (1969) was one of the most cited and most influential books in the history of criminology (Cohn & Farrington, 1996; Cohn *et al.*, 1998, chapter 2), particularly in the 1970s. It was important mainly because it was the first major attempt to test a theory about the causes of delinquency using the self-report method. It soon inspired a number of similar cross-sectional surveys designed to test causes of delinquency (e.g. Akers *et al.*, 1979; Johnson, 1979). Most attempts to test delinquency theories in the last 30 years in the United States have used the self-report method.

Most SRO surveys thus far had been conducted on samples based on one particular part of the United States. It was soon thought desirable to carry out national SRO surveys, and the first two of these were conducted by Gold in 1967 and 1972 (see Williams and Gold, 1972; Gold and Reimer, 1975). These provided an alternative measure of juvenile crime rates to the official arrest records. Gold and Reimer (1975, p.494) found that, apart from drug offences (which increased 10-fold), male juvenile offending decreased by 20% between 1967 and 1972 according to self-reports, compared with an increase of 29% in male juvenile court cases (Nimick *et al.*, 1983, Table 2).

The first major American longitudinal survey based on self-reports was conducted by Elliott and Voss (1974) in California. Four waves of data were collected annually in California schools, using questionnaires, beginning in the ninth grade (age 14-15). This was followed by the first national longitudinal survey based on self-reports -- Youth in Transition -- conducted by Gold's colleagues Bachman, O'Malley and Johnston at the Institute for Social Research at the University of Michigan, and funded by the U.S. National Institute of Education (NIE). Five waves of data were collected between 1966 and 1974 (Bachman *et al.*, 1978).

In turn, this was followed by the ambitious longitudinal National Youth Survey, beginning in 1977 and continuing to the present day. This is undoubtedly one of the most highly cited and influential American criminological projects; its principal investigator Elliott was the sixth most cited author in major American and International criminology and criminal justice journals in 1991-95, and his most cited work was the first book from the National Youth Survey (Elliott *et al.*, 1985). This survey is one of the most important sources of self-report data on criminal careers and the causes of offending, although concerns have been raised about testing effects in it (Thornberry, 1989; Lauritsen, 1999).

These first national SRO surveys were soon followed by a larger-scale repeated national cross-sectional survey -- Monitoring the Future -- conducted annually by Johnston, O'Malley and Bachman at the Institute for Social Research. This began in 1975 and continues to the present day (e.g. Johnston *et al.*, 2001). Funded by the U.S. National Institute on Drug Abuse (NIDA), it is the main source of information about trends in the prevalence of drug abuse over time. It also provides information about the prevalence of 15 delinquent acts over time, based on about 2,500 children per year (see e.g. Maguire and Pastore, 1999, pp.206-215). It shows that the prevalence of most delinquent acts has remained tolerably constant in the last 15 years. For example, 29.3% of American high school students admitted stealing from a store in 1986-88, compared with 31.8% in 1996-98; 5.4% admitted taking a car in 1986-88, compared with 5.4% in 1996-98.

Most SRO surveys have been conducted with children and young people. However, the first major SRO survey including interviews of adults was carried out by Tittle (1980). It was designed to test the deterrent effects of sanctions on offending, according to self-reports, and was funded by the U.S. National Science Foundation (NSF).

The Seattle survey of 1978 was important because it was part of a major

methodological and substantive assessment of SRO surveys by Hindelang *et al.* (1981). Again, this book -- *Measuring Delinquency* -- proved to be a very influential and highly cited work; Hindelang was the second most highly cited author in major American criminology and criminal justice journals in 1986-90, and this book was his most-cited work (Cohn and Farrington, 1994). The SRO survey was used in a randomized experiment to investigate the impact of different methods of administration (interview versus questionnaire, anonymous or not). The results indicated that no method was consistently better or worse than any other method according to the various criteria of reliability and validity. The SRO survey can be criticised for its low response rates (Elliott, 1982), but the book's significance depended more on its literature reviews.

Basically, Hindelang *et al.* (1981) exposed and debunked some of the currently fashionable but factually incorrect beliefs of criminologists at that time. For example, whereas some current theories assumed that everyone committed offences and that there were no differences between criminals and non-criminals, there was enormous variation between individuals in the frequency and seriousness of offending and many differences between more and less frequent or serious offenders. Secondly, whereas it was believed that the correlates (particularly SES) of self-reported offending were different from the correlates of official offending, Hindelang *et al.* (1981) showed that this was not true, with one important exception: race. In this case, they argued that self-report instruments were:

differentially valid by official delinquency status and race... black self-report scores are especially invalid among the most delinquent segment of the black population (p.165)... it is illegitimate to use lack of difference between white males and black males on self-reported delinquency as support for the view that the juvenile justice system discriminates against black males (p.214).

Equally important were Hindelang *et al.*'s (1981) reviews of the literature on the methodology of SRO surveys. In general, the reliability and validity of the self-report method came out of this rather well, at least in comparison with other methods. Unfortunately, this landmark book tended to kill methodological SRO research stone

dead. Researchers assumed that the validity of SRO surveys had been established for all time. The method became even more dominant in the 1980s and 1990s, but methodological research on it declined.

The other important change in the 1980's was the increasing realization by funding agencies and journal editors that longitudinal surveys were superior to cross-sectional ones in drawing conclusions about the development of criminal careers and the causes of offending. Basically, prospective longitudinal surveys can establish causal order better and can avoid retrospective bias. They can establish developmental sequences. Providing that a large number of explanatory variables are measured, longitudinal surveys can have high internal validity in excluding plausible alternative explanations of observed effects.

The remainder of the major SRO surveys in Table 1 are all longitudinal. Five major surveys began in the 1980s and are still continuing. The success and perceived importance of the National Youth Survey encouraged NIMH to fund the Oregon Youth Survey, which had more wide-ranging and intensive measurement of explanatory variables but a much smaller sample (see e.g. Patterson *et al.*, 2000). Convinced of the need for new prospective longitudinal surveys, the U.S. Office of Juvenile Justice and Delinquency Prevention (OJJDP) established the Pittsburgh, Rochester and Denver surveys in 1987-88. All of these surveys have continued up to the present.

These surveys have undoubtedly had a major impact on criminology; for example, the Pittsburgh Youth Study has already produced two books and 85 articles on numerous different topics (see Loeber *et al.*, 1998). It has advanced knowledge about the development of offending (prevalence, frequency and onset), about developmental pathways, about individual, family, peer, neighbourhood and socio-economic risk factors, about inter-relationships of problem behaviours, cumulative effects of risk factors, protective factors, and differences between reported offences (by mothers, boys and teachers) and court referrals. The intensity of data collection is impressive. For

example, in the first three years of the study, information on 1,500 boys was collected twice a year from mothers, boys and teachers, totalling 9,000 questionnaires per year. A sister study of about 2,500 Pittsburgh girls has just begun.

The Seattle Social Development Project is one of a new generation of longitudinal-experimental surveys. Arguments in favour of such surveys were set out in detail in Farrington *et al.* (1986) and Tonry *et al.* (1991). Briefly, they could advance knowledge about both the development of criminal careers and the effectiveness of interventions. The Seattle project had an early school-based intervention followed by a longitudinal follow-up (Hawkins *et al.*, 1999). A similar study, also involving repeated SRO surveys, is being conducted in Montreal by Tremblay *et al.* (1995).

