

# To What Extent do Changes in Rates of Imprisonment Influence the Incidence of Offending?

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INTRODUCTION .....	3
I. RELEVANT PATTERNS OF OFFENDING.....	5
II. THE GENERAL IMPACT ON CRIME OF A PUNITIVE CRIMINAL JUSTICE SYSTEM .....	8
III. INCAPACITATION.....	9
A. OVERVIEW .....	9
B. ACTUARIAL ASSESSMENT OF RISK OF RECIDIVISM .....	11
D. TARGETED INCAPACITATION OF DANGEROUS OFFENDERS .....	14
E. THE INCAPACITATIVE EFFECT OF IMPRISONMENT ON RATES OF OFFENDING: SOME NUMBERS .....	15
IV. DETERRENCE .....	18
A. THE STRUCTURE OF THE DISCUSSION .....	18
B. DEFINITIONS AND ILLUSTRATIONS.....	18
C. A FOCUS ON MARGINAL DETERRENCE AND SERIOUS CRIME.....	20
D. IS DEBATE IN THE COURTS ABOUT MARGINAL DETERRENCE OFF-LIMITS? .....	21

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E. MARGINAL DETERRENCE – AN OVERVIEW OF THE ARGUMENTS ....	24
F. CALIFORNIA’S THREE-STRIKES LAW .....	27
G. SUSPENDED SENTENCES AND INDIVIDUAL MARGINAL DETERRENCE .....	31
H. DISCOURAGING THE CARRYING OF FIREARMS: SPECIFIC MARGINAL DETERRENCE.....	33
I. THE GENERAL LITERATURE AS TO MARGINAL DETERRENCE .....	34
J. LIMITS OF DETERRENCE.....	36
CONCLUDING OBSERVATIONS.....	36
APPENDIX 1 .....	38
APPENDIX 2 .....	39

## INTRODUCTION

The prison population is contributed to by many factors, crime rate, efficacy of the police in catching criminals, prosecution policies, bail policies, conviction rates, sentencing practices and parole decisions. Because a rising crime rate can be expected (all other things being equal) to lead to an increase in prison population, the size of this population is not necessarily a reliable measure of the punitiveness of the criminal justice system. On the other hand, official policies aimed at enhancing the punitiveness of the criminal justice system can be expected to lead to increases in the prison population (all other things being equal). Over recent decades, such policies have been adopted in many jurisdictions for the ostensible purpose of reducing crime. What I am interested in is whether resulting increases in prison population have served to limit the incidence of crime.

Incarceration rates in New Zealand and England and Wales (hereafter England for short) (expressed, as usual, in terms of the number of prisoners per 100,000 of population) are currently in the order of 190 and 151 respectively.<sup>1</sup> Twenty years ago, the equivalent figures were 101 and 96.<sup>2</sup> A significant driver of these increases has been increased punitiveness in the criminal justice systems concerned. Amongst the factors<sup>3</sup> which have driven these increases in incarceration rates has been

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<sup>1</sup> New Zealand: Derived from figures given by Hon Judith Collins (19 March 2009) Parliamentary Question (for written answer) 1413. England: International Centre for Prison Studies *Prison Brief for United Kingdom: England & Wales* <[www.kcl.ac.uk/depsta/law/research/icps](http://www.kcl.ac.uk/depsta/law/research/icps)> (2009).

<sup>2</sup> New Zealand: Derived from Ministry of Justice *Conviction and Sentencing of Offenders in New Zealand: 1998 to 1997* (1998), Table 6.5. England: Derived from Ministry of Justice *Offender Management Caseload Statistics 2007* (2008) at 91.

<sup>3</sup> The relevant factors are reviewed, for instance, in Roberts and others *Penal Populism and Public Opinion* (2003); Tony "Evidence, elections and ideology in the making of criminal justice policy," in Tony (ed) *Confronting Crime: Crime Control Policy*

the desire to limit crime—a desire which is understandable given that by 1990, recorded rates of crime were many times higher than in the post-war period.<sup>4</sup>

In comparison, Canada's incarceration rate has remained relatively consistent. Currently it stands at 116; a slight decrease from the position 20 years ago when it stood at 123.<sup>5</sup>

A graph tracing the changes in incarceration rates in England, New Zealand and Canada is attached as appendix 1 to this paper.

Determining the crime reductive effectiveness of increased punitiveness is shrouded in difficulty and indeterminacy. In the first place, it is not possible to be definitive about the actual rates of offending. Variations in levels of punishment are far from being the only significant variables which affect the incidence of crime. Self-evidently, cause and effect relationships are hard to establish or refute. Particularly in terms of unpleasantness and rehabilitative/criminogenic balance, the nature of imprisonment varies significantly from institution to institution, as well as over time and between different jurisdictions. So imprisonment is not a homogenous product. Nor is crime a homogenous phenomenon. As well, the clarity of debate is often obscured by ambiguity in the terms which are deployed, particularly in relation to deterrence.

Some effective rehabilitative programmes are delivered in prisons. But, because this is dependent on the nature of the programmes and their delivery (rather than the effect of imprisonment), it lies outside the scope of this paper.<sup>6</sup> As well, there is some evidence to suggest that

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*under New Labour* (2003); and Pratt "The Dark Side of Paradise" (2006) 46 *Brit Jo of Criminology* 541.

<sup>4</sup> In New Zealand, the rate of recorded offences was seven times greater in 1992 than in 1950: Statistics New Zealand *Crime in New Zealand: 1996–2005* (2006) at 4. In England and Wales the number of recorded crimes increased almost ten-fold from 479,366 in 1950 to 4,363,632 in 1990: Gordon C. Barclay and Cynthia Tavares (eds) *Information on the Criminal Justice System in England and Wales: Digest 4* (Home Office, 1999) at 2. Victimization surveys, such as the British Crime Survey and the New Zealand Crime and Safety Survey, do not go back as far as the 1950s.

<sup>5</sup> R Walmsley *World Prison Population List* (8<sup>th</sup> ed) Kings College London, International Centre for Prison Studies.

<sup>6</sup> As well, for some offenders imprisonment might promote rehabilitation, for instance by providing time out from anti-social activities or abusive relationships. It seems sensible, however, to proceed on the basis that, at least generally, locking up an offender will not, in itself, make him or her a better person.

imprisonment does, or can have, criminogenic effects, particularly where the comparison is between short terms of imprisonment and alternative sanctions. I have decided to treat these criminogenic effects as also outside the scope of this paper. This is partly because such effects logically should be considered in conjunction with the already out of scope rehabilitation considerations but also because I suspect that so much in practice depends on the nature of the imprisonment regime in question.

Instead, I propose to examine the extent to which imprisonment, through mechanisms of incapacitation and deterrence, reduces crime. For reasons I am about to come to, I think it is clear that a robust criminal justice system based around the sanction of imprisonment reduces crime from what it would otherwise be, i.e. where the counterfactual assumption is the absence of a reasonably punitive criminal justice system. What is rather less clear is the marginal impact (if any) on crime of increased punitiveness and associated increases in prison population.

## I. RELEVANT PATTERNS OF OFFENDING

I think that it is important to have a reasonable idea of the extent to which the general population engage in offending, from time to time, and as to typical criminal career trajectories of offenders.

A 2001 English Home Office analysis<sup>7</sup> indicated that:

- 33 per cent of males and 9 per cent of females born in 1953 had been convicted of at least one ‘standard list’ offence before the age of forty-six.
- Two-thirds of all court appearances where a conviction occurred before the age of forty-six for males born in 1953 were attributable to about one quarter of offenders, or 8 per cent of the male population.

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<sup>7</sup> Julian Prime, Steve White, Sarah Liriano and Kinnari Patel *Criminal careers of those born between 1953 and 1978 in England and Wales* (Home Office Statistical Bulletin 4/01, 12 March 2001). American longitudinal studies have produced similar results, see Bernard Harcourt *Against Prediction: Profiling Policing and Punishing in an Actuarial Age* (2006) at 88 and 87.

- The majority of offenders had been convicted on only one occasion: half of male offenders and three-quarters of female offenders born in 1953 had only been convicted once.
- 22 per cent of males currently aged 10 to 45 are estimated to have a conviction for at least one standard list offence.
- 55 per cent of male offenders and eighty per cent of female offenders had a criminal career of less than a year in length.
- The peak age of known criminal activity for males was nineteen, at which age 11 per cent of those born in 1953 were known to be criminally active.<sup>8</sup> Over 10 per cent of males born in 1953 were criminally active between the ages of 17 and 25.
- 7 per cent of males and half of one per cent of females born in 1953 had received a custodial conviction before the age of forty-six.

