

Reducing Juvenile Reoffending by Understanding Factors Contributing to Intention to Reoffend

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Abstract

The New South Wales Government has made explicit its aim to reduce reoffending by 10 per cent by 2014. Contributing to the knowledge base on reoffending will help government agencies and other groups to provide adequately targeted interventions to help achieve this aim. This article looks at reoffending through the prism of intention to reoffend. It therefore moves away from procedural definitions of reoffending (e.g. arrest rate or reconviction rate) that, among other limitations, are subject to the changing policies and practices of local law enforcement agencies. Intention to reoffend also identifies a subgroup of recidivists who might be different from other recidivists in significant ways. Declared intention to reoffend was captured during interviews with young offenders (using close-ended questions) 0 to 45 days after the index sentence. The question revealed a subgroup of recidivists whose reoffending was characterised by feelings of disenfranchisement – they were more likely than other offenders in the cohort to be disengaged from teachers and parents; to be frequent binge drinkers; to have friends who all used illicit drugs; and to have parents who punished by slapping or hitting. Further to this, being sentenced to custody did not deter intention to reoffend, but rather was independently associated with intention to reoffend.

Introduction

New South Wales (NSW) Juvenile Justice (formerly the NSW Department of Juvenile Justice) has been mandated by the NSW Government to reduce the proportion of offenders who reoffend within 24 months by 10 per cent by 2014 (NSW State Government 2010). Further to this, in recent years the incarceration of juveniles has contributed to overcrowding in juvenile justice centres in NSW (Vignaendra et al 2009). Research that sheds light on the factors that contribute to juvenile reoffending in NSW would usefully inform how best to reduce reoffending and the number of juveniles incarcerated. Previous NSW studies (e.g. Chen et al 2005; Smith and Jones 2008; Weatherburn et al 2009) have shown that prior

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criminal record accounts for most of the variance around juvenile recidivism. Given the lack of availability of any other measure of reoffending, these studies were limited to a single procedural definition of reoffending: reconviction (inclusive of sentences of dismissals). Reconviction as a measure of reoffending has been identified as problematic for a number of reasons. A significant proportion of juveniles, including recidivists, commit crimes that go undetected (Cunneen and White 2002). It also leads to a Type II error: it fails to count arrestees who are guilty of committing a crime, but who, for administrative reasons (e.g. breach of evidentiary rules), are not convicted (Maltz 1984). Reconviction also reflects the policies and practices of local law enforcement agencies, which could fluctuate and change independently of actual offending (Maltz 1984; Cunneen and White 2002).

The study reported in this article examines reoffending through an alternative definition: intention to reoffend. This moves away from procedural definitions of reoffending, and also identifies a particular type of recidivist—those who declare themselves to be such in advance of their subsequent offending. For this group of offenders, reoffending, as measured by intention to reoffend, might be informed by a different set of factors than reconviction. For example, prior criminal record might be found to exert minimal influence on intention to reoffend. Other explanatory variables—that perhaps lend themselves to being corrected by juvenile justice programs and initiatives—might be found to better account for the variance around intention to reoffend.

Juvenile reoffending has a number of features that distinguishes it from adult reoffending. The prevalence of offending is greater among juveniles than adults (Piquero, Farrington and Blumstein 2007), juveniles are proportionately more likely to co-offend (McCord and Conway 2005) and juveniles reoffend more frequently than adults and commit crimes that are more easily detected by police than adult crimes (Cunneen and White 2002).

With these features in mind, studies largely undertaken in the United States (US) have examined the nature and correlates of juvenile intention to offend and reoffend. Given the material and other costs associated with incarceration (which is also relevant to the NSW context, see Weatherburn et al 2009), many of the studies attempted to test the success of deterrence theory and the rational choice model at explaining criminal behaviour, including intended behaviour. Other studies aimed to test the efficacy of strain theory (as explicated by Cloward and Ohlin 1960), including social drift theory (most notable associated with Matza 1964); labelling theory (beginning with Becker's (1963) theory); and lack of self-control (most commonly associated with Gottfredson and Hirschi 1990) at explaining juvenile offending and reoffending.

A number of different methodologies were adopted to examine intention to offend and reoffend: some studies measured a wide range of factors thought to contribute to criminal activity; others focused on the effect of the legal sanction alone. Some tried to capture the dynamic nature of intentions; and others the pathways that culminate in intentions. Some studies focused solely on serious crimes; others only on the less serious, but more common, types of juvenile offending.

In particular, the efficacy of deterrence theory was examined in a number of different ways and this might account for why the effect of the criminal justice system on intention to reoffend found mixed support. Most studies had a simple and single measure of deterrence, which was the effect of a legal sanction on intention to offend or reoffend. Others extended deterrence to encompass either the effect of being arrested for an offence, how one is dealt with by the criminal justice system, and the certainty and severity of legal sanctions on

intention to reoffend. Legal sanctions were found at best to have a weak deterrent impact on intention to drink-drive or steal (Tibbetts 1997) and to have no impact on the intention to start, desist from or persist in, drinking alcohol underage, taking marijuana, committing petty theft or committing vandalism (Paternoster 1989). Corrado et al (2003) found that among serious and violent offenders, while fairness of the criminal justice system, its ability to meet special needs, procedural rights (all found by factor analysis to form a single construct) and the deterrent effect of a custodial sanction all played a role in juveniles' intention to reoffend after a period of incarceration, the individual and collective effect of these factors was weak. Less than half their sample's intentions to reoffend were influenced by any of these factors. Piquero and Paternoster (1998) made a distinction between punishment and punishment avoidance. They found that experiences of punishment (learnt directly through experience and/or vicariously through others) strengthens the perceived certainty of arrest and decreases intention to repeatedly drink-drive. Punishment avoidance (that is, the offence going undetected), by contrast, weakens the perceived certainty of arrest and increases intention to drink-drive.