The final survey listed in Table 1 is also the most ambitious. Convinced of the value of longitudinal surveys and influenced by the recommendations of Farrington *et al.* (1986) and Tonry *et al.* (1991), the U.S. National Institute of Justice (NIJ) and the MacArthur Foundation jointly established in Project on Human Development in Chicago Neighbourhoods. In the first wave of data collection in 1995-97, about 6,300 persons from birth to age 18 were surveyed; some findings on the exposure to violence of 2,022 children aged 9, 12 and 15 have been published by Kuo *et al.* (2000). Second wave data were collected in 1997-99, and third wave data in 2000-01; it seems that no self-reported offending results have yet been published.

Major longitudinal SRO surveys have also been conducted in other countries, notably New Zealand (e.g. Fergusson and Horwood, 2000; Moffitt *et al.*, 2001) and Canada (e.g. LeBlanc and Frechette, 1989). However, I will now move on to review British SRO surveys, and will concentrate on British SRO research from now on.

Major British SRO Surveys

SRO surveys vary in methodological quality, of course. For surveys that are primarily concerned to provide national estimates of criminal career features such as the prevalence of offending, the best surveys are those based on large representative

samples that can be generalized to the national population. For surveys that are primarily concerned to identify causes of offending, the best surveys are longitudinal (with explanatory factors measured before offending outcomes) and measure many different explanatory variables (individual, family, peer, school, neighbourhood, etc.) in order to maximize internal validity by testing and excluding alternative hypotheses about the causes of observed effects.

Validity and attrition are key features of all SRO surveys. Because of doubts about the accuracy of self-reports of offending, it is essential to assess the validity of these reports against some external criterion such as official records of convictions. Validity will be discussed in more detail in the next section. Attrition is important because of evidence that the persons who are most difficult to find and to interview tend to commit the most offences (Farrington *et al.*, 1990). Hence, a survey with a high attrition rate will tend to miss out a relatively large number of frequent offenders and to under-estimate the true number of offences committed. Cernkovich *et al.* (1985) argued that chronic offenders were usually missing from SRO surveys.

In the Cambridge Study in Delinquent Development, which is a prospective longitudinal survey of 411 South London males, 36% of those who were most difficult to interview at age 18 were convicted by that age, compared with 22% of the remainder (West and Farrington, 1977, p.165). Similarly, 41% of boys whose parents were uncooperative to the research when they were aged 8 were convicted as juveniles, compared with 18% of the remainder (West and Farrington, 1973, p.77); and 31% of the most uncooperative men at age 32 were convicted after age 21, compared with 19% of the remainder (Farrington *et al.*, 1990, p.143). Furthermore, the most elusive and uncooperative men at age 32 tended to have uncooperative parents at age 8 and to have been uncooperative themselves at age 18, showing the continuity of uncooperativeness across time and between generations.

It might be expected that attrition rates would be higher in longitudinal surveys

than in one-off cross-sectional surveys, but this is not necessarily true. Capaldi and Patterson (1987) found that initial recruitment rates and retention rates varied dramatically in longitudinal surveys. In 9 such surveys, the average recruitment rate was 75%, while the average retention rate up to 10 years afterwards was 53%. However, in the Cambridge Study, all eligible boys were included in the Study at age 8 (although 5% of their parents were uncooperative), and 94% of those still alive were interviewed at age 32, 24 years later. Methods of tracing and securing cooperation in this study were outlined by Farrington *et al.* (1990).

There are many ways of calculating attrition. For example, the response rate in the national survey of 14-15 year olds by Riley and Shaw (1985, p.6) was reported to be 73%. They started with the estimate from the population census that 8.3% of households should contain a child of this age. They tried to screen 17,365 addresses, which should therefore have produced 1,441 with a child aged 14-15. In fact, only 1,063 of these addresses contained such a child: “the most likely explanation of this difference would seem to be a form of concealed refusal with eligible households denying having such children” (Riley and Shaw, 1985, p.63). The number of successful interviews was 751, which is 71% of 1,063 but only 52% of 1,441.

In many ways, the interviewing requirements are less stringent for this kind of national cross-sectional survey than for a longitudinal survey. Whereas attrition in a longitudinal survey is based on not interviewing a specified individual, attrition in a national cross-sectional survey is based on not interviewing anyone at a specified address. While the longitudinal survey has to try to pursue a specific person who has moved from a specified address, the cross-sectional survey does not. Attrition rates would be much higher in cross-sectional surveys if they were based on target people (e.g. those listed on the electoral register) rather than target addresses.

Table 2 summarizes 9 major cross-sectional SRO surveys conducted in Great Britain or Northern Ireland, while Table 3 summarizes some results obtained in the

Cambridge Study, which is the only large scale longitudinal SRO survey ever conducted in England and Wales. A large-scale longitudinal SRO survey has recently begun in Scotland, directed by David Smith, but no results have yet been published from it.

Table 2 shows large scale community surveys (of at least several hundred persons) with published results on self-reported offending. Other smaller scale SRO surveys have been conducted; for example, Shapland (1978) interviewed 51 boys at ages 11-12 and 13-14, interestingly showing the percentage involvement in group as opposed to solitary offending. Campbell (1981) carried out one of the first SRO surveys focussing on female delinquency, interviewing 66 girls. She also presented some results from a large scale unpublished SRO survey by Jamison with 781 boys and 501 girls.

Many different acts have been enquired about in self-report surveys. Some have been relatively trivial. The focus here is on acts that are clearly against the law. Tables 2 and 3 summarize information about the prevalence and frequency of burglary and shoplifting obtained in SRO surveys. These acts were chosen to present here because they are relatively well defined and measured comparably in most surveys. Two SRO surveys were excluded from Table 2 because they did not provide information about either burglary or shoplifting: Gladstone (1978) focussed only on vandalism and Mayhew and Elliott (1990) reported results only for minor offences such as stealing office supplies and fiddling work expenses.

Three pioneering British SRO surveys were carried out in the 1960s. These were the surveys by Willcock (1974) and Belson (1975) and the Cambridge Study (reported by West and Farrington, 1973). Willcock aimed to interview a representative sample of boys from England, Wales and Scotland, while Belson aimed to interview a representative sample of London boys. Both used household samples. The Cambridge Study initially aimed to follow up all boys aged 8-9 in 6 state primary schools in a deprived area of South London, and first collected self-report data at age 14 (Farrington, 1995).

Two further school-based studies were carried out by Mawby (1980) in Sheffield and Anderson *et al.* (1994) in Edinburgh. The first of these was mainly concerned with gender differences in offending, while the second was mainly concerned with the victimization of young people. In both cases, the SRO surveys were self-completed in a group situation (in class). Obviously, it is more difficult to ensure comprehension and valid responding in a group self-completion exercise than in individual one-to-one interviews.

