

Sentencing Matters

Does Imprisonment Deter? A Review of the Evidence

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Executive summary

Deterrence can be described as the prevention of crime through the fear of a threatened – or the experience of an actual – criminal sanction. General deterrence is aimed at reducing crime by directing the threat of that sanction at all potential offenders. Specific deterrence is aimed at reducing crime by applying a criminal sanction to a specific offender, in order to dissuade him or her from reoffending.

Deterrence is only one of the purposes of sentencing in Victoria, determined by section 5(1) of the *Sentencing Act 1991* (Vic). The other purposes are: punishment, denunciation, rehabilitation and community protection (incapacitation).

The scope of this paper is limited to examining the sentencing purpose of deterrence only – it does not present an analysis of the evidence of imprisonment's effectiveness in regard to other sentencing purposes. There is an overlap in some studies when measuring deterrence and incapacitation; however, the paper does not draw conclusions on the effectiveness of imprisonment as a means of reducing crime through incapacitation.

Deterrence theory is based upon the classical economic theory of rational choice, which assumes that people weigh up the costs and benefits of a particular course of action whenever they make a decision. Deterrence theory relies on the assumption that offenders have knowledge of the threat of a criminal sanction and then make a rational choice whether or not to offend based upon consideration of that knowledge.

Rational choice theory, however, does not adequately account for a large number of offenders who may be considered 'irrational'. Examples of such irrationality can vary in severity – there are those who are not criminally responsible due to mental impairment, those who are drug affected or intoxicated and those who simply act in a way that is contrary to their own best interests. Research shows that the majority of offenders entering the Victorian criminal justice system have a history of substance use that is directly related to their offending.

That people are not perfectly rational and do not always make decisions that are in their own best interests is supported by studies in behavioural economics. Behavioural economic theory proposes that individuals make decisions on the basis of imperfect knowledge by employing 'rules of thumb', rather than strict logic, and are subject to limits on their willpower. People are also subject to a great number of patterns of deviation in judgment that occur in particular situations (known as 'cognitive biases'), which influence decision-making in predictable – but often irrational – ways.

The evidence from empirical studies of deterrence suggests that the threat of imprisonment generates a small *general* deterrent effect. However, the research also indicates that increases in the severity of penalties, such as increasing the length of terms of imprisonment, do not produce a corresponding increase in deterrence.

It has been suggested that harsher penalties do not deter because many crimes are committed in circumstances where it is difficult to identify when, or if, offenders have considered the consequences of their criminal behaviour. In addition, otherwise rational individuals are more strongly influenced by the perceived immediate benefits of committing crime and individuals 'discount' the cost of future penalties.

A consistent finding in deterrence research is that increases in the *certainty* of apprehension and punishment demonstrate a significant deterrent effect. Perceptions about the certainty of apprehension, for example, may counter the 'present bias' and reinforce the potential cost of committing crime. This result is qualified by the need for further research that separates deterrable from non-deterrable populations.

Research into *specific* deterrence shows that imprisonment has, at best, no effect on the rate of reoffending and often results in a greater rate of recidivism. Possible explanations for this include that: prison is a learning environment for crime, prison reinforces criminal identity and may diminish or sever social ties that encourage lawful behaviour and imprisonment is not the appropriate response to many offenders who require treatment for the underlying causes of their criminality (such as drug, alcohol and mental health issues). Harsh prison conditions do not generate a greater deterrent effect, and the evidence shows that such conditions may lead to more violent reoffending.

The empirical evidence on the effectiveness of imprisonment as a deterrent to crime suggests that the purposes of sentencing should be considered independently – according to their own merits – and that caution should be exercised if imprisonment is to be justified as a means of deterring all crimes and all kinds of offenders.

Background

Introduction

Deterrence is only one of the purposes of sentencing in Victoria. However, the intuitive basis of deterrence – that the punishment of an offender stands as a threat to both the offender and to others, and so reduces the further commission of crime – is compelling and, at first glance, seems uncontroversial.

Nevertheless, the 'intuitive appeal' (Varma and Doob, 1998, p. 167) of the effectiveness of deterrence is insufficient for the development of sound criminal justice policy and, ultimately, the imposition of just sentences. Instead, an analysis of the evidence regarding that effectiveness is required.

Sentences in Victoria may be imposed for one or more of the following purposes: punishment, denunciation, rehabilitation, community protection and deterrence. These purposes can be separated into two groups on the basis of the effects they are intended to achieve.

In the first group, punishment and denunciation can be seen as direct responses to the criminal behaviour. Punishment is a form of redress against the moral imbalance caused by crime – inflicting upon an offender a sanction that is in proportion to the harm he or she has caused. Denunciation is a statement to the offender (and to the community at large) that such criminal behaviour will not be tolerated.

In the second group, rehabilitation, community protection and deterrence act as more than simply responses to the criminal behaviour and are intended to achieve the outcome of a reduction in the future commission of crime.

There is often tension between these purposes, and they can conflict. For example, the purpose of rehabilitation may best be satisfied by the imposition of a community-based sentence, which maintains an offender's links with family and community (including possible employment) and allows broader access to drug or alcohol treatment services. However, such a sentence may fail to sufficiently punish an offender or adequately denounce his or her offending behaviour.

A sentencing court must engage in the challenging and complex task of considering the circumstances of each case and assigning a particular weight to each sentencing purpose, in light of those circumstances.

The question of what weight should be given to each purpose is informed by both precedent and by the available evidence. If a sentencing purpose is intended to result in a reduction in crime, then in order to determine what weight should be given to that purpose, it is critical to examine the evidence of whether or not – or the extent to which – that goal of crime reduction is achieved.

The significance of deterrence to sentencing in Victoria is apparent from a consideration of sentence appeals. The Sentencing Advisory Council recently undertook a statistical analysis of the grounds relied upon by the Crown in sentence appeals. That analysis reveals that, of the 34 Crown appeals in the 2008 calendar year, in addition to other grounds (such as manifest inadequacy), failure to give sufficient weight to general deterrence was raised as a ground in 73.5% of appeals and failure to give sufficient weight to specific deterrence was raised as a ground in 61.8% of appeals. In those appeals where the grounds of failure to give sufficient weight to general deterrence or failure to give sufficient weight to specific deterrence were raised, the grounds were successful or considered favourably by the Court of Appeal in 44.0% and 33.3% of cases, respectively.

Although imprisonment is only one of a number of available sanctions, it is the most severe form of penalty that can be imposed by a court when sentencing an offender in Victoria. In the year from September 2009 to September 2010, the number of people imprisoned in Victoria increased by 3.8% (Australian Bureau of Statistics, 2010a, p. 11). While Victoria had the second-lowest rate of imprisonment of any Australian jurisdiction during that year, the increase reflects a long-term trend. Since 1977, the imprisonment rate has shown a continual upward trend (Freiberg and Ross, 1999), and in the decade between 1999 and 2009 the imprisonment rate in Victoria increased by 28.7%, from 81.4 per 100,000 of the adult population (Australian Bureau of Statistics, 2001, p. 8) to 104.8 per 100,000 of the adult population (Australian Bureau of Statistics, 2010a, p. 12).