Corrado et al (2003) cautioned against assuming that similar factors would influence the decision to repeatedly commit different types and seriousness of crimes. In fact, Paternoster (1989) found that different factors influenced the decision to commit different types of crimes and that the decision to quit offending was also offence-specific. For example, intention to use marijuana and to commit acts of vandalism were linked to changes in friendship or behaviour of friends, while intention to drink alcohol underage and to commit petty theft were not. Exum (2002) found that anger and inebriation—the latter of which impairs the brain's executive cognitive function (EFT)—increased intention to engage in violent behaviour. It would also be useful to ascertain the influence of impairment to EFT on non-violent juvenile recidivism.

One of the more persistent findings from a range of studies was the importance of moral beliefs about offending on intention to offend and reoffend. In the studies that controlled for this factor, moral beliefs either took the form of state-based offence-specific shame, the regard with which juveniles thought family and friends held offending, or versions of civic-mindedness (Paternoster 1989; Tibbetts 1997; Piquero and Paternoster 1998). Tibbetts (1997) found that moral beliefs inhibited intention to drink-drive and shoplift. He also found that state-based shame derived from the crime being exposed to others was found to have a negative effect on intention to shoplift. Nagin and Paternoster (1994) found that self-centredness decreased investment in personal capital (that is, regard for what others think and forming close friendship), which, in turn, increased intention to reoffend.

Tibbetts (1997) found that a lack of self-control, the need for pleasure, and prior offending were all positively associated with intention to shoplift and drink-drive; however, together all these factors explained only 40 per cent of the variance around intention to drink-drive and 37 per cent of the variance around intention to shoplift.

Paternoster (1989) showed that the intention to reoffend was not static over time, but was regularly evaluated and re-evaluated. He examined what factors made juveniles enter into crime or desist, persist with this decision to continue with crime or desist, and desist from crime after period of offending and start criminal activity after desisting from crime. After controlling for a wide range of factors (background factors, affective ties, material considerations, opportunities, informal sanctions, formal sanctions and moral considerations), the decision to drink alcohol, take marijuana, or commit theft or vandalism was found to be related to gender, moral beliefs, parental supervision and social activities,

which he theorised collectively suggested that undertaking risk-taking and/or anti-social behaviour was linked to weaker bonds to conventionality and being free to drift into delinquency. The decision to start offending after desisting was linked to weak attachment to parents, opportunity and moral beliefs.

Paternoster and Pogarsky (2009) found that problematic decision-making at an early age impacted on both proximal and distal outcomes and persisted over time. Specifically they found that those juveniles who engaged in less thoughtful and reflective decision-making in early years (12–19 years old) committed more risky behaviours and had lower college aspirations 6 to 18 months later. Five to seven years later, they had not enrolled or completed college. These people also had fewer conventional prosocial attachments five to seven years later (as measured by amount of community and civic participation) and were more likely to be involved in delinquency, heavy drinking and drug use at this later point in time.

Carroll (1978) attempted to determine whether individuals engage in a cost-benefit analysis when making the decision to reoffend. He found that the intention to reoffend could in part be explained by expectations about the rewards of committing the crime and the penalties for committing the crime, and the perceived probability of success and capture. Only main effects were found; the interaction of these factors did not account for the variance around intention. Furthermore, for 71 per cent of the adults and juveniles in Carroll's study, only one of these factors accounted for their intention to reoffend. Perceived rewards and perceived penalties accounted for much more of variance around intention to reoffend than the perceived probability of either success or capture; however, juveniles factored in probabilities in their decision-making more so than adults.

The current study examined intention to reoffend in the NSW context. It re-analysed data collected for purposes other than to measure intention to reoffend. This broader study utilised only a single measure of intention to reoffend obtained at a single point in time.

This study was also not able to determine the effects of impairment to juveniles' executive cognitive functioning on intention to reoffend—the study did not measure whether participants were inebriated or very angry at the time of stating their intention to reoffend (given the context in which the interviews for the study were conducted, it is suspected that very few, if any, study participants were inebriated). Similarly, the study's cross-sectional design did not enable the study to determine whether unreflective decision-making at an earlier age led to intention to reoffend, and whether this persisted over time.

Nonetheless, this is one of the few studies in NSW that captured juvenile intention to reoffend, as well as other possible correlates of reoffending.

The aims of the study were:

- to assess the deterrent effect of a sentence of custody on intention to reoffend;
- to determine whether prior offending accounted for most of the variance around intention to reoffend; and
- to determine what other factors were independently associated with intention to reoffend when all factors were considered together.

Method

Data Collection

A survey was undertaken of young offenders sentenced by the Children's Court of NSW. The purpose was to determine what factors contributed to juvenile offending and juvenile recidivism.

Juveniles dealt with by the Children's Court of NSW would have committed their offence (assuming they were guilty) after the age of 10 years and before the age of 18 years and would have been apprehended by the police for the offence before the age of 21 (s28 *Children (Criminal Proceedings) Act 1987* (NSW)). Study participants were aged between 13 and 20 years, inclusive, at the time of their interview.

Section 28 of the Act also provides that the Children's Court has jurisdiction to hear and determine proceedings in respect to any offence—indictable or otherwise—other than a serious children's indictable offence as defined by s3, which includes very serious offences such as murder and sexual assault. Most traffic offences also fall outside the jurisdiction of the Children's Court. None of the juveniles included in the study were therefore surveyed following an offence of murder, sexual assault or the majority of traffic offences.