McQuoid (1992, 1994) carried out two SRO surveys in Belfast. The first was a pilot for the second, which was part of the International Self-Reported Delinquency (ISRD) survey (Junger-Tas *et al.*, 1994). McQuoid used a “modified random walk” method to select the sample, beginning with a random sample of addresses and then enquiring if any other house in the street contained a young person of the target age (14-21). She thought that the fee of £5 per interview might have accounted for the high response rate (the percentage of those asked who agreed to take part).

The other three large-scale surveys shown in Table 2 (Riley and Shaw, 1985; Graham and Bowling, 1995; Flood-Page *et al.*, 2000) were carried out by the Home Office and aimed to interview national samples. The latest survey used a computer-assisted self-completion method, which produced an increased admission rate compared with the previous paper questionnaire method (Flood-Page *et al.*, 2000, p.84). Riley and Shaw focussed particularly on the importance of parental supervision as a risk factor for delinquency, while the later two surveys aimed to provide more general information on criminal careers and causes of offending.

Validity of Self-Reports of Offending

Reiss (1975) castigated SRO researchers for paying insufficient attention to methodological issues such as the reliability and validity of instruments. The first assessment of SRO surveys on standard psychometric criteria such as questionnaire construction, administration procedure, objective scoring, norms for various populations,

internal consistency, retest stability, and concurrent and predictive validity was completed by Farrington (1973). The most important subsequent methodological assessments have been carried out by Hindelang *et al.* (1981), Huizinga and Elliott (1986), Farrington *et al.* (1996a), Junger-Tas and Marshall (1999) and Thornberry and Krohn (2000).

The key issue is validity: How far do self-reports produce an accurate estimate of the true number of offences committed? How accurately do self-reports measure the prevalence, frequency and seriousness of offending? Setting aside the less important issues of content and construct validity, the validity of self-reports is usually assessed by comparing them with some external criterion of offending. The comparison can be concurrent (measure and criterion at the same time) or predictive (measure taken before criterion).

The main problem centres on what to use as an accurate external criterion of offending. Unlike drug use, for example, (e.g. Harrison and Hughes, 1997; Fendich *et al.*, 1999), there are no physical traces of burglary or shoplifting in hair, blood or urine. Some researchers have compared self-reports in the usual conditions and when subjects are told that their lying will be detected physiologically (e.g. Clark and Tifft, 1966; Tourangeau *et al.*, 1997). Generally, admissions increase in the physiological condition. Admissions are also greater in anonymous conditions (Kulik *et al.*, 1968).

Notwithstanding the fact that self-reports were intended to overcome some of the perceived deficiencies of official records, SRO results are usually validated against arrest or conviction records. Other attempts to validate self-reports of offending are needed. It is possible to compare self-reports with parent, teacher or peer reports of offending (e.g. Gold, 1966; Jessor *et al.*, 1968; Hackler and Lutt, 1969). Self-reports can also be compared with more direct behavioural measures of offending. Farrington *et al.* (1980) gave young people an opportunity to steal and compared actual stealing with self-reported stealing, and Erickson and Smith (1974) compared actual cheating with self-

reported cheating. However, the most important validity checks are in relation to official records.

In order to assess the concurrent validity of self-reported offending, self-reports have been compared with convictions. The key statistic is not the association between the two measures (since many self-reported offences will not be officially recorded) but the probability that an officially recorded offence will be self-reported. This assumes that offences leading to convictions have really happened, neglecting plea bargaining and the possibility that convicted persons may in fact be innocent. In the Cambridge Study, Gibson *et al.* (1970) found that 91% of offences leading to convictions were admitted on an SRO survey at age 14. Using a more restrictive criterion for matching official and self-reported offences, Blackmore (1974) estimated this figure as 81% at age 14 and 76% at age 16. These are encouraging results. In the same survey, West and Farrington (1977, pp.20-26) found that, at age 18, 94% of convicted boys admitted that they had been convicted, while only 2% of unconvicted boys claimed to have been convicted. Of offences leading to conviction, 53% were reported accurately, 34% were reported but minimized, 7% were exaggerated and 6% were not reported.

Predictive validity is more impressive than concurrent validity, because being convicted may itself lead to an increase in the probability of admitting delinquent acts (Farrington, 1977), perhaps because a person may assume that the researcher will know about convictions and hence that concealment is futile. It is only to be expected that current self-reported offending (of past acts) will predict future convictions, because many current self-reported offenders are also convicted, and because future convictions are of course predicted by past convictions. A better test of the predictive validity of SRO surveys is to investigate how far self-reports predict future convictions *among currently unconvicted people*.

Only two studies of predictive validity among unconvicted people have been carried out in Great Britain, both in the Cambridge Study. Among unconvicted boys, a

measure of self-reported variety of offending at age 14 significantly predicted convictions in the next three years (Farrington, 1973). This test was later replicated for specific types of offences. Among boys not convicted of burglary up to age 18, 20% of those self-reporting burglary were subsequently convicted of burglary up to age 32, compared with only 2% of those who denied burglary up to age 18 (Farrington, 1989b). Similar results were obtained for theft of and from vehicles, assault, vandalism and drug use, but not for shoplifting. Only 23 boys (6%) denied all these types of offences up to age 18, but none of them was subsequently convicted of any offences up to age 32, suggesting that they were telling the truth. The first American test of predictive validity also showed that self-reports predicted future court appearances among unrecorded boys (Farrington *et al.*, 1996a).

While young males may readily admit their convictions, this may not be true for older males or for females. In 1981, I carried out a pilot study of self-reported offending by adults that was intended to inform the design of the first British Crime Survey (see Mayhew and Elliott, 1990, p.94). A nationally representative household sample of 433 persons aged 17-64 was interviewed. All were searched in the Criminal Record Office, and 26 were found to be convicted.

Of these convicted persons, only 10 (38%) admitted in the survey that they had been convicted, compared with 4% of unconvicted people who said that they had been convicted. Admission rates were higher for younger people (age 37 or less) than older ones (47% as opposed to 27%) and higher for males than for females (44% as opposed to 25%). The majority (55%) of younger males who had been convicted admitted this in the survey.

Gender differences in validity were also found by Hindelang *et al.* (1981, p.172) in the Seattle survey: the percentage of officially recorded serious offences that were self-reported was 80% for White males, 43% for Black males, 50% for White females and 41% for Black females. The percentage of officially recorded delinquents who admitted

that they had been picked up by the police was 76% for White males, 50% for Black males, 52% for White females, and 30% for Black females. Whether there are race differences in validity is not clear; they were also found in American research by Huizinga and Elliott (1986) but not by Hirschi (1969, p.77), Farrington *et al.* (1996a) or Maxfield *et al.* (2000). However, gender differences in validity were reported by Maxfield *et al.* (2000): 76% of convicted males admitted being arrested, compared with 60% of convicted females.

One final relevant result will be quoted from the Cambridge Study. At age 32, the males were asked if they had ever committed each offence, and these retrospective self-reports were compared with prospective self-reports obtained at ages 14, 18, 21 and 25. Over 8 types of offences about half (46%) of those who had previously admitted each offence denied ever committing it at age 32 (Farrington, 1989b). Similar results were obtained in a comparison of retrospective and prospective self-reports of shoplifting in the Dunedin study in New Zealand (Henry *et al.*, 1994). It might be concluded that long-term retrospective self-reports fail to detect many offenders identified in prospective self-reports and hence that prospective longitudinal surveys are needed to obtain valid data on self-reported offending over time.