At the same time, global and local economic pressures have forced many jurisdictions to reassess the effectiveness of imprisonment and to examine the ability of imprisonment to achieve the purposes of sentencing.

In light of Victoria's increasing rate of imprisonment, the significant investment of public resources that this requires and successful submissions by the Crown to the Court of Appeal for increased imprisonment on the basis of general and specific deterrence, it is important to explore the empirical evidence as to the effectiveness of imprisonment in achieving deterrence in practice.

As deterrence is just one purpose of sentencing in Victoria, a consideration of the evidence demonstrating the deterrent effect of imprisonment does not determine the legitimacy of imprisonment for other purposes. Further, the sanction of imprisonment is only one of the sentences that may be imposed by a court for an offence. Other sanctions include intensive correction orders, community-based orders and fines. However, as imprisonment is the most severe, iconic and resource intensive, and the one most commonly believed to be effective in achieving deterrence, it is the focus of this paper.

Scope of the paper

This paper reviews the current empirical studies and criminological literature regarding the effectiveness of imprisonment as a deterrent to crime. This paper examines the empirical evidence and criminological studies that have sought to examine such questions as: Does the threat of imprisonment in fact deter potential offenders? Does an increase in the severity of penalties result in a corresponding decrease in offending? Does the experience of imprisonment deter offenders from reoffending after they are released from prison, or does it make them more likely to reoffend?

The paper examines the current role of deterrence in the sentencing process in Victoria. The paper then briefly reviews classical deterrence theory and its development by modern economic theory. It discusses the implications for deterrence of more contemporary perspectives, including the critique of classical economic theory by behavioural economics. The paper examines the findings of recent empirical research on the concept of general deterrence, including absolute and marginal deterrence and the deterrent effect of changes to punishment certainty and punishment severity. Finally, the paper examines the findings of recent empirical research on specific deterrence and the effect of imprisonment upon recidivism and reoffending. That section also includes a discussion of studies relating to the specific deterrence of young offenders.

Deterrence in Victoria

The Victorian sentencing process

The *Sentencing Act 1991* (Vic) is the principal source of legislative guidance on sentencing in Victoria. The Act sets out the purposes of sentencing, establishes a basic process of sentencing and details the various factors that the court must consider when sentencing an offender. The *Sentencing Act 1991* (Vic) is supplemented by a number of other Acts that prescribe and set out the maximum penalties for criminal offences.

The courts are also guided by sentencing principles established in common law (Fox and Freiberg, 1999, p. 29), including the principles of totality and proportionality. Although there is relatively broad judicial discretion in Victoria, allowing a court to determine a sentence that is particular to the offender being sentenced, the courts have been restricted by the legislature to sentence only for the purposes listed in the *Sentencing Act 1991* (Vic).

Deterrence in sentencing

Section 5(1) of the *Sentencing Act 1991* (Vic) states that the only purposes for which a sentence may be imposed in Victoria are to provide just punishment, to manifest denunciation, to facilitate rehabilitation, to protect the community from the offender and – in section 5(1)(b) – ‘to deter the offender or other persons from committing offences of the same or a similar character’.

Even prior to its statutory formulation as one of the purposes of sentencing, the Victorian Court of Appeal identified deterrence as having an important role in sentencing. In *R v Williscroft*,¹ the court quoted the New Zealand case of *R v Radlich*,² stating:

one of the main purposes of punishment ... is to protect the public from the commission of such crimes by making it clear to the offender and to other persons with similar impulses that, if they yield to them, they will meet with severe punishment ... The fact that punishment does not entirely prevent all similar crimes should not obscure the cogent fact that the fear of severe punishment does, and will, prevent the commission of many that would have been committed if it was thought that the offender could escape without punishment, or with only a light punishment.³

The court has recognised that general deterrence is more likely to have an effect on crime where there is an identifiable choice – or in effect, a series of choices – that requires consideration on the part of the offender of the costs and benefits of the crime. In the case of *R v Perrier*,⁴ McGarvie J stated:

There is reason to doubt whether, with some crimes and some types of persons, sentences in reality have any general deterrent effect. There is no reason to doubt that substantial sentences do deter people who might otherwise be inclined to engage as principals in the commercial importation of heroin. Those who run businesses, legitimate or illegitimate, are constantly guided in deciding whether to take particular commercial courses by their assessments of the economic and other risks and costs involved. In deciding whether to run the risk of pursuing the high returns obtainable from the commercial importation of heroin, the non-addict with the intelligence and ability to organise and operate such a business must count the potential cost. If the contingent cost includes that of forfeiting the whole or a large part of one's remaining life to the prison system, clearly it will operate substantially to discourage selection of the heroin option.⁵

Similar comments on the application of general deterrence to particular types of crimes were made in *R v Poyser*.⁶ In that case, Murphy J stated that deterrence assumed greater importance when sentencing for ‘deliberate, calculated, carefully designed and avaricious crimes, committed by ... confidence men masquerading as men of worth’ and that ‘deterrence in such cases is not a difficult concept to understand, however artificial it may appear to be in ... crimes of passion or drug-related crimes’.⁷

The Victorian Court of Appeal has acknowledged the difficulty of advancing general deterrence. In *Winch v The Queen*,⁸ Maxwell P and Redlich JA suggested that the effectiveness of deterrence hinges upon *communication* of the threat of punishment to potential offenders:

[The prevalence of glassing offences and the community's concern] alone heighten the importance of general deterrence as a sentencing objective. They also highlight the urgent need for sentencing decisions in cases such as this to be communicated to those most likely to commit this kind of offence. How to make general deterrence effective remains one of the great challenges in the administration of criminal justice.⁹

1 *R v Williscroft* [1975] VR 292.

2 *R v Radlich* [1954] NZLR 86, 87.

3 *R v Williscroft* [1975] VR 292, 298–299; citing *R v Radlich* [1954] NZLR 86, 87.

4 *R v Perrier* [No 2] [1991] 1 VR 717.

5 *Ibid* 721.

6 *R v Poyser* (Unreported, Supreme Court of Victoria, Court of Criminal Appeal, Murphy, Gray and Nathan JJ, 15 September 1988).

7 *Ibid* 5.

8 *Winch v The Queen* [2010] VSCA 141 (17 June 2010).

9 *Ibid* [43].

In a speech to the Melbourne Press Club in April 2010, Chief Justice Marilyn Warren drew attention to knowledge of penalties being an essential requirement, saying 'deterrence within the community will not be achieved unless knowledge of the sentences is conveyed to the community' (Warren, 2010, p. 6).