The survey took the form of an interview using a written questionnaire comprising 95 closed-ended questions, some of which were first used by other studies referred to in the Introduction. The instrument was compiled by Andrew McGrath and is reproduced in his PhD thesis.

The interviews took place at Children's Courts and Juvenile Justice Centres in NSW between 1 December 2004 and 30 June 2007. Two researchers randomly attended four Children's Courts in NSW on days of the week that these courts were due to sentence juveniles, and a single researcher regularly visited seven NSW Juvenile Justice Centres. All interviews with juveniles were conducted after sentencing of the index offence, out of the earshot of anyone else, including the juvenile's family and legal representative, and court and juvenile justice staff.

The response rate for the non-custodial group was 71.2 per cent and for the custodial group was 92.5 per cent.

The end of the follow-up period for the study was 1 January 2008, six months after the last study participant was interviewed. The NSW Bureau of Crime Statistics and Research Reoffending Database (ROD) was used to determine how quickly juveniles reoffended after the sentence for which they were interviewed (index sentence), after taking into consideration the amount of freetime each interview participant had between sentence completion and the end of the follow-up period. Freetime refers to the amount of time that the juvenile did not spend in either juvenile or adult custody.

After excluding people who were mistakenly interviewed more than once for the study, it was determined that 444 unique individuals who met the eligibility criteria for study inclusion were interviewed for the study. Names and dates of birth were matched with BOCSAR's ROD to determine prior criminal history for each study participant and instances of post index sentence reoffending, if any. If the juvenile could not be located in ROD, then they were excluded from data analysis. Overall, 8 (5.0 per cent) people on

custodial orders and 41 (14.4 per cent) people on non-custodial orders could not be located in ROD (or 11.0 per cent of the cohort overall). As such, 395 people comprised the dataset for analysis: 152 on custodial orders and 243 on non-custodial orders at the time of his or her interview.

Dependent Variable

The dependent variable for the study was the interviewee's response to the question: 'How likely will you commit a crime in the future?' This question had four possible responses: 'Very unlikely', 'Unlikely', 'Likely' and 'Very likely'. Tests for trend against most of the independent variables found little to no difference between 'very likely' and 'likely' and then 'very unlikely' and 'unlikely'. The former two responses were, therefore, collapsed to form a response called 'yes' and the latter two responses collapsed to form a response called 'no'.

Explanatory Variables

The study controlled for as many of the variables as there were data available, which, in turn, were shown by other studies to contribute to reoffending (Nagin, Cullen and Jonson 2009; Cottle, Lee and Heibrun 2001) and intention to reoffend (Carroll 1978; Paternoster 1989; Tibbetts 1997; Corrado et al 2003), including a NSW study by Weatherburn, Vignaendra and McGrath (2009) that examined the relationship between custody and reconviction. The complete list of explanatory variables considered by this study is listed in Table 1.

Table 1: Explanatory Variables

<p>Outcome of Court</p>	<ul style="list-style-type: none"> • How much have your chances of having a good relationship with your family been hurt by going to court today? • How much have your chances of having good friends been hurt by going to court today? • How much have your chances of having a good education been hurt by going to court today? • How much have your chances of having a good job been hurt by going to court today?
<p>Experience of Court</p>	<ul style="list-style-type: none"> • Did you learn from the court case today that there are people who care about you? • Were you treated as a trustworthy person in the court case? • During the court case did people talk about aspects of yourself which they like? • At the end of the court case did people make it clear to you that you can put the whole thing behind you? • At the end of the court case did people indicate that you were forgiven? • Did others at the court case say that you had learnt your lesson and now deserve a second chance? • Even though the court case is over do you still feel that others will

	<p>not let you forget what you have done?</p> <ul style="list-style-type: none"> • During the court case did any of the people who are important to you reject you because of the offence? • Were you treated in the court case as though you were likely to commit another offence? • Did people during the court case make negative judgements about what kind of person you are? • Did people in the court case say that it was not like you to do something wrong? • During the court case did people indicate that they accepted you as basically law abiding? • During the court case were you treated as though you were a criminal? • During the court case were you treated as though you were a bad person? • Did you think the court case was fair today? • Did you feel you had enough control over the way things were run today? • If the court had got the facts wrong, did you feel you could correct this? • Did you understand what your rights were? • Do you feel that people who have committed the same offence as you would be treated the same?
<p>Demographic Factors</p>	<ul style="list-style-type: none"> • Sex • Age at the time of the interview. • Aboriginal and Torres Strait Islanders (ATSI) status. • Age of mother/significant female adult. • Age of father/significant male adult. • Who are you currently living with (Both my parents, Father only, Mother only, Relatives, Foster home, A share house or apartment, Other)? • How long have you been in that (i.e. the above) situation? • Number of people in the house/number of bedrooms in the house.
<p>Parenting</p>	<ul style="list-style-type: none"> • Are your parents separated? • In general, how well do your parents get on? • In general, how well do you get on with your mother? • In general, how well do you get on with your father? • Do your parents (significant adult/s) fight or argue in front of you? • Do your parents (significant adult/s) know where you are when you're out of the house?

