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Juvenile Offending: Specialisation or Versatility

Carlos Carcach & Simon Leverett

Juvenile offending is an important public policy issue and one that attracts a great deal of attention in the Australian media. There is an overwhelming body of evidence suggesting that adult offenders begin their criminal careers as juveniles, and that policy interventions at the early stages of these careers reduce crime rates over time. Identification of promising interventions requires an understanding of the complexities underlying the delinquent careers of juvenile offenders.

Assessment of offending patterns is an important component in the process of improving our knowledge about juvenile offending in Australia. If offending is specialised, knowledge about earlier types of offences may help to predict later offending and may be used to assist juvenile justice decision making. On the other hand, versatility in offending does not enable the path of juvenile offending to be accurately predicted, which in turn makes control and prevention of juvenile crime a difficult task.

This paper shows that juvenile property offenders stick to this type of offence while other juvenile offenders show more versatile delinquent careers. It also shows that, in general, patterns of offending for most juvenile offenders tend to remain stable over time, irrespective of whether they are versatile or specialised.

This study uses juvenile court data from New South Wales from 1991 to 1996. It examines the extent to which youth offenders confine their offending to a particular type of offence, or spread their activities widely.

Adam Graycar
Director

This paper examines offence specialisation among juvenile offenders in New South Wales by addressing the following questions:

1. Do juvenile offenders tend to commit the same type of offence, or consistently switch between offences over the course of their offending careers?
2. Do patterns of juvenile offending remain stable or change over a career?

Studies of specialisation or versatility in offending shed light on the number of dimensions underlying delinquent behaviour. If there are several underlying processes leading to delinquency, then offending should be versatile rather than specialised. Offenders would tend to commit many different types of offences during their careers, and knowledge of the type of offence committed on one occasion would not help to predict the type committed on another.

Specialisation occurs when a single underlying process drives offending. Offenders would tend to continue committing the same type of offence during their careers, and knowledge of the type of offence committed on one occasion would help to predict the type committed on another.

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Data on offences committed on different occasions can be arranged by type of offence to produce what is known as a transition matrix. Transition matrices are constructed by using long-term average probabilities of moving from one type of offence to another over a delinquent career, and are based on the assumption that the likelihood of committing a given type of offence at any period of time depends only on the type of offence committed during the previous time period. They are often used to assess whether juvenile offenders are escalating in their offending, that is whether they are progressing from less serious to more serious types of offence; or de-escalating.

Transition matrices indicate the probability that an offender committing a given type of offence on one occasion will commit another offence of the same or different type on the next occasion. (These probabilities are known as transition probabilities, and they are used to assess the degree of specialisation over the course of delinquent careers.)

Offender specialisation is a neglected topic in the Australian literature and our knowledge about careers of juvenile offenders derives from research conducted overseas. Some studies support the hypothesis of a tendency towards specialisation (Wolfgang et al. 1972; Cohen 1986; Stander et al. 1989; Lattimore et al. 1994). Other studies report on weak evidence of offence specialisation, particularly among persistent juvenile offenders (Rojek & Erickson 1982; Smith & Smith 1984; Tracy et al. 1985; Cohen 1986; Farrington et al. 1988). Specialisation has been found to be strong for property offences, but weak for violent offences. However, the results of most studies should be treated with caution due to problems with the specification of crime categories and the portion of delinquent career examined (Tracy & Kempf-Leonard 1996).

Coumarelos (1994) and Cain (1996) addressed the issue of offence specialisation in their studies of juvenile recidivism in New South Wales. Using data on all proven court appearances during a given period, Cain (1996) compared offences at the first and last proven court appearances among recidivist juveniles between 1986 and 1994. He found that, for 40 per cent of the recidivist offenders, the offence at the last appearance was more serious than the offence at the first appearance, whereas both offences had a similar degree of seriousness for 20 per cent of these offenders. He obtained similar results when comparing the first and the most serious proven offence. Cain's results suggest that, among persistent juvenile offenders, there is a tendency towards progressively moving from violent offending to theft / property offences. He concludes that: "… theft and property offences, such as break and enter, are the 'norm' to which adolescent offenders progressively shift the longer such individuals are involved in juvenile crime" (pp. 55-8).

