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Abstract | New South Wales (NSW), like Australia overall, has experienced a large decline in crime since 2000, yet little is known about its causes. This study explored this decline through a developmental criminology lens by examining two birth cohorts involving all those born in New South Wales in 1984 and 1994.

Comparisons between cohorts showed that, by age 21, the proportion of the population that had come into contact with the criminal justice system had halved (–49%), with the largest declines in vehicle theft (–59%), other property theft (–59%) and drink-driving (–49%).

However, there remained a group of 'chronic' offenders (those committing 5+ offences) who committed crime at a higher rate and accounted for a larger proportion of offences (77%) than the 1984 cohort of 'chronic' offenders (68%).

The crime decline in New South Wales would therefore appear to have resulted from a large reduction in the number of young people committing crime for the first time, although there remains a diminishing 'hard core' of prolific offenders.

CRIMINOLOGY RESEARCH FUND

Where have all the young offenders gone? Examining changes in offending between two NSW birth cohorts

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In their analysis of recent crime trends, Weatherburn and Holmes (2013) describe for New South Wales the extent of the 'crime decline' also widely observed in other countries. They found that between 2000 and 2012 New South Wales experienced a 50 percent decline in the rate of theft and a 33 percent decline in the rate of robbery—declines which Clancey and Lulham (2014) estimate have so far produced a saving of $5.15b to the NSW community. Like most other Australian states and territories (ABS 2013), New South Wales is currently in the midst of the largest and longest decline in crime on record, an experience it shares with New Zealand (Mayhew 2012), the United States (Zimring 2011) and much of Western Europe (Aebi & Linde 2010).

Several explanations have been offered for this widespread decline in crime, although these typically include explanations for changes in violence as well as property crime. As noted by Farrell et al. (2010), for example, only some of these theories have been (at best partially) tested, including the potential influence of demographic changes (Blumstein 2000), increases in immigration (Wadsworth 2010); increased abortion (Donohue & Levitt 2001), increases in the prison population (Langan & Farrington 1998), changes to policing strategies (Zimring 2011), increases in police numbers (Levitt 2004), changes to gun laws (Duggan 2001), changes to drug markets (Levitt 2004) and reductions in childhood exposure to airborne lead pollution (Reyes 2007). Importantly, with the exception of the recent work by Weatherburn, Halstead and Ramsey (2016), none of these ideas have been explored in the context of the crime decline in Australia, which started later and was (at least in the earlier years) limited to property crimes.

In New South Wales and across Australia more broadly, relatively little effort has been made to explore the causes (and consequences) of this phenomenon. In one of the earliest studies, Moffatt, Weatherburn and Donnelly (2005) argued that the decline in crime was most likely the result of a reduction in heroin availability and consumption (the so-called heroin drought), an increase in re-registrations for drug treatment, and improvements in local economic conditions.

Later, Wan et al. (2012) examined the reduction in burglary and suggested that the reduction in this property crime might have also been attributable to higher levels of incarceration and increases in average levels of income. In 2013, Weatherburn and Holmes explored the potential influence of new policing practices, coupled with a shift in local demographic profiles (ageing populations) and improvements in security (widespread use of electronic locks and CCTV) as possible complementary explanations. In recent analyses, Weatherburn, Halstead and Ramsey (2016) conclude that four explanations for the decline in property crime offer reasonable empirical and theoretical support. These are: the fall in heroin use (at least during the early years of the decline), the rise in income, the increased risk of arrest and imprisonment/incapacitation, and the improvement in motor vehicle security (2016: 271).

Notwithstanding the diversity of these explanations, there has been insufficient focus on the crime decline from the perspective of developmental and life-course criminology. Perhaps because of the sudden and abrupt nature of the decline (starting in 2000), coupled with its coincidence with the NSW heroin shortage, many scholars abandoned demographic explanations (decline in high risk youth as a percentage of population) and instead tried to understand the changing nature of crime though the lens of immediate situational, contextual and environmental factors.

Yet, in 2015, Farrell, Laycock and Tilley analysed aggregated arrest data, comparing the composition of the offending population in the United States in 1980, 1990 and 2010. Their findings indicated that the crime decline in the United States was marked by a disproportionate reduction in adolescent offending, offset by higher than average rates of offending among those aged 40 and over.
The authors, having replicated earlier findings in Australia (Weatherburn, Freeman & Holmes 2014), tentatively concluded that diminishing criminal opportunities reduced the relative incidence of adolescent offending, while the apparent increase in offending among older people was likely the result of the criminal habituation of a generation when there were plentiful criminal opportunities.

The crime decline through a developmental lens

As a comparative cross-sectional snapshot of crime at three time points, the Farrell, Laycock and Tilley (2015) study was the first to explore in detail the potential impact of intergenerational change on the crime decline in the United States. The finding that fewer crimes were committed by adolescent offenders invited explanations that focused on criminal careers or developmental criminology. Specifically, Farrell and colleagues (2015) argued that a 'debut crime hypothesis' was the causal link between criminal opportunities and the development of criminal careers. The debut crime hypothesis argues that some crime types—in particular, status offences and less serious property crimes—serve as the traditional starting point for criminal careers and that as opportunities to commit these so-called debut crimes diminish, so too might the number of young people having contact with the police, leading to relatively fewer career criminals, or less serious criminal careers.

The research by Farrell, Laycock and Tilley (2015) is a turning point in helping to explain the causes of the crime decline. Although the approach is developmental, a situational crime prevention focus is used to argue that increased securitisation has reduced criminal opportunities and therefore prevented the induction of many young people into a life of crime.

This is, however, just one possible developmental interpretation. For example, many developmental theories place significant emphasis on persistent population heterogeneity to explain differences in crime both between individuals and within individuals. The most notable of these is Gottfredson and Hirschi's General Theory of Crime (1990), which argues that low self-control is the single most important predictor of social failure. Individuals with low self-control, for example, are relatively more likely to engage in antisocial and criminal behaviour because they lack the capacity to resist immediate gratification and relish the satisfaction of succeeding at risky activities. To the extent, therefore, that aggregate crime rates reflect population variability in levels of self-control, the crime decline might be explained by the development of relatively fewer individuals with low self-control.

Although often criticised as 'reductionist', the population heterogeneity thesis of Gottfredson and Hirschi (1990) may not be so difficult to apply to the crime decline if it can be shown that the causes of this heterogeneity have incrementally improved such that the population distribution of self-control has changed to produce lower levels of antisocial and criminal behaviour. For Gottfredson and Hirschi (1990) this likely includes improved parental supervision of children, fewer adverse child–parent relationships, and lower prevalence of unreasonable or excessive punishment, just to name a few. Another developmental approach is Sampson and Laub's (1995) revision of social bond theory, in which they describe the importance of social bonds in preventing crime or facilitating desistence. Criminality, it is argued, can be intimately tied to the strength and relevance of prosocial versus antisocial bonds. Those lacking strong prosocial bonds are more likely to experience social failure. This social failure compounds through the foreclosure of prosocial and non-criminal opportunities.

From Sampson and Laub's perspective, the crime decline might have resulted from two mechanisms—improved prosocial bonding during adolescence (eg higher rates of sporting club and extra-curricular activities, or lower rates of school exclusion and isolation) or the diminishing importance of some antisocial activities (eg experimentation with drug use or informal contact with the police) as mechanisms of prosocial foreclosure.

This brief overview shows developmental criminology has much to offer in interpreting the data emerging about the scale and scope of the international crime decline. The aggregate analysis by Farrell and colleagues (2015) provides a starting point from which developmental criminology could add to our understanding of the crime decline by using longitudinal data and methods.

The present study makes a unique contribution by comparing the developmental trajectories of young offenders from two birth cohorts (1984 and 1994). These cohorts have been selected to represent two distinct periods in New South Wales, and two cohorts for which full (age 10+) criminal history data are available. Born in 1984, the first cohort are members of 'Generation Y'—young people who transitioned through adolescence at a time of sustained year-on-year growth in the rates of drug, property and violent crime. The second cohort are members of 'Generation Z' who, unlike their predecessors, transitioned through adolescence at a time when crime rates were in decline. Although too young to have contributed to the decline in its earliest phases, these young people nevertheless grew up in a contextually distinct period and may have benefited developmentally from an evolving criminal milieu in which there were fewer criminal opportunities and greater investments in early interventions.

The purpose of this study is to identify whether in these different generational contexts there has been any meaningful shift in the prevalence (proportion of the population), frequency and nature (offence types) of the antisocial and criminal trajectories of young people in New South Wales.

Method

Research design

The principal objective of this research is to examine whether the prevalence, frequency and nature of police contact has changed significantly. A longitudinal approach was used to examine the experience of two birth cohorts (separated by 10 years) and their experiences of police contact during adolescence and early adulthood. This analysis adds to the research on the scale and causes of the crime decline—research which has relied on the examination of temporal changes via repeated cross-sectional data.

Data

The data for this study represent offence-level unit records recorded by NSW police for all proven offences committed by offenders born in one of two NSW birth cohorts (1984 and 1994). Consistent with the approach of Hua, Baker and Poynton (2006), the two birth cohorts were identified from the records of the NSW Registry of Births, Deaths and Marriages. The names and dates of birth for each person born in those cohorts were then cross-matched with the Reoffending Database maintained by the NSW Bureau of Crime Statistics and Research. For each individual match, the unit record data were extracted for each offence, together with offence-specific details (ie offence type, date and outcome) and a series of demographic variables (ie gender, age at arrest and Indigenous status).

Counting rules

In this study criminal offending is defined as any unique 'proven offence'. Proven offences are those recorded by the police for which there was an official outcome that substantiated the offence. In most cases this is the recording of a formal conviction, but it may also include formal cautions or diversions where the offence is not disputed. All unique offence counts are included in this study, meaning that where an offender is apprehended and charged with multiple counts of the same offence, these are recorded as separate offences. Finally, crime types are coded using the Australian and New Zealand Standard Offence Classification.

Age-specific and cumulative prevalence rates are calculated relative to the population count in each birth cohort. As extracted from the NSW Registry of Births, Deaths and Marriages, these were:

- 83,328 persons born in New South Wales in 1984; and
- 89,373 persons born in New South Wales in 1994.

At the time of data extraction, it was not possible to identify cohort-specific mortality rates, only annualised age-specific mortality rates in New South Wales for each year since 1984. In the absence of cohort-specific mortality rates and to be consistent with Hua, Baker and Poynton (2006), the population denominators in this study are treated as constant to age 21.

Limitations

While mortality rates have been used to provide adjusted estimates, cohort-specific mortality at the individual level is not available and consequently the probability of death at each age is treated as equal across the population. Mortality rates are likely to be higher among disadvantaged groups and those having more frequent contact with the criminal justice system. As a consequence, the age-specific rates of offending presented are likely to be conservative.

Further, these data do not reduce the denominator to account for individuals who move interstate or overseas, whether permanently or temporarily. Research in the health data field has shown that approximately five percent of individuals in one state have data elsewhere in the country (Boyd et al. 2015). Much consideration has been given to this issue, but to adjust both birth cohorts for migration out would require a number of assumptions which are equally problematic. For example, the analysis would ignore the fact that migration rates are confounded by families who move many times. There is also the possibility that those who migrate out of New South Wales may migrate in at a later time and thus still be eligible for police contact. Without much more detailed analysis of migration pathways, it is unlikely that any aggregate adjustment would be a fair treatment of these data.

Finally, the crime data used in this study are for recorded and proven offences only. A more detailed discussion of the limitations of this study is provided at the conclusion of this report.

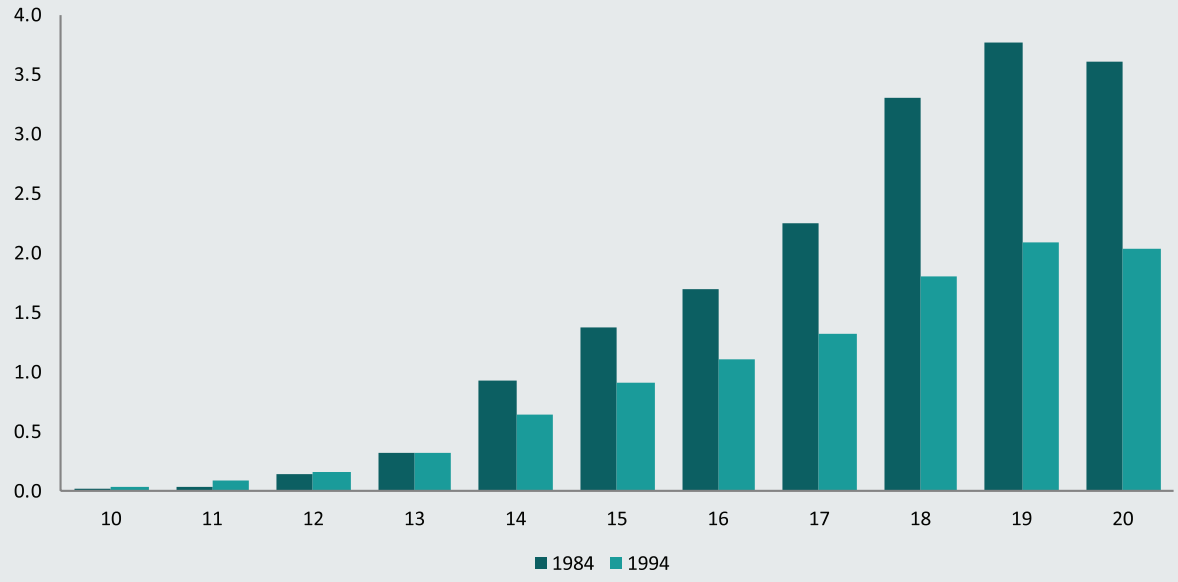
Results

Prevalence

Figure 1 maps the annual prevalence of offending for each age between 10 and 20 years, inclusive. Here, the annual prevalence is the percentage of the population who had recorded at least one proven offence at each age. For both the 1984 and 1994 cohorts the age at which there was the greatest number of active offenders was 19 years. For the 1984 cohort, the peak population prevalence was 3.8 percent, while for the 1994 cohort it was 2.1 percent.

At peak offending (age 19) there were 44 percent fewer members of the 1994 cohort having contact with the police for at least one proven offence. This divergence between the two cohorts is not, however, consistent at all ages. Before age 14, for example, both the 1984 and 1994 cohorts appeared to track along an almost equivalent pathway. After age 14, the annual prevalence of offending among the 1994 cohort increases, but not as quickly as was the case for their peers born in 1984.

Figure 1: Annual prevalence of offending, by age and cohort (%)

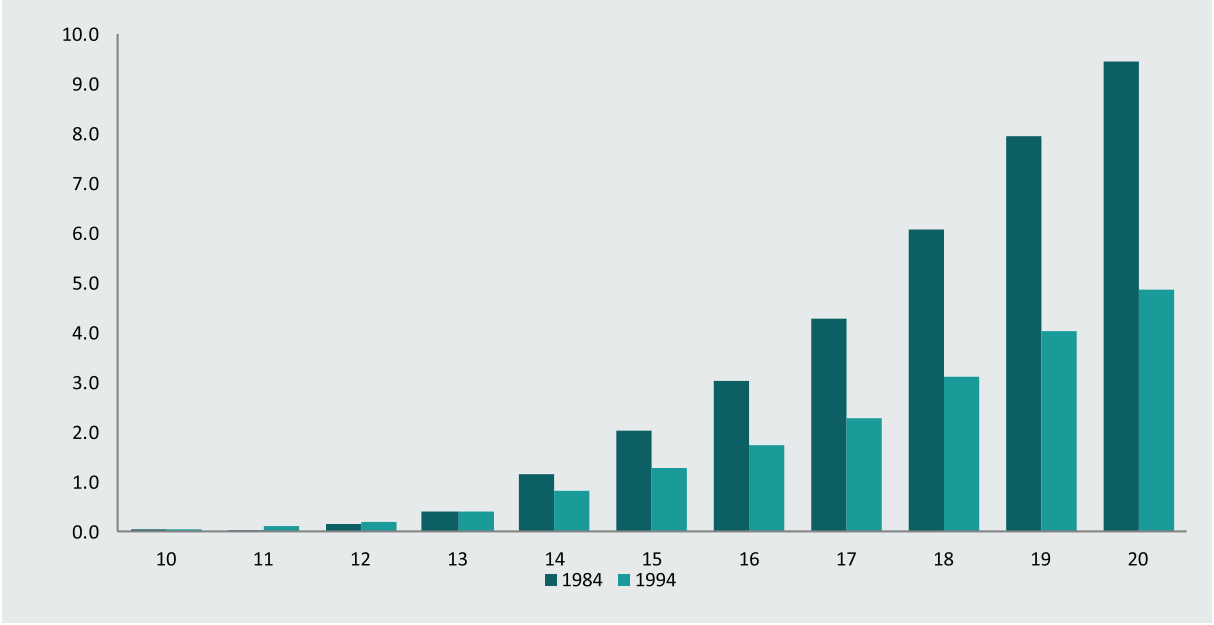


Source: Trajectories of two NSW Birth Cohorts [computer file]

The presentation here of age-specific prevalence rates suggests that, overall, a substantially smaller proportion of the 1994 birth cohort had committed offences prior to age 21. However, since some offenders may have committed offences at more than one age, it is difficult to be sure that the disparity between the two birth cohorts is the result of a fall in population prevalence, and not just a substantial reduction in the frequency of offending for those who are active offenders. In other words, the differences seen in Figure 1 may be the consequence of there being fewer offenders (lower prevalence) committing roughly the same number of offences, or the same number of offenders committing substantially fewer offences, or a mix of both.

To examine this in more detail, Figure 2 presents the cumulative prevalence of offending for both the 1984 and 1994 birth cohorts. It shows that, by age 21 (depicted as the prevalence at age 20), 9.5 percent of the 1984 birth cohort had at least one proven offence. The equivalent estimate for the 1994 birth cohort was 4.8 percent, indicating that proportional to population, almost half (down 49%) as many young people born in 1994 had committed at least one proven offence compared to their peers born 10 years earlier.

Figure 2: Cumulative prevalence of offending, by age and cohort (%)



Source: Trajectories of two NSW Birth Cohorts [computer file]

Table 1 disaggregates these data by offence type and illustrates that for the 1984 and 1994 birth cohorts:

- The prevalence of violent offending was 2.6 and 1.8 percent, respectively—a decline of 32 percent.
- The prevalence of property offending was 3.8 and 1.7 percent, respectively—a decline of 56 percent.
- The prevalence of drug offending was 1.7 and 1.3 percent, respectively—a decline of 22 percent, the smallest of the offence-specific declines.
- The prevalence of disorderly conduct offences was 3.3 and 1.9 percent, respectively—a decline of 42 percent.

Table 1: Cumulative prevalence of offending to age 21, by cohort and offence type						
	1984		1994		Summary	
	n	%	n	%	% difference in prevalence	% change in prevalence
Violent	2,162	2.6	1,571	1.8	–0.8	–32.3
Assault	975	1.2	748	0.8	–0.3	–28.5
Sex	67	0.1	42	0.0	0.0	–41.6
Robbery	319	0.4	196	0.2	–0.2	–42.7
Other violent	1,459	1.8	1,152	1.3	–0.5	–26.4
Property	3,207	3.8	1,512	1.7	–2.2	–56.0
Burglary	1,030	1.2	594	0.7	–0.6	–46.2
Motor vehicle theft	830	1.0	363	0.4	–0.6	–59.2
Stealing	1,934	2.3	1,028	1.2	–1.2	–50.4
Other property	1,283	1.5	559	0.6	–0.9	–59.4
Drug	1,384	1.7	1,163	1.3	–0.4	–21.7
Drink	2,092	2.5	1,135	1.3	–1.2	–49.4
Traffic	2,496	3.0	1,687	1.9	–1.1	–37.0
Disorder	2,748	3.3	1,707	1.9	–1.4	–42.1
Breach	598	0.7	916	1.0	0.3	42.8
Other	935	1.1	709	0.8	–0.3	–29.3
Any	7,900	9.5	4,341	4.9	–4.6	–48.8
Any (excl. breaches)	7,887	9.5	4,332	4.8	–4.6	–48.8
Any (mortality adjusted)	7,900	11.1	4,341	5.4	–5.6	–50.8

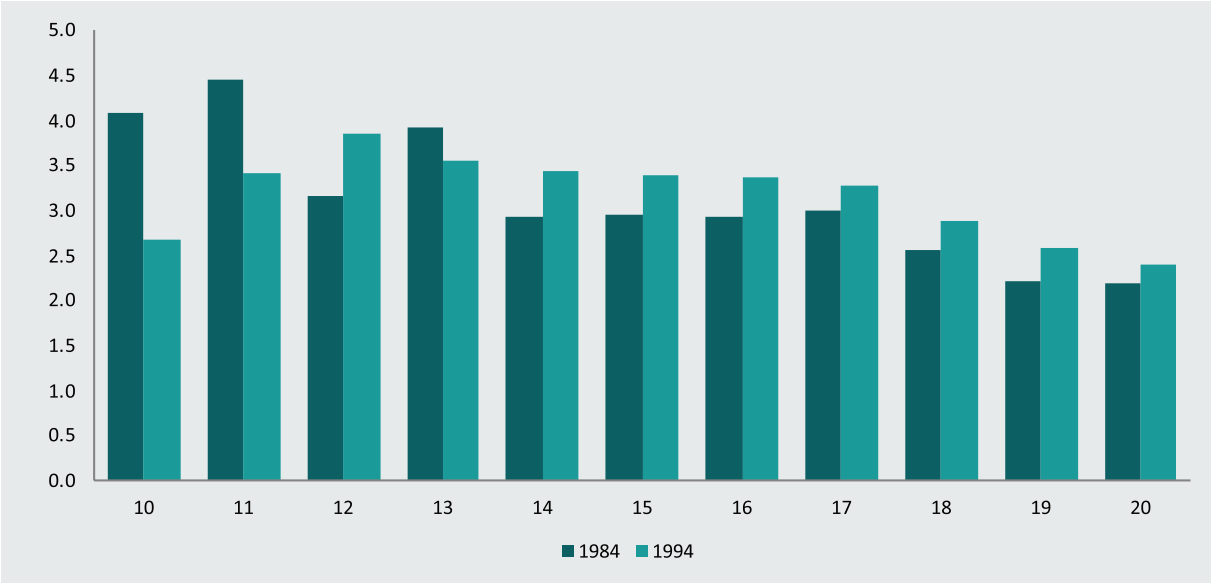
Source: Trajectories of two NSW Birth Cohorts [computer file]

Within the category of violence, the largest declines in cumulative prevalence were seen for robbery and sex offences (down 43% and 42%, respectively). The fall in prevalence was smaller for assault (down 29%) and other violent offences (26%). Among the property offences, motor vehicle and other property theft offences (not elsewhere classified) exhibited the largest decline in prevalence (59% for each).

Frequency

The relative levels of offending at each age are depicted in Figure 3 as the average number of proven offences recorded per active offender at each age. Although in the early years (ages 10 and 11) very few members of either cohort had contact with the police, those in the 1984 cohort who did recorded an average of 4.1 and 4.5 proven offences at each age, respectively. For their peers born in 1994, the average number of proven offences was 2.7 at age 10 and 3.4 at age 11. In both cases, the average rate of offending was higher among early onset offenders in 1984.

Figure 3: Average offence count, by age and cohort (n)



Source: Trajectories of two NSW Birth Cohorts [computer file]

From age 14 onwards, however, the average number of proven offences per active offender was consistently higher for the 1994 cohort. Given the 1994 cohort had considerably fewer offenders, these data suggest a tendency towards the concentration of more active or prolific offenders within the offending population. In other words, the fall in prevalence between 1984 and 1994 was also partly the result of a disproportionate fall in the number of infrequent offenders, leading to an apparent concentration of offenders who, as a group, committed more proven offences each year.

Chronicity

The picture that has so far been painted by these data suggests that considerably fewer individuals of the 1994 birth cohort were formally processed in the criminal justice system, but of those who were, the number of crimes committed was higher.

To consider this issue in more detail, active offenders were classified into one of three possible categories:

- once-only offenders—those who committed only one crime by age 21;
- moderate offenders—those who recorded between two and four crimes by age 21; and
- chronic offenders—those who recorded five or more crimes by age 21.

Table 2 shows that, for the 1984 cohort, once-only offenders comprised 41 percent of the offending population—equal to 3.9 percent of the total birth cohort. The equivalent group from the 1994 cohort represented 35 percent of the offending population and only 1.7 percent of the total birth cohort. The ratio of the proportion of the population of once-only offenders in 1984 compared with 1994 was 0.43.

Moderate offenders (those committing between 2 and 4 offences) accounted for 36 percent of the 1984 offender population and 33 percent of the 1994 offender population (3.4 and 1.6 percent of their respective total birth cohorts). The ratio of the proportion of the population in 1984 compared with 1994 was 0.47.

Chronic offenders (those committing 5 or more offences by age 21) represented one in four (23%) of the 1984 offender cohort, but almost one in three (32%) of the 1994 offender cohort (equal to 2.2 and 1.5 percent of their total populations, respectively). The ratio of the proportion of the population in 1984 compared with 1994 was 0.68.

Table 2: Once-only, moderate and chronic (5+) offenders by age 21 (proportion of population and proportion of offenders)

	1984			1994		
	n	% of population	% of offenders	n	% of population	% of offenders
1 offence	3,216	3.9	40.8	1,529	1.7	35.3
2–4 offences	2,853	3.4	36.2	1,438	1.6	33.2
5+ offences	1,818	2.2	23.1	1,365	1.5	31.5
Total	7,887	9.5	100.0	4,332	4.8	100.0

Source: Trajectories of two NSW Birth Cohorts [computer file]

These results show a significant reduction in the proportion of once-only offenders in the population of offenders born in 1994 compared with those born in 1984. In fact, proportional to population, the prevalence of once-only offending had more than halved. There also appears to have been a substantial fall in the population prevalence of moderate offending—again, there being less than half the number of moderate offenders in the 1994 birth cohort than there were in the 1984 cohort. Although still in decline somewhat, chronic offenders nevertheless comprise a larger proportion of the offender population born in 1994.

The findings in Table 2 also suggest that chronic offenders are responsible for an increasing share of all the offences committed, given that their share of the offender population increased. To confirm this, Table 3 provides the number of crimes committed by each of the three offender groups, their average rate of offending, and the percentage of all offences for which they were responsible. The results indicate that among those born in 1984 there were 3,216 once-only offenders responsible for nine percent of all crimes recorded by the cohort. Among those born in 1994, there were 1,529 once-only offenders responsible for only six percent of the offences recorded.

For moderate offenders, not only were there fewer actual offenders, but the average rate of offending also declined from 3.0 for the 1984 cohort to 2.7 for the 1994 cohort. As a consequence, moderate offenders born in 1984 were responsible for a higher proportion of crimes than were their peers born 10 years later (23% vs 16% for moderate offenders in the 1994 cohort).

Table 3: Once-only, moderate and chronic (5+) offenders by age 21 (offence rate and proportion of offences)								
	1984				1994			
	Offenders (n)	Offences (n)	Average	% of offences	Offenders (n)	Offences (n)	Average	% of offences
1 offence	3,216	3,216	1.0	8.9	1,529	1,529	1.0	6.4
2–4 offences	2,853	8,480	3.0	23.4	1,438	3,892	2.7	16.4
5+ offences	1,818	24,574	13.5	67.8	1,365	18,380	13.5	77.2
Total	7,887	36,270	4.6	100.0	4,332	23,801	5.5	100.0

Source: Trajectories of two NSW Birth Cohorts [computer file]

In both cohorts, the average number of offences committed by chronic offenders was the same (13.5 offences by age 21), but the relative over-representation of chronic offenders in the 1994 cohort means that chronic offenders were responsible for a higher proportion of the total crime count (77% vs 68% for the 1984 cohort).

As has been demonstrated consistently in other studies (Wolfgang, Figlio & Sellin 1987; Loeber & Dishion 1983), a small proportion of chronic offenders are often responsible for the majority of crime, and these data are no exception to that rule. In fact, the diminishing prevalence of once-only and moderate offending in the 1994 cohort means that chronic offenders, though not offending at higher rates, were nevertheless responsible for a disproportionally greater number of recorded offences than was the case for their peers born in 1984.

Discussion

This study examined the criminal trajectories of two cohorts of individuals born in New South Wales. Members of the first cohort were born in 1984 and reached their teens in an era of rising crime rates. Members of the second cohort, born in 1994, grew up during the now well-documented crime decline—an era when rates of crime in New South Wales and elsewhere in Australia were falling. Although the analysis of the Australian and international crime decline has, to date, focused largely on macro-level factors using repeated cross-sectional or time-series data, this study considers the phenomenon from a developmental criminological perspective, employing a longitudinal design.

The findings of this study have identified some important differences between these two cohorts. Most notably:

- Born 10 years apart, the population prevalence of offending for the 1994 cohort was considerably lower than was estimated for their peers born in 1984. Proportional to population, the number of young people offending by age 21 had almost halved.
- The greatest overall declines in offending were seen for property crime (–56%), drink driving (–49%) and disorder offences (–42%).
- Though fewer people born in 1994 had contact with the police, those who did tended to offend at a higher rate (higher by 20%).
- The proportion of the offenders categorised as ‘chronic’ (on the basis of committing five or more offences by age 21) increased between the two cohorts.

These findings require further explanation. First, the apparent decline in the prevalence of offending highlights the fact that during the crime decline there were far fewer young people ever becoming involved in crime. As a proportion of the population, those committing just one or two offences by age 21 had halved over the 10 years, from 3.9 percent of the population, to 1.7 percent.

Explaining these changes is difficult on these data alone, but it is likely that several factors are at play. The increased securitisation of both personal and public property may also help to explain these changes, especially if the items once targeted by young offenders have become more difficult to steal (because of built-in security), more difficult to on-sell (because there are fewer people to sell to, for less profit) or if theft is more likely to be detected (because of CCTV and other monitoring systems). Increased securitisation in this sense may have made offending more difficult and less rewarding—cardinal principles of crime prevention. Improved in-built product security, improved building design and increased formal surveillance have increased both the effort and risk associated with committing property crime, which may have dissuaded some young people from stealing and being consequently caught up in the criminal justice system. Indeed, interviews with offenders have found that they most commonly cite improvements in security as a reason for the crime drop (Brown 2015). The debut crime hypothesis (Farrell et al. 2011) may be of some use here, especially to explain why preventing youth property crime (particularly motor vehicle theft) may have contributed to the redirection of potential offenders into non-criminal alternatives (or undetected offences). Of course, these are just a few of the possible explanations, and only alternative data can illuminate further.

The changing nature of routine activities among young people may also help to explain why the prevalence of offending has declined for such a large proportion of the population. There is little doubt that the routine activities of young people have changed, with less time spent in unsupervised circumstances in which opportunistic offending may be more attractive, such as 'hanging out' on the streets with like-minded peers. Increased opportunities for home entertainment through the internet may have increased the prevalence of virtual interactions that limit or undermine opportunities for traditional forms of crime, while at the same time offering opportunities for new forms of crime to emerge which are less easily detected. As we enter the digital age, those native to social media and online social networking may explore antisocial and criminal behaviours online which at present attract far less scrutiny from parents and authorities. Perhaps the significant declines seen in these data, and indeed the crime decline more generally, are the consequence of displacement to other forms of antisocial conduct that for now remain hidden from official statistics.

The large decline in the frequency of offending was seen across the board, cutting across gender and Indigenous status, with most offence types experiencing large reductions (the exceptions being drug and breach offences). This was largely due to the reduction in prevalence, given that the frequency of offending (average offences per offender) rose for most ages and for most crime types in the 1994 cohort. This apparent increase in rates of offending is an artefact of the disappearance of a large group of moderate offenders in the 1994 cohort.

It is notable that the cumulative number of breaches by age 21 rose by 171 percent between the two cohorts, while the average number of breaches per offender increased by 90 percent. This is likely to be a function of the increasing proportion of chronic offenders in the latter cohort, who may be more likely to reoffend and to fail to comply with the requirements of their sanctions. This could have implications for the justice system in terms of the increased likelihood of receiving a custodial sentence following the failure to comply with community based orders—an issue that would be worth further exploration.

Of course, earlier work in New South Wales points to the potentially transformative and important role of improved economic conditions in that state (Weatherburn, Freeman & Holmes 2014), and this cannot be ignored. Indeed, some of the outcomes seen in these data are likely to have also been influenced by these broader societal and economic conditions, which have been favourable to the decline in crime.

Finally, given the explicit developmental and life-course focus of this research, it is important to reflect on the results and their implications for theory and practice in this arena. It is unlikely that the population distribution of self-control (Gottfredson & Hirschi 1990) shifted so dramatically in 10 years that the decline in prevalence resulted from lower propensities to offend. That said, the proliferation of initiatives responding to young children with behavioural or conduct disorders, especially those on the borderline, may have had a role to play in the outcomes seen in this study. The less often that official, punitive and exclusionary responses are used for children exhibiting conduct problems, the less likely it is that those children will accumulate disadvantage and foreclose future opportunities (Sampson & Laub 1995). These issues are explored in more detail elsewhere (Payne, Brown & Broadhurst 2018), but such tentative suggestions require new data.

Conclusion

This study has provided a unique insight into the NSW crime decline. It explores a number of competing hypotheses about youth crime which require a more detailed analysis. Nevertheless, it yields observations which help to guide future research and adjust criminal justice policies in the context of declining rates of crime.

First, not only is there less crime but there are fewer offenders coming into the criminal justice system and, therefore, fewer entering the custodial sector. As with past cohorts, those who remain in the system will likely be among the more serious and potential career criminals. The re-assessment of policies and the criminal justice resources now required by a sustained era of crime decline will be a significant challenge. Government agencies should look to innovate and evaluate criminal justice system programs. Investment in primary prevention, especially through situational crime prevention, could play a significant role in maintaining low levels of crime and further reducing youth engagement in crime.

Second, the displacement of crime and antisocial conduct into the online environment is a real phenomenon, contiguous with the broader social transformation underway. This displacement need not always produce adverse outcomes. For example, if typical once-only and adolescent-limited offenders' online antisocial behaviours have replaced more serious forms of juvenile offending this

may be preferable to traditional offending. However, if there is displacement to more serious forms of online antisocial and criminal behaviour, then the resource shifts and policy implications would be significant. Efforts to understand the nature and scale of displacement are critical to informing future criminal justice policies, and the continued monitoring of these NSW birth cohorts is warranted.

References

Aebi MF & Linde A 2010. Is there a crime drop in Western Europe? *European Journal on Criminal Policy and Research* 16(4): 251–277

Australian Bureau of Statistics (ABS) 2013. *Recorded crime – victims, Australia, 2013*. ABS cat. no. 4510.0. Canberra: ABS

Blumstein A 2000. Some recent trends in US violence, in Blumstein A & Wallman J (eds), *The crime drop in America*. New York: Cambridge University Press

Boyd JH, Randall SM, Ferrante AM, Bauer JK, McInneny K, Brown AP et al. 2015. Accuracy and completeness of patient pathways: The benefits of national data linkage in Australia. *BMC Health Services Research* 15(1): 312

Brown R 2015. Explaining the property crime drop: The offender perspective. *Trends & issues in crime and criminal justice* no. 495. Canberra: Australian Institute of Criminology. https://aic.gov.au/publications/tandi/tandi495

Clancey G & Lulham R 2014. The New South Wales property crime decline. *Current Issues in Criminal Justice* 25(3): 839–851

Donohue JJ & Levitt SD 2001. The impact of legalized abortion on crime. *Quarterly Journal of Economics* 116(2): 379–420

Duggan M 2001. More guns, more crime. *Journal of Political Economy* 109(5): 1086–1114

Farrell G, Laycock G & Tilley N 2015. Debut and legacies: The crime drop and the role of adolescence-limited and persistent offending. *Crime Science* 4(16). DOI: 10.1186/s40163-015-0028-3

Farrell G, Tilley N, Tseloni A & Mailley J 2010. Explaining and sustaining the crime drop: Clarifying the role of opportunity-related theories. *Crime Prevention and Community Safety* 12: 24–41

Farrell G, Tseloni A, Mailley J & Tilley N 2011. The crime drop and the security hypothesis. *Journal of Research in Crime and Delinquency* 48(2): 147–175

Gottfredson M & Hirschi T 1990. *A general theory of crime*. Stanford: Stanford University Press

Hua J, Baker J & Poynton S 2006. Generation Y and crime: A longitudinal study of contact with NSW criminal courts before the age of 21. Crime *and Justice Bulletin: Contemporary Issues in Crime and Justice* no. 12. Sydney: NSW Bureau of Crime Statistics and Research

Langan PA & Farrington DP 1998. *Crime and justice in the United States and in England and Wales, 1981–96*. US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics

Levitt SD 2004. Understanding why crime fell in the 1990s: Four factors that explain the decline and six that do not. *Journal of Economic Perspectives* 18(1): 163–190

Loeber R & Dishion T 1983. Early predictors of male delinquency: A review. *Psychological Bulletin* 94(1): 68–99

Mayhew P 2012. The case of Australia and New Zealand, in Van Dijk J, Tseloni A & Farrell G (eds), *The international crime drop: New directions in research*. London: Palgrave Macmillan: 76–102

Moffatt S, Weatherburn D & Donnelly N 2005. What caused the recent drop in property crime? *Crime and Justice Bulletin: Contemporary Issues in Crime and Justice* no. 85. Sydney: NSW Bureau of Crime Statistics and Research

Payne J, Brown R & Broadhurst R 2018. *Exploring the causes and consequences of the Australian crime decline: A comparative analysis of the criminal trajectories of two NSW birth cohorts*. Report to the Criminology Research Advisory Council. Canberra: Australian Institute of Criminology

Reyes JW 2007. Environmental policy as social policy? The impact of childhood lead exposure on crime. *The B.E. Journal of Economic Analysis & Policy* 7(1). DOI: 10.2202/1935-1682.1796

Sampson RJ 2008. Rethinking immigration and crime. *Contexts* 7(1): 28–33

Sampson RJ & Bean L 2006. Cultural mechanisms and killing fields: A revised theory of community-level racial inequality, in Peterson R, Krivo L & Hagan J (eds), *The many colours of crime: Inequalities of race, ethnicity, and crime in America*. New York: New York University Press: 8–36

Sampson RJ & Laub JH 1995. *Crime in the making: Pathways and turning points through life*. Harvard University Press

Spelman W 2000. What recent studies do (and don't) tell us about imprisonment and crime, in Tonry M (ed), *Crime and justice: A review of research* vol 27. Chicago: University of Chicago Press: 419–494

Spelman W 1994. *Criminal incapacitation*. New York: Plenum Press

Stowell JI, Messner SF, McGeever KF & Raffalovich LE 2009. Immigration and the recent violent crime drop in the United States: A pooled, cross-sectional time-series analysis of metropolitan areas. *Criminology* 47(3): 889–928

Trussler T 2012. Demographics and homicide in Canada: A fixed-effects analysis of the role of young males on changing homicide rates. *Western Criminology Review* 13(1): 53–67

Wadsworth T 2010. Is immigration responsible for the crime drop? An assessment of the influence of immigration on changes in violent crime between 1990 and 2000. *Social Science Quarterly* 91(2): 531–553

Wan WY, Moffatt S, Jones C & Weatherburn D 2012. The effect of arrest and imprisonment on crime. *Crime and Justice Bulletin: Contemporary Issues in Crime and Justice* no. 158. Sydney: NSW Bureau of Crime Statistics and Research

Weatherburn D, Freeman K & Holmes J 2014. Young but not so restless: Trends in the age-specific rate of offending. *Crime and Justice Statistics: Bureau Brief* no.98. NSW Bureau of Crime Statistics and Research: Sydney

Weatherburn D, Halstead I & Ramsey S 2016. The great (Australian) property crime decline. *Australian Journal of Social Issues* 51(3): 257–278

Weatherburn D & Holmes J 2013. The decline in robbery and theft: Inter-state comparisons. *Crime and Justice Statistics: Bureau Brief* no. 89. Sydney: NSW Bureau of Crime Statistics and Research

Wolfgang ME, Figlio RM & Sellin T 1987. *Delinquency in a birth cohort*. Chicago: University of Chicago Press

Zimring FE 2011. *The city that became safe: New York's lessons for urban crime and its control*. Oxford: Oxford University Press

Zimring FE 2006. *The great American crime decline*. Oxford: Oxford University Press

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