Summarizing, the validity of SRO surveys is clearly high for young males but less clearly established for older people or for females. This may be because older people and females are concerned to present a façade of respectability whereas young males, who offend more often, are more open about offending; or it may be that the memory for offences decreases with an increasing time interval between the offence and the survey. Whatever the reason, more research on the validity of SRO surveys is needed.

Criminal Careers according to Self-Reports

It is not universally accepted that valid information about criminal careers can be obtained from SRO surveys. For example, in discussing careers of criminal violence, the U.S. National Academy of Sciences Panel on Violence stated:

Very few projects permit the investigation of the occurrence of violent crimes in criminal careers. Generally, self-report studies with general population samples (e.g. Elliott *et al.*, 1989) are unsuitable, for two main reasons. First, the prevalence of unambiguously violent crimes (as opposed to “gang fights”) is very low, possibly because many of the most violent people in the population are not included in the samples interviewed. Second, information about the time ordering of different types of offences is not collected in such studies. It would be desirable in future self-report studies of offending to collect time ordering information about unambiguously serious offences, which are rare; it would be impracticable to collect such data about all self-reported offences (Reiss and Roth, 1993, p.374).

Elliott (1994) disagreed so much with this that he devoted his 1993 Presidential Address to the American Society of Criminology to discussing the contribution of SRO surveys in advancing knowledge about careers of serious violence. He argued that self-reports of aggravated assault, robbery and rape in the National Youth Survey were serious: medical treatment was needed in two-thirds of cases and half involved a weapon. The prevalence of serious violent offences was considerable: at the peak age of 17, 36% of Black males and 25% of White males admitted at least one. He presented information not only about prevalence but also about onset and continuity over time and about gender and race differences in self-reported violence.

The main problem in obtaining information about criminal careers from SRO surveys is that, typically, many trivial offences are included. Many young males will admit that they have hit another young male, just as many older people will admit stealing office supplies or fiddling work expenses. But should such acts be included as offences in criminal careers? What is needed is a widely accepted subcategory of relatively serious “index” offences that are used in analyses of prevalence, frequency, onset (etc.) in criminal career research. These index offences should probably include burglary, robbery, vehicle theft, violence causing injury, forced sex and arson, but should probably exclude shoplifting, minor thefts, vandalism and less serious fighting. Hence, it seems interesting to compare SRO results with a more serious offence -- burglary -- and a less serious offence -- shoplifting -- in Tables 2 and 3.

Given the trivial nature of many offences, and the focus on young people in SRO

surveys, it is perhaps surprising that the prevalence of offending is not higher. Riley and Shaw (1985, p.31) found that 49% of boys and 39% of girls admitted at least one of 21 offences in the past year; the most common offence was smashing bottles in the street for boys (21%) and travelling without a ticket for girls (18%).

Graham and Bowling (1995, pp.11-12) reported that 55% of males and 31% of females admitted at least one of 23 offences ever, and 28% of males and 12% of females admitted at least one in the past year. The most common offence in the past year was handling stolen goods (13% of males and 7% of females). Similarly, Flood-Page *et al.* (2000, p.9) found that 57% of males and 37% of females admitted at least one of 27 offences ever, and 26% of males and 11% of females admitted at least one in the past year. The most common offences in the past year were buying stolen goods (8% of males and 4% of females) and fighting (8% of males and 2% of females).

The Prevalence of Burglary

Turning to the more specific and more serious offence of burglary, Tables 2 and 3 show great differences in prevalence between the different surveys. The “ever” prevalence for males varied from 22% in the Cambridge Study up to age 32 (Farrington, 1989b, Table 1) to 18% of London boys aged 13-16 (Belson, 1975, Table 2.1), 13% of London boys aged 14 in the Cambridge Study (Farrington, 1989b, Table 1), 12% of Belfast children aged 14-21 (McQuoid, 1994, Table 1), 9% of Belfast males aged 14-21 (McQuoid, 1992, Table 1) and 6% of English males aged 14-25 (Graham and Bowling, 1995, Table C1). “Last year” prevalences varied similarly, from 5.8% of Sheffield boys aged 13-15 (Mawby, 1980, Table 6) to 0.5% of English persons aged 12-30 (Flood-Page *et al.*, 2000, Table A3) and 0% of English boys aged 14-15 (Riley and Shaw, 1985, Appendix 3).

What annual prevalence of self-reported burglary would be expected in England and Wales in light of victim survey results? It is not difficult to derive a rough order-of-magnitude estimate. Between 1981 and 1999, the average number of residential

burglaries in England and Wales was about 1,200,000 per year according to the British Crime Survey or BCS (see Langan and Farrington, 1998, Appendix Table 36; Mirrlees-Black *et al.*, 1998; Kershaw *et al.*, 2000). On average, residential burglaries comprise about half of all recorded burglaries (e.g. 51% in 1991: see Home Office 1993). Therefore, it can be estimated that the total number of burglaries of all kinds per year in England and Wales is about 2,400,000.

However, about half of all burglaries in the BCS (46% in 1997; see Budd, 1999) were attempts in which the offender failed to gain entry. Such burglaries would not generally be admitted in SRO surveys, which focus on completed burglaries (e.g. “sneaked into someone’s garden or house or a building intending to steal something”: Flood-Page *et al.*, 2000, Appendix B; “break or sneak into a building”: McQuoid, 1992, Appendix). This reduces the number of burglaries likely to be admitted in SRO surveys to 1,200,000.

It is, of course, necessary to take account of co-offending. One burglary committed by two offenders should produce two persons admitting in an SRO survey. On average, each BCS burglary was committed by 1.8 offenders (Langan and Farrington, 1998, Appendix Table 36). Therefore, if all persons in England and Wales had been interviewed in an SRO survey the total number of burglaries admitted should have been about 2,160,000 per year ($1,200,000 \times 1.8$).

About three-quarters of all police-recorded offences (e.g. 77% in 1991: Home Office, 1993, Table 5.23) were committed by persons aged 10-29; this fraction is not published separately for burglary. Almost all SRO surveys focus on this age group. It can be estimated that this age group should admit about 1,620,000 burglaries per year ($2,160,000 \times 0.75$), or about 80,000 for each of the 20 ages from 10 to 29. Since about 96% of burglars found guilty or cautioned are male (Home Office, 1993, Table 5.12), it can be estimated that, at each age, males should admit about 77,000 burglaries and females should admit about 3,000 burglaries.

In 1991, there were on average 372,000 males and 355,000 females at each age from 10-29 (Office of Population Censuses and Surveys, Population Estimates Unit data). Therefore, in an SRO survey based on a national sample, 1,000 males should admit about 207 burglaries, while 1,000 females should admit only about 8 burglaries.

The prevalence estimate depends on the number of burglaries committed per year by each burglar. The best estimate of this average annual frequency of burglary is about 2-3. In the Cambridge Study, there were 8.2 offences per offender in the three years between 15 and 18, and 5.5 per offender in the two years between 19 and 21 (Table 3). The average offences per offender last year was 2.1 in McQuoid's first survey and 5.3 in an average 2.3 years in Belson's survey (Table 2). Assuming that the frequency = 2.5, the prevalence = 8.3% of males and 0.3% of females. This prevalence estimate for males is much higher than the actual annual prevalence of burglary found in the three national English SRO surveys: 0% (Riley and Shaw), 2.4% (Graham and Bowling) and 0.5% (Flood-Page *et al.*, males and females together).