Data and Methods

The data used in this study consisted of unit records extracted from the New South Wales Department of Juvenile Justice's Children's Court Information System (CCIS). Data were available for all finalised appearances for the period from 1 July 1992 to 30 June 1997, amounting to 71,560 records. According to current legislation in New South Wales, any offender aged between 10 and 18 years is defined as a juvenile.

Data were processed to produce an offender-based file containing information on all the court appearances for each offender. There were 35,947 individual juveniles appearing in the New South Wales children's courts at some time between 1 July 1992 and 30 June 1997, inclusive. Of these juveniles, only those with at least two proven court appearances (6,094 or 16.9 per cent of offenders) were included in the study.

The following types of offence were considered:

- Violent offences (homicide, assault, sexual assault and extortion)
- Robbery
- Break and enter
- Motor vehicle theft
- Other theft
- Drug offences (possession, trafficking and producing / manufacturing)
- Offences other than above

This classification scheme results in more or less mutually exclusive crime categories.

A transition occurs when a juvenile offender records consecutive proven court appearances. The maximum observed number of proven court appearances for a single individual included in this study was 26 and the minimum number was two. This study examined offenders' passages from the first up to the sixth proven court appearances, giving rise to a maximum of five transitions.

Transition matrices were constructed from data on the number of individuals at consecutive court appearances classified by type of offence. For example, Table 1 shows that a juvenile who was convicted for a violent offence at his / her first proven court appearance, has a 28.3 per cent chance of being convicted for the same type of offence at his / her next proven court appearance.

Court data only provide information on the most serious offence at each recorded appearance, even though a juvenile may record several charges for a single court appearance. This imposes serious constraints on its use in this type of study, but the problem is not unique to court data, as can be appreciated from overseas studies using arrest records (Stander et al. 1989; Lattimore et al. 1994). However, evidence from overseas indicates that as high as 80 per cent of juvenile offenders

who appear in court are charged with one offence only (Farrington et al. 1988).

Further, court based data are notoriously incomplete in respect of measuring re-offending. Due to the relatively low seriousness of the offences committed by most juveniles, they are not placed under detention awaiting court trial, so may engage in further offending and go undetected. This has the net effect of underestimation of the recidivism rate and overestimation of the period between offences.

Research on delinquent careers, and in the most specific issue of specialisation in offending, is restricted by the lack of adequate data. Ideally, the data set should consist of longitudinal observations on individuals and their contacts with the criminal justice system, but in Australia such data are seldom available. Court based data, despite all their imperfections, are still useful to study specialisation.

The two more commonly used measures of specialisation are based on the Adjusted Standardised Residual (ASR) (Haberman 1979), and the Forward Specialisation Coefficient (FSC) developed by Farrington (1986). This study uses the ASR to assess specialisation of offending.

The ASR provides a measure to test whether an element of the transition matrix is less or greater than would be expected by chance; that is, whether a type of offence committed is independent of the type of offence committed on the previous occasion. The ASR is not intended to compare the criminal careers of offenders according to their intensity of offending. Moreover, the ASR should not be interpreted as a measure of scalation / graduation of offending. Its only purpose is to serve as a criterion to assess whether the observed data