	<ul style="list-style-type: none"> • Do your parents (significant adult/s) know who you're with when you're out of the house? • Do you feel rejected (not loved) by your parents (significant adult/s)? • When your parents (significant adult/s) make rules, do they explain them to you? • If you were to damage or destroy property on purpose, what would your parents (significant adult/s) do if they found out? • If you were to use cannabis, what would your parents (significant adult/s) do if they found out? • If you were to take something from a store, what would your parents (significant adult/s) do if they found out? • Do your parents (significant adult/s) make up rules that don't seem fair to you? • Do your parents (significant adult/s) punish you by slapping or hitting you? • Do your parents (significant adult/s) encourage you or congratulate you for things that you did? • Do your parents (significant adult/s) chop and change the rules in your house? • Do your parents (significant adult/s) follow through on their rules? • Are your parents (significant adult/s) aware of what you think and feel? • Do your parents (significant adult/s) nag you about little things? • How close do you feel to your parents (significant adult/s)? • Do you care what your parents (significant adult/s) think of you?
<p>School</p>	<ul style="list-style-type: none"> • Are you still at school? • (If not at school) What age did you leave school? • (If not at school) What grade/year did you complete? • (If still at school) What grade/year are you in? • How well are/were you doing at school (when you left)? • How often do/did you wag? • How often are/were you suspended? • Do/Did you like school? • Do/Did you care what your teacher thought of you?
<p>Peers</p>	<ul style="list-style-type: none"> • Have many of your friends have been in trouble with the police? • How many of your friends...shoplift or steal? • How many of your friends...vandalise? • How many of your friends...drink alcohol under age?

	<ul style="list-style-type: none"> • How many of your friends...use illegal drugs? • How often do you hang out with friends who have been in trouble with the police?
Drugs	<ul style="list-style-type: none"> • In the last 12 months how often did you drink more than 6 standard alcoholic drinks in one day? By a standard drink, I mean the equivalent of a middy of full strength beer, a schooner of light beer, a small glass of wine, a glass of port or a nip of spirits. • On the last occasion you drank more than 6 standard drinks in one day, how many standard drinks did you actually have? • How many times, if ever, have you smoked tobacco ... in the last four weeks? • How many times, if ever, have you smoked tobacco ... in the last year? • How many times, if ever, have you used marijuana (grass, hash, cannabis, mull, dope, pot)...in the last four weeks? • How many times, if ever, have you used marijuana (grass, hash, cannabis, mull, dope, pot)...in the last year? • How many times, if ever, have you used or taken amphetamines other than for medical reasons...in the last four weeks? • How many times, if ever, have you used or taken amphetamines other than for medical reasons...in the last year? • How many times, if ever, have you used or taken cocaine or crack...in the last four weeks? • How many times, if ever, have you used or taken cocaine or crack...in the last year? • How many times, if ever, have you used or taken heroin or other opiates such as methadone, morphine or pethidine other than for medical reasons...in the last four weeks? • How many times, if ever, have you used or taken heroin or other opiates such as methadone, morphine or pethidine other than for medical reasons...in the last year? • Have you ever injected any drug, apart from any that were prescribed for you to inject?
Criminal Justice Factors	<ul style="list-style-type: none"> • Custodial order (yes/no) • Index principle offence type (offences were defined using the Australian Standard Offence Classification and categorised into 'against the person', 'property' and 'other'). • Number of court appearances prior to the index reference date. • Number of proven court appearances prior to the index reference date.

	<ul style="list-style-type: none"> • Number of times sentenced to custody for a principle offence prior to the index reference date. • Number of times sentenced to a supervision order for a principle offence prior to the index reference date.
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Data Analysis

Trend analysis was undertaken to collapse the main and other explanatory variables—that were mostly count variables with four values or continuous variables—into binary variables that maximised the explanatory power of the variables.

To determine whether intention to reoffend led to reconviction (inclusive of sentences of dismissal), the study used Cox Regression to examine the bivariate relationship between intention to reoffend at the time of sentence commencement and time to reconviction (including sentences of dismissal) post-sentence completion, discounting time spent in juvenile or adult custody for those juveniles on custodial orders. A post-interview sentence was only counted for offences committed post-interview participation.

Cross-tabulation using the X^2 statistic was used to determine which explanatory variables had a relationship with the intention to reoffend. Cross-tabulation using the X^2 statistic was also used to determine what relationships, if any, existed among the explanatory variables. Importantly, it was used to determine which explanatory variable had a statistically significant bivariate relationship with the main explanatory variable (that is, whether juveniles were sentenced to custody or not).

To ensure that offenders on custodial orders were not predisposed to indicate a willingness to reoffend because of measures that led to their being sentenced to custody, propensity score matching was used to align the people in custody as closely as possible to the people on non-custodial orders. This matching process provided a degree of certitude, as far as it was possible, that once individuals had been matched on the likelihood of receiving custody, chance factors alone determined who actually was sentenced to custody. Therefore, in accounting for the variance around intention to reoffend, any differences between people in custody and on non-custodial orders could, therefore, be attributed to sentence type alone, rather than to other factors associated with sentence type (Rubin and Thomas 1996).¹

Propensity score matching was undertaken in two stages: a matching stage and an outcome comparison stage, as adopted by Lulham, Weatherburn and Bartels (2009) and before them by Krebs et al (2009). Logistic regression was used to estimate the propensity scores (that is, the probability that each offender would receive a custodial sentence). The `psmatch2` module of STATA was used to undertake one-on-one nearest neighbour matching without replacement. People who received custodial orders were considered to be matched when there was an offender on a non-custodial order with a propensity score within 0.01 units (calliper) of the custodial case's score.

¹ The propensity score was introduced by Rosenbaum and Rubin (1983) to provide an alternative method for estimating treatment effects when treatment assignment is not random, but can be assumed to be unconfounded. In this case, the 'treatment' was receiving a custodial order.

Logistic regression was undertaken to determine whether custody and prior criminal record (measured four different ways) accounted for the variance around intention to reoffend when all variables were considered together, and to identify which other variables also accounted for the variance around intention to reoffend. The outcome of the propensity score matching stage was then utilised such that only custodial cases that were adequately matched to non-custodial cases, and vice versa, were included in the model.