Building on this paper, the Halliday Report<sup>9</sup> of 2001 noted:<sup>10</sup>

- 55% of known male offenders, and 80% of females born in 1953 had careers of less than one year, as measured by convictions. The great majority of these had only one conviction (93% of both males and females in the 1953 cohort).
- In the same sample around a quarter of males had careers of at least 10 years in length, and 10% had careers of 20 or more years. Only 7% of females had careers of over 10 years.
- The average rate of desistance, as measured by convictions, appears to increase with age, reaching one third by age 19, 43% by the age of 25, and around one in two between the ages

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<sup>8</sup> The authors use a broad definition of criminally active under which a person is “criminally active” at age X if either he or she is convicted at age X, or has two or more convictions and age X is between their first and last recorded convictions.

<sup>9</sup> John Halliday and others *Making Punishments Work: A Review of the Sentencing Framework for England & Wales* (2001).

<sup>10</sup> *Ibid.* at appendix 3 para 3.

of 34 and 40, still leaving a high rate of persistence for those still offending in middle age.

As to reconviction, the raw figures provided in the Halliday Report are of interest:<sup>11</sup>

In general, although most offenders desist quickly, the preponderance of persistent offenders in the criminal justice system means that reconviction rates are disappointingly high. Rates of reconviction within two years, for prisoners discharged and offenders commencing community penalties in 1995 were:

- 56% (discharged prisoners)
- 56% (community penalties, adjusted)

(Source: Kershaw C., Goodman J., and White S. Reconvictions of offenders sentenced or discharged from prison in 1995, England and Wales, Home Office Statistical Bulletin 19/99).

This suggests that there is currently no discernible difference between reconviction rates for custody and for community penalties.

The report went on:<sup>12</sup>

Of released prisoners, reconviction rates are higher for those who have served short sentences than for those released after longer terms. This is shown by the following rates of reconviction within two years of discharge in 1996:

- 60% (up to 12 month sentences)
- 53% (over 12 months, up to four years)
- 31% (over four years, up to ten years)
- 29% (over ten years, excluding life)
- 5% (life sentence prisoners).

It might seem plausible to infer from these figures that shortish prison sentences do not have any greater deterrent effect than community

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<sup>11</sup> *Ibid.* at appendix 6 at para 2.

<sup>12</sup> *Ibid.* appendix 6 at para 2.

based penalties but that long sentences are more effective at reducing recidivism than short sentences (i.e. that prison “works” if administered in sufficiently large doses). The difficulty, however, is that there are many confounding factors, particularly the differing characteristics and offending of the various groups of offenders and the age specific nature of crime.

The more important, and in part overlapping, factors that come out of these figures are:

- (a) The relatively high proportion of the population who have criminal convictions (and thus the presumably larger proportion of the population who have offended);
- (b) The tendency of offenders to mature out of offending with the result that most criminal careers are quite short;
- (c) The high proportion of offenders who do not recidivate after initial exposure to the criminal justice system or who desist from offending after several such exposures.

## **II. THE GENERAL IMPACT ON CRIME OF A PUNITIVE CRIMINAL JUSTICE SYSTEM**

The very significant proportion of the population who offend reasonably seriously is consistent with a reasonably high baseline propensity to offend (i.e. one which is not constrained by purely ethical considerations). Some indications of what might happen in the absence of an effective criminal justice system are provided by instances of increased lawlessness when policing has been largely suspended, as in Denmark in September 1944 (when the German occupying forces disarmed and disbanded the Danish police and detained and deported many police officers) and earlier in Liverpool and Melbourne during the police strikes of 1919 and 1923.

Criminal justice systems provide rational as well as ethical reasons for abstaining from crime. This is based around imposing sanctions on criminals, the risk of which (a function of the perceived likelihood of detection and the consequences) should be seen by potential offenders as outweighing any benefits likely to result from offending. And broadly this seems to work, at least eventually and with most people. The usually

short length of criminal careers suggests that deterrence associated with the criminal justice system, the perhaps related tendency of offenders to mature out of offending (which must to some extent be associated with linking consequences to actions) along with the social and economic consequences of being labelled a criminal exert considerable downwards pressure on crime.

It also suggests that those who have long criminal careers are, in a sense, outliers—people who for reasons associated with personality or life circumstances are relatively impervious to the deterrence message which the criminal justice system provides, a point to which I will revert to later in the paper.

### III. INCAPACITATION

#### A. OVERVIEW

While in prison, offenders have limited opportunities for offending. So it might be thought to follow that an increase in incarceration rates should be accompanied by a proportionate reduction in crime. Further, because crime is disproportionately committed by a comparatively small group of offenders, selective incapacitation (ie targeting likely prolific and recidivist offenders) might be thought to have the potential to produce major reductions in crime. As it has turned out, however, the marginal incapacitative effect of increasing incarceration has proved to be limited. There are a number of reasons why this is so.

First, there is the age specific nature of offending to which I have already referred briefly. The peak age for male offending is around 18 to 19, the highest proportion of offenders (in terms of the population as a whole) is in the 15–24 age group and rates of offending drop off appreciably for those who are 25 and older. Criminal careers tend to be comparatively short, with around three quarters of such careers (as measured by convictions) lasting for less than ten years.<sup>13</sup> Given that progression through the criminal system to the point of a prison sentence may take some time, it is likely that many of those in prison are at (or nearing) the end of their criminal careers.

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<sup>13</sup> These figures are taken from The Halliday Report, *supra* note 9 at appendix 6.

A second reason is the likelihood of substitution. The incarceration of a retail drug dealer affects directly neither the wholesale availability of, nor retail demand for, drugs and is thus unlikely to reduce the incidence of drug dealing. Similar considerations apply in other circumstances in which there is either a market for criminal activity (for instance the receiving of stolen property) or fixed and limited crime opportunities<sup>14</sup> and to offending with an organised or group character.

A third factor is the small percentage of criminal offences which result in conviction. It has been estimated that in England, approximately 2% of offences result in conviction.<sup>15</sup> The percentage of convictions in relation to the number of crimes committed is higher for more serious (and particularly serious violent) crime, but is still comparatively low.

A fourth factor is the difficulty in predicting recidivism. It is one thing to identify a prolific offender with hindsight. It is not so easy to do so prospectively. To some extent, the criminal justice system has addressed this by resorting to actuarial assessment techniques, which I will discuss shortly. But what the associated studies have shown is that in any group of offenders who are rated at medium or high risk of dangerous reoffending (and are thus candidates for incapacitative sentences), there will be a very significant number who will not relevantly recidivate—the so-called “false positives.”

It is also possible that there may be a level of incarceration at which the negative elasticity of crime to imprisonment turns positive; in other words, at which increases in incarceration may lead to more crime. This point would be reached when the negative impact of high and increasing levels of incarceration on society (and disadvantaged groups) generates more crime than is being prevented by the incapacitation of particular offenders. All of this is discussed by Liedka, Piehl and Useem “The Crime Control Effect of Incarceration: Does Scale Matter?”<sup>16</sup> They suggest that the “point of inflection” may be reached where a state’s incarceration rate is 325 per 100,000. If this is so, there are many jurisdictions in the United States where increasing incarceration may result in more, rather than less, crime.

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<sup>14</sup> For a full discussion of this, see Zimring and Hawkins *Incapacitation: Penal Confinement and the Restraint of Crime* (1995) at 53 and ff.

<sup>15</sup> See Andrew Ashworth *Sentencing and Criminal Justice* (4 ed, 2005) at 29.

<sup>16</sup> (2006) 5 *Criminology and Public Policy* 245.

## B. ACTUARIAL ASSESSMENT OF RISK OF RECIDIVISM

Unguided clinical risk assessments (which in this context include those made by judges) have been shown to be unreliable and, on the whole, to over-predict the risk of reoffending.<sup>17</sup> I suspect that this has been especially true of assessments made by judges. A judge who is continually exposed to recidivists but not desisters is likely to over-estimate the risk of recidivism particularly given the public safety context in which such assessments must be made.

Actuarial instruments identify and score static risk factors which appear to be correlated to later offending (or types of offending). Such tools are supplemented by other instruments which capture dynamic risk factors specific to an offender which can change over time. Also used as a predictive tool, although not strictly speaking an actuarial instrument, is the revised psychopathy checklist (PCL-R)—or iterations of it—developed by Dr. Robert Hare.

Actuarial instruments have been utilised in the criminal justice system for many decades<sup>18</sup> but it is only in the last ten years that they have been systematically incorporated into sentencing, parole decisions and sentence management.<sup>19</sup> A New Zealand Ministry of Justice paper, “Sentencing Policy and Guidance: A Discussion Paper” shows why the development and use of actuarial models has been attractive to policy makers:<sup>20</sup>

Studies show that actuarial (statistical) methods of prediction based on selected objective characteristics of the offender have had a higher success rate than clinical predictions based on a diagnostic approach to the individual characteristics of the

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<sup>17</sup> For a review of the literature, see Ashworth, *supra* note 15 at 215–216.