The decision of the High Court of Australia in *Veen v The Queen (No 2)*¹⁰ also affirmed the importance of deterrence as a sentencing purpose but drew attention to the fact that deterrence is just one of a number of purposes of sentencing and that sometimes those purposes can conflict with one another. In that case, Mason CJ, Brennan, Dawson and Toohey JJ said:

The purposes of criminal punishment are various: protection of society, deterrence of the offender and of others who might be tempted to offend, retribution and reform. The purposes overlap and none of them can be considered in isolation from the others when determining what is an appropriate sentence in a particular case. They are guideposts to the appropriate sentence but sometimes they point in different directions.¹¹

While deterrence is enshrined in common law and in Victorian sentencing legislation, there remains judicial scepticism about the effectiveness of deterrence and in particular the effectiveness of *imprisonment* to act as a deterrent. In the South Australian case of *R v Dube*,¹² it was acknowledged by King CJ that:

there is no proven correlation between the level of punishment and the incidence of crime and that there is no clear evidence that increased levels of punishment have any effect upon the prevalence of crime.¹³

Despite accepting the lack of clear evidence of the effectiveness of deterrence, His Honour remarked:

the criminal justice system has always proceeded upon the assumption that punishment deters and that the proper response to increased prevalence of a crime of a particular type is to increase the level of punishment for that crime. I think that courts have to make the assumption that the punishments which they impose operate as a deterrent.¹⁴

Similarly, in the case of *Pavlic v The Queen*,¹⁵ Green CJ stated:

there is no justification for the view that there exists a direct linear relationship between the incidence of a particular crime and the severity of the sentences which are imposed in respect of it such that the imposition of heavier sentences ... will automatically result in a decrease in the incidence of that crime.¹⁶

According to Green CJ, 'general deterrence is only one of the factors which are relevant to sentence and must not be permitted to dominate the exercise of the sentencing discretion to the exclusion of all the other factors'.¹⁷ However, the continuing importance of considerations of deterrence to sentencing in Victoria is evident from the recent analysis by the Sentencing Advisory Council of the grounds relied upon by the Crown in sentence appeals, discussed above.

Deterrence and sentencing young offenders

In Victoria, the Children's Court has jurisdiction if the offender was under 18 years old at the time of the alleged commission of an offence, and is under 19 years old at the time when proceedings are commenced. The sentencing of offenders in the Children's Court is governed by the *Children, Youth and Families Act 2005* (Vic), providing a particular set of matters to which the court must have regard.

Section 362(1) of the *Children, Youth and Families Act 2005* (Vic) outlines the priorities and aims of sentencing in the Children's Court, including:

1. preserving relationships between the child and his or her family;
2. the desirability of the child living at home, allowing the continuation of education, employment or training;
3. minimising stigma from the court's determination;
4. the suitability of the sentence to the child;
5. the need to ensure the child is accountable; and
6. the need to protect the community.

In *H v Rowe*,¹⁸ Forrest J affirmed that general deterrence is not applicable to sentencing offenders in the Children's Court, stating: 'The principle of specific deterrence is incorporated within [the need to protect the community]; general deterrence is not a relevant sentencing principle.'

¹⁰ *Veen v The Queen (No 2)* (1988) 164 CLR 465.

¹¹ *Ibid* 476.

¹² *R v Dube* (1987) 46 SASR 118.

¹³ *Ibid* 120.

¹⁴ *Ibid*.

¹⁵ *Pavlic v The Queen* (1995) 83 A Crim R 13.

¹⁶ *Ibid* 16.

¹⁷ *Ibid*.

¹⁸ *H v Rowe* [2008] VSC 369.

In the adult courts, the sentencing of 'younger' or 'youthful' offenders (although still adults for the purposes of the jurisdiction) also involves a focus on rehabilitation rather than general deterrence. This issue was discussed in the recent case of *Winch v The Queen*¹⁹ where Maxwell P and Redlich JA quoted the general statement of principle from Batt, JA in *R v Mills*:²⁰

In the case of a youthful offender rehabilitation is usually far more important than general deterrence. This is because punishment may in fact lead to further offending. Thus, for example, individualised treatment focusing on rehabilitation is to be preferred. (Rehabilitation benefits the community as well as the offender.)

Their Honours, however, also cited Batt JA in *Director of Public Prosecutions v Lawrence*²¹ (with whom Winneke P and Nettle JA agreed) and affirmed that this general principle does not always prevail. Instead, it is sometimes the case that:

[y]outh and rehabilitation must be subjugated to other considerations. They must take a 'back seat' to specific and general deterrence where crimes of wanton and unprovoked viciousness (of which the present is an example) are involved ... This is because the offending is of such a nature and so prevalent that general deterrence, specific deterrence and denunciation of the conduct must be emphasised.²²

Deterrence and proportionality

As the court in *Veen v The Queen (No 2)*²³ observed, the purposes of imposing a sentence act as guideposts, which may sometimes 'point in different directions'.²⁴ This conflict of purposes becomes apparent when comparing the sentencing principle of proportionality with the purpose of general deterrence.

The common law sentencing principle of proportionality requires that, when offenders are sentenced, the overall punishment must be proportionate to the gravity of the offending behaviour. General deterrence, on the other hand, is concerned with threatening potential future offenders who might engage in the same criminal conduct with the same criminal sanctions. As von Hirsch and Ashworth (1998, p. 48) note, if general deterrence takes precedence over proportionality, then the

'convicted offender's punishment is being determined entirely by the expected future behaviour of other persons, not by his own past behaviour'. The authors (von Hirsch and Ashworth, 1998, pp. 46–47) point out that:

a major objection [to deterrence] has been that since its distinctive aim and method is to create fear of the penalty in other persons, it may sometimes require ... excessive punishment of an offender in order to achieve this greater social effect.

In other words, deterrence theory might require that a disproportionate punishment be imposed in order to achieve the effect of general deterrence. The problem with this, the authors argue, is that doing so would be to ignore individual justice and 'regard citizens merely as numbers to be aggregated in an overall social calculation' (von Hirsch and Ashworth, 1998, p. 47). Their argument is not that deterrence is irrelevant, only that it cannot be the sole justification for the imposition of a sentence, and there must be 'both a link with the general social justification for the institution of punishment and principles which ... place limits on the amount of punishment' (von Hirsch and Ashworth, 1998, p. 47; citations omitted).

Summary

This section has examined the sentencing process in Victoria and the purposes for which a sentence may be imposed. Specific and general deterrence form one of the purposes prescribed by the *Sentencing Act 1991* (Vic) for which a sentence may be imposed, reflecting an assumption that deterrence can reduce crime. Courts have expressed scepticism regarding the efficacy of deterrence for at least some types of offenders, and the High Court of Australia has determined that deterrence is but one of a number of considerations to be made when sentencing.

In Victoria, the sentencing of young persons operates under a model that provides for specific deterrence but excludes general deterrence as a purpose of sentencing. Deterrence can conflict with the principle of proportionality, and seeking to impose a sentence that deters the public at large from the commission of an offence may result in a disproportionate sentence for the individual offender.

19 *Winch v The Queen* [2010] VSCA 141 (17 June 2010) [39].

20 *R v Mills* [1998] 4 VR 235, 241.

21 *Director of Public Prosecutions v Lawrence* (2004) 10 VR 125.

22 *Winch v The Queen* [2010] VSCA 141 (17 June 2010) [44]; citing *Director of Public Prosecutions v Lawrence* (2004) 10 VR 125, 132.

23 *Veen v The Queen (No 2)* (1988) 164 CLR 465.

24 *Ibid* 476.

Deterrence theory

What is deterrence?