Results

Ninety of the 395 interviewees (22.8 per cent of the cohort) indicated that they intended to reoffend.

Intention to reoffend was found have a strong relationship with detected reoffending, which was measured as time to reoffend 6 to 36 months after the index sentence counting only freetime². This means that many of the juveniles who indicated at the time of the interview that they would reoffend did, in fact, subsequently reoffend.

Furthermore, they reoffended more quickly after their index sentence than juveniles who indicated at the time of the interview that they were unlikely or very unlikely to commit a crime in the future (Log Rank $X^2 = 13.09$; $df = 1$; $p=0.000$).

Table 2: Intention to Reoffend: Relationship with Perception of Being Caught by the Police

	N intention to reoffend	% intention to reoffend	% unlikely to reoffend	X^2	p-value
Likelihood of being Caught by the Police				20.0	<0.000
Unlikely/very unlikely	56	62.2	35.7		
Likely/very likely	34	37.8	64.3		

Interestingly, for some juveniles, intention to reoffend was coupled with not thinking they would be caught by the police for a future offence. Table 2 shows that 62 per cent of people who were intending to reoffend thought they would be unlikely to be caught by the police for a future offence compared to 34 per cent of juveniles who thought they were unlikely to reoffend.

² 'Freetime' refers to the number of days each juvenile in the cohort was not locked up in adult or juvenile custody.

Bivariate Relationship between Intention to Reoffend and the Explanatory Variables

Most of the explanatory variables were found to have a statistically significant bivariate relationship with intention to reoffend (at $p < 0.05$).

Bivariate Relationship between a Receiving a Custodial Sentence and Other Explanatory Variables

However, most of the explanatory variables were also found to have a statistically significant bivariate relationship (at $p < 0.05$) with the main explanatory variable: whether or not the juvenile was sentenced to custody.

Propensity Score Matching

Given differences were found between the custodial and non-custodial groups in terms of the other explanatory variables, juveniles on custodial orders needed to be matched as far as it was possible with juveniles sentenced to non-custodial orders.

Given that many of the variables considered by the study were significantly related to one another, only four variables were needed for matching. The four that best matched between people in custody and people on non-custodial orders were: whether young offenders liked school (yes/no), whether they thought their parents’ rules were unfair (yes/no), how old they were at the time of the index sentence and at stating their intention to reoffend (17–20/13–16 years), and whether they wagged school when they were enrolled at school (yes/no).

Table 3 shows that after matching, the effect of custody on intention to reoffend was only slightly lower after matching than before matching. After matching, there was significant positive effect of custody on intention of 0.23. That is, the intention rate of juveniles in custody was 23 per cent higher than the intention rate of juveniles on non-custodial orders. Before matching, the intention rate of juveniles on custody was 24 per cent higher than the intention rate of juveniles on non-custodial orders.

Table 3: The Relationship between Receiving a Custodial Sentence on Intention to Reoffend - Before and After Matching

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
Intention	Unmatched	0.372413793	0.136929461	0.235484333	.042357158	5.56
	ATT	0.372413793	0.144827586	0.227586207	.049831265	4.57

9 missing values generated

Note: S.E. for ATT does not take into account that the propensity score is estimated.

Logistic Regression

After matching, logistic regression was undertaken to determine which variables accounted for the variance around intention to reoffend when all variables were considered together. The regression analysis utilised the outcome variables generated by propensity score

matching to confine the modelling to custodial cases that were adequately matched to non-custodial cases, and vice versa. The final model from the logistic regression analysis is shown in Table 4. Given that prior offending, offence type, sex and Aboriginality were found in previous NSW studies to be associated with reconviction, these factors were all considered for inclusion in this final model—this, despite their strong relationship with other factors that had stronger independent associations with intention to reoffend. However, measures for all four factors were only found to account for negligible amount of the variance (they were thought to operate through other factors, at best).

Table 4: Intention to Reoffend: Outcome of Logistic Regression Analysis

Juvenile characteristics	Odds ratio	SE	95% confidence interval		p-value
			Lower	Upper	
Custodial order vs. Non-custodial order	2.8	0.91	1.5	5.3	0.001
Juveniles who binge drank one to seven days a week vs. Juveniles who binge drank never to two to three days a month	2.7	0.86	1.5	5.1	0.001
All peers use illegal drugs vs. None to most peers use illegal drugs	2.3	0.76	1.2	4.4	0.016
Parents punish by hitting or slapping vs. Parents do not punish by hitting or slapping	2.4	0.91	1.2	5.1	0.018
Do not care what teachers thought of him/her vs. Care what teachers thought of him/her	2.3	0.17	1.1	5.1	0.034
Do not care what parents thought of him/her vs. Care what parents thought of him/her	2.0	0.18	1.0	4.1	0.055

Table 4 shows that six variables best accounted for the variance around intention to reoffend:

- **Being on a custodial order (yes):** odds of intending to reoffend 2.8 times that of person on non-custodial order.
- **How often the juvenile binge drank (1–7 days per week):** odds of intending to reoffend 2.7 times that of person who binge drank less frequently.
- **The proportion of the juvenile’s peers who used illegal drugs (all):** odds of intending to reoffend 2.3 times that of person who had fewer friends who used illegal drugs.