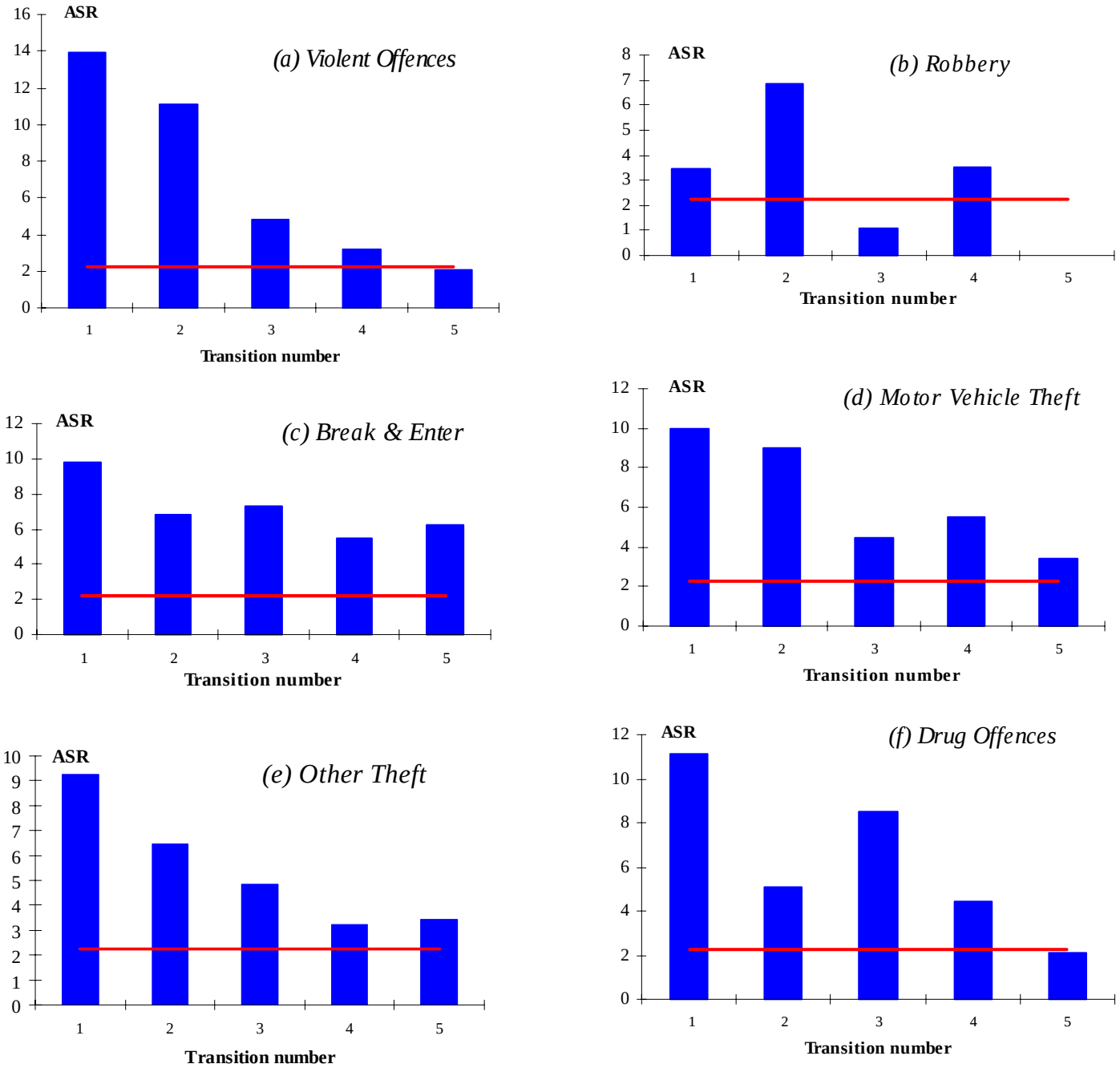

Figure 1: *Measure of Offence Specialisation*

are consistent with specialised or versatile criminal careers.

Our second research question was addressed by assessing whether the transition probabilities remain unchanged across proven court appearances. Temporal stability of offending patterns is determined by testing the hypothesis that transition probabilities are stationary. A statistical procedure to perform this test was proposed by Goodman (1962).

Is Juvenile Offending Specialised or Versatile?

Our results point toward both specialisation and versatility in juvenile offending. While violent and motor vehicle offenders tend to remain specialists over the course of their delinquent careers, the versatility of juveniles sentenced for the remaining offences tends to increase over time.

Figures 1a to 1f show the values of the specialisation measure for each of the seven types of offences included in the study. Transitions are represented in the horizontal axis. The horizontal reference line shows the value above which the specialisation measure is statistically significant at the 1 per cent level. Transitions with values above this line indicate specialisation in offending, while those with values below the reference line are indicative of versatility in offending. Note that no graph has been included for the group of "other offences" because the diversity of the illegal behaviours contributing to this group makes any assessment of specialisation in offending meaningless.

In general, our results support the hypothesis that there is an initial tendency towards specialisation among juvenile offenders, in particular for violent offences, break and enter, motor vehicle theft and other theft. Note that as the number of proven court appearances increases, the level of specialisation among violent, motor vehicle theft and other theft offenders tends to decline. On the other hand, break and enter offenders tend to stay as specialists as they progress in their criminal careers.