<sup>18</sup> For an early article, see Hart “Predicting Parole Success” (1923) 14 *Journal of Criminal Law and Criminology* 405. The relevant history is well described by Brown “Calculations of risk in contemporary penal practice” in Brown and Pratt (eds) *Dangerous Offenders: Punishment and social order* (2000) 93. The practice is controversial, see Bernard E Harcourt, *supra* note 7.

<sup>19</sup> For the relevant history in England and Wales, see Crawford “What impacts of quality assessment using OASys” (2007) 54 *Probation Journal* 157.

<sup>20</sup> Ministry of Justice *Sentencing Policy and Guidance: A Discussion Paper* (1997) at 64.

offender. Actuarial prediction is gaining ground, particularly in the United States, as its techniques become more sophisticated. It is part of the conceptual shift from subjective approach involving a diagnostic assessment of an individual's psychology for indications of dangerousness to a more 'objective' one of matching individuals to the high risk factors statistically linked to the highest probability of future violent offending. This application of 'rationality' rather than human discretion is considered by its advocates to be more exact, consistent and transparent, and therefore fairer. (It is also cheaper.)

Actuarial assessment has been the subject of judicial consideration by the New Zealand Court of Appeal, in a general way in *Belcher v. The Chief Executive of the Department of Corrections*<sup>21</sup> and in considerably more detail in *R. v. Peta*.<sup>22</sup> The actuarial tools that are primarily used in New Zealand are derived from instruments developed in Canada and adapted to accommodate the extent to which information is captured by the New Zealand criminal justice system.

Actuarial risk assessment involves complex and controversial issues.<sup>23</sup> But I can give what I trust is a reasonable illustration of the way in which it all works by reference to the way in which the relevant New Zealand instrument, ASRS,<sup>24</sup> is used to assess the risk of sexual reoffending against children.

ASRS provides for a scoring of seven static risk factors (relating to the number of prior sentences, the nature of the prior offending, whether the current sentence includes non-sexual violence and age). The aggregate score produces a risk categorisation of "low" (ASRS score of 0), "medium-low" (ASRS score of 1–2), "medium-high" (ASRS score of 3 or 4) and "high" (ASRS score of 5 and above). In the case of sexual reoffending against children, the validated relevant rates of reoffending after ten years and the percentages of offenders within each risk group were:

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<sup>21</sup> [2007] 1 NZLR 507.

<sup>22</sup> [2007] 2 NZLR 627.

<sup>23</sup> These are fully reviewed by Bernard Harcourt, *supra* note 7.

<sup>24</sup> Automated Sexual Recidivism Scale.

<b>Risk Group</b>	<b>Percentage re-offending after 10 years</b>	<b>Percentage of offenders within risk group</b>	<b>Number of re-offenders</b>
<b>Low</b>	8%	47.25%	19/249
<b>Medium-Low</b>	11%	38%	23/200
<b>Medium-High</b>	16%	9.5%	8/50
<b>High</b>	36%	5.25%	10/28

To put this in context, of offenders in the high risk group, the rate of reconviction over 10 years for offending against children was 36 per cent and the correlative of that is that 64 per cent in that group were not relevantly reconvicted. ASRS does not provide a basis for predicting whether a particular offender in that group is amongst the 36 per cent or 64 per cent subgroups (who are, or are not, relevantly reconvicted). So it is not correct to say that someone in the high risk group has a 36 per cent chance of relevantly reoffending.

### **C. IMPROVING THE INCAPACITATIVE EFFICIENCY OF THE PRISON SYSTEM**

In theory at least, the incapacitative efficiency of the prison system could be enhanced by concentrating the use of scarce penal resources on likely prolific re-offenders. Doing this would require very significant sentencing differentials based around risk-assessments, with those assessed at high risk serving sentences much (and perhaps many times) longer than low risk offenders. The resulting disproportionality of sentences to culpability and the high incidence of false positives in those assessed at high risk have discouraged the widespread adoption of this strategy as a general part of the sentencing process. Instead, formal incapacitative strategies (and associated reliance on actuarial assessment) have tended to be confined to parole decisions and the sentencing of

dangerous offenders, contexts in which the disproportionality concerns and the false positive problem have not been treated as controlling.<sup>25</sup>

I will discuss the targeted incapacitation of dangerous offenders shortly. Before I do so, I should note that treating prior criminal history (which forms the basis of actuarial assessment) as an aggravating sentencing consideration, operates, in a crude way, as a proxy for more formal prediction of likely recidivism.<sup>26</sup>

#### **D. TARGETED INCAPACITATION OF DANGEROUS OFFENDERS**

Legislative schemes providing for indeterminate detention of habitual or dangerous offenders have been common for around 100 years.<sup>27</sup> But indeterminate sentences were not popular with judges and the empowering legislation was often “moribund.”<sup>28</sup> That, however, is no longer the case. Selective incapacitation addressed to the risk of reoffending posed by dangerous individuals is an important feature of current criminal justice systems. Current sentencing legislation provides that dangerousness is now a trigger for indeterminate sentences in New Zealand<sup>29</sup> and Canada<sup>30</sup> and indeterminate<sup>31</sup> or extended<sup>32</sup> sentences in England.

Because indeterminate and extended sentences result in prison sentences which are longer than would otherwise be the case, their imposition must serve to prevent a significant (albeit uncertain) number of offences which those categorised as dangerous would otherwise commit.

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<sup>25</sup> As to all of this, see Zimring and Hawkins, *supra* note 14, and Bernard Harcourt, *supra* note 7.

<sup>26</sup> A consideration which is reflected in the design of American sentencing systems, see Harcourt, *supra* note 7 at 91.

<sup>27</sup> See for instance the discussion by Arie Freiberg in “Guerrillas in our midst? Judicial responses to governing the dangerous” in Brown and Pratt (eds) *Dangerous Offenders: Punishment and Social Order* (2000) 51.

<sup>28</sup> See Freiberg, *supra* note 27 at 56.

<sup>29</sup> Section 87 of the *Sentencing Act* 2002 (NZ).

<sup>30</sup> Section 753 of the Criminal Code of Canada.

<sup>31</sup> See ss 225 and 226 of the *Criminal Justice Act* 2003.

<sup>32</sup> See ss 227 and 228 of the *Criminal Justice Act* 2003.

Such sentences, however, have only a limited effect on rates on the targeted (i.e. dangerous) offending.

I can illustrate this mathematically by reference to my ASRS table. Of the 60 recidivists, only 10 were in the high risk group (and thus the most serious candidates for incapacitative sentences). More than two thirds of reoffenders were in the two lowest risk groups (and thus not very plausible candidates for incapacitative sentences).

Another way of illustrating this point is to look at crimes of high salience (such as sexual offending) and analyse the background of the offenders with a view to seeing how many of the relevant crimes could have been precluded by an actuarially-based system of incapacitative sentences. A substantial proportion (perhaps up to 80 per cent) of sex offenders who are dealt with by the courts have not previously been convicted of a sexual offence.<sup>33</sup> In the case of such offenders, the criminal justice system necessarily has not had the opportunity to engage in predictive and incapacitative exercises.

#### **E. THE INCAPACITATIVE EFFECT OF IMPRISONMENT ON RATES OF OFFENDING: SOME NUMBERS**

There are broadly three different (albeit related) types of assessments on the incapacitative effect of imprisonment on rates of offending:

- (a) Current estimates of the incapacitative effect of imprisonment at existing levels;
- (b) Prospective estimates of increased incapacitative effect associated with postulated and usually modest increases in the prison population; and
- (c) Retrospective estimates of the incapacitative impact of increases in prison population.

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<sup>33</sup> Amanda Matravers and Gareth V Hughes “Unprincipled sentencing? The policy approach to dangerous sex offenders” in Tonry (ed) *Confronting Crime: Crime control policy under New Labour* (2003) 51 at 71.

I can illustrate this with some examples. In a 1998 article,<sup>34</sup> John Donahue and Peter Siegelman reviewed the literature as to the current estimates of the incapacitative effect of imprisonment on robbery (i.e. the extent to which the incidence of robbery would increase if all prisoners were released). The lowest estimate was five per cent and the highest was 175 per cent. They noted that “the consensus estimate of the elasticity of crime to incarceration has been roughly 0.15.”<sup>35</sup>

An example of a prospective estimate (along with some of the underlying methodology) is to be found in the Halliday Report:<sup>36</sup>

25. A survey of self-reported offending among males received into prison under sentence in early 2000, suggests that they commit offences at around 140 per year in the period at liberty, before they were imprisoned. A substantial proportion of the offences are committed with co-offenders (over ½ for theft of a vehicle). There are substantial differences in the extent of drug related offending, ranging from 22 offences per person per year for those not taking any drugs to 257 for those who take drugs and admit to their drug taking being a problem.