At its most basic, deterrence can be described as the avoidance of a given action through fear of the perceived consequences. In the context of the criminal law, deterrence has been expressed as 'the avoidance of criminal acts through fear of punishment' (von Hirsch et al., 1999, p. 5) and not through any other means (Beyleveld, 1979, p. 207).

Implicit in this definition is the assumption that individuals have a choice whether or not to commit criminal acts and, when successfully deterred, deliberately choose to avoid that commission through fear of punishment. The critical focus of deterrence is on the individual's knowledge and *choice* and the way in which the criminal justice system – through the threat and imposition of punishment – informs, and so (it is presumed) influences, that choice.

The reliance upon choice also distinguishes deterrence from the sentencing purpose of incapacitation. While both purposes seek to bring about an effect upon subsequent offending, incapacitation seeks to prevent offenders from reoffending through the fact of their imprisonment, and as a result, their lack of capacity to commit offences in the community. Deterrence, on the other hand, seeks to prevent individuals from offending through the threat of punishment.

General and specific deterrence

The criminal justice system as a whole has been shown to exert an *absolute* general deterrent effect. Historical events – such as police strikes – where there has been a lack of enforcement of the law, coincide with a significant increase in the commission of crime (von Hirsch and Ashworth, 1998, p. 51). However, research suggests that individuals are most often deterred from the commission of crime through internalised personal and social norms and the threat of social stigmatisation or non-legal consequences – collectively known as *informal* deterrence, or 'socially-mediated deterrence' (Wenzel, 2004, p. 550).

Some therapeutic courts – such as the Koori Court Division of the Magistrates' Court in Victoria – endeavour to build upon the strength of informal deterrence by involving members of the offender's cultural group in the proceedings. This aims to confer on the court cultural legitimacy and also moral authority (Sentencing Advisory Council, 2010, p. 17), combining elements of both formal and informal deterrence.

Historically, research has focused on *general* deterrence and *specific* deterrence, rather than absolute or informal deterrence. *General* deterrence refers to the way in which the threat of punishment may deter the public at large from committing

criminal acts. *Specific* (sometimes called 'special') deterrence refers to the way in which the experience of a particular sanction may deter a particular offender from committing further criminal acts.

The two concepts overlap: a sentence can act both as a specific and a general deterrent – specifically deterring the offender him- or herself, but also standing as an example or threat to the community at large, and so acting as a general deterrent. Similarly, an offender may be generally deterred from the commission of crime by the threat of punishment to the same extent as a non-offender; separate from the experience of a previous sanction.

Research into general deterrence has often focussed on the effect that changes to punishments (such as changes to the severity of penalties or changes to the level of enforcement) have upon deterrence, rather than the mere existence of punishments themselves. Studies into general deterrence usually seek to measure the 'marginal' deterrent effect of particular changes to the law, rather than the 'initial' deterrent effect of prohibiting conduct that was previously not a crime (von Hirsch et al., 1999, p. 5).

Knowledge and deterrence

Both general and specific deterrence are subjective concepts – they rely upon the knowledge and perceptions of the individual. Williams and Gibbs (1981, p. 591) emphasise that the claim that 'certain, swift and severe legal punishment prevents crimes' ignores the fact that deterrence theory 'is primarily a *perceptual* theory' (emphasis added). The authors question how the 'threat of legal punishments deter potential offenders unless they *perceive* those punishments as sufficiently certain, swift, and severe' (Williams and Gibbs, 1981, p. 591, emphasis added).

For any sanction by the criminal justice system to act as a deterrent, the potential offender must be aware of a number of considerations and act on the basis of that awareness. In order to be deterred by a sanction, a potential offender must:

1. realise that there is a criminal sanction for the act being contemplated;
2. take the risk of incurring that sanction into account when deciding to offend;
3. believe that there is a likelihood of being caught;
4. believe that the sanction will be applied to him or her if he or she is caught; and
5. be willing (and able) to alter his or her choice to offend in light of the criminal sanction (adapted from von Hirsch et al., 1999, p. 7).

This analysis applies not only to the existence of sanctions, but also to changes in their severity or certainty (discussed further below). For deterrence to work in *any* manner, the conditions above must be satisfied, as 'knowledge of penalties logically precedes perceptions of the certainty and severity of penalties' (Williams and Gibbs, 1981, p. 591).

For deterrence to influence the decision-making process, the offender must have both knowledge of the threat of punishment for the offence and a choice whether or not to commit the offence.

Economic theory and rational choice

The classical theory of deterrence assumes that the commission of criminal acts is the result of a *rational choice*. The classical theory was developed by eighteenth-century philosophers Jeremy Bentham (1948 [1776]) and Cesare Beccaria (1994 [1764]) and drew upon utilitarianism, a theory that held that 'human behaviour results from the pursuit of pleasure and the avoidance of pain' (Bodman and Maultby, 1997, p. 884).

This theory of rational choice, known in economics as 'expected utility theory' (Mongin, 1997), assumes that any behaviour is the result of 'careful thinking and sensible decisions' (Felson, 1993, p. 1497), and criminal behaviour in particular is a result of the 'calculation of individual advantage' (Beyleveld, 1979, p. 205). It assumes that individuals are rational beings who 'engage in conscious and deliberate cost-benefit analysis such that they maximize the values and minimize the costs of their actions' (Ward, Stafford and Gray, 2006, p. 572).

Rational choice theory suggests that crime results from a 'rational calculation of the costs and benefits of criminal activity' and individuals will 'commit crimes ... when the benefits outweigh the costs' (Spohn, 2007, p. 31). Therefore, according to the theory, an individual will be deterred from committing a crime if he or she perceives the costs to outweigh the benefits. In other words, a person will be deterred from offending 'if they perceive that they are certain to be punished, with a severe penalty, and soon after the offence has been committed' (Spohn, 2007, p. 31; citing Paternoster, 1991, p. 219).

Punishment avoidance and deterrence

Classical deterrence research has also been criticised for overlooking what might be described as the 'other side' of the cost-benefit equation, having 'focused on punishments for crime with little regard to the rewards for crime, or the rewards and punishments for noncrime' (Ward, Stafford and Gray, 2006, pp. 573-574). In other words, deterrence theory has failed to consider the gains and losses that people receive when they do not commit a criminal act, and how those considerations affect deterrence.

An expansion of deterrence was proposed by Stafford and Warr (1993), in order to address some of the limitations of classical deterrence theory. Their approach was to include the direct and indirect effects of both punishment and 'punishment avoidance' (Stafford and Warr, 1993, p. 125) – where an individual has had the experience of committing a crime and then avoiding punishment. The authors assert that specific deterrence needs to be considered as the direct effect on the individual of both his or her experience of punishment and his or her experience of punishment avoidance. The experience of punishment avoidance is assumed to reduce the effect of deterrence.

Similarly, it is proposed that general deterrence should be seen as the effect of the indirect experience of punishment – through knowledge of others being punished – and, again, indirect punishment avoidance – where an offender has knowledge that others have committed a crime but avoided punishment. The effect of general deterrence is also assumed to be reduced by the experience of indirect punishment avoidance.