Drug offenders tend to remain specialists until after the fourth proven court appearance, when they begin to diversify their offending.

Do Patterns of Juvenile Offending Remain Stable over Time?

Our results indicate that patterns of juvenile offending do tend to remain stable over time. This implies that the probabilities of moving from one type of offence to another do not change as juveniles develop their delinquent careers.

Table 1 contains the probabilities that a juvenile who has a proven court appearance for a specific offence on one occasion will have a proven court appearance for the same or any other offence on a subsequent occasion. It shows, for example, that juveniles having a current proven court appearance for violent offences have a 28.3 per cent chance of a subsequent proven court appearance for the same type of offence; the chance is 7.7 per cent for robbery; and so on.

Among offenders recording a proven court appearance for robbery, there is a 18.2 per cent chance of a subsequent appearance for violent offences such as assault or homicide.

Note that among juveniles having a current proven court appearance for break and enter, there is a 17.8 per cent chance that the subsequent proven court appearance will relate to other theft, and a 29.6 per cent chance that it will relate to other offences.

Among drug offenders, the chance of a subsequent court appearance related to break and enter is 13 per cent, whilst there is a chance of 16.4 per cent that it will relate to other theft, and 34 per cent for other offences.

The figures shown in Table 1 could also be used to answer the question of whether there is a progression in the seriousness of offences during the delinquent careers of juvenile offenders in New South Wales. If the probability of moving from a less serious to a more serious offence exceeds the probability of moving from the more serious to the less serious offence then we can talk of escalation in the seriousness of offences.

Data suggest a trend towards de-escalation among juvenile offenders in New South Wales. For all the types of offence, excluding violent offences and robbery, the probability of moving to a less serious offence exceeds that of moving in the

Table 1: *NEW SOUTH WALES, Chances that a Juvenile Appearing in Court for a Given Offence will Appear in Court for the Same or Other Type of Offence*

Current Proven Court Appearance	**Probable Subsequent Proven Court Appearance (%)**						
	Violent Offences	*Robbery*	*Break & Enter*	*MVT*	*Other Theft*	*Drug Offences*	*Other Offences*
Violent Offences	28.3	2.9	11.7	6.0	13.5	4.0	33.7
Robbery	18.2	7.7	10.2	11.6	12.9	3.4	36.1
Break & Enter	14.0	2.3	26.3	6.4	17.8	3.6	29.6
MVT	14.8	2.2	12.0	19.5	15.3	6.1	30.2
Other Theft	16.3	2.8	13.5	8.9	25.9	4.0	28.5
Drug Offences	11.3	2.4	13.0	6.0	16.4	17.0	34.0
Other Offences	18.7	2.4	13.0	7.8	17.2	4.9	36.1

opposite direction. As an example, Table 1 shows that the chance of an offender appearing in court for "other theft" (less serious) given that his/her previous appearance was for break and enter (more serious) is 17.8 per cent. On the other hand his/her chance of appearing in court for break and enter given that the previous appearance was for "other theft" is 13.5 per cent.

Violent offences do not conform to the de-escalation trend. As shown by the figures in Table 1, the probability of recording a court appearance for a violent offence given a previous appearance for an offence in any of the other groups always exceeds the probability of an event in the opposite direction. This result is consistent with our previous findings about the trend for versatility over time. As juveniles appearing in court for offences other than a violent offence progress through their delinquent careers, their chance to commit a violent offence increases. This pattern tends to remain stable over time.

The transition matrix shown in Table 1 can also be used to make a very rough assessment of the relationship between drugs and crime. Figure 1f indicated that drug offenders tend to commit other types of crime only after they have reached a certain stage of their delinquent careers. The figures in Table 1 show that the chance of a court appearance for drug offences given a previous appearance for any other type of offence is always less than the chance of a transition in the opposite direction. Our findings can only be considered as indicative of a possible causal link between drugs and crime and suggest the need for further research on this issue.

Policy Implications

Juveniles contribute between 30 and 40 per cent of all property offences and about 20 per cent of all offences recorded by police. As persons aged 10 to 18 years contribute about 14 per cent of the total Australian population, juvenile crime rates are higher than those for the rest of the population (Mukherjee et al. 1997).