The Prevalence of Shoplifting

These calculations can be repeated for other offences, and I now turn to shoplifting. This is a less serious offence and its prevalence can be estimated from surveys of retailers.

Again, the prevalence of shoplifting varies dramatically between different SRO surveys in Tables 2 and 3. The "ever" prevalence for males varied from 70% in the Belson survey (age 13-16) to 48% in the Cambridge Study (up to age 32), 24% of English males in the Graham and Bowling national survey (age 14-25) and 22% of Belfast males in McQuoid's first survey (age 14-21). The "last year" prevalence for males varied from 54% in Sheffield (age 13-15) to 40% in the last 9 months in Edinburgh (age 11-15), 12% in the national survey of Riley and Shaw (age 14-15), 6% in Belfast (age 14-21), 5% in the national survey of Graham and Bowling (age 14-25) and 2% in the national survey of Flood-Page *et al.* (age 12-30).

What annual prevalence of shoplifting would be expected in England and Wales in light of results from surveys of retailers? In the annual Retail Crime Surveys of the British Retail Consortium from 1992-97, there were an average of about 4,200,000 known shoplifting incidents per year (British Retail Consortium, 1998; Farrington, 1999). This includes witnessed incidents and cases where missing items were determined to have been stolen. The Home Office Commercial Victimization Survey of 1993 (a telephone survey of retail outlets) reached a broadly comparable estimate of 5,800,000 known shoplifting incidents in England and Wales (Mirrlees-Black and Ross, 1995).

It might therefore be assumed that there are a minimum of 5,000,000 shoplifting incidents per year. The only co-offending estimate is that from the Cambridge Study (Reiss and Farrington, 1991, Table 2) which shows 1.8 offenders per offence. Therefore, if all persons in England and Wales had been interviewed in an SRO survey, the total number of shopliftings admitted should have been about 9,000,000 per year.

According to retailers, about equal numbers of males and females are apprehended for shoplifting, and about two-thirds of those apprehended are aged 10-29 (Farrington, 1999, Table 2). This yields the estimate that males and females aged 10-29 in England and Wales should each admit about 3,000,000 shoplifting incidents per year. This translates into 150,000 incidents at each age. Relating this figure to 372,000 males and 355,000 females at each age from 10-29, a national sample of 1,000 males should admit about 400 shoplifting incidents, and a national sample of 1,000 females should admit about 420 shoplifting incidents per year.

The best frequency estimate from Tables 2 and 3 is again about 2-3 incidents per year per shoplifter. Taking this figure to be 2.5, about 16% of males and females aged 10-29 in England and Wales should admit shoplifting each year. This prevalence estimate is much higher than the "last year" figures in the national surveys of Graham and Bowling (4.5% of males and 2.4% of females) and Flood-Page *et al.* (2% of males and 2% of females). These estimates are admittedly rough and dependent on various

assumptions, but they suggest that admission rates in national SRO surveys might be under-estimates.

The Probability of Conviction

All SRO surveys provide information about the prevalence of offending, and in addition some provide information about the frequency of offending (the average number of offences per offender). Prevalence and frequency estimates in SRO surveys are typically greater than prevalence and frequency estimates from official records of convictions, as might be expected. By comparing SRO surveys and official records, it is possible to estimate the probability of an offender being convicted and the probability of an offence leading to a conviction.

However, the comparison is not straightforward. In particular, there is the problem of deciding what to do when a person is convicted of an offence but does not self-report it. One possible solution (adopted by West and Farrington, 1977) is to ignore such instances and calculate the probability of a conviction given a self-reported offence. An alternative solution (adopted by Farrington, 1989b) is to add these convictions to the numerator and denominator as known offences. In this case, the probability of a conviction given a known (self-reported or convicted) offence is calculated. It is not clear which solution is the better one. To the extent that few conviction offences are not self-reported, the two methods will give similar results.

Extensive estimates about the probability of conviction have been provided in the Cambridge Study. For example, West and Farrington (1977, p.28) found that 62% of boys who admitted burglary between ages 15 and 18 were convicted of burglary between these ages, and that 13% of the admitted burglaries led to convictions (see Table 3). The comparable figures between ages 19 and 21 were 48% of offenders convicted and 18% of offences leading to conviction; and between ages 27 and 32, 67% of offenders were convicted and 42% of offences led to conviction.

The probability of each type of offender being convicted in each age range is

given by Farrington (1989b, Table 3). Over the whole age range 10-32, the probability of an offender being convicted was highest for burglary (54%) and theft of vehicles (53%), followed by theft from vehicles (24%), shoplifting (14%), assault (13%), theft from work (7%), drug use (7%), vandalism (6%) and fraud (3%). Over all offences, this probability was 12% at age 10-14, 29% at age 15-18, 30% at age 19-21 and 15% at age 27-32.

Willcock (1974) also provided information about the probability of an offender and an offence being convicted. However, his information about convictions was obtained during the SRO survey, not independently from official records (as in the case of the Cambridge Study). The males in Willcock's survey were asked whether they had ever appeared in court accused of any offence. Relatively few admitted this. The probability of an offence leading to a conviction was 24% for residential burglary, 18% for theft of vehicles, and 1% for shoplifting. (These estimates were derived after setting a maximum frequency of 20 of each type of offence.)

In her first survey in Belfast, McQuoid (1992, Table 10b) asked about whether the last act committed had been detected, and by whom (police, parents, teachers, shop staff, etc.). She found that the probability of detection per offence was 23% for burglary, 29% for taking vehicles and 18% for shoplifting. Similarly, Flood-Page *et al.* (2000, Table A3) enquired about whether the respondents had been cautioned or taken to court in the past year for each offence. The probability of detection per offender was 29% for burglary, 50% for theft of a car and 15% for shoplifting.

Unfortunately, many of these analyses are based on small numbers. In the Flood-Page *et al.* survey, for example, only 0.5% admitted burglary in the past year, 0.3% admitted theft of a car, and 1.9% admitted shoplifting. This makes it difficult to carry out further analyses relating the probability of conviction to age, gender, race, or number of offences committed. For example, it was found in the Cambridge Study that the probability of an offender being convicted increased with the number of offences committed, but the probability of conviction per offence decreased with the number of

offences committed (West and Farrington, 1977, p.29). A similar result was obtained in the U.S. National Youth Survey by Dunford and Elliott (1984). These results suggest that more frequent offenders are more skilled in avoiding detection. More research on the probability of conviction is needed.

Other Criminal Career Features

Apart from the prevalence and frequency of offending, SRO surveys have provided information especially about the age of onset. For example, Tables 2 and 3 show that the average age of onset of shoplifting was 10 according to Belson (1975), 10.8 according to the Cambridge Study, and 13 according to Willcock (1974) and McQuoid (1992). Similarly, the average age of onset of burglary was 12 according to Belson (1976), 13-14 according to Willcock (1974), 14.5 according to the Cambridge Study and 15 according to McQuoid (1992). According to Graham and Bowling (1995, p.23), the average age of onset of all offences was 13.5 for males and females; they did not present comparable figures for offences such as burglary or shoplifting. The average age of onset of convictions is later (Farrington, 1992a).