This reformulation is significant, for it has been proposed that 'punishment avoidance does more to encourage crime than punishment does to discourage it' (Stafford and Warr, 1993, p. 125). Although the consideration of 'punishment avoidance' broadens classical deterrence theory, it does not address the primary issue of how decisions to offend are made in the first place.

Limitations of rational choice theory

Rational choice theory has been criticised because of its highly 'normative' stance, assuming that an individual makes a purely rational, utilitarian calculation of costs and benefits, without being influenced by individual, subjective perceptions. As a result, the model does not adequately account for offenders who do not exhibit that level of rationality.

For the purposes of this paper, different levels of irrationality can be broadly separated into three groups.

First, at the most extreme are the examples of crimes committed by people who are subsequently found to be not criminally responsible due to mental impairment.²⁵ By definition those offenders do not satisfy rationality or rational choice theory and so lack a necessary element for deterrence.

Second, many offenders may be considered 'irrational' under the traditional model, though not so irrational as to be not criminally responsible. This grouping might include offenders who are drug-affected or intoxicated with alcohol, intellectually disabled or suffering from a mental disorder. Also, it might

²⁵ *Crimes (Mental Impairment and Unfitness to be Tried) Act 1997* (Vic) s 20.

include those who have behavioural problems, such as poor 'anger management', or who lash out impulsively if provoked. Although all of these offenders are properly considered criminally responsible, their offending behaviour is not easily reconciled with rational choice theory.

A 2003 report for Corrections Victoria on substance use treatment found that two-thirds of all first-time offenders entering the Victorian criminal justice system had 'a history of substance use that is directly related to their offending behaviour' (FPRG, 2003, p. 3). The report (p. 3) further noted that:

For second and subsequent incarcerations, this figure increases to 80% for men and 90% for women (Victorian Prison Drug Strategy, 2002). Excessive alcohol use has also been implicated in the offending cycle, with research suggesting that between 41% and 70% of violent crimes committed in Victoria are done so under the influence of alcohol (Office of the Correctional Services Commissioner, 2000).

A more recent (2007) Victorian study found a high prevalence of mental illness among people detained in police cells (Department of Justice, 2010, p. 14; citing Corrections Victoria, 2007). Of that group, 70% had some form of substance use or dependency, 53% were registered in the Victorian public mental health database and 25% reported a psychiatric history. Another Victorian study of prisoner mental health found that 28% of prisoners had diagnosed mental health conditions (Department of Justice, 2003, p. 26).

Often, these offenders have multiple conditions (described as 'co-morbidities'). For example, substance use and mental illness are strongly correlated (Mullen, 2001, p. 17). While the presence of mental illness and substance use or dependency does not by itself indicate an inability to make a rational choice, it does suggest that the general assumption of rationality, required by classical economic theory, is problematic for an overwhelming majority of offenders.

Third, more subtle forms of irrationality – in the strict sense of individuals not acting in their own best interests – can be observed in much of human behaviour. This challenge to rational choice theory has been the particular focus of behavioural economics.

Behavioural economics theory

Behavioural economics explores the ways in which people depart from the 'rational actor' model of classical economics and instead seek satisfaction (which may be against their own interests), rather than maximising utility as classical economics presumes (Simon, 1955). Behavioural economics proposes that decision-making is based upon imperfect knowledge and often employs the use of experience-based techniques for

problem solving – such as using 'rules of thumb' and intuitive judgments – known as 'heuristics', rather than strict logic. Further, it is argued that our thinking is subject to patterns of deviation in judgment that occur in particular situations described as 'cognitive biases' (Tversky and Kahneman, 1974, p. 1124). Numerous cognitive biases have been proposed; however, this discussion will be limited to those biases that have a particular bearing upon decision-making in the context of deterrence.

For example, despite offenders knowing that there may be a severe penalty for committing a particular offence, they may overestimate their own ability to complete the offence successfully, without being apprehended, compared to others. McAdams and Ulen (2009) argue that this reflects the cognitive bias known as the 'optimism' or 'overconfidence' bias. Along with other biases (such as the 'present bias' discussed below) the optimism bias creates deviations from perfect rationality and affects the decision to offend (McAdams and Ulen, 2009).

The study of cognitive biases has also suggested an explanation for why, in some cases, there is a significant relationship between punishment and an *increased* likelihood of reoffending. The bias known as the 'gambler's fallacy' suggests that offenders may reoffend soon after being caught and punished. This may be due to a 'resetting effect', which causes an offender to lower his or her estimation of being apprehended, believing (irrationally) that being apprehended again is extremely unlikely (Piquero and Pogarsky, 2002, pp. 180–181).

Bounded rationality and bounded willpower

In its classical form, rational choice theory does not take into account the subjectivity inherent in decision-making. However, modern versions of rational choice theory argue that people intuit the values and costs of an action, but because they are imperfect processors of information, they pursue what they perceive as most satisfying (Ward, Stafford and Gray, 2006, p. 572). This 'subjective expected utility' form of rational choice theory still assumes that people perceive and evaluate the costs and benefits of a particular course of action; however, they are bound by the 'limits of their abilities' (Ward, Stafford and Gray, 2006, p. 572) and so exhibit limited or *bounded* rationality.

Despite the reliance of bounded rationality upon intuition, rather than knowledge, it is argued (von Hirsch et al., 1999, p. 6) that deterrence theory will still apply:

if [people] consider benefits and costs, to some degree, within parameters influenced by their attitudes, beliefs and preferences; and if they are affected by the information (however incomplete or inaccurate) available to them.

Alongside bounded rationality, the theory of 'bounded willpower' refers to the fact that people often take actions that are in conflict with their own long-term interests, despite being aware of this conflict. At play are two forms of decision-making: on the one hand, thinking that is deliberative and forward-looking, concerned with some future goal and, on the other hand, thinking that is impulsive and short-sighted and that seeks only to satisfy an immediate need.

Robinson and Darley (2004, p. 179; citations omitted) found that:

potential offenders as a group are people who are less inclined to think at all about the consequences of their conduct or to guide their conduct accordingly. They often are risk-seekers, rather than risk-avoiders, and as a group are more impulsive than the average. Further, conduct decisions commonly are altered by alcohol and drug intake.

Present bias and discounting future penalties

As Jolls, Sunstein and Thaler (1998, p. 1538) note, '[a] central feature of much criminal behaviour is that the benefits are immediate, while the costs (if they are incurred at all) are spread out over time—often a very long time'. Bounded willpower creates what is known as the 'present bias' – where greater value is placed on the immediate circumstances (whether it be a cost or a reward) and the future consequences are 'discounted'. As a result, the degree to which individuals devalue those delayed consequences is described as their 'discount rate' (Jolls, Sunstein and Thaler, 1998, pp. 1538–1539).

Research has shown that potential offenders may have unusually high discount rates. In other words, the 'cost' of a penalty of years in prison, imposed far in the future, will be heavily discounted when compared to the immediate benefit of committing a crime. One study found that, on a scale of severity, offenders considered a five-year term of imprisonment as only twice as bad as a one-year term (Spelman, 1995, p. 120). These findings suggest that offenders may demonstrate a diminishing sensitivity to increasingly severe punishments, with serious implications for deterrence theory.