According to Carcach and Leverett (forthcoming) 37 per cent of juveniles having a proven court appearance in New South Wales during the 1992–93 financial year recorded a subsequent court appearance during the following 5 years. This suggests a relatively high rate of repeat juvenile offending.

The results from this study indicate that violent and property juvenile offenders tend to specialise. At least 65 per cent of all juvenile offenders commit the most specialised offences of violence, burglary, motor vehicle theft and other theft. This suggests the possibility of accurately predicting the delinquent careers of a significant portion of juvenile offenders.

Among drug offenders, the level of specialisation tends to decrease as the number of proven court appearances increases. Our results suggest that juvenile offenders appearing in court for a drug offence will continue to do so until the fourth consecutive appearance, when they will begin to appear for violent and property offences. This points towards the conclusion that any link between drugs and crime is dependent upon the length of time a juvenile spends as a drug offender. Note however that no causal relationship between drugs and crime can be inferred from the results of this study.

Important policy implications derive from our findings. Firstly, since juvenile offending tends to be specialist for the most serious offences of violence, break and enter, other theft and motor vehicle theft, the frequency and path of court convictions are highly predictable. Properly designed and managed interventions aimed at diverting juvenile offenders at the early stages of their criminal careers from further engagement in crime would be expected to result in sensible declines in the rates of juvenile crime and delinquency. Juvenile conferencing, which is already operating in New South Wales (Department of Juvenile Justice 1999), is one promising strategy for dealing with juvenile crime.

Community based programs aimed at providing juvenile offenders with opportunities to enhance their educational attainment and performance, as well as their employment prospects may have a positive impact in dealing with offending behaviour. The families of juvenile offenders who are at the early stages of their criminal careers, as well as those with more persistent patterns of offending, need support in their efforts to help their children to get out of crime. Support aimed at enhancing parents' abilities to provide their children with skills for self-control is of foremost importance in this respect.

The formal role of the juvenile justice system cannot be neglected, in particular when dealing with persistent violent and property offenders. A sentencing policy oriented towards incapacitation of juvenile violent and property offenders would reduce the supply of juvenile violent offenders by at least 28 per cent, and that of property offenders by at least 46 per cent, over the potential length of the delinquent careers. Such a potential reduction in crime must undoubtedly be weighed against the costs associated with the detention of juveniles. (Current figures on the cost of keeping a juvenile under detention are not available, but Potas, Vining and Wilson (1990) indicated that the annual cost of incarceration per juvenile was $82,679 in 1986–87.) Incapacitation policies should be pursued as a last resort, only after community based mechanisms may have proved not successful.

A second policy implication arises from the fact that juvenile offenders charged with drug offences tend to become versatile after a given number of proven

court appearances. An immediate consequence of this is the reduced predictability of the delinquent careers of these juveniles, which in turn complicates judicial decisions regarding sentencing options. Given the relative unpredictability of offending among juveniles charged with drug offences, rehabilitative sentencing in the form of mandatory drug treatment may help in breaking the drug–crime cycle that seems to develop after the fourth proven court appearance. Specialist drug courts may have a potential for success in this area (Makkai 1998).

A third policy issue results from the versatility in offending among juveniles charged with "other offences". Our results show that these juveniles tend to start committing violent, property or drug offences only after they have had three proven court appearances for an offence in the miscellaneous group. (These miscellaneous offences are arguably minor in terms of their seriousness when compared to the other types of offence included in this study.) Its relevance as a policy issue relates to the fact that soon after a period of minor offending during their delinquent careers, on average 54 months (Carcach & Leverett forthcoming), these offenders turn to more serious crimes. Community based programs coupled with tougher sentencing policies aimed at incapacitating persistent violent and property offenders, together with mandatory treatment for drug offenders, may have a deterrent effect among minor offenders who are at the early stages of their delinquent careers. Rigorous evaluation is required in order to ascertain the impact of any policy aimed at reducing juvenile crime.

The limitations of court data in analysing juvenile offending careers have been discussed extensively. Properly matched police, court and corrections data such as those held by the Western Australian Crime Research Centre or the Office of Crime Statistics of South Australia have an enormous potential to support research in this important area.

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