Prospective information about ages of onset of offending, based on repeated interviews, is likely to be more accurate than retrospective information, where the average age of onset inevitably increases with the age of assessment. Similarly, it seems likely that very long-term longitudinal surveys are needed to provide valid information about ages of desistance and the duration of offending careers. Based on official criminal records, the median ages of the last offence in the Cambridge Study was 37 for the boy's fathers and 41 for their mothers (Farrington *et al.*, 1998, Table 5). Similarly, the median duration of criminal careers was 15 years for fathers and 10 years for mothers.

Graham and Bowling (1995, p.52) defined "desisters" as persons who had committed at least three offences (or one serious offence) in the past but no offences in

the previous year. They were compared with “persisters” who had committed at least one offence in the previous year. More defensible definitions of desistance would require the absence of offending over longer time periods, just as more defensible definitions of persistence would require the continuation of offending over longer periods. Flood-Page *et al.* (2000, p.6) defined serious and/or persistent offenders as those who had committed at least three minor offences and/or one serious offence in the previous year. Such offenders do not necessarily seem very persistent.

An important finding in longitudinal studies of official criminal careers is that a small proportion of persons account for a large proportion of all offences. In the Cambridge Study between ages 10 and 32, 6% of the males committed half of all the recorded offences (Farrington and West, 1993). They also committed a substantial fraction of all self-reported offences: 53% of all self-reported burglaries between ages 15 and 18, for example.

Graham and Bowling (1995, p.19) also found that the most frequent offenders accounted for a large number of self-reported offences: 3% of offenders accounted for 26% of offences in the previous year, and 22% of offenders accounted for 73% of the offences. Similarly, Flood-Page *et al.* (2000, p.13) concluded that 3% of offenders accounted for 22% of offences. It might be expected that this disproportionality would be greater in longitudinal than in cross-sectional data. The key issue is not so much this disproportionality (which is inevitable when high-frequency offenders are chosen) but how far these high-frequency offenders can be predicted in advance (see Blumstein *et al.*, 1985).

In the Cambridge Study, the transition matrices from offence types in one age range to offence types in the next age range were very similar for official records and self-reports, showing similar continuity and versatility of offending over time (Farrington, 1989b, Tables 6 and 7). Remarkably, self-reports at age 10-18 were just as good as convictions at age 10-18 in predicting future convictions for the same type of offence at

age 19-32. This reflected the considerable overlap between convictions and self-reports in identifying the same people as offenders. To a large extent, the males who were convicted tended to be those who admitted the most offences.

Few SRO surveys have enquired about co-offending, which is a crucial criminal career feature (see Reiss and Farrington, 1991). In the Cambridge Study, after admitting each type of offence, the males were asked "Who do you usually do it with?". Both numbers and types of co-offenders were coded. For example, for burglary ever up to age 32, the average number of co-offenders was 1.7 (based on 65 offenders), making the average co-offending group size 2.7. The average group size in official records of convictions was 2.3. The vast majority of co-offenders (90%) were male friends.

In Belfast, McQuoid (1992, Table 9) enquired about the number of accomplices on the last occasion, and found that the average co-offending group size for residential burglary was 3.1. She also enquired about locations of offences, and reported that 64% of residential burglaries were committed within 10 minutes walk of the offender's home. In the Cambridge Study according to official records, 58% of all offences were committed within one mile of the offender's home (Reiss and Farrington, 1991, Table 9). This figure decreased from 100% at age 10-13 to 53% at age 21-32.

SRO surveys have also enquired about motives for offences. In the Cambridge Study, West and Farrington (1977, p.35) found that the main motives for shoplifting at age 15-18 were rational or utilitarian (52%), followed by excitement or enjoyment (30%), group influence (7%) and self-exculpatory (e.g. "I was young", "I was drunk": 6%). Willcock (1974, Tables 36 and 37) provided extensive information about motives in response to the questions "What sort of things might urge you on, or encourage you or tempt you to do it?" and "What sort of things would hold you back, or worry you about doing it?". The study of motivation typically includes energizing, directing, inhibiting and decision-making factors (Farrington, 1993). For residential burglary, the main energizing factors were tempting situations (e.g. tempted by the money/wanted the goods) while the

main inhibiting factors were personal restraints (e.g. conscience, consideration for the victim).

Few British SRO researchers have investigated relationships between different criminal career features. The most important of these is probably the ability of an early age of onset to predict frequent offending and a long criminal career. This was investigated in the U.S. National Youth Survey by Tolan and Thomas (1995).

Similarly, few British SRO researchers have tried to test theories of different types of offenders using trajectory models. The most famous of these theories was proposed by Moffitt (1993), who distinguished between “life-course-persistent” offenders (who started early and had long, frequent careers) and “adolescence-limited” offenders (who started later and had relatively short criminal careers). Nagin *et al.* (1995) distinguished these types of offenders in the Cambridge Study using conviction data but then used self-report data at age 32 to test relevant hypotheses. For example, they concluded that the reformation of the “adolescence-limited” offenders at age 32 was more apparent than real, since these males continued to drink heavily, use drugs, get into fights and commit offences (according to self-reports but not according to official records).

Finally, no British researcher has yet studied the intergenerational transmission of offending using SRO surveys completed by parents and children. A great deal is known about intergenerational transmission based on convictions (Farrington *et al.*, 1996b). However, theories about the different mechanisms underlying this transmission could be tested most effectively using SRO surveys.

Predictors, Causes and Correlates of Offending

A great deal is known about the most important risk factors for offending (see e.g. Farrington, 1997a, 1998). These include individual factors such as impulsiveness, family factors such as poor parental supervision, peer factors such as having delinquent peers, school factors such as attending a high delinquency rate school, community factors such as living in a high-crime neighbourhood, and socio-economic factors such as poverty.

While it is easy to identify risk factors for offending, it is more difficult to determine which risk factors might be causes of offending. Longitudinal surveys can establish this more securely than cross-sectional surveys, because they can determine that a risk factor preceded offending. For example, they can exclude the hypothesis that poor parental supervision and child offending are correlated because the child's antisocial behaviour caused the parent to give up trying to control him or her.

In order to establish causes, it is important to measure a wide range of possible explanatory variables in order to test the hypothesis that a risk factor X only predicts offending because it is confounded with some other causal factor Z. For example, are poor parental supervision and child offending associated only because antisocial parents tend to have antisocial children and also tend to be poor supervisors of children?

A regression approach is useful in establishing which risk factors predict offending independently of other risk factors. However, the most common problem with regression analyses in criminology is that the presumed explanatory factors are measuring the same underlying construct as the outcome variable of offending (see e.g. Amdur, 1989). If, for example, school exclusion is used as a predictor of offending, it could be argued that this is not a causal analysis, since one index of the child's antisocial behaviour is being used to predict another index of the child's antisocial behaviour. As another example, since most offences (at least in the teenage years) are committed with others, most offenders will inevitably have delinquent friends. In a cross-sectional survey, demonstrating that having delinquent friends "predicts" child offending provides no information about whether having delinquent friends might cause child offending.

The most convincing knowledge about causes of offending is obtained in prospective longitudinal surveys measuring a wide range of possible explanatory factors at different ages and also measuring self-reported and official offending. However, British SRO surveys have provided useful information about the correlates of offending prevalence in cross-sectional surveys. Reassuringly, important risk factors for official

offending identified previously in longitudinal surveys of small samples prove to be important risk factors for self-reported offending in nationally representative samples. All the evidence suggests that, in general, the most important risk factors are replicable over time and place (e.g. Farrington and Loeber, 1999). However, careful meta-analyses would be needed to determine how far effect sizes are comparable over time and place.

Taking the most recent SRO survey, Flood-Page *et al.* (2000) reported risk factors for the prevalence of serious or persistent offending (defined above) in their national sample of persons aged 12-30. The serious/persistent offenders were disproportionately male (Table A10a), from inner cities (Figure 2.6) and from lower social classes (Figure 2.7). They tended to have lone or step parents rather than two natural parents (Figure 3.1), criminal parents (Table A11), poorly supervising parents (Table 3.1) and delinquent friends (Table A11). They tended to be bullies (Table 3.4), truants (Table 3.3), excluded from school (Figure 3.3), low achievers at school (Table 3.2), drug users (Figure 3.4) and regular drinkers (Figure 3.5). The likelihood of being a serious/persistent offender increased with the number of risk factors, from 4% of those with no risk factors to 57% of those with 4 or more risk factors (for boys aged 12-17: Figure 3.7).

Numerous systematic comparisons of the predictors of self-reported and official offending have been carried out in the Cambridge Study (e.g. West and Farrington, 1973, p.158; Farrington, 1979, 1985, 1989a, 1992b, 1992c, 1997b, 1998, 2000a, 2001; Juby and Farrington, 2001). In general, similar results are obtained with the two methods. For example, Farrington (1992c, Table 6.1) found that the most important age 8-10 predictors of juvenile convictions and self-reported delinquency were: troublesomeness, dishonesty, hyperactivity, daring, low intelligence, low attainment, poor parental child-rearing, poor parental supervision, separation from a parent, a convicted parent, a delinquent sibling, low family, income, poor housing and large family size. The only discrepancies between official and self-reported delinquency were that small boys tended to be official but not self-reported offenders and coming from a low social class

family predicted self-reported but not official offending.

Most studies of the predictors, causes and correlates of offending have focussed on the prevalence or onset of offending (e.g. comparing serious/persistent offenders with the remainder). It would also be useful to aim to predict other criminal career features such as persistence, desistance, residual career length, specialization and escalation (see e.g. Farrington and Hawkins, 1991), as measured by self-reports.

Questions in a New National SRO Survey

The main questions that might be addressed in a new national SRO survey of adults and young people in England and Wales concern criminal career features and correlates of offending. By extending the age range of the persons interviewed, it becomes more feasible to collect valuable information about the ages of desistance of offending and the duration of criminal careers. It might be desirable to ask about fewer types of offences and ask a series of follow-up questions about each offence that has ever been committed.

The screener question might be “Have you ever done X?” and the follow-up questions might include:

- How often in the last year?
- How often in the last 5 years?
- At what age did you first do it?
- At what age did you last do it?
- Who did you usually do it with?
- Why did you usually do it?

In addition, questions designed to establish the seriousness of the act could be asked (e.g. about the value of stolen goods or degree of injury to the victim). Information should be obtained about burglary, robbery, theft of and from vehicles, shoplifting, assault, vandalism/arson, forced sex and drug use. If there is concern about giving respondents something to admit, some questions about less serious acts might be administered first but not trigger follow-up questions. The questions about more serious acts would provide useful information about the prevalence and frequency of offending by people of different ages, onset, career duration and desistance, co-offending, motives,

and the quality of offences.

As far as possible, questions about offending should be designed to be comparable to other national data on crime, such as national victimization surveys and national police records. More efforts should be made to compare prevalence and frequency results from national SRO surveys with other data on offending. Ideally, questions should also be designed to be comparable to those asked in large scale SRO surveys in other countries, in order to facilitate cross-national comparisons of offending rates. Coordination with other comparable Western countries would be desirable.

In addition, questions should be asked about possible explanatory factors for offending such as those listed in the above section. It is perhaps less important to ask about types of antisocial behaviour that are well known to be associated with offending, such as heavy drinking, truancy and school exclusion, and more important to ask about a wide range of explanatory variables. For example, previous national SRO surveys contained few questions about individual factors such as impulsiveness, hyperactivity, low intelligence or low empathy. Also, previous national SRO surveys contained few questions about the community and neighbourhood context.

As indicated in this report, the two key issues which need more attention are attrition and validity. More efforts to minimize attrition should be made, including the payment of respondents (see Stouthamer-Loeber and van Kammen, 1995). Efforts should be made to include persons likely to be high-frequency offenders who are currently excluded from national surveys, such as persons in institutions, persons with no fixed abode, and non-residents. Research is needed on the effects of attrition on estimated offending rates, involving very intensive efforts to increase response rates in certain targeted areas.

It is essential to measure the validity of self-reports in any SRO survey. The easiest way to do this would be to search the criminal records of respondents and

compare offences for which they have been convicted with their self-reported offences and self-reported convictions in the survey. Of course, this raises ethical issues and requires respondents to supply names and dates of birth. According to the research of Kulik *et al.* (1968), admissions are about 10% greater in anonymous conditions than in non-anonymous conditions. It is essential to give respondents a guarantee that their admissions will be confidential and will not be disclosed to any criminal justice persons. Effects should also be made to assess validity of other information that could be collected in the survey that could be checked against some official record.

It is important to use methods that are likely to maximize the validity of self-reports of offending. It would be better to conduct interviews in an office rather than in the respondents' homes, where some other family member is often present. It might be better not to use traditional survey interviewers (i.e. middle aged, middle class females). It might be better to use a computerized interview, and even to use some kind of physiological measure of lying. Research is needed on how to maximize the validity of self-reports of offending.

Ideally, it would be desirable to plan any new national SRO survey to be the first wave of a new longitudinal SRO survey. If the sample could be reinterviewed several times, this would constitute a very significant new accelerated longitudinal survey (see e.g. Farrington *et al.*, 1986; Tonry *et al.*, 1991). The longitudinal design would provide much better SRO data on criminal careers and causes of offending. Problems of validity would be less, because respondents would know that their previous admissions had not led to any official action and would be less suspicious and more trusting. Also, validity is more easily measured in a longitudinal survey because of discrepancies between information given in different waves. The time is ripe to embark on an ambitious national longitudinal SRO survey, which could prove to be the most influential and informative ever carried out anywhere in the world.

TABLE 1**Major American Self-Report Surveys**

Researcher, Date of Survey, Main Funding	Initial Community Sample (Representative Publication)
Short, Nye, 1955 SSRC	2,358 Washington State and Illinois high school children age 14-17 (Nye & Short, 1957)
Gold, 1961 NIMH	Representative sample of 522 children age 13-16 in Flint (Michigan) schools (Gold, 1970)
Hirschi, 1964 NIMH	Richmond Youth Project: Stratified sample of 4,077 children age 12-17 in Richmond, California schools (Hirschi, 1969)
Elliott, Voss, 1963-1967 NIMH	2,617 children age 14-15 in California schools (Elliott & Voss, 1974)
Gold, 1967 and 1972 NIMH	National Surveys of Youth: Nationally representative household samples of 847 (1967) and 1395 (1972) children age 11-18 (Gold & Reimer, 1975)
Bachman, 1966-1974 NIE	Youth in Transition: Nationally representative sample of 2,213 high school boys aged 15-16 (Bachman <i>et al.</i> , 1978)
Tittle, 1972 NSF	Household sample of 1,993 adults age 15-93 in Oregon, Iowa and New Jersey (Tittle, 1980)
Johnston, Bachman, 1975- NIDA	Monitoring the Future: Nationally representative sample of about 2,500 school children age 13-18 interviewed each year about offending (Johnston <i>et al.</i> , 2001)
Weis, 1978 NIMH	1,206 Seattle school children age 15-18 (Hindelang <i>et al.</i> , 1981)
Elliott, Huizinga, 1977- NIMH	National Youth Survey: Nationally representative household sample of 1,725 children age 11-17 (Elliott <i>et al.</i> , 1989)
Patterson, 1984- NIMH	Oregon Youth Study: 206 boys age 10 in Eugene, Oregon, schools (Patterson <i>et al.</i> , 2000)
Hawkins, Catalano, 1985- NIDA	Seattle Social Development Project: 808 children age 10 in Seattle schools (Battin <i>et al.</i> , 1998)
Loeber, 1987- OJJDP, NIMH	Pittsburgh Youth Study: 1517 boys age 7-13 in Pittsburgh schools (Loeber <i>et al.</i> , 1998)
Thornberry, 1988 OJJDP, NIDA	Rochester Youth Development Study: 1,000 children age 12-14 in Rochester, N.Y., schools (Krohn <i>et al.</i> , 2001)
Huizinga, 1988- OJJDP, NIDA	Denver Youth Survey: 1,528 children age 7-15 in high-risk neighbourhoods of Denver (Huizinga & Jakob-Chien, 1998)
Earls, 1995- NIJ, MacArthur	Project on Human Development in Chicago Neighbourhoods: About 6,000 persons from birth to age 18 in Chicago neighbourhoods (Harvard University, 2000)

TABLE 2

Major British Self-Report Surveys

Researcher, Date of Survey	Description of Main Sample	Burglary Results	Shoplifting Results
Willcock, 1963	808 M age 15-21 from England, Wales & Scotland. Individual interview, 71% response.	2% ever broke into big store, garage, etc. 1% broke into house. Av. onset 13-14. Av. offences per offender 3.2 (store, shop), 3.4 (house).	6% ever stole from small shop, 3% ever stole from big store. Av. onset 13. Av. offences per offender 4.3 (small shop), 4.0 (big store)
Belson, 1967	1425 M age 13-16 from London. Individual interview, 86% response.	18% ever burgled. Av. offences per offender 5.3. Av. onset 12. Av. duration 2.2 years.	70% ever shoplifted. Av. offences per offender 9.7. Av. onset 10, Av. duration 4.2 years.
Mawby, 1975	327 M and 264 F age 13-15 from one Sheffield School. Group self-completion, 80% response.	5.8% of M and 1.1% of F broke into house in last year. 11.6% of M and 1.1% of F broke into school, shop last year.	53.6% of M and 38.6% of F shoplifted in last year.
Riley & Shaw 1983	378 M and 373 F age 14-15 from England and Wales. Individual interview, 71% response.	0% of M and 0.3% of F burgled house in last year.	2.4% of M and 1.3% of F stole item worth £1 or more. 12.4% of M and 5.9% of F stole item <£1. (in last year)
Anderson, 1989	465 M and 427 F age 11-15 from four Edinburgh schools. Group self-completion, response rate not stated.	3% burgled house and 3% burgled shop in last 9 months.	40% of M and 30% of F shoplifted in last 9 months.
McQuoid, 1990	149 M and 161 F age 14-21 from Belfast. Individual interview, 95% response.	8.7% of M and 7.5% of F ever burgled. Median onset 15. Av. offences per offender last year = 2.1	21.5% of M and 22.4% of F ever shoplifted. Median onset 13. Av. offences per offender last year = 2.3.
McQuoid, 1992-93	456 M and 427 F age 14-21 from Belfast. Individual interview, 92% response.	12.4% ever burgled. 3.1% of M and 1.4% of F in last year. Av. offences per offender ever = 2.2	26.8% ever shoplifted. 5.7% of M and 3.3% of F in last year. Av. offences per offender ever = 10.2
Graham & Bowling, 1992-93	738 M and 910 F age 14-25 from England and Wales. Individual interview, 64% response.	5.5% of M and 0.7% of F ever burgled. 2.4% of M and 0.1% of F burgled in last year	23.9% of M and 15.5% of F ever shoplifted. 4.5% of M and 2.4% of F shoplifted in last year.
Flood-Page, 1998-99	4,848 persons age 12-30 from England and Wales. Computer interview, 69% response	0.5% admit burglary in last year.	2% of M and 2% of F shoplifted in last year.

TABLE 3

Self-Report Data from the Cambridge Study

Date, Age, Response Rate (N)	Burglary Results	Shoplifting Results
1967, 14, 99% (405)	13.2% ever burgled. 26.4% of offenders were convicted	39.3% ever shoplifted 7.7% of offenders were convicted
1971, 18, 95% (389)	10.9% burgled at 15-18 Av. offences per offender 8.2 61.9% of offenders were convicted 13% of offences led to conviction	15.5% shoplifted at 15-18 Av. offences per offender 19.8 9.7% of offenders were convicted 1 per 170 offences led to conviction
1974, 21, 90% (218)	4.5% burgled at 19-21 Av. offences per offender 5.5 47.8% of offenders were convicted 17.7% of offences led to conviction	6.7% shoplifted at 19-21 Av. offences per offender 20.8 8.0% of offenders were convicted 1 per 250 offences led to conviction
1985, 32, 94% (378)	2.2% burgled at 27-32 Av. offences per offender 2.0 21.8% ever burgled (prospective) 17.5% ever burgled (retrospective) 66.7% of offenders at 27-32 were convicted 41.7% of offences led to conviction 53.6% of offenders at 10-32 were convicted Av. age first done it 14.5 (median 14) Av. age last done it 18.1 (median 16)	5.5% shoplifted at 27-32 Av. offences per offender 11.4 48.2% ever shoplifted (prospective) 52.6% ever shoplifted (retrospective) 26.1% of offenders at 27-32 were convicted 1 per 40 offences led to conviction 13.7% of offenders at 10-32 were convicted Av. age first done it 10.8 (Median 10) Av. age last done it 15.8 (Median 14)

Note: At ages 14, 18 and 32 the aim was to interview the whole sample. At age 21, the aim was to interview all convicted males and an equal number of unconvicted males (target N = 241 males).

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