- **Whether the juvenile cared what his/her teacher thought of him/her (no):** odds of intending to reoffend 2.3 times that of person who cared what teachers thought.
- **Whether the juvenile cared what his/her parents thought of him/her (no):** odds of intending to reoffend 2.0 times that of person who cared what parents thought.
- **Whether the juvenile indicated that their parents punished him/her by slapping or hitting him/her (yes):** odds of intending to reoffend 2.4 times that of person who was not punished by parents in this way.

The Hosmer-Lemeshow Goodness of Fit test statistic was found not to be statistically significant for the model shown in Table 4 ($X^2=2.65$; $df=5$; $p=0.449$) and the ROC statistic was 0.769, thereby indicating that the model provided a satisfactory overall fit.

Discussion and Conclusion

In response to the aims of this study, it was found that a sentence of custody did not have a deterrent effect on intention to reoffend. In fact, when all explanatory factors were considered together, being sentenced to custody was found to have a positive independent effect on intention to reoffend, such that juveniles sentenced to custody were more likely to indicate intention to reoffend than juveniles sentenced to a non-custodial order. This effect of custody on intention to reoffend was only a little less pronounced when people in custody and on non-custodial orders were matched as far as it was as possible on attitude to court, demographic factors, schooling, parenting, peers, drug-taking and criminal justice factors.

Prior offending was found to have a statistically significant bivariate relationship with intention to reoffend, regardless of the way in which it was measured (i.e. number of previous finalised court appearances, number of prior sentences of custody, number of prior supervision orders). The effect of prior offending on intention to reoffend, however, did not persist when other factors were considered at the same time. This is an important finding. If prior offending mostly accounts for the variance around reoffending then this suggests a single solution to stop reoffending among juveniles in the criminal justice system: ensure juveniles never commit crimes that result in their entering the criminal justice system. It does little to indicate what forms of crime prevention would enable recidivists in the criminal justice system to end their criminal careers.

Similarly, offence type was not found to significantly account for the variance around intention to reoffend. This might have been due to the classification system used to define offences—the Australian Standard Offence Classification (ASOC)—which was utilised as it is the most extensively used in Australia. After defining offences using this classification system, the study further grouped offences into the most common offences committed by juveniles who appear before the NSW Children’s Court (BOCSAR 2008), and with reference to the literature on intention to reoffend and recidivism. The study therefore compared five offence categories: against the person, theft, property offences, drug offences and ‘other’. No matter how these offence categories were grouped, regrouped or collapsed together, offence type was not found to have an independent association with intention to reoffend. It is possible that the utilisation of a more nuanced classification system might have yielded a different result.

Also, being Aboriginal and/or male were also not found to be independently associated with intention to reoffend. This is significant as in previous NSW studies, gender and Aboriginality were found to account for the variance around reconviction (e.g. Chen et al 2005; Smith and Jones 2008; Vignaendra and Fitzgerald 2006). This difference in outcome between this study and these previous studies might be accounted for in two possible ways. Firstly, intention to reoffend is a qualitatively different measure of reoffending than reconviction. Secondly, in previous studies, sex and Aboriginality were masking the actual factors associated with reoffending, measures for which were not available to these other studies.

What factors, then, were independently associated with intention to reoffend? As mentioned above, being sentenced to custody was one such independent factor. Two of the other factors that were independently associated with intention to reoffend had to do with juveniles not caring what the adults in their lives thought of them (specifically, teachers and parents). On the topic of parents, parents slapping or hitting to punish the juvenile was also independently associated with intention to reoffend. Finally, binge drinking 1–7 days a week had an independent association with intention to reoffend, as did having friends all of whom used illegal drugs.

Intenders to Reoffend

Before discussing whether these findings were foreshadowed by previous studies on reoffending and intention to reoffend, and before commenting on what factors are missing from the above list, let us first consider the group of juveniles who indicated an intention to reoffend. Significantly, only ninety of the 395 interviewees (22.8 per cent of the cohort) indicated that they would reoffend (and most of these juveniles were subsequently caught for another offence). This is less than what Chen et al (2005) found to be the reconviction rate (inclusive of sentences of dismissal) among first-time juvenile offenders who appeared before the NSW Children's Court—that is, approximately 70 per cent of Chen and her colleagues' cohort reoffended within five years of their index sentence. What could therefore be assumed about intenders to reoffend? They might either form the most hardened recidivists among the group, or perhaps the most fatalistic/realistic about their reoffending.

Certainly, anecdotal information collected from study participants outside the questionnaire provides some support for the latter position. For quite another purpose than to test the veracity of participants' responses to the intention to reoffend question, one of the interviewers in the study, at the end of most the interviews, asked interview participants to discuss what they understood to be the meaning of certain questions, including the question on intention to reoffend. This was done to confirm that the questions were intelligible to study participants. Most interview participants found the intention question intelligible. When intenders to reoffend were asked to discuss what they thought the question meant, most indicated that this was obvious, and tellingly, also spoke about their future offending as an inevitability ('it's what happens', 'everyone does it'), rather than as a considered choice.

So, while the term 'intention to reoffend' implies agency, anecdotal evidence from the interview suggests that some juveniles' 'intentions' are a little more than responding to their environment in a reactive way. Fischhoff, Crowell and Kipke (1999) have shown that juveniles are able to make cost-benefit analyses before making an important decision and to consider the consequences before taking an action; however, they do this less well than

adults. Instead, it is thought that, for some of them, their decision-making is hampered because they see only either/or choices rather than a variety of options; they lack the experience, knowledge or feeling of control over their lives to come up with alternative choices; they favour their own experience over probabilistic evidence when determining the consequence of their actions; and they may not be able to estimate the probability of negative events and may have a hard time interpreting the meaning or credibility of information when making decisions (Fischhoff, Crowell and Kipke 1999). Further to this, juveniles are more likely than adults to interpret certain behaviours as being less risky (Cohn et al 1995); to focus more on the social reactions of their peers when deciding to engage in or avoid risky behaviours (Beyth-Marom et al 1993); and to be influenced by their emotions. In explaining their intention to reoffend, intenders to reoffend seemed to offer pithy concurrence with much of this evidence.