Robinson and Darley (2004, p. 174) comprehensively summarise the present challenges to deterrence theory from behavioural science:

Potential offenders commonly do not know the legal rules ... Even if they know the rules, the cost-benefit analysis potential offenders perceive ... commonly leads to ... violation rather than compliance, either because the perceived likelihood of punishment is so small, or because it is so distant as to be highly discounted ...

And, even if they know the legal rules and perceive a cost-benefit analysis that urges compliance, potential offenders commonly cannot or will not bring such knowledge to bear [because of] a variety of social, situational or chemical influences. Even if no one of these three hurdles is fatal to the law's behavioural influence, their cumulative effect typically is.

The challenges to rational choice theory posed by behavioural economics suggest that models of decision-making – and consequently, the theory of deterrence – must be broad enough to include a range of characteristics that have been ignored in the classical model, including such things as low self-control, shame, moral beliefs and even the 'pleasure of offending' (Piquero and Tibbetts, 1996, p. 482).

Decision-making theories

The examples above of bounded rationality, bounded willpower and a number of the cognitive biases that affect the commission of criminal acts, only touch upon the complexity that surrounds decision-making theory. There is significant controversy between philosophers (Dennett, 2003), behavioural economists (Kahneman and Tversky, 2000), psychologists (Plous, 1993) and neuroscientists (Walton, Devlin and Rushworth, 2004) regarding the processes of thinking involved in decision-making.

As a result, for the purposes of this paper, the only definitive conclusion necessary is that the rationality required for deterrence theory to operate is not something that can be assumed; nor is it likely to be satisfied for a significant number of offenders and for particular kinds of offences.

Deterrence in practice

The question of whether deterrence *actually works* is critical to any evaluation of the philosophical or moral principles underlying its use. As Doob and Webster (2003, p. 148) note, in 1987 the Canadian Sentencing Commission evaluated the available evidence and expressed its scepticism over the legitimacy of general deterrence, finding that 'the evidence did not support the deterrent impact of harsher sentences'.

The Commission's conclusion that harsher sentences did not deter became 'one of the justifications for its proposal that sentences be proportionate to the harm done rather than based on deterrence' (Doob and Webster, 2003, p. 148). The following section examines the most recent empirical evidence on the effectiveness of imprisonment as a general deterrent.

Measuring deterrence

If successful, deterrence should prevent the commission of criminal offences. How then can we measure this 'counterfactual' figure? In other words, how do we measure the crime that does not occur? McAdams and Ulen (2009) caution that those studies that focus on prisoners are by definition focusing on individuals whom deterrence has failed to influence, and as a result may not be representative of those individuals for whom deterrence works. Nevertheless, there has been much empirical research on general and specific deterrence.

The various studies have adopted a number of approaches:

- 'ecological' or 'association' models, which compare crime rates in different jurisdictions that have different penalties;
- interrupted time-series studies of jurisdictions where there has been a change in penalty (or changes in the certainty of apprehension from different enforcement methods); and
- experimental survey data of targeted offenders or potential offenders, and less common experimental data from both designed experiments (such as assigning an offender to either probation or incarceration) and 'natural' experiments (such as the effect of mass releases resulting from clemency decrees).

When examining the various studies it is important to recognise, as Durlauf and Nagin (2010, p. 14) note, that:

because there is no settled theory on the causes of crime ... choices about control variables in the deterrence literature are necessarily ad hoc to some degree and so the influence of such judgments needs to be assessed.

Despite these constraints inherent in criminological research, there are consistent themes that emerge from the research on deterrence to be explored.

Summary

This section has defined deterrence as the avoidance of criminal acts through fear of punishment. Deterrence exists in a number of forms, including absolute, general and specific deterrence. Deterrence theory is based on the economic theory of rational choice, which suggests that individuals will weigh up the costs and benefits of committing crime. Individuals will be deterred when they have knowledge of – and consider – those costs, in the form of certain, swift and severe legal punishments. Deterrence theory has also been expanded to encompass the rewards of crime, the benefits of non-crime and the experience of punishment avoidance.

Rational choice theory fails to account for a large number of 'irrational' offenders, including those affected by drugs or alcohol and those with mental illness or suffering a mental disorder. Research shows that these offenders comprise a majority of the prison population. Rational choice theory has also been challenged by behavioural economics, which asserts that people are not perfectly rational. Instead, individuals make decisions on the basis of imperfect knowledge, employing rules of thumb, and subject to bounded rationality, bounded willpower and influenced by cognitive biases.

Finally, essential to an assessment of the use of deterrence as a purpose of sentencing is an evaluation of whether or not there is evidence that deterrence works in practice.

General deterrence

Introduction

This section examines the empirical studies and criminological literature from the last 10 years on the effectiveness of imprisonment as a general deterrent. The analysis shows that imprisonment has a small positive deterrent effect.

The section then examines the evidence for the effects of two forms of marginal general deterrence – changes to the *severity* of punishment and changes to the *certainty* of punishment. The research demonstrates that an increase in the severity of punishment (particularly imprisonment) has no increased deterrent effect upon offending. However, increases in the certainty of apprehension consistently show a significant positive deterrent effect.

This section also examines the emerging research which suggests that studies that aggregate different populations – combining 'deterable' and 'non-deterable' individuals – may overstate the significance of the deterrent effect of the certainty of apprehension and the certainty of punishment as a deterrent factor.

Measuring general deterrence

Nagin, Cullen and Jonson (2009, p. 119; citations omitted) have noted the difficulty in measuring general deterrence when compared to its conceptual basis:

The theory of general deterrence is clear and particularly well articulated in economic theory. It is the empirics that remain unclear. What is the magnitude of the effect? How does it vary across sanction types, crimes and people?

While there is substantial literature examining the effect on general deterrence of changes to the severity and certainty of punishments (particularly imprisonment), generally speaking there have been two approaches to measuring the effect of general deterrence: individual-level perceptual studies and broad population-level aggregate studies.

Perceptual studies

A number of perceptual, questionnaire-based studies have been used to survey populations and measure their anticipated responses to existing laws or experimental scenarios. The studies usually involve self-reporting of past behaviour and predictions of future behaviour and, as a result, are susceptible to self-reporting bias and may not reflect the participants' true behaviours. However, these studies avoid some of the problems associated with aggregate studies (discussed below).

A recent Australian study by Watling et al. (2010) sought to examine the general deterrent effect of new 'drug-driving' laws introduced in Queensland in December 2007. The authors surveyed 899 members of the public, including individuals who had been referred to a drug treatment program, gauging the subjects' knowledge of, and experience with, the drug-driving laws. The study also examined direct and indirect experience of drug-driving behaviour and direct and indirect experience of punishment and punishment avoidance.

The study found that experiences of punishment *avoidance* (both direct and indirect) were related to increases in the likelihood of drug-driving and were a significant predictor of the intent to drug-drive. However, the indirect experience of punishment – from knowledge of others being apprehended for drug-driving – was not a significant deterrent.

The potential punishment included the loss of a driving licence and the imposition of fines, rather than imprisonment; however, these studies are of value in examining the deterrent effect from the threat of a sanction in general. The study is consistent with the theory developed by Stafford and Warr (1993), referred to above, that the experience of avoiding punishment for an offence does more to encourage crime than being punished does to discourage it.

These results may seem contradictory: if knowledge of indirect punishment *avoidance* is a predictor of behaviour, then why wouldn't knowledge of indirect punishment act in the same way?

A possible answer may lie in the cognitive biases that can apply to this situation. The present bias may favour knowledge of punishment avoidance, and subsequent decision-making may prefer the immediate reward (drug-driving without punishment) over a potential, and seemingly doubtful, threat of apprehension and subsequent punishment. Similarly, the optimism bias – whereby offenders overestimate their ability to complete the offence successfully without being apprehended, compared to others – might explain why knowledge of other individuals' punishment experiences did not deter.

An earlier study by Watson (2004) analysed the survey responses of 290 people charged with unlicensed driving or driving while disqualified, seeking to measure their predicted deterrence from self-reported future offending. The study used a number of classical deterrence variables, including predicted risk of apprehension, knowledge of punishments and the perceived severity, certainty and swiftness of punishment. The results for those variables were that none predicted the frequency of unlicensed driving. The perceived risk of apprehension was the only variable that approached significance.

The study also used a number of variables based on the expanded deterrence theory of Stafford and Warr (1993), including direct and vicarious exposure to punishment avoidance (driving unlicensed without apprehension or knowing people who had) and vicarious exposure to punishment (knowing family or friends punished for unlicensed driving). The results showed that punishment avoidance was the strongest predictor of the frequency of unlicensed driving.

Although these studies were limited to driving offences (and did not involve the threat of imprisonment), the results were isolated to deterrence and did not combine deterrence and incapacitation effects.

Meta-analyses and aggregate studies

A recent meta-analysis by Dölling et al. (2009) examined 700 studies on the general preventive effect of deterrence (not specifically the effect of imprisonment as a general deterrent). For this meta-analysis, each deterrence study was given an 'estimation' score based upon how strongly the hypothesis in each study was supported by the results of each study. The meta-analysis showed that over half of the studies (53%) found a 'general preventive effect of deterrence' (Dölling et al., 2009, pp. 202–204); however, the average deterrent effect was negligible and had no statistical significance.

While a meta-analysis may provide a broad picture, the synthesis of evidence through such analysis may 'obscure important subtleties related to large differences in quality across studies' (Nagin, Cullen and Jonson, 2009, p. 143).

Another, more problematic approach (Piquero and Blumstein, 2007, p. 279) to measuring the general deterrent effect – but one that focuses on imprisonment – involves:

measuring both the crime rates and incarceration rates in multiple places, finding that places with higher incarceration rates have lower crime rates, and using econometric analysis to assess the 'elasticity' of crime rates to changes in incarceration rates.

The elasticity refers to the amount by which the crime rate changes in response to changes in the rate of imprisonment. The results of measurement of general deterrence across multiple jurisdictions and in the form of aggregate studies suggest that there is a small general deterrent effect of imprisonment.

A recent review of six aggregate studies by Donohue (2009; cited by Durlauf and Nagin, 2011, pp. 24–25) found that each study showed a negative association between the imprisonment rate and the crime rate – in other words, as the imprisonment rate increased, the crime rate decreased. However, there has been criticism of the methodology used in aggregate studies (Durlauf and Nagin, 2011, pp. 24–26; Piquero and Blumstein, 2007, p. 268).

Piquero and Blumstein (2007, p. 279) have noted that there may be a two-way relationship between crime and incarceration – one in which 'not only does incarceration influence crime, but crime may also influence incarceration'. For example, higher crime rates may saturate the prison system and so reduce the use of imprisonment as a sentencing option when capacity has been reached. As a result, a lower imprisonment rate does not always correlate with a lower crime rate. To control for this variable, 'one needs to identify factors that contribute to crime, but not incarceration and others that contribute to incarceration' (Piquero and Blumstein, 2007, p. 279).

Further, Durlauf and Nagin (2010, p. 8) criticise the aggregate studies for the fact that they were actually measuring a combination of deterrent and incapacitation effects, and as a consequence:

it is impossible to decipher the degree to which crime prevention is occurring because of a behavioral response by the population at large or because of the physical isolation of crime-prone people.

Deterrence and incapacitation

While the aim of deterrence is to prevent future offending through the threat of punishment, incapacitation seeks to prevent an offender from committing crimes in the community by means of physical incarceration (although further offending may occur while in prison, for example, assaults on other prisoners or theft).

The rationale for incapacitation is that it denies the offender the opportunity to commit those crimes that would have been committed had the offender been free in the community.

Incapacitation is a purpose of sentencing in Victoria, incorporated in section 5(1) of the *Sentencing Act 1991* (Vic). That section provides that one of the purposes for which an offender may be sentenced is 'to protect the community from the offender'.

As discussed above, a number of aggregate studies of general deterrence that compare imprisonment rates to crime rates do not distinguish between incapacitation and deterrent effects. In other words, any change in the crime rate as a result of changes to the imprisonment rate may be a consequence of the incapacitation of offenders (and their physical inability to offend outside of prison), rather than a result of a general deterrent effect acting upon other individuals living in the community.

To separate incapacitation effects from the effect of general deterrence, complex methodologies (based on criminal surveys) are used to estimate the number of offences that particular offenders *would have* committed across their criminal 'career' – focussing on estimates of the frequency of offending and the estimated duration of that offending (Donohue and Siegelman, 1998, p. 9).

There has been very little research in Australia on incapacitation as a purpose of sentencing and the effect of incapacitation upon crime. A 2006 study of the incapacitation effect of prison on burglary adopted the following methodology (Weatherburn, Hua and Moffatt, 2006, p. 3; citations omitted):

Instead of looking at the correlation between the rate of offending and the rate of imprisonment, [researchers] estimate its effect using a mathematical model ... This model assumes there is a finite population of offenders who, when they are free in the community, commit crimes at a certain rate and remain involved in crime over a certain period (known as their criminal career) ... the larger the fraction of an offender's criminal career spent in prison, the less crime they are able to commit.

In that study, the authors found that imprisonment was an effective method of crime control for the offence of burglary, estimating that 'the incapacitation effect of prison on burglary (based upon the assumption that burglars commit an average of 38 burglaries per year when free) [was] 26 per cent' (Weatherburn, Hua and Moffat, 2006, p. 8). However, the authors acknowledged that their results were based upon a methodology that made significant assumptions – including the primary assumption that there was a finite population of offenders.

This assumption is questionable when the imprisonment of certain offenders who provide a market with goods that are high in demand – such as stolen goods in the case of burglars, or drugs in the case of traffickers – is likely to result in other individuals commencing offending in order to meet that continuing demand. The effect of incapacitation policies are therefore likely to vary depending upon the type of offences and the types of offenders that are targeted.

Deterrence and increasing the severity of punishment

In response to the small positive effect of imprisonment as a general deterrent, lawmakers have often sought to achieve an increased deterrent effect by strengthening the threat – that is, by increasing the severity and certainty of punishment.

If, as classical deterrence theory contends, the existence of the criminal justice system (and the sanctions it imposes) acts as a general deterrent to the commission of crime, then it would seem reasonable that an increase in the severity of those sanctions would correspondingly result in an increased deterrent effect and thus a decrease in crime.

As discussed above, the presumption of deterrence from the economic perspective of decision-making theory holds that 'an increase in the probability and/or severity of punishment (representing costs of criminal behaviour) will reduce the potential criminal's participation in illegitimate activities' (Bodman and Maultby, 1997, p. 885) – in other words, the greater the severity of punishment, the greater the potential 'cost' to be weighed up by the offender when contemplating the commission of a crime.

Implicit in the ability to weigh up the cost of a crime is the assumption that a potential offender has knowledge of the actual punishment. If a punishment level has been increased for the purposes of increasing deterrence, it follows that the increase must also be known to the offender in order to have any increased effect. In 2005, a study that tested the relationship between actual punishment levels and an individual's perception of punishment (Kleck et al., 2005, p. 653) found that:

[t]here is generally no significant association between perceptions of punishment levels and actual levels ... implying that increases in punishment levels do not routinely reduce crime through general deterrence mechanisms.

This study confirmed Doob and Webster's 2003 review of sentence severity and deterrence, which argued that the empirical evidence simply did not sustain the hypothesis that an increase in the severity of penalties generated a marginal increase in deterrence (and therefore a reduction in crime). Doob and Webster (2003) comprehensively reviewed major studies of the deterrent effect of changes to penalty severity from a period of 10 years and concluded that they 'could find no conclusive evidence that supports the hypothesis that harsher sentences reduce crime through the mechanism of general deterrence' (Doob and Webster, 2003, p. 187).

A few years earlier, in their comprehensive paper 'Criminal Deterrence and Sentence Severity: An Analysis of Recent Research', von Hirsch et al. (1999) conducted a similar review of the empirical studies and literature on the marginal deterrent effect of changes to the severity of punishment and concluded that the research 'fails ... to disclose significant and consistent negative associations between severity levels (such as the likelihood or duration of imprisonment) and crime rates' (von Hirsch et al., 1999, p. 47).

These findings have been confirmed in subsequent studies, including one that examined the striking difference in the severity of punishments as a result of the change in jurisdiction from the juvenile court to an adult court. Lee and McCrary (2009) examined crime histories for young offenders in Florida in order to see if there was a marked decline in offending at the age of 18, when prosecution of offending moves from the juvenile court to the adult court. If identified, such a decline might be evidence of the deterrent effect of the potential for more severe penalties in the adult court.

Lee and McCrary (2009, p. 8) were able to use data on the precise timing of arrests, in order to separate deterrence from incapacitation effects, and found that there was a small decline, but it did not achieve statistical significance, confirming the 'null' effect that increasing the severity of penalties has on general deterrence (Doob and Webster, 2003). The study's findings contradicted those of Levitt (1998), who found a significant deterrent effect for the same change from a juvenile to an adult court. However, Levitt's study used annualised data, and Lee and McCrary (2009, p. 7) argue that, as a result, this may have combined incapacitation and deterrence effects resulting in a larger deterrence estimate.

Why don't harsher penalties deter more crime?

As emphasised by Kleck et al. (2005, p. 653), the studies on changes to sentence severity do not imply that punishment does not generate any deterrent effect at all. Instead, the authors demonstrate that the deterrent effect does not increase or decrease according to the actual punishment level to any substantial degree. The authors propose that this is because – as their findings demonstrated – the *perceptions of risk* upon which deterrence depends do not change according to the actual punishment levels imposed (Kleck et al., 2005, p. 653).

Durlauf and Nagin (2011, p. 31) suggest that another reason why an increase in the severity of penalties does not generate an increased deterrent effect is that 'most research on sentence length involves increases in already long sentences'. For example, if the threat of a fifteen-year imprisonment penalty does not deter a potential offender, it is questionable how much more

a twenty-year imprisonment penalty will generate a deterrent effect. This is particularly relevant in light of the 'present bias' and the resulting 'discounting' of future penalties, discussed above. If potential offenders irrationally regard a penalty that is five times as severe as being only twice as severe (Spelman, 1995, p. 120), then it is likely that similar discounting would occur (and have even less of a deterrent effect) when a penalty is increased by one third.

This suggests that, for changes in sentence severity to have a noticeable effect upon deterrence, those changes would have to be extremely severe to counteract the discounting caused by the present bias. For example, a 15%–20% specific deterrent effect described by Helland and Tabarrok (2007, p. 326) (discussed further below) was associated with an increase in the expected sentence of at least 300% (Lee and McCrary, 2009, p. 6). It has been argued that the resources required to impose such sanctions would have a greater effect in reducing crime if spent on policing, parole and probation monitoring systems (Durlauf and Nagin, 2011, p. 38).

Critical to deterrence theory is the potential offender's perception of the penalty that he or she will face, including knowledge of the penalty and, if a change in penalty severity is to influence the crime rate, knowledge of that change. Darley (2005) returns to the fundamental question of whether considerations of future punishment are in fact represented in most offenders' decisions to commit a crime.

If, as Darley (2005, pp. 195–198) suggests, crimes are committed by 'persons with somewhat disordered personalities who are characterized by a predilection for impulsive behaviour', or while under the influence of drugs and/or alcohol, or in the company of social peers who form a crime-prone group (or indeed, all three), then the considerations required for deterrence – let alone marginal deterrence from changes to the severity of penalties – are unlikely to be satisfied.

Those people who are characterised by their impulsive behaviour, drugs and alcohol use or criminal peers, make up a significant proportion of offenders. For example, a recent statistical profile by the Sentencing Advisory Council on sentencing for armed robbery for the period 2006–07 to 2007–08 found that, of the 517 charges for which motivation was known, the overwhelming majority (84.3%) were related to drug or alcohol use (Woodhouse, 2010, p. 14).

Even if none of these factors influencing offending behaviour is present, however, a 'rule known by a rational [individual] and perceived to carry a meaningful penalty nonetheless will not deter if the chance of getting caught is seen as trivial' (Robinson and Darley, 2004, p. 205). The *certainty* of apprehension and punishment is therefore critical to any general deterrent effect.

Deterrence and increasing the *certainty* of punishment

That the deterrent effect of the certainty of punishment far outweighs the deterrent effect of the severity of punishment has been described as 'one of the most prominent empirical regularities in criminology' (Pogarsky 2002, p. 435; citations omitted).

Numerous studies have confirmed this effect. Durlauf and Nagin's (2010) review of aggregate studies of police presence 'consistently [found] that putting more police officers on the street ... is associated with reductions in crime' (Durlauf and Nagin, 2010, p. 25). However, it is not merely the presence of police, but the necessary consideration in the potential offender's mind that apprehension is a genuine threat, that will generate a deterrent effect.

A 2005 Australian study by Tay demonstrated that an increase in the number of random breath tests conducted (even though the apprehension rate was low) would result in a significant decrease in the number of serious road crashes caused by alