Applied Research in Crime and Justice Conference

13 - 14 February 2019 | Sydney

Handbook
program and abstracts

Applied Research in Crime and Justice Conference

13 - 14 February 2019 | ICC, 14 Darling Drive, Sydney | http://tinyurl.com/arcjc2019

DAY 1	Wednesday 13 February 2019
8.15am - 9:00am	**Registration**
9:00am - 9:10am	**Welcome to country:** Aunty Ann Weldon *(Room C4.5)*
9:10am - 9:30am	**Opening of proceedings:** Dr Don Weatherburn, Executive Director, NSW Bureau of Crime Statistics and Research
9:30am - 10:30am	**Keynote 1: Chair: Don Weatherburn** *(Room C4.5)* Professor David Wilson, George Mason University. *Developing a theory of effective juvenile delinquency programming through an examination of change-levers rather than program types: Preliminary evidence from a large juvenile delinquency meta-analysis.*
10:30am - 11:00am	**MORNING TEA**

11:00am - 1:00pm	**Session 1A: Chair: Karen Freeman** *(Room C4.5)*	**Session 1B: Chair: Hamish Thorburn** *(Room C4.4)*
	Suzanne Poynton & Sara Rahman, NSW Bureau of Crime Statistics and Research. *The effect of the NSW custodial Violent Offender Treatment Program (VOTP) on reoffending*	Troy Allard, Griffith University. *Costing Indigenous and non-Indigenous offending trajectories*
	Richard Wortley, Jill Dando Institute, University College London. *A situational analysis of homicide in Australia*	Felix Leung, NSW Bureau of Crime Statistics & Research. *Predicting offending on bail*
	Nina Papalia & Ben Spivak, Swinburne University of Technology. *A systematic review and meta-analysis of the efficacy of psychological interventions with violent offenders in custodial, community, and forensic mental health settings*	Sara Rahman, NSW Bureau of Crime Statistics & Research. *The marginal effect of bail decisions on failure to appear, imprisonment and crime*
	Kyle Ott & Rachel Teicher, John Jay College of Criminal Justice. *Intimate Partner Violence (IPV) and Data Science: A case study of enhancing IPV data and implementing an IPV focused deterrence strategy*	George Athanasopoulos, Monash University. *Forecasting prisoner numbers: A grouped time series approach*

1:00pm - 2:00pm	**LUNCH**
2.00pm - 3.00pm	**Keynote 2: Chair: Jackie Fitzgerald** *(Room C4.5)* Paul Mazerolle, Griffith University. *Striving for effectiveness in crime and justice policy: Rhetoric, reality and pathways for the future*
3:00pm - 3:30pm	**AFTERNOON TEA**

3:30pm - 5:00pm	**Session 2A: Chair: Paul Nelson** *(Room C4.5)*	**Session 2B: Chair: Neil Donnelly** *(Room C4.4)*
	Evarn J Ooi, NSW Bureau of Crime Statistics & Research. *The impact of Private versus Public legal representation on criminal proceedings*	Natasa Gisev, National Drug and Alcohol Research Centre *The effect of treatment and retention in opioid substitution therapy on reducing crime among opioid dependent people*
	Jeremy Prichard, University of Tasmania. *Online warning messages to prevent the viewing of adult-minor sex images: the results of a randomized controlled experiment*	Tony Butler & Armita Adily, Kirby Institute, University of New South Wales. *The role of mental health treatment in preventing offending behaviour*
	Lucy Snowball, Centre for Education Statistics & Evaluation, NSW Department of Education. *Did the National Firearms Agreement reduce the likelihood of a gun massacre in Australia?*	Elizabeth Sullivan, University of Technology Sydney. *Recidivism and health outcomes following release to the community of NSW prisoners with a history of substance dependence: a novel approach to evaluation of a statewide through care program*

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DAY 2 — Thursday 14 February 2019

8.30am - 9:00am	**Registration**

9:00am - 10:00am

Keynote 3: Chair: Anna Stewart *(Room C4.5)*
Anaïs Henneguelle, École Normale Supérieure of Paris-Saclay
What works in France? Questions and answers about recidivism and electronic monitoring

10:00am - 10:30am	**MORNING TEA**

10:30am - 12:30pm

Session 3A: Chair: Felix Leung *(Room C4.5)*	**Session 3B: Chair: Tracy Painting** *(Room C4.4)*
Anthony Morgan, Australian Institute of Criminology. *Does CCTV help police solve crime?*	Giulio Zanella, University of Adelaide. *Prison work and recidivism*
Roman Marchant, Sydney University. *Bayesian optimisation for police patrolling*	Jesse Cale, University of New South Wales & Ryan Harber, Department of Correctional Services, South Australia. *Findings from the 2016-2018 evaluation study of home detention in South Australia*
Steve Yeong, NSW Bureau of Crime Statistics & Research. *The impact of police numbers on crime*	Don Weatherburn, NSW Bureau of Crime Statistics & Research. *Can electronic monitoring reduce reoffending*
Joe Clare, University of Western Australia. *What's changing in what's being stolen?*	Jennifer Bell & Sandra Sacre, Queensland Corrective Services. *Predictive factors in attempted and completed suicides in Queensland correctional facilities*

12:30pm - 1:30pm	**LUNCH**

1:30pm - 2:30pm

Keynote 4: Chair: Suzanne Poynton *(Room C4.5)*
Kevin Schnepel, Simon Fraser University.
Diversion in the Criminal Justice System

2:30pm - 3:00pm	**AFTERNOON TEA**

3:00pm - 4:30pm

Session 4A: Chair: Steve Yeong *(Room C4.5)*	**Session 4B: Chair: Nicole Mahoney** *(Room C4.4)*
Anna Stewart, Griffith University. *Assessing the life course overlaps among mental health, child protection and criminal justice system contacts: Similarities and differences by gender and Indigenous status*	Alana Cook, Department of the Attorney-General and Justice, Northern Territory. *An analysis of alcohol-related justice system contacts following introduction of the Northern Territory Banned Drinker Register*
Christopher Dowling & Isabella Voce, Australian Institute of Criminology. *An incident-level analysis of female-perpetrated domestic violence: Implications for prevention*	Federico Masera, University of New South Wales. *Flight from urban blight: Lead poisoning, crime and suburbanization*
George Karystianis, Kirby Institute, University of New South Wales. *Automatic extraction of mental health disorders from domestic violence police narratives: a text mining study*	Steve Yeong, NSW Bureau of Crime Statistics & Research. *A re-analysis of the 2015 Domestic Violence Evidence in Chief Re-offending (DVEC)*

4:30pm - 5:00pm	**WRAP UP (Room C4.5)**

Keynote speaker abstracts

Developing a theory of effective juvenile delinquency programming through an examination of change-levers rather than program types: Preliminary evidence from a large juvenile delinquency meta-analysis

Professor David Wilson

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The desired outcome for juvenile delinquency programs is the cessation of delinquent and other problematic behaviors. This is almost always accomplished by bringing about change on some other internal characteristic of a youth (such as through processes, emotions, or behavioral repertoire), their family relationships (such as improved family functioning), their peer relationships, or a youth's broader social context (such as his or her school and community). Thus, we are typically trying to bring about positive changes in a youth or changes in his or her environment. We can conceptualize these intermediate changes as change-levers. A preliminary exploration of potential change-levers will be presented that is based a large juvenile delinquency meta-analysis. Rather than focusing on programs an program types, this analysis explores the relationship between changes in proximal outcomes (potential change levers) with the changes in the distal outcome of reduced delinquency. By focusing research on advancing our understanding of which change-levers are most effective at bringing about reductions in delinquency, we can move beyond lists of effective and ineffective programs toward an understanding of what change-levers effective programs should target.

Striving for effectiveness in crime and justice policy: Rhetoric, reality and pathways for the future

Paul Mazerolle

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Effective policy and program responses to crime and criminal behaviour represents an important aspiration for governments in Australia and beyond. Yet despite proclamations of commitments to evidence based policies and programs, many jurisdictions fail to systematically embrace evidence informed approaches much less develop organisational settings that foster a commitment to such approaches. A key question is why is this the case? This presentation explores the main constraints against developing and implementing evidence informed policy frameworks in the crime and justice context and charts a pathway for building "evidence committed" organisations.

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What works in France? Questions and answers about recidivism and electronic monitoring

Anaïs Henneguelle

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"Is prison effective in fighting recidivism? Answering this question, although apparently simple, is in fact very complex methodologically. Indeed, judges do not assign sanctions randomly: the most at-risk convicts will certainly be sent to detention while the others will benefit from alternative measures. It is therefore not enough to compare the recidivism rates obtained after each sentence to draw conclusions.

To overcome this problem, we rely here on results obtained from the French case. France has faced significant problems of prison overcrowding over the past 20 years. To address this, French governments have implemented alternative measures to prison, such as electronic monitoring, which was introduced in the early 2000s. In this context, it is possible to find similar offenders who did not serve their sentences in the same way, because the measure was not available everywhere or not at the same time. We can therefore empirically show that electronic monitoring actually reduces recidivism, all other things being equal. With the use of similar methods, we can also study the case of halway houses, which are another alternative to detention in France.

This communication will focus in particular on those convicted persons most likely to be receptive to alternative measures to prison. Who benefits most from a sentence adjustment? How to choose target audiences? How can statistical techniques and econometrics help court decisions?"

Diversion in the criminal justice system

Kevin Schnepel

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We provide causal estimates on the popular, cost-saving practice of diversion in the criminal justice system. We exploit two natural experiments in Harris County, Texas where first-time felony defendants faced abrupt changes in the probability of diversion. Using administrative data and regression discontinuity methods, we find robust evidence across both experiments that diversion halves reoffending rates (-32 p.p.) and increases quarterly employment rates (+18 p.p.) over 10 years. These improved trajectories persist even 20 years out and are concentrated among young, black men. Further analysis suggests that felony conviction stigma and re-sentencing deterrence are key direct mechanisms.

Session abstracts

Costing Indigenous and non-Indigenous offending trajectories

Troy Allard, Molly McCarthy Anna Stewart & April Chrzanowski

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The lifetime costs of offenders on the criminal justice system provides powerful evidence to support implementation of targeted prevention programs and to enable assessment of their cost-effectiveness. However, no research has explored whether criminal justice system costs differ based on Indigenous status. This study used linked administrative data (contacts individual's born in 1983/84 had with police, courts and corrections in Queensland) to determine how offending develops over the life-course and how Indigenous status influences offending trajectories. An innovative costing framework, employing both primary and secondary data collection to estimate resources and expenditure in the criminal justice system, was used to assess the direct criminal justice system costs of Indigenous and non-Indigenous offending trajectories, accounting for critical cost drivers (e.g., offence type, plea and location). Results indicated that a small proportion of offenders accounted for a large proportion of costs, and differences were apparent based on whether the offender was Indigenous or non-Indigenous. The implications of these findings for policymakers who are responsible for developing and targeting crime prevention programs will be discussed

Forecasting prisoner numbers: A grouped time series approach

George Athanasopoulos

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Reliable forecasts are imperative for supporting decision making and planning at all levels of policy decision making and prison management. In this paper we implement an approach that generates accurate and detailed forecasts of inmate numbers at the aggregate national level but also for multiple groupings of the prison population based on attributes (and their interactions) that are of interest to a variety of policy makers and correctional administrators, such as: geographical location, sex, legal status and indigenous status. Comprehensive empirical results show that these forecasts improve on forecast accuracy over traditional approaches. The level of detail and the coherent nature of the forecasts enables informed and importantly aligned decision making across multiple departments and at all levels of management: strategic, tactical and operational.

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The role of mental health treatment in preventing offending behaviour

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Aims: To examine the effect of contact with mental health services by offenders with a diagnosis of psychosis on re-offending.

Methods: Using a data linkage study in New South Wales, we examined the effect of contact with mental health services on re-offending within three to eight years from the first offence in 2,724 individuals with a prior diagnosis of psychosis who received a non-custodial sentence or no penalty for their first offence. Contact with mental health services covered admission to a hospital for a mental health problem, presentation to an emergency department, or contact with mental health ambulatory services.

Results: Seventy percent of offenders with psychosis had clinical contact with at least one health service in relation with their mental health problem within three to eight years from their first offence. Risk of re-offending among those who contacted health services for their mental health problem was 44% less than those who did not. The higher numbers of clinical contacts with health services for mental health problems were associated with lower risk of re-offending.

Conclusion: This comprehensive population based study has provided strong evidence about the effectiveness of contact with health services in association with mental health problems in reducing re-offending by those with psychosis.

Findings from the 2016-2018 evaluation study of home detention in South Australia

Jesse Cale & Ryan Harber

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In 2016 the Department of Correctional Services (DCS) in South Australia commissioned an independent evaluation of Home Detention in the state. The objective of the evaluation was to examine the impact that legislative and program changes in 2016 had on return to prison rates; forecast prisoner growth and government expenditure on correctional services; and, the lives of people affected by the changes including prisoners, their families, and those involved in supervising and implementing the program. The evaluation employed a variety of quantitative and qualitative research methods to investigate these issues. This presentation describes the results of a series of studies from the evaluation that examined: 1) the effectiveness of service delivery and support models for Home Detention; 2) outcomes associated with Home Detention including community re-integration, social and vocational participation, health, and rates of reoffending; and, 3) a cost-effectiveness analysis to establish if Home Detention in the state offers value for money for government.

What's changing in what's being stolen? Examining 11-years of residential burglaries for target selection, repeat victimisation, net return on offending effort, and theft of motor vehicles

Joe Clare

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Aim: Eleven-years (2007-2017) of Western Australian Police (WAPOL) residential burglary data is used to examine stolen property trends. This research utilises the CRAVED (concealable, removable, available, valuable, enjoyable, and disposable) opportunity-based framework (Clarke, 1999) to examine longitudinal burglary target selection within the context of the global crime drop (e.g., Farrell, Tilley, & Tseloni, 2014), trends towards a cashless economy (Reserve Bank of Australia, 2017), indication that burglaries are producing lower net returns for offenders (Shaw et al., 2015), and burglaries motivated by car theft (e.g., Davies, Tonkin, Bull, & Bond, 2012).

Method: A range of questions are addressed, including (a) longitudinal trends in burglary frequency as a rate of housing stock, (b) same address repeat victimisation, (c) variations in attractiveness of property types over time, (d) trends in the relative loss of items per burglary, and (e) frequency and incident characteristics of burglaries that also result in theft of cars.

Results and conclusions: Findings will be discussed in terms of relevance for crime prevention policy and practice, emphasizing the importance of continuing to design-out crime opportunities with emerging technological changes, reducing repeat victimisation whenever possible, and assisting residents to make informed crime prevention decisions.

An analysis of alcohol-related justice system contacts following introduction of the Northern Territory Banned Drinker Register

Alana Cook

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The Banned Drinker Register (BDR) is a major policy initiative for the Northern Territory that aims to improve community health and safety by reducing alcohol-related harms. The initiative involves temporarily banning individuals from purchasing, possessing or consuming alcohol, combined with denial of sale from take-away alcohol outlets. Through a longitudinal analysis of individuals who received one or more bans in the first year of operation, we found that for some individuals, the BDR was associated with a reduction in alcohol-related contact with the justice system. However, other individuals maintained their frequency of alcohol-related justice system contacts while on the BDR. Using latent class analysis, we also found distinctive differences in the frequency and type of contacts (i.e. criminal or non-criminal) that banned drinkers had with the criminal justice system in the year before going on the BDR. The most dominant latent class was characterised by a high probability of having only a single alcohol-related apprehension in the year before going on the BDR. Patterns in the responses of banned drinkers, associations with criminal and non-criminal justice system contact, and implications for informing alcohol harm reduction policy frameworks, will be discussed.

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An incident-level analysis of female-perpetrated domestic violence: Implications for prevention

Christopher Dowling & Isabella Voce

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Most violence perpetrated by women is against their intimate partners. However, while research has focused on the histories of victimisation and abuse experienced by female perpetrators, there is little understanding of the circumstances under which they use violence, or the characteristics of the violence they use. Critically, this lack of situationally-focused research on female-perpetrated intimate partner violence prohibits efforts to develop responses that are tailored to its unique circumstances, or justify the application of responses originally developed for male perpetrators. This presentation will discuss two studies undertaken by the Australian Institute of Criminology examining females' use of violence against their male partners. One examines the characteristics and circumstances of 113 female intimate partner homicides recorded in the Australian National Homicide Monitoring Database between 2004 and 2014, with additional supplementary data from court, police and coronial records and the Australian Bureau of Statistics. The other draws on information from more than 150 detailed police narratives to undertake a crime script analysis of non-fatal female intimate partner violence. Findings are used to highlight several potential intervention points involving the criminal justice system, community programs and situational prevention measures.

The effect of treatment and retention in opioid substitution therapy on reducing crime among opioid dependent people

Natasa Gisev[1], Chrianna Bharat[1], Sarah Larney[1], Timothy Dobbins[1], Don Weatherburn[2], Matthew Hickman[3], Michael Farrell[1] & Louisa Degenhardt[1]

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Aim: Although there are many health and social benefits associated with opioid substitution therapy (OST), there are mixed findings on its' effectiveness in reducing crime. This study aimed to evaluate whether OST reduces crime rates among opioid-dependent people, and explored the relationship between retention in OST and crime rates.

Methods: Data were drawn from retrospective linkage of 10,744 OST entrants in New South Wales, Australia (2004-2010) to data on crime (proven charges), custody episodes and death notifications (up to 31 December 2011). The impact of OST on crime rates was investigated using multivariate Anderson-Gill intensity models and the relationship between OST retention and crime was investigated using zero-inflated negative binomial regression.

Results: Overall, 53.5% of OST entrants were charged with an offence during follow-up. Being in OST significantly reduced crime rates, and although this effect decreased with time from first OST entry, it remained significantly better than being out of OST. Poorer treatment retention, evidenced by cycling in/out of OST and spending less time in OST, was associated with higher crime rates.

Conclusions: Among a cohort of Australian OST entrants, treatment with OST was associated with reduced crime rates, and was most effective the longer individuals were retained in treatment.

Forty is the new thirty (for recidivism): Trends in offender age, reimprisonment, and time to desistance among the New South Wales custodial population

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Aims: Trends towards ageing of the inmate population has potential implications for changes in the relationship between age and recidivism risk and trajectories of desistance over time. The aim of this research was to examine trends in the age profile of offenders held in NSW correctional centres, and how these trends correspond with patterns of return to custody and duration of persistent recidivism over the life course.

Methods: We examined custodial episode data for all offenders housed in Corrective Services NSW correctional centres between 1990 and 2016 (N = 416,841 episodes) using a series of cross-sectional and longitudinal analyses.

Results: Representation of inmates in most older age brackets increased substantially between 1990 and 2016. While the average age of both first-time and repeat custody offenders increased over time, repeat custody offenders also comprised an increasing proportion of the custodial population. Results indicated that growth in the number of inmates in older age brackets was associated with more offenders being engaged in active cycles of repeat reimprisonment at a later age and for longer periods. Supplementary analyses indicated corresponding trends in the actuarial risk and criminogenic needs profiles of inmates as a function of their age.

Conclusion: The results suggest that ageing of the inmate population has a relationship with the increasing representation of higher risk offenders who exhibit persistent patterns of recidivism and reimprisonment, with their attendant social and other costs, for more prolonged periods over the life course.

Automatic extraction of mental health disorders from domestic violence police narratives: a text mining study

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Areas of interest: policing, situational crime prevention, criminal justice administration, domestic violence

Background: Vast numbers of domestic violence (DV) incidents are attended by the New South Wales Police Force each year and recorded as both structured quantitative data and unstructured free text in the WebCOPS database. Since the free text remains widely untapped for DV reporting and surveillance purposes, we investigated whether we can automatically text mine DV police records for mental illness information. Methods: We used a training set of 200 DV recorded events to design and implement a knowledge-driven method based on syntactical patterns suggesting mental illnesses for offenders and victims in text. Results: Evaluating our approach in 100 DV events returned 97.5% and 87.1% precision for mental illnesses related to offenders and victims respectively. We applied our method to a large-scale corpus of half a million DV events between 2005 And 20016 recognizing 77,995 events (16%) with mental illnesses. 77% were linked to persons of interest versus 16% for the victims and 6% for both. Mood disorders had the highest rates of mentions of mental illnesses with depression being the most common in both victims (22%; 3,258) and offenders (19%; 8,918), followed by alcohol abuse for offenders (12%; 5,829) and various anxiety disorders for victims (11%; 1,671). Conclusions: The results indicate that text mining can automatically extract targeted information from DV police events to support further public health research into the nexus between mental illnesses and domestic violence.

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Predicting offending on bail

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The decision to remand or bail a suspected offender while they await their court date is a complex one. The decision has serious ramifications for the suspect, victims of the original crime, possible future victims of any new offence and demand on the prison system. In NSW bail decisions are made by police, magistrates and judges; these bail authorities are legislatively required to give thought to a number of concerns when making their decision. One concern which must be considered is whether the accused will commit a new serious offence if released from custody. Decision making in respect to this concern could potentially be improved by giving bail authorities access to empirical information about the likelihood of a defendant reoffending.   This study investigates whether it is possible to develop a statistical tool to assist in this aspect of bail decision making; that is, is it possible to predict whether a defendant will reoffend while on bail?   Results include the rate of offending on bail, factors related to offending on bail and the success of our efforts to predict offending on bail.

Bayesian optimisation for police patrolling

Roman Marchant[1,2], Di Lu[1] & Sally Cripps[1,3]

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This paper bridges a gap between spatial-temporal modelling of crime and decision making under uncertainty. We propose the use of Bayesian Optimisation to find optimal patrolling trajectories for police cars over street networks. The optimisation occurs in the space of decisions and is informed by a complex model that estimates crime density for each crime category as a latent function based on historical count data. A key advantage of the proposed decision-making algorithm is that it automatically trades off between exploration and exploitation, ultimately removing existing bias in the historical data. In order to solve the Bayesian Optimisation formulation, the problem is framed as a Partially Observable Markov Decision Process, which is solved using Monte Carlo Tree Search, an algorithm capable of estimating multiple lookahead trajectories in the street network. The results validate, through simulations with real crime data, that patrolling trajectories simultaneously help uncovering crime by exploring areas with high uncertainty and allow for short response times by exploiting knowledge and patterns recovered from historical data. In conclusion, the proposed methodology marries complex spatial-temporal statistical models with decision making under uncertainty for efficient and smart predictive policing.

Flight from urban blight: Lead poisoning, crime and suburbanization

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In the post World War II period, most U.S. cities experienced large movements of population from the city centers to the suburbs. In this paper we provide causal evidence that this process of suburbanization can be explained by the rise of violent crime in city centers. We do so by proposing a new instrument to exogenously predict violent crime. This instrument uses as time variation the U.S. national levels of lead poisoning. Cross-sectional variation comes from a proxy for soil quality, which explains the fate of lead in soil and its subsequent bioavailability. Using data from more than 300 U.S. cities, results show that the increase in violent crime from the level in 1960 to its maximum in 1991 decreased the proportion of people living in city centers by 15 percentage points. This increase in crime moved almost 25 million people to the suburbs. As a result of suburbanization, we find that people remaining in the city center are more likely to be black people, consistent with the "white flight" phenomenon. We then demonstrate that this suburbanization process had aggregate effects on the city. Exploiting a spatial equilibrium model, we determine that violent crime had externalities on productivity and amenities.

Does CCTV help police solve crime?

Anthony Morgan, Christopher Dowling, Alexandra Gannoni & Penny Jorna

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There remains a distinct lack of research on the impact of CCTV on criminal investigations. This presentation will outline the results of three interrelated studies on the use of CCTV by police investigating crime on the NSW rail network. The first aimed to understand spatial predictors of police requests for footage, analysing data on more than 6,000 requests across 300 stations. The second aimed to measure the impact of CCTV footage on clearance rates for crimes that occur on the rail network in NSW using a sample of almost 20,000 crime events linked with footage request data. The third study aimed to better understand how footage is used by police, based on interviews with nearly 150 officers who had accessed CCTV footage.

The results showed that police frequently request rail network footage, but this varies by crime type and incident location. Access to footage is associated with a small but significant increase in clearance rates. Police indicated that CCTV was critical to their investigation of crime on the rail system, particularly in identifying and locating suspects and corroborating offender, victim and witness statements. The implications of these findings for the design, management and provision of CCTV footage for investigative purposes will be discussed.

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The impact of Private versus Public legal representation on criminal proceedings

Evarn J Ooi

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Aim: To investigate the impact of publicly funded private versus in-house legal representation on indictable criminal proceedings.

Method: Data was obtained from Legal Aid NSW on every indictable criminal law grant of aid in NSW between 2012 and 2016. Legal Aid NSW assigns criminal law cases to either a private or in-house defence lawyer. These data were linked to BOCSAR's criminal courts database to obtain a rich set of information including defendant characteristics, and prior offending history. Focusing on indictable offences only, we compare the probability that cases assigned to private or in-house lawyers are dealt with summarily, are committed for sentencing or result in a late guilty plea.

Results: On average, publicly funded cases assigned to private lawyers are less likely to be dealt with summarily or to be committed for sentence even after controlling for a wide range of defendant and case characteristics. In addition, matters assigned to private lawyers are more likely to result in a late guilty plea. We also perform a supplementary analysis that exploits the opening of a new Legal Aid NSW office in Port Macquarie. In comparison with a similar court, we find an increase in the percentage of Table 1 and Table 2 offences that are dealt with summarily and dealt with summarily after a guilty plea following the introduction of in-house defence lawyers at Port Macquarie Court.

Conclusion: Legal Aid NSW indictable matters assigned to private defence lawyers are more likely to be finalised at a later stage in proceedings and are more likely to be finalised in the Higher Court.

Intimate Partner Violence (IPV) and Data Science: A case study of enhancing IPV data and implementing an IPV focused deterrence strategy

Kyle Ott & Rachel Teicher

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This working paper introduces a solution to the flawed state of intimate partner violence data. IPV presents a unique set of factors and circumstances that demands a specific approach, separate from family violence. It is a cross-cutting crime hinging on the relationship between offender and victim: any crime can be IPV. While limited IPV data exists, it varies across jurisdictions, seldom existing in a format allowing for easy analysis. Utilizing both supervised and unsupervised machine learning models, we will present a case study based on text data (13,000 report narratives) from one mid-sized city in the US. We find the prevalence of IPV for 35 different serious charges is tripled than when trusting current systems. Believed to be the first research paper to utilize data science techniques in measuring the true scope of IPV, this paper will situate the results in the context of a focused deterrence strategy (under the tutelage of David Kennedy) informed by this data analysis. The conclusion discusses how to enable jurisdictions to better understand the nuance and depth of their local IPV offending dynamics and how to develop strategies to effectively respond to these newfound insights, focusing on the most dangerous offenders and preventing victimization.

A systematic review and meta-analysis of the efficacy of psychological interventions with violent offenders in custodial, community, and forensic mental health settings

Nina Papalia & Ben Spivak

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Aim: This systematic review and meta-analysis aimed to determine whether psychological interventions with violent offenders in custodial, community, and forensic mental health settings are effective in bringing about psychological and behavioural change. A secondary objective was to consider what factors modify treatment effects. The last meta-analysis of this kind was conducted over 10 years ago.

Method: Nine databases were searched alongside hand-searching of eight relevant journals to identify primary studies. A bibliography search of existing reviews, grey literature searching, and contact with experts also occurred to ensure all relevant published and unpublished studies were identified. Key exclusion criteria were: (a) < 80% of the sample comprised violent offenders; (b) juvenile samples; (c) specialised samples or interventions (e.g., spousal abusers, sexual offenders receiving sex offender specific intervention); (d) lack of a suitable comparison group; and (e) absence of a quantitative primary/ secondary outcome measure.

Results/Conclusions: We included 52 studies (46 independent reports), with a range of experimental and quasi-experimental study designs. Synthesis of findings across studies is underway. Meta-analyses will be presented separately for different outcomes (i.e., violent recidivism, anger regulation, etc.). Statistical analysis of differential treatment effects will be examined according to a number of important factors, including: treatment setting; treatment dosage/duration; treatment components; sample characteristics; and methodological characteristics. The paper will provide insights into how best to intervene with this population, and may ultimately lead to improved rehabilitative outcomes for violent offenders.

Online warning messages to prevent the viewing of adult-minor sex images: the results of a randomized controlled experiment

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Aim: Online warning messages (WM) have been advocated as a situational strategy to prevent people viewing child exploitation material (CEM). However, it is unclear if WM influence behaviour, and, whether effects may differ according to message-type. This study sought to test if (a) WM influence users' behaviour when attempting to access 'barely legal porn' (BLP) and (b) behaviour varied according to message type.

Method: With commercial services the study established a real-life male-oriented Australian website. Naïve participants who clicked on a BLP advertisement were randomly allocated to a control group (who did not receive a WM), or one of four experimental groups who received messages relating to: harm to viewers (E1); harm to victims (E2); the risk of detection (E3); or the consequences of detection (E4). (BLP, which eroticizes adult-minor sex, was used as a proxy for CEM because attempting to access a fake advert for CEM could constitute an offence.)

Results: The website attracted 19,229 visitors (1/12/2017 and 9/04/2018). Of these 512 clicked on the BLP advert. Compared against controls, E3 and E4 were significantly less likely to continue to access BLP. No significance difference was found between controls and E1 or E2.

Conclusion: Deterrent-focussed WM are likely to dissuade CEM viewing. Harm-focussed WM may be more effective against CEM than BLP. Implications of the findings will be considered for non-LEA agencies that could employ WM at local, national and international levels.

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The effect of the Violent Offender Treatment Program (VOTP) on offender outcomes

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Aim: To identify the impact of the Violent Offender Treatment Program (VOTP) on re-offending and return to custody outcomes at 24 months of free time post release.

Method: Data were obtained for all offenders referred to VOTP between 2007 and 2014 and released from prison, yielding a sample size of 587 referrals. Ordinary least squares and two-stage-least-squares (2SLS) linear probability models were used to estimate the differences between those who started the program and those who did not, on four outcome variables measured at 24 months free time post release: 1) re-offending with any offence; 2) re-offending with any offence or a return to custody; 3) re-offending with a violent offence; and 4) re-offending with a violent offence or a return to custody. Similar analyses were also undertaken comparing outcomes for offenders who completed VOTP with those who did not complete the program.

Results: Starting VOTP was associated with significantly lowered probability of general re-offending (by 9 percentage points) and general re-offending or returning to custody (7 percentage points) at 24 months free time post release. Similar differences in the probability of general re-offending (9 percentage points) and general re-offending or returning to custody (7 percentage points) were found in relation to completing VOTP. We also find non-significant results for violent re-offending. The latter finding may be related to loss of statistical power due to sample attrition.

Conclusion: VOTP appears to be associated with lower rates of general re-offending and return to custody, however the estimates obtained are based on a simple regression approach and may not represent causal effects. Replication with more robust techniques and/or a larger sample size is recommended.

The marginal effect of bail decisions on failure to appear, imprisonment and crime

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This study estimates the effect of bail decisions on the likelihood of receiving a prison sentence, failure to appear and offending on bail. A dataset of 42,362 first bail hearings taking place after the 'show cause' amendments to the Bail Act (2013) was constructed and linked to final case outcomes and offending data. Quasi-random assignment of bail magistrates with differing propensities to grant bail was used to address problems of selection bias and partial observability. Further analyses were undertaken to determine the proportion and characteristics of defendants who were sensitive to magistrate leniency. Robustness checks were conducted to determine the sensitivity of estimates to different specifications. Significant effects were found for all three outcomes, with results showing that release to bail significantly increases the rate of offending, decreases the rate of imprisonment and increases the rate at which defendants fail to appear. These differences are causal and net of differences in observed characteristics and selection bias, but are estimated on the subset of defendants whose bail status is sensitive to magistrate leniency. The likelihood of failing to appear and of offending on bail for defendants whose bail outcomes are sensitive to magistrate leniency does not exceed the general rate among those released on bail. Taken together, the results show that bail refusal has a significant incapacitation effect on crime and failure to appear. These benefits should, however, be considered alongside the considerable cost to the correctional system and the individual arising from increased imprisonment rates.

Predictive factors in attempted and completed suicides in Queensland correctional facilities

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This paper aims to further understanding about the factors that predict attempted and completed suicides within Queensland corrective facilities. A detailed examination of the types of locations, individual characteristics, period of incarceration, classifications and offence types, as well as remand vs. sentenced will be discussed. The method was a manual exploration of the records of all prisoners who attempted or completed suicide in Queensland correctional centres over a two year period from July 2016 to June 2018. Previous self-harm and first time vs multiple incarcerations will be considered. Potential learnings in relation to strategies for suicide prevention and management of the risk of serious self-harm will be discussed.

Did the National Firearms Agreement reduce the likelihood of a gun massacre in Australia?

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The Australian approach to gun legislation is lauded internationally, however there is currently no rigorous evidence to suggest it has achieved its primary objective, to reduce the likelihood of a gun massacre. Only one previous study has evaluated the National Firearms Agreement's (NFA) impact on the likelihood of a gun massacre using quantitative methods. This study found the NFA had no impact on the likelihood of a gun massacre, however the methodology and assumptions it employed were flawed and therefore the conclusion is unreliable. Using gun massacre data from 1971 to the present, we used three different methodological approaches to examine whether the likelihood of a gun massacre had altered after the NFA. Sensitivity analyses were employed to test whether the findings were resistant to changes in the definition of a massacre or the time period of study. Our study found there was clear evidence of a change in the likelihood of a massacre, with the probability now 90 per cent lower than the pre-NFA period. The result was consistent across the three methodologies and using differing definitions of massacre and time period.

Assessing the life course overlaps among mental health, child protection and criminal justice system contacts: Similarities and differences by gender and Indigenous status

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This study uses an Australian birth cohort to examine how trajectories of criminal justice contacts into early adulthood vary by contact with the child protection and mental health systems. Our aim is to outline how these contacts are sequenced throughout the life course and to examine variation in these sequences across subgroups defined by both gender and Indigenous status. We know that patterns of criminal justice system contact vary by gender and Indigenous status, but we do not know how mental health and child protection contacts factor into these patterns. Using linked administrative data from a 1990 Australian birth cohort (to age 25 years, N = 45,000), we detail trajectories of system contact and assess variation across groups defined by gender and Indigenous status. Specifically, we examine whether, relative to criminal justice contacts, offenders have prior mental health system or child protection system contacts that could serve as points of prevention or intermediate system contacts that could serve as points for intervention. Further, do the nature and sequencing of mental health and criminal justice contacts vary by gender and Indigenous status in ways that suggest unique needs and prevention/intervention opportunities and strategies? We conclude by outlining the implications of these patterns of contact for life course theories of offending.

Recidivism and health outcomes following release to the community of NSW prisoners with a history of substance dependence: a novel approach to evaluation of a statewide through care program

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Aim: The Connections Program (CP) is a state-wide voluntary reintegration program targeting incarcerated adults with a history of substance dependence in NSW that was set-up in 2007. It is a tailored throughcare program delivered by the Justice Health and Forensic Mental Health Network to people in prison focused on improving health, social and emotional wellbeing and reducing recidivism. It provides continuous caseworker support commencing prior to release and up to 12 weeks post-release. The aim of this study is to evaluate whether the CP is associated with a reduction in recidivism.

Method: Population-based cohort study using record linkage of the CP dataset with ten NSW population datasets on reoffending, health, opioid substitution therapy and mortality. Propensity score matching to adjust for socio-demographic factors, offending history and participation versus non participation on the program. Recidivism, mortality and health outcomes will be examined using a generalised estimating equation model. Of the estimated 6534 patients who were eligible to participate in the CP from January 2008 to December 2015, 4518 (69%) patients were able to access care with 3627 receiving their first episode of care.

Conclusion: This evaluation will inform evidence-based policy on the effectiveness of throughcare programs in reducing recidivism.

Can electronic monitoring reduce reoffending

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This research evaluates the impact of electronic monitoring as an alternative to prison on reoffending. Leveraging plausibly exogenous variation in sentencing outcomes generated by quasi-random assignment of judges, we find electronic monitoring reduces reoffending within 24 months by 16 percentage points compared to serving a prison sentence. For offenders who are less than 30, the reduction is 43 percentage points, with sizable and significant reductions in reoffending persisting for 8 years. Our calculations suggest that criminal justice costs are reduced by around $30,000 for each eligible offender who services their sentence under electronic monitoring rather than in prison.

A situational analysis of homicide in Australia

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The Australian Homicide Project (AHP) involves self-report data gathered from comprehensive interviews with 302 convicted homicide offenders serving custodial sentences across Australia. Among the areas covered were life events leading up to the offence and the 'who', 'what', 'where', 'when', 'why' and 'how' of the offence itself. The analysis examines differences in the situational dynamics between intimate partner homicide (n=69) and other homicides (n=193). In comparison to other homicide offenders, intimate partner offenders had less extensive criminal records, were older at the time of the offence, had higher levels of self control, reported higher levels of emotional disturbance leading up to the offence, had been having violent thoughts towards the victim for a longer time, were less likely to be affected by drugs or alcohol, and were more likely to report that they had lost control. Results are interpreted with in the routine activity approach, rational choice perspective and the concept of situational precipitators. Implications for situational prevention are considered.

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The impact of police numbers on crime

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This study estimates the causal effect of police numbers on rates of crime and arrests. The data consists of monthly Local Area Command (LAC) level counts of police officers and selected violent and property crimes for the period July 2000 – April 2003. These crimes include; break and enter, theft, motor vehicle theft, robbery and homicide. Using these data I exploit variation in police numbers driven by a massive recruitment campaign in the lead up to the 2003 New South Wales (NSW) state election to estimate the causal effect of police on crime and arrests. Results suggest that a one per cent increase in the size of the police force generates a 0.8 per cent reduction in theft and a 1.1 per cent reduction in motor vehicle theft. This roughly equates to one additional police officer preventing 17 thefts and four motor vehicle thefts each year. My estimates are too imprecise to draw any definitive conclusions with respect to other types of crime. I do not find evidence that an increase in police numbers generates any significant change to the arrest rate. This indicates that police reduce theft and motor vehicle theft through deterrence rather than incapacitation.

Prison work and recidivism

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The question of whether prison labor reduces reincarceration is investigated applying reduced-form and structural methods to administrative data on the universe of convicts released from Italian prisons between 2009 and 2012, their work records in prison jobs, and their criminal records for three years following the release. The relatively high wage rate in prison jobs in Italy induces a form of rationing that offers levers for identification. I find that a standard deviation increase in average annual hours spent in a prison job (about 200 hours per year) reduces the reincarceration rate by about 12 percentage points one year of release due to a combination of liquidity, rehabilitation, and training effects. This effect persists after three years of release. The implied rate of return on government funds allocated to prison work programs in Italy is about 70%.