Turning now to the differences between the 22.8 per cent of the cohort who were intenders to reoffend and the approximately 50 per cent of juveniles that evidence suggests will probably reoffend but did not indicate an intention to reoffend at the time of the interview. The latter group might either have had every intention to curb their offending, but their resolve did not match their capacity to combat the conditions in their environment that 'encouraged' reoffending. Alternatively, the latter group might have chosen to lie about their intention to reoffend to please or deceive the adult who was asking them about this intention. Intenders to reoffend, by contrast, did not appear to have, nor pretended to have, a resolve to end their offending. Intenders to reoffend might arguably have had a better recognition of the realities of their lives or the limitations of their capacity to make good decisions than other recidivists.

All in all, these findings are a salutary reminder that recidivists are not a homogenous group, and that those juveniles who both openly acknowledge and accept that reoffending as part of their future might represent a group that require a different set of preventative measures than other recidivists.

What intenders to reoffend did have in common with some of the other recidivists was in not thinking they would be caught by the police for a future offence. Intenders to reoffend were, however, more likely to think this than other recidivists and other juveniles who did not reoffend. What makes this particularly significant is that a large proportion of intenders to reoffend did, in fact, reoffend and also got caught by the police for doing so and were then sentenced to another order. What is more, they were reconvicted more quickly than anyone else in the cohort. This might say something about this group's fatalism—it extends to accepting that reoffending is part of their lives, but not to accepting that getting caught for offending is also part of their lives. This serves to confirm what was cited above regarding the limited ways in which adolescent decision-making accommodates a range of consequences, possibly more true of intenders to reoffend than of other recidivists, and offenders who desist from offending.

Feelings of Disenfranchisement

What preventative measures could work with this subset of recidivists? Returning to the other outcomes of the multivariate analyses, intenders to reoffend were more likely than other offenders in the study to be characterised by frequent binge drinking, contact with deviant peers who all engaged in illicit drug-taking, disengagement from adults, and periods of incarceration for offending. Any two or more of these findings together present a picture

of feelings of disenfranchisement. It is perhaps this that distinguishes them from other recidivists and those offenders who desist from offending.

The idea that youth offending might be borne out of feelings of disenfranchisement is not a new one. However, it is not clear whether feelings of disenfranchisement are borne out of social conditions or out of individual characteristics that interact with the social conditions in which intenders to reoffend live. Juvenile offenders more generally are more likely than other juveniles to live in social and economic deprivation. Weatherburn, Lind and Ku (1998) have shown that juvenile offenders are more likely to have contact with poverty, parental unemployment, neglect and residential instability and to live in crowded dwellings than other juveniles in NSW. While measures of social-structural position (e.g. lower socio-economic status, residential instability, parental neglect) per se were not found by this study to account for much or any of the variance around intention to reoffend, this could be explained by the fact that this study only comprised juvenile offenders, many of whom were living under similar types and amounts social strain. It might be their response to their strain, however, that separates intenders to reoffend from other juvenile offenders. Each correlate that differentiated intenders to reoffend from others in the cohort lends some support to this supposition.

Disengaging from Adults

Intenders to reoffend were proportionately more likely than others in the study to not care what the adults in their lives thought of them (parents, teachers, or both). This mirrors the finding by Paternoster (1989) that undertaking risk-taking and anti-social behaviour followed weaker bonds to conventionality (parents) and being free to drift into delinquency. Nagin and Paternoster (1994) expanded on this finding by showing that what they referred to as 'self-centredness' leads to decreased investment in personal capital, which, in turn, serves to increase people's intention to reoffend. Putting this in terms of the findings of this study, the process of disengaging from adults, whatever the cause for this, might feed feelings of disenfranchisement in the juvenile that further weakens the influence the adults in the juvenile's life (parent, teacher, both) can have on them. This distancing from the good guiding influence of an adult might then contribute to the juvenile drifting into harmful behaviour such as reoffending (Matza 1964).

Incarceration

If this disengagement from adults is coupled with periods of incarceration for an offence—which in many cases it was, especially if the disengagement happened with teachers—then it might remove from the juvenile's life the types of people who might offset feelings of disenfranchisement and provide the guidance and support that the juvenile might require to break patterns of harmful behaviour.

Other studies have also shown that incarceration in itself can be criminogenic, the most oft-quoted being the US study by Spohn and Holleran (2002) of young adult drug offenders. After adjusting for the factors that contribute to receiving a prison sentence, and after controlling for other factors associated with reoffending, they found that incarcerated offenders were more likely than those who were on probation to be arrested and charged, convicted, and incarcerated for a new offence. They explained their findings in terms of social exclusion. It was their opinion that even if incarceration does not 'breed crime', it affects society's response to offenders, thereby making it more difficult for them to find stable employment, be reconciled with their families and come in to contact with other

similar positive social influences. Adding to the quote of Sampson and Laub (1993) they refer to incarceration as the “‘knifing off’ of opportunities to participate in conventional social life’ (Spohn and Holleran 2002:351).