26. Home Office modelling suggests that the prison population needs to increase by around 15% to result in a short-term reduction of crime of just 1%, assuming that the extra prisoners would have committed 13 recorded offences per year, if at liberty. These figures represent the avoidance of crimes, arising from just imprisoning a person. They do not estimate the effect on the propensity to commit crime after their period of imprisonment or the deterrent effect on others.

27. A 1% reduction in recorded crime can be achieved by targeting particular groups, but with a smaller overall increase in the prison population. For example, by increasing by 16% the prison population of persons who admit to taking a drug and to their drug taking being a problem. This is equivalent to a 7% increase in the overall prison population.

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<sup>34</sup> “Allocating Resources Among Prisons And Social Programs In The Battle Against Crime” (1998) 27 JLS 1.

<sup>35</sup> *Ibid.* at 13.

<sup>36</sup> The Halliday Report, *supra* note 9 at appendix 6.

(Source: Lewis D. and Mhlanga B, *A life of crime – The hidden truth behind criminal activity*, Paper presented to Market Research Society Conference, March 2001)

The Halliday Report estimations imply an elasticity of crime to increases of incapacitation of between 0.067 and 0.14 depending on targeting of likely recidivists.

While current and prospective estimates assume that all other variables remain constant, retrospective estimates must accommodate other factors which have (presumably) affected actual rates of offending. The Carter Report of 2003<sup>37</sup> estimated that between 1997 and 2003, increased use of imprisonment (associated with a 25% increase in the prison population) contributed 5% of the overall 30 per cent reduction in crime which occurred over that period, i.e. 17 % of the total reduction. In another retrospective estimate, Stephen Levitt has concluded that increased rates of imprisonment in the United States between 1991–2001 (during which time rates of incarceration rose by around 50 per cent) reduced the homicide and violent crime rates by 12 per cent and the property crime rate 8%.<sup>38</sup> His assessments allow for deterrence as well as incapacitation.

Underlying the debate about the marginal crime reduction effectiveness of increasing rates of incarceration are the following overlapping issues: the baseline incapacitative effectiveness of the existing system (a factor of the existing incarceration rate and the extent to which the system incarcerates the most probable recidivists), the likely offending rates of the those who will fill the postulated extra prison beds, the extent of the substitution effect and the degree to which additional incarceration produces diminishing marginal returns. Lord Carter was presumably affected by these underlying uncertainties, because he observed:<sup>39</sup>

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<sup>37</sup> Patrick Carter *Managing Offenders, Reducing Crime: A new approach* (2003) at 16.

<sup>38</sup> “Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not” (2004) 18 *Journal of Economic Perspectives* 163. Reference can also usefully be made to William Spelman “The Limited Importance of Prison Expansion” in Alfred Blumstein and Joel Wallman *The Crime Drop in America* (2000) 97.

<sup>39</sup> *Ibid.* at 30.

- Given the current level of the prison population, there is no convincing evidence that further increases in the custody rate or sentence length will significantly reduce crime.
- At present the only rationale for significantly increasing the number in custody is if we arrest and convict more offenders.

#### **IV. DETERRENCE**

##### **A. THE STRUCTURE OF THE DISCUSSION**

I will set the scene for what follows with some definitions and illustrations and an explanation why my focus is on marginal deterrence and serious crime. I will also address whether debate about marginal deterrence is off-limits in the courts. I will then provide a general overview of the arguments; analysis of some of the evidence as to California's three-strikes law; suspended sentences and sentence uplifts for the use of firearms; a survey of the general literature; and a discussion of the limitations of deterrence.

##### **B. DEFINITIONS AND ILLUSTRATIONS**

For the sake of clarity I should identify what I mean by the particular expressions which I use in this section of the paper:

- (a) By "general deterrence" I refer to the crime limiting effect of the existence of a punitive criminal justice system and associated general awareness on the part of potential offenders that the commission of crime leads to adverse legal consequences.
- (b) By "individual deterrence" I refer to the crime limiting effect on individual offenders of sentences which they receive, their associated practical awareness of the link between offending and legal sanctions, and their recognition that any future recidivist offending will or may result in more severe sanctions.

- (c) By “specific deterrence” I refer to the crime reductive effect (via deterrence) of sentencing levels associated with a particular offence or group of offences.
- (d) By “marginal deterrence,” I refer to the additional crime reductive effect (whether by way of general, individual or specific deterrence) of increases in sentencing levels. I treat marginal deterrence as including “differential deterrence” which encompasses changes in offending patterns associated with changes in relative sentencing levels.

I emphasise that these concepts are not mutually exclusive. For instance a punitive three-strikes regime (such as California’s, which I discuss later in this section):

- (a) Is a well-publicised element of the criminal justice system in that State and thus can be expected in a general way to exert some downwards pressure on crime through the mechanism of general deterrence;
- (b) Targets particular types of crime (felonies which follow conviction for strike offences) and particular offenders (those who already have convictions for strike offences) and thus can be analysed in terms of both specific and individual deterrence; and
- (c) Involved a significant step-up in sentence severity (for second and third strike convictions), and thus can be analysed for marginal deterrence.

I can illustrate what I mean by marginal and differential deterrence by reference to a trial that I presided over in which a number of women were alleged to have conspired to inflict grievous bodily harm.

One of the defendants was the girlfriend of a man who was suspected of murder. As a result, the police had placed an interception device (i.e. a bug) in her living room. This resulted in the police recording a discussion between her and her friends (all of whom were distinctly affected by alcohol) in which they appeared to be planning an attack on another woman. The tape recording of this discussion was played at their later trial for conspiracy. As the plan first unfolded, it was proposed that the women should arm themselves with baseball bats, break into the house of the other woman and assault her with the baseball bats.

At this time in New Zealand, crimes which involved home invasion were subject to a very sharp uplift in penalty. This had not escaped the notice of one of the alleged conspirators. She expressed concern that if the plan as conceived were executed and they were caught, they would receive enhanced sentences. This problem was resolved by an amendment to the plan under which the victim was to be lured out of her house and attacked with baseball bats outside, thus resulting in an offence which would not attract the home invasion uplift.

On the Crown case,<sup>40</sup> the change of plan illustrates both specific marginal deterrence and differential deterrence in action. The defendants were content to face the usual sentence for attacking another woman in her home with baseball bats but deterred from doing so because of the distinct sentence uplift associated with the home invasion legislation. There was also a differential deterrence effect in that they decided to commit another—and less severely punishable—type of crime, in effect non-home invasion grievous bodily harm.

### C. A FOCUS ON MARGINAL DETERRENCE AND SERIOUS CRIME

In the absence of a criminal justice system which punished offenders, offending would be more common. I think it reasonably clear that punitive criminal justice system serves to limit crime through mechanisms of general, individual and specific deterrence. Given what I see as the obviousness of this proposition and the implausibility of the implied counterfactual (under which crime is not punished), I prefer to focus on marginal deterrence.

Marginal deterrence can be demonstrated in relation to minor offences. This is illustrated by a study on the impact of increasing the fines payable by those who run red traffic lights, based on a review of cases in Israel (where fines increased by 150 per cent) and San Francisco (where fines increased by 161 per cent).<sup>41</sup> The conclusion was that the elasticity of offending to the increase in fine was between -0.26 and -0.31 (in other words for a 100% increase in penalty, the level of offending was

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<sup>40</sup> The defendants were all acquitted. The jury appears to have concluded that it was the alcohol that had been doing the talking.

<sup>41</sup> Bar-Ilan and Sacerdote, “The Response of Criminals and Non-Criminals To Fines” (2004) 47 *Jo of Law and Econ* 1.

reduced by between 26% and 31%). In the part of the study carried out in Israel, the authors concluded that drivers with criminal records acted in the same way as those without criminal records.

The authors of this study confidently concluded their article in this way:<sup>42</sup>

Overall, the empirical work is quite supportive of the economic model of crime. The results offer further reason to believe that policy makers have effective tools at their disposal to combat crime and that changes in deterrence partially explain changes in crime rates.

There are, however, significant differences between running red lights and the sort of offending which attracts sentences of imprisonment and is so often committed impulsively or under the influence of alcohol or drugs and by offenders who are “deeply socialised into deviant values and lifestyles.”<sup>43</sup> Given my focus on the effects of imprisonment, I will thus be addressing marginal deterrence in the context of serious crime.