Peers

It is here that the role of peers becomes important. The literature has established that co-offending is a feature of juvenile offending (McCord and Conway 2005). Further to this, and pertinent to the present study’s intenders to reoffend, juveniles who feel disenfranchised as a result of being disengaged from the adults in their lives, might seek out and assume the thinking of similarly disenfranchised people. These ‘others’ might not offer them the necessary support to counteract feelings of disenfranchisement that, for example, strong parental bonds might assist with (de Coster and Heimer 2001). Instead, these peers might help create an impression that deviant behaviour is commonplace and that such behaviour will go undetected (Matza, 1964). This might be more true of intenders to reoffend than other recidivists, and might explain why many intenders to reoffend might acknowledge the role of offending in their lives, but not foresee being caught for it. This mirrors what Carroll (1978) showed to be juveniles’ greater propensity than adults’ to factor the probability of success with getting away with, or being caught for, a crime in their decision to offend and reoffend. However, extending from the literature on adolescent decision-making, intenders to reoffend might not successfully factor these probabilities into their decision-making, especially in the face of contrary views from their friends.

Parents Hitting/Slapping to Punish

Gershoff (2002) conducted a meta-analysis of the effects of corporal punishment by parents on associated child behaviours and experiences. Corporal punishment was defined as adults using force towards a juvenile in their parental care; however, the strength of this force was not always specified. Gershoff found that parental corporal punishment was associated with decreased moral internalisation; increased child aggression; increased child delinquency and anti-social behaviour; a decreased quality of relationship between parent and child; decreased child mental health; increased risk of being a victim of physical abuse; increased adult aggression; increased adult criminal and anti-social behaviour; decreased adult mental health; and increased risk of abusing one’s own child or spouse in the future. It is important here to mention that, in this current study, while intenders to reoffend were more likely than others in the study to indicate their parents punished by hitting, it could not be confirmed whether this was factually true. What is important is that this was the juvenile’s perception of the situation, regardless of the accuracy of the perception. It is this perception that might lead to feelings of disenfranchisement. (Less than a third of intenders to reoffend indicated that parents punished them by slapping or hitting them.)

Binge Drinking: Depression?

Juveniles who binge drank often (1–7 days a week) were more likely to indicate an intention to reoffend than juveniles who binge drank less frequently (never to two to three times a month). Further to this, a large proportion of intenders to reoffend who were frequent binge drinkers also experienced periods of incarceration, disengagement from adults and/or peers who all used illicit drugs. It might be that frequent binge drinking is suggestive of a lack of self-control, which Tibbetts (1997), in support of Gottfredson and Hirschi (1990), found partially accounted for juvenile intention to drink-drive and to shoplift. Alternatively, frequent binge drinking might signify feelings of disenfranchisement that are more closely

akin to adolescent depression or a sub-clinical malaise that resembles depression. Achenbach (1991, in Petersen et al 1993) has suggested that, for juveniles, living in social and/or economic deprivation or residential instability are sufficient causes of adolescent depression, which, in turn, are more likely to be expressed through offending. Wu et al (2006) have confirmed the link between adolescent alcohol use and adolescent depression. Furthermore, they have drawn a link between the two and parental style and parental psychopathology, all four of which they found were individually implicated in adolescent anti-social behaviour. It was not possible in this current study to measure levels of depression and mental health. There is evidence available from other sources, however, which shows a significant amount and variety of mental health and developmental problems among juveniles on supervision orders (Kenny et al 2006) and on custodial orders (NSW Department of Juvenile Justice 2003) in NSW. The complex nexus between adolescent depression and reoffending is worth establishing more clearly in NSW. Intention to reoffend, coupled with frequent binge drinking, might be a key to unlocking this nexus.

Parenting

The many aspects of parenting that previous studies found were associated with juvenile offending (notably, Loeber and Stouthamer-Loeber 1986; Weatherburn, Lind and Ku 1998; Loeber and Farrington 2000) were not found by this study to account for the variance around intention to reoffend. Perhaps this was because, in this study, the questions on parenting were put to the juveniles and not to their parents or to an independent observer. This methodology assumes that the juvenile is able to assess and report on the facts of their parents' parenting styles separate from the own complex and possibly protective feelings towards their parents. Nonetheless, while the parenting variables per se were not found to be significant, the findings that juveniles felt disengaged from the adults in their lives, frequently binge drank, had friends who all engaged in harmful behaviour (illicit drug use), committed frequent or serious enough crimes to earn a period of incarceration, and/or were punished by being hit or slapped, individually and together are suggestive of parenting problems. This problem might be about parental neglect per se, or a laissez-faire approach to parenting. Or it might be due to social and/or economic deficits in the neighbourhoods in which juveniles live, such that constructive parenting is either not supported or encouraged, or the juvenile is not supported in the absence of constructive parenting.

Future Research

The study discussed in this article identifies a possible subgroup of recidivists in NSW, whose reoffending appears to be influenced by qualitatively and quantitatively different factors than those that inform the reoffending of other recidivists and offending desisters. The veracity and robustness of feelings of disenfranchisement accounting for reoffending amongst intenders to reoffend needs to be tested with a cohort of NSW juveniles that includes non-offending juveniles as well. Such a study might benefit from following juveniles prospectively from early childhood into adulthood, and by measuring factors known and considered to contribute to offending persistence and desistance (as identified by, among others, Farrall and Bowling 1999; Maruna and Roy 2007; Piquero, Farrington and Blumstein 2007). It should also provide cohort members with the tools to comment on the entirety of their own lives to uncover the relationship between their intended and actual law-breaking and the precursors of these thoughts and behaviours. Such a study would, therefore, need to find inventive ways to help, as far as it is possible, juveniles abstract from the complex web of social, cultural, custodial, familial and other ties, the place where intentions and motivations to break the law arise. Results from such a study would usefully

propose when and how interventions could be utilised to maximally bring about the reduction in reoffending of young people in the criminal justice system.

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