#### **D. IS DEBATE IN THE COURTS ABOUT MARGINAL DETERRENCE OFF-LIMITS?**

Sentencing legislation commonly stipulates that the reduction of crime by deterrence is one of the purposes of sentencing<sup>44</sup> and the language of deterrence is frequently deployed in sentencing. Sometimes such references encompass only general, individual and specific deterrence rather than marginal deterrence; perhaps in the context of the need to maintain a robust and credible justice system and to show that crime does not pay. But often enough and more debatably, judicial references to deterrence are to marginal deterrence, for instance in the context of increased incidence of particular types of crime (whether nationally or locally) and as an explanation for imposing a sentence which is more, rather than less, severe. In this way, judges often act on the basis

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<sup>42</sup> *Ibid.* at 16.

<sup>43</sup> Tonry, “Learning from the Limitations of Deterrence Research” (2008) 37 *Crime and Justice: A Review of Research* 279 at 282.

<sup>44</sup> See for instance s 7(1)(f) of the Sentencing Act 2002 (NZ), s 142(1)(b) of the *Criminal Justice Act* 2003 (UK), and s 718 of the *Canadian Criminal Code*.

that increases in sentence severity limits crime through the mechanism of marginal deterrence.

As far as I am aware courts in New Zealand and England have not been faced with direct challenges to the validity of this proposition. This has, however, happened in Australia where such arguments have been rejected as legally untenable, most recently by the Court of Criminal Appeal for New South Wales in *R. v. Barber and others*.<sup>45</sup> This case addressed sentencing for armed robbery committed by drug addicts. There is much of interest in this case, but for present purposes, it is sufficient to refer to the following observations of Spigelman CJ:

204 *It was also submitted that the principle of general deterrence should be given less weight in the context of offenders who commit their crimes for the purposes of assuaging a drug addiction. In this submission, reliance was placed on the often expressed doubts about the direct effect on potential offenders of increases in penalties imposed.* Particular reliance was placed on the driven nature of a drug addicts, many of whom engage in high risk activity, like exchange of needles notwithstanding the risk of HIV infection. This kind of submission has been made many times before [...]. It has always been rejected. This Court should do so again.

205 General deterrence always operates at the margin. Some people will continue to engage in criminal conduct notwithstanding the level of, or increases in the level of, the penalties they suffer. However, some people will be deterred. It is not to the point that some addicts engage in high-risk activities. It would be necessary to establish that all addicts do so. Neither the submissions, nor the materials in support, suggest anything of this character.

206 I attach particular significance to the impact that acknowledgment of drug addiction as a mitigating factor would have on drug use in the community. The sentencing practices of the courts are part of the anti-drug message, which the community as a whole has indicated that it wishes to give to actual and potential users of illegal drugs. Accepting drug addiction as a

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<sup>45</sup> *R. v. Barber and others* [1999] NSWCCA 111 (12 May 1999).

mitigating factor for the commission of crimes of violence would significantly attenuate that message. The concept that committing crimes in order to obtain monies to buy an illegal substance is in some way less deserving of punishment than the commission of the same crime for the obtaining of monies for some other, but legal, purpose is perverse.

207 It may very well be the fact that increased possibility of detection has greater effect by way of deterrence than increased punishment. There is no warrant, however, for the Courts abandoning reliance on the latter. In any event the two propositions are related. It is only because detection, when it occurs, leads to a level of punishment, that increases in detection have their deterrent effect.

208 It may very well be that the criminal justice system has a modest role to play in the control of drug addiction. But however modest that role may be, it must be performed in accordance with the basic structure of the criminal sentencing process. At the level of a structure deeply embedded in our society, not merely at the level of an individual's calculus of risks and benefits for specific conduct, the criminal justice system is now, and has always been, based on the proposition that punishment deters and, within limits of tolerance, increased punishment has a corresponding effect by way of deterrence. This Court should not change such a longstanding assumption. Legislation would be required to alter the common law in this way.

209 *I reiterate that the process of imposing penalties for the commission of crimes, has its primary deterrent effect through its operation as a structural phenomenon of the criminal justice system.* That is not capable of being assessed from the perspective of what particular penalties, or increases in penalty, may have in the case of individuals.

(Emphasis added.)

As an aside, this passage of the judgment illustrates why I have taken some care with my definitions. In para [209], Spigelman CJ is referring to my "general deterrence" whereas in para [204], what he describes as "general deterrence" is my "marginal deterrence." What is more significant is that the judgment effectively declares as off-limits any

enquiry into the tendency (or otherwise) of increased sentences to limit crime through marginal deterrence.

I disagree with this approach. The law (including sentencing legislation) proceeds on the basis that what Spigelman CJ refers to as the “structural phenomenon of the criminal justice system” serves to limit crime and I accept that this is so. But I am not aware of any requirement for judges to accept that increases in sentence severity are necessarily going to lead to a corresponding reduction in offending. I do not accept that the courts are required to sentence on the basis of what may be a fiction. On this point I prefer the more cautious and skeptical approaches adopted by the Ontario Court of Appeal in *R. v. Edwards*<sup>46</sup> and Wood JA in *R. v. Sweeney*.<sup>47</sup>

#### **E. MARGINAL DETERRENCE – AN OVERVIEW OF THE ARGUMENTS**

There is ample evidence that criminals act rationally in relation to the likelihood of detection. In the United States, the mechanisms by which tax evaders seek to defraud the Internal Revenue Service (IRS) are closely calibrated to the risk of detection; the more visible to the IRS the income, the less likely there is to be evasion.<sup>48</sup> Bus vandalism tends to occur primarily on the upper deck and at the back of buses, areas which are not able to be closely supervised by the crew.<sup>49</sup> It is commonsense that a burglar will not burgle a house with a police officer looking on. Following on from this, there is, as might be expected, evidence which supports the view that increased probability of detection (or more relevantly the perception of the risk of detection) is associated with reduction in offending.<sup>50</sup> It might be thought to follow that increasing sentence severity would have the same effect.

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<sup>46</sup> *R. v. Edwards* (1996) 105 CCC (3d) 21.

<sup>47</sup> *R. v. Sweeney* (1992) 11 CR (4th) 1 (BC C.A.).

<sup>48</sup> Daniel S. Nagin “Deterrence and Incapacitation” in Tonry (ed) *The Handbook of Crime and Punishment* (1998) 345.

<sup>49</sup> See von Hirsch and others *Criminal Deterrence and Sentence Severity: An Analysis of Recent Research* (1999) at 12.

<sup>50</sup> Much of the pre-1999 research is reviewed in von Hirsch and others, *supra* note 49 at 27–31.

The most enthusiastic supporters of marginal deterrence adopt an economic theory of crime.<sup>51</sup> This has recently been summarised by Joanna Shepherd in this way:<sup>52</sup>

The “market model” of crime is based on the interaction between offenders and law enforcers. The behaviour of offenders is represented by a supply-of-offenses equation in which a person’s decision to engage in criminal activity is motivated by the expected costs and gains from offenses. Expected costs include the direct costs incurred by acquiring loot, prospective penalties that are discounted by the probability of apprehension and conviction, and the forgone wages from legitimate activity. The expected payoff (monetary and/or psychic) is the gain from criminal activity.

Commonsense suggests that there must come a point where increases in sentencing severity will reduce crime. If conviction for theft resulted inexorably in the amputation of limbs, there would probably be less shoplifting (even by first time offenders). But for purposes of policy-makers and judges, the economic theory of crime falls to be assessed not in postulated extreme situations, but rather in the real world context of the sort of sentencing sanctions and levels which are “plausible in Western countries.”<sup>53</sup>

It is noticeable that Shepherd’s formulation makes only passing reference (in the form of the phrase “psychic gain”) to the many crimes which are not economically motivated. And her postulated rational and probabilities-weighting offender bears little resemblance to the irrational, impaired, drug and alcohol using and impulsive offenders who have occupied so much of my life. Sentence severity is only relevant to an offender who is detected and only a very small percentage of offending results in convictions. On a “cost of crime analysis,” an offender who rates the chance of being caught at 1 per cent will not be much affected by

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<sup>51</sup> The modern literature starts with Becker “Crime and Punishment: An Economic Approach” (1968) 76 J Pol Econ 169. Useful reference can also be made to Posner “An Economic Theory of the Criminal Law” (1985) 85 Columbia Law Review 1193.

<sup>52</sup> “Police, Prosecutors, Criminals, and Determinate Sentencing: The Truth About Truth-In-Sentencing Laws” (2002) 45 Jo of Law and Econ 509.

<sup>53</sup> The expression comes from Anthony Doob and Cheryl Marie Webster “Sentence Severity and Crime: Accepting the Null Hypothesis” (2003) 30 Crime and Justice 143 at 191.

the perceived likely sentence. Detection and arrest has a “here and now” impact which, for offenders who often live in the present, is more real than downstream, future and uncertain legal sanctions, which, if thought about at all, are likely to be discounted to a reduced “present value.” In any event, many, perhaps most, offenders, have only a hazy idea as to likely sanctions and are unaware of changes to sentencing policy. Further, their personalities, values and life circumstances may be such that they are not particularly influenced by even well-understood risks of imprisonment.

That said, some crime (including, by way of example only, some fraud, robbery and drug importing and dealing) is premeditated and carefully planned. It is at least possible that decisions whether to commit crime of this sort may be influenced by perceptions of the likely severity of any resulting sentence.

As well, in a broader sense, most criminals have made choices—no doubt often significantly constrained by circumstance, but choices nonetheless—which are highly relevant to the crimes they commit. A young man who chooses to associate with criminals, carries a knife and engages in anti-social behaviour might be thought (at least to my bleak and non-determinist way of thinking) to have chosen to commit the sort of crimes (involving for instance impulsive violence) which are closely correlated with the lifestyle he has chosen. I think it reasonably clear that exposure (sometimes repeated) to the criminal justice system does tend to discourage recidivism and, in this way, is associated with desistance on the part of at least some offenders. In this context, it is not inconceivable that changes in sentence severity might affect lifestyle (and thus desistance) decisions.

This may be so is illustrated, in perhaps an odd way, in *Ewing v. California*,<sup>54</sup> which upheld the validity of the three-strikes legislation in California and will be discussed in a little more detail later. The judgment notes that in the aftermath of the enactment of the three-strikes legislation in California there was something of an exodus from that State of parolees.<sup>55</sup> For parolees who considered that they would continue to

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<sup>54</sup> *Ewing v. California* 538 US 11 (2003).

<sup>55</sup> *Ibid.* at 27. This is also discussed in Radyar Iyengar “I’d rather be Hanged for a Sheep than a Lamb: The Unintended Consequences of ‘Three-Strikes’ Laws” (Working Paper 13784, National Bureau of Economic Research) [www.nber.org/papers/w13784\\_\(2007\)](http://www.nber.org/papers/w13784_(2007)).

offend and wished to avoid the very punitive consequences of a second or third strike, leaving California would indeed be the rational thing to do, as will become apparent from what I will shortly say.

So despite there being plausible reasons for doubting the efficacy of marginal deterrence, there is certainly something to discuss.

#### **F. CALIFORNIA'S THREE-STRIKES LAW**

The most studied three-strikes legislation is that enacted in California. Conviction for one of a number of defined serious or violent felonies (including residential burglary) constitutes a first strike for which there is no sentence enhancement. A subsequent conviction for any felony is a second strike for which the ordinary penalty is doubled and 80 per cent (rather than the usual 50 per cent) of the term must be served. The practical effect is a tripling of time required to be served. Where there have been two or more convictions for serious or violent felonies, a conviction for any felony constitutes a third strike for which a life sentence must be imposed along with a minimum term which cannot be less than 25 years, of which 20 years must be served. The background and operation of this legislation are reviewed in *Ewing v. California*,<sup>56</sup> where the United States Supreme Court declined to interfere with a sentence of 25 years to life imposed for a third strike offence of felony grand theft. Ewing went into a pro-shop on a golf course and left with three golf clubs (worth a little under \$1,200) concealed in his trousers. By time the case reached the Supreme Court, the only challenge available to Ewing was that the sentence breached the eighth amendment to the Constitution as a cruel and unusual punishment. This challenge failed as did a like challenge in *California v. Andrade*<sup>57</sup> (a case decided on the same day as *Ewing*). Andrade had been sentenced to 50 years (of which 40 had to be served) to life imposed for two counts of theft involving two incidents of shoplifting in which nine videos worth \$153.54 were stolen. For no doubt more typical examples of the three strikes law in operation, reference should be made to appendix 2.

A not dissimilar system operates in Texas. There a third felony conviction attracts a mandatory life sentence. The operation of the

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<sup>56</sup> *Supra* note 54.

<sup>57</sup> *California v. Andrade* 538 US 63 (2003).

relevant legislation is exemplified by *Rummel v. Estelle*.<sup>58</sup> Over a 19 year period (between 1964 and 1973), Rummel acquired three felony convictions, in 1964 for credit card fraud (involving \$80), in 1969 for a forged cheque (for \$28.36) and on 1973 for obtaining \$129.75 by false pretences. The Supreme Court upheld the constitutionality of the life sentence imposed on his third conviction.

The three-strikes law in California is, in comparative terms, strictly enforced but its impact on the ground has been affected by varying police practice, plea bargains and prosecutorial and judicial discretions.<sup>59</sup> By way of example, it would have been open to the sentencing judges in both *Ewing* and *Andrade* to have avoided imposing third strike “mandatory sentences” by characterising the shoplifting offences in question as misdemeanours rather than felonies.

The early literature on three-strikes laws is reviewed by Doob and Webster “Sentence Severity and Crime: Accepting the Null Hypothesis.”<sup>60</sup> For reasons which they give, a number of attempts (primarily involving association studies) to establish a marginal deterrent effect are unconvincing. There is also a full study of the observed effects of the law by Zimring, Hawkins and Kamin,<sup>61</sup> in which they compared the arrest records of second and third strike eligible defendants as a percentage of all arrests after the law came into effect against the corresponding pre-three-strikes law arrest records of offenders with the same pattern of convictions. This was carried out by reference to offending in Los Angeles, San Diego and San Francisco. They discerned no marginal deterrence in relation to second strike offenders whose assumed share of felony crime in California did not decline. In the case of third strike offenders, relevant arrests declined from 4.3% to 3.5% of all adult arrests, a difference of around 19%, representing 0.08 per cent of adult felonies and 0.06 per cent of all felonies.

There are also a number of papers by economists which seek to identify crime reductive effects of California’s three strikes laws.

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<sup>58</sup> *Rummel v. Estelle* 445 US 263 (1980).

<sup>59</sup> See Zimring, Hawkins and Kamin *Punishment And Democracy; Three Strikes and You’re Out in California* (2001) at 63 and ff.

<sup>60</sup> Doob and Webster “Sentence Severity and Crime: Accepting the Null Hypothesis” in Tonry (ed) *Crime and Justice: A Review of Research* (2003) 143.

<sup>61</sup> Zimring, *supra* note 59.

The most accessible (in the sense of being easy to follow) of these is based on a quasi-experiment conducted by Eric Helland and Alexander Tabarrok focused primarily on the effect of the three strikes legislation in California in which they compared post-sentencing criminal activity of two groups of offenders.<sup>62</sup> Group A consisted of those with two strike convictions. Group B consisted of those who had been tried twice for strike offences and had one strike conviction and one conviction for a non-strike offence. The assumption was that groups A and B were truly comparable so that any difference in post-sentencing criminal activity could be attributed to the difference in penalties associated with second and third strike convictions. The average time served in California for a second strike offence is 43 months. On the other hand, as at 2005, not a single prisoner sentenced for a third strike offence had been released. Their conclusion was that the threat of a third strike conviction reduced rates of re-arrest (over three years) of group A offenders by 17.2 per cent compared to group B offenders.

Helland and Tabarrok also found similar evidence of marginal deterrence in Texas, concluding (albeit by reference to comparatively small samples) that those in the Texan group A were 50 per cent less likely to be rearrested than those in Texan group B. On the other hand, their analysis of reoffending rates in other jurisdictions suggested that:<sup>63</sup>

“normal” progression of punishments is not large enough or sharp enough to generate significant evidence of deterrence in our data.

I should note a suggestion that the different conviction histories of the two groups are not necessarily exogenous to propensity to offend.<sup>64</sup> If the more favourable conviction histories of those in group B are associated with a reduced propensity to offend, the estimated deterrent effect may be too high.

It might be thought that if the sentences imposed on Ewing and Andrade for shoplifting do not have a significant marginal deterrent on the incidence of theft, nothing would. But econometric analysis by Joanna Shepherd specific to California suggests that the legislation has

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<sup>62</sup> “Does Three Strikes Deter? A Nonparametric Estimation” (2007) *Journal of Human Resources* 309.

<sup>63</sup> *Ibid.* at 320.

<sup>64</sup> See Iyengar, *supra* note 55.

encouraged larceny, see “Fear Of The First Strike: The Full Deterrent Effect of California’s Two And Three Strikes Legislation.”<sup>65</sup> She attributes this apparent paradox to differential marginal deterrence because (and despite what happened in *Ewing* and *Andrade*) larceny cases do not usually fall to be sentenced under the three-strikes law. This study was focused on a county-by-county analysis and around the probability, county by county, of sentences under the three-strikes law being imposed. She concluded that there was a deterrent primarily in relation to what she called “strikeable offences” (by which she meant triggering serious and violent felonies) rather than what she called “non-strikeable felonies” (being all other felonies) and that in the first two years after the legislation came into effect, the legislation deterred “approximately” eight 8 murders, 3,952 aggravated assaults, 10,672 robberies and 384,488 burglaries but resulted in 17,000 more larcenies.

Methodology broadly similar to that used by Joanna Shepherd was adopted by John Worrall but with very different results which are reviewed in his 2004 article “The effect of three strikes legislation on serious crime in California.”<sup>66</sup> His conclusion was that the three-strikes law in California had not had “a significant deterrent or incapacitative effect on crime.” He attributed the difference between his result and those reached by Shepherd to what appear (at least to my untutored eye) to have been comparatively small differences in modelling.

The final paper is Radyar Iyengar, “I’d rather be Hanged for a Sheep than a Lamb: The Unintended Consequences of ‘Three-Strikes’ Laws.”<sup>67</sup> Operating on the basis that the underlying recidivism propensity of offenders with particular conviction histories would not have changed around the introduction of the three-strikes legislation, Iyengar concluded that this introduction reduced relevant reoffending by 18% in the case of second-strike eligible offenders and by 28% in the case of third-strike eligible offenders, reductions which were contributed to by appreciable migration out of California by parolees with strike convictions. She was

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<sup>65</sup> Joanna M Shepherd “Fear Of The First Strike: The Full Deterrent Effect of California’s Two And Three Strikes Legislation” (2002) 31 JLS 159. She also written, using similar methodology, in relation to truth in sentencing laws “Police, Prosecutors, Criminals, and Determinate Sentencing: The Truth About Truth-In-Sentencing Laws” (2002) 45 Jo of Law and Econ 509.

<sup>66</sup> (2004) 32 Jo of Criminal Justice 283.

<sup>67</sup> Iyengar, *supra* note 55.

examining what was (at least very broadly) the same behaviour as Zimring, Hawkins and Zamin, namely recidivism by offenders with one or two previous strike convictions. She did so by reference to data from the same three cities (albeit from over a longer time period). And her results are appreciably different from those of Zimring, Hawkins and Zamin, particularly as to the behaviour of offenders with one strike conviction. But even on her conclusions, there is little overall impact on California's crime rate, given that defendants with one and two previous strike convictions only made up around 7.3 per cent and 3.3 per cent, respectively, of those arrested on felony charges prior to 1994.<sup>68</sup> She also concluded that amongst the third-strike eligible offenders who did reoffend, there was an increased probability of committing violent third strike offences.

In all of this there is much room for debate. Such debate, however, is referable to extreme increases in penalty (as illustrated in appendix 2) for non-violent offending which lie well outside the sort of variations in sentence severity which are open to the judiciary. Further, these increases were well-publicised and must have been reasonably well-understood by the offenders who are targeted. Those who are exposed to three-strikes penalties and who wish to continue to offend have the relatively easy option of migrating to states with less punitive regimes. But despite the circumstances being about as conducive as possibly imaginable for marginal deterrence, a respectable case (based on the work of Zimring, Hawkins and Kamin, Helland and Tabarrok and Worrall) can still be made for the view that California's three-strikes legislation has had little appreciable impact on offending.

#### **G. SUSPENDED SENTENCES AND INDIVIDUAL MARGINAL DETERRENCE**

Where suspended sentences are an available sentencing option, there is usually a tension between the policy makers, who wish to reduce the prison population, and sentencing judges who see a suspended sentence as (to use the stock phrase) a "sword of Damocles" hanging over the head of the offender and thus operating as an effective individual deterrent. This judicial approach can result in net-widening as judges

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<sup>68</sup> See Zimring, *supra* note 59 at 44 and ff, and at 95 and ff.

impose suspended sentences of imprisonment where they would not impose “real” prison terms. There is also a risk of sentence inflation, with terms of imprisonment which are suspended being longer than “real” sentences. All of this can tend to an increase rather than a decrease in the prison population. To limit the potential for this, legislatures have tended to require judges to go through an artificial two-stage reasoning process; first to determine whether an immediate sentence of imprisonment is appropriate and, if so its length, and only secondly, whether to suspend that sentence.<sup>69</sup>

The debate about suspended sentences has tended to focus on their impact on the prison population rather than their efficacy as a deterrent to further offending during their currency. Most of the literature on the deterrent effect of suspended sentences is disappointingly inconclusive.<sup>70</sup>

A study in New South Wales which compared recidivism rates between offenders who receive suspended sentences of imprisonment and an apparently like group of offenders placed on supervised good behaviour bonds found that there was no significant difference in reoffending.<sup>71</sup> There is scope for debate as to whether the two groups of offenders were truly comparable given that those released on supervised good behaviour bonds received rehabilitative interventions, whereas the suspended sentence group did not. A possible explanation for the similar recidivism rates is that the deterrent effect had a broadly similar crime reducing effect as the rehabilitative interventions which were part and parcel of the supervised good behaviour bond sentence.

Some evidence for a marginal deterrent effect associated with suspended sentences is found in a paper which traces the post-release behaviour of Italian prisoners released under a conditional amnesty.<sup>72</sup> Under this amnesty, all sentences imposed prior to 1 May 2006 were reduced by three years, with effect from 1 August 2006. This meant that

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<sup>69</sup> This is all usefully discussed in Bagaric, *Punishment and Sentencing: A Rational Approach* (2001), at 192–202.

<sup>70</sup> This published material is reviewed by Weatherburn and Bartels “The recidivism of offenders given suspended sentences in New South Wales, Australia” (2008) 48 *Brit J Criminol* 667.

<sup>71</sup> See *Weatherburn and Bartels, supra* note 70.

<sup>72</sup> See Francesco Drago, Roberto Galbiati and Pietro Vertova “The Deterrent Effects of Prison: Evidence from a Natural Experiment” (2009) 117 *Journal of Political Economy* 257.

on 1 August 2006, the 20,950 prisoners then in prison who had less than three years to serve were released. The amnesty was conditional because an offender who was reconvicted within five years and sentenced to more than two years imprisonment would be required to serve both the new sentence and the residual period of the original sentence. Those residual terms ranged from one day (for those who would otherwise have been released on 2 August 2006) to three years. The paper addresses reoffending up to 28 February 2007 (i.e. for a seven month period) and identifies a close negative relationship between residual sentence length and propensity to reoffend. The authors put it this way:

For a 7-month period we estimate an elasticity in the propensity to recommit a crime with respect to the average sentence that individuals expect equal to -0.74. This means that increasing the expected sentence by 50 percent should reduce recidivism rates by about 35% in 7 months.

After 17 months, the total recidivism rate was 22% and the authors assumed that the relevant elasticity over that period would be in the order of -0.43 to -0.47 which they recognised was very high. It may be relevant that all of the released offenders had served some prison time and that the time period which was studied was only seven months.

My reservations about this study notwithstanding, the functional similarity between the residual terms of imprisonment in issue and suspended sentences suggests that there may be scope for the design of a system of suspended sentences which does result in demonstrable marginal deterrence.

#### **H. DISCOURAGING THE CARRYING OF FIREARMS: SPECIFIC MARGINAL DETERRENCE**

A good deal of research has focused on the extent to which mandatory sentence uplifts associated with the use of firearms is associated with crime reduction. With the exception of one study, American research between the 1970s, 1980s and 1990s found little or no marginal deterrent effect associated with such uplifts.<sup>73</sup> This is not entirely surprising as the implementation of the mandatory penalties was

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<sup>73</sup> See Michael Tonry *Sentencing Matters* (1996) at 139–140.

often circumvented by police, prosecutors and judges<sup>74</sup> and in any event much gun crime is committed by offenders whose rationality is affected by alcohol or drugs. One exception is a study<sup>75</sup> which produced the apparently paradoxical results that mandatory penalties for gun crime reduced homicides involving firearms by around 14% but that such an effect could not be demonstrated with respect to assaults and robberies.

A comparison of offending patterns in Western Australia, where the sentence uplift for firearms use in robbery simply formed part of the overall penalty, and Canada where the use of firearms attracted a specific and discrete uplift, suggests that marginal deterrence is more likely to emerge under the latter regime.<sup>76</sup> This study suggested that the Canadian police, prosecutors and judges had not sought to avoid the effect of mandatory sentences. In the decade that followed the introduction of mandatory penalties in 1977, the percentage of robberies in which firearms were used dropped from 36% to 25%.<sup>77</sup>

## I. THE GENERAL LITERATURE AS TO MARGINAL DETERRENCE

Leaving aside the specific instances I have discussed and some perceptual<sup>78</sup> and association studies,<sup>79</sup> there is a remarkable absence of evidence-based academic support for the view that increased terms of imprisonment operates to limit crime by way of marginal deterrence.

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<sup>74</sup> The mechanisms are explained in detail by Tonry, a *supra* note 73 at 146 and ff.

<sup>75</sup> David McDowall, Colin Loftin and Brian Wiersma "A Comparative Study of the Preventive Effects of Mandatory Sentencing Laws For Gun Crimes (1991) 83 *Journal of Criminal Law and Criminology* 378.

<sup>76</sup> See Richard Harding "Rational-Choice Gun Use in Armed Robbery: The Likely Deterrent Effect of Gun Use of Mandatory Additional Imprisonment" (1990) 1 *Criminal Law Forum* 427.

<sup>77</sup> A decrease which obviously may have been contributed to (or even caused by) other factors, including increased difficulty in obtaining firearms.

<sup>78</sup> These are based on surveys of, or interviews with, selected groups (sometimes consisting of offenders) as to perceptions of the probability of punishment and its severity and the relevance of this to the decision whether or not to offend. These studies provide some support for the view that the perception of risk of sentence severity has a deterrent effect and that this is particularly marked with those who report "high stakes in conventionality," cf Nagin, *supra* note 48 at 351

<sup>79</sup> These address whether changes in penal policy have been associated with changes in crime rates and, if so, whether there is a causative link.

There are three reasonably full surveys of the literature: first, a 1999 paper commissioned by the Home Office and conducted by Andrew von Hirsch and others, *Criminal Deterrence and Sentence Severity: An Analysis of Recent Research*;<sup>80</sup> secondly, a 2003 article by Anthony Doob and Cheryl Marie Webster, “Sentence Severity and Crime: Accepting the Null Hypothesis;”<sup>81</sup> and thirdly an article by Michael Tonry, “Learning from the Limitations of Deterrence Research.”<sup>82</sup>

In the 1999 paper, the authors saw the relevant evidence as pointing to persistent offenders often acting impulsively to meet situations of immediate need, consciously not dwelling on the risk of being caught and generally in circumstances in which the influence of threatened sanctions was weak. The authors recognised that, while the material they reviewed “had not disclosed much evidence indicating substantial marginal deterrent effects of increased severity,” it was possible that:<sup>83</sup>

sentence increases of still greater magnitude [...] accompanied by more effective publicity aimed at potential offenders might possibly have shown more impressive results.

The 2001 Halliday Report picked up the conclusions expressed in this paper in the following way:<sup>84</sup>

1.62 [...] The review has found no evidence to show what levels of punishment produce what levels of general deterrence. Along with likelihood of detention and conviction, the availability of punishment clearly contributes to general deterrence, which undoubtedly exists (see Appendix 6), but there seems to be no link between marginal changes in punishment levels and changes in crime rates. The evidence shows the importance of certainty of punishment, so that deterrent effects are unlikely to be achieved if the prospects of avoiding detection and conviction are high. It is the prospect of getting caught that has deterrence value, rather than alterations to the “going rate” for severity of sentences. The lack of correlation between punishment levels and crime levels is

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<sup>80</sup> Andrew von Hirsch, note 49.

<sup>81</sup> Doob, *supra* note 60 at 143.

<sup>82</sup> Tonry, *supra* note 43.

<sup>83</sup> Andrew von Hirsch, *supra* note 49 at 41.

<sup>84</sup> The Halliday Report, *supra* note 9.

in line with the current literature which analyses these trends in other jurisdictions. Punishment levels may have more to do with tradition, culture, and prevailing mood—including levels of fear and concern about crime—than about the shape and content of the legal framework.

The article by Doob and Webster was even less equivocal. In their view, the evidence supported the view that variations in sentencing severity “within the limits that are plausible in Western countries”<sup>85</sup> do not affect crime levels. The approach of Tonry, in the third article, was broadly similar, that there is little credible evidence that changes in sentence severity affect crime rates and that while some offending may “deterable,” identification of such offending will require “fine-grained studies.”

#### **J. LIMITS OF DETERRENCE**

It is possible that increases in sentence severity may have detrimental impacts on offending. For example, there is the possibility that very severe sentences for non-fatal offending may encourage rapists, robbers and burglars to kill their victims to reduce the prospect of being caught.<sup>86</sup> If imprisonment is seen as being applied disproportionately to ethnic minorities, going to prison may become a rite of passage for young offenders, thus lose its stigmatising power and, as well, begin to evoke defiance rather than compliance. In cases which are on the custody threshold, resort to imprisonment may mean the forgoing of more promising rehabilitative sentences.

#### **CONCLUDING OBSERVATIONS**

Criminal justice systems which operate primarily by reference to just desert considerations and meet legitimate public sentencing expectations necessarily limit crime by both incapacitation and general deterrence. But there is remarkably little evidence to support the view that significantly enhanced crime reduction can be achieved by increasing

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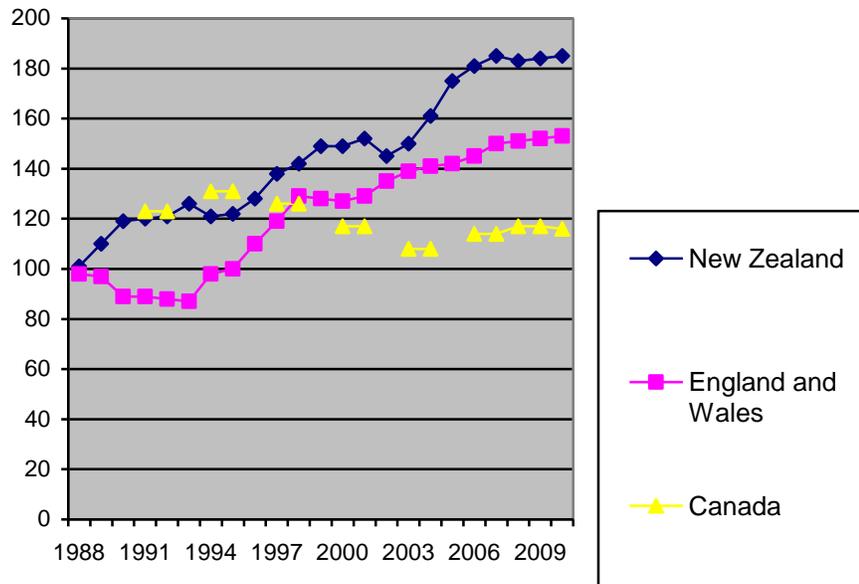
<sup>85</sup> Doob, *supra* note 60 at 191.

<sup>86</sup> A conclusion reached by Marvell and Moody “The Lethal Effects of Three-Strikes Laws” (2001) 30 JLS 89.

the severity of the sentence within the sort of limits which constrain judicial action.

## APPENDIX 1

Comparative Incarceration Rates for New Zealand, Canada and England and Wales per 100,000 of the population:



### Sources

New Zealand: Ministry of Justice *Conviction and Sentencing of Offenders in New Zealand: 1998 to 1997* (1998); Ministry of Justice *Conviction and Sentencing of Offenders in New Zealand: 1998 to 1997* (2008); United Nations Development Programme *Human Development Report* (2008); Statistics New Zealand *Estimated Population* (2008).

England: Ministry of Justice *Offender Management Caseload Statistics 2007* (2008); National Statistics *Population Trends* (2009).

Canada: R Walmsley *World Prison Population List* (8<sup>th</sup> ed) Kings College London, International Centre for Prison Studies; World Prison Brief for Canada. <http://www.kcl.ac.uk/depsta/law/research/icps/worldbrief/wpbcountry.php?country=188>.

**APPENDIX 2**

**Figure 2**

**Illustrations of Prison Sentencing Under Three Strikes  
Prior Law Versus Current Law**

Scenarios	Crimes Committed		Time to Serve in Prison <sup>a</sup>	
	New Offense	Prior Offense <sup>b</sup>	Prior Law	Current Law
<b>No Prior Offense</b>				
Any felony with:				
No prior felony	Burglary of residence	None	2 years	Same
<b>Second Strike Offense</b>				
Any felony with:				
One prior serious/violent felony	Burglary of residence	One prior burglary of residence	4.5 years	10.4 years
<b>Third Strike Offense</b>				
Nonviolent/nonserious felony with:				
Two prior serious/violent felonies	Receiving stolen property	One prior assault on a peace officer, and one prior burglary of a residence	2 years	25 years to life
Serious/violent felony with:				
Two prior serious/violent felonies	Robbery	One prior burglary of a residence, and one prior robbery	7 years	25 years to life

<sup>a</sup> Assumes the offender (1) receives typical prison sentence for the new offense, (2) receives sentence enhancements for prior offenses, and (3) earns maximum credits from participation in work/education programs.

<sup>b</sup> Assumes prior offense resulted in a prison sentence

Source: Legislative Analyst’s Office, *A Primer: Three Strikes - The Impact After More Than a Decade* (October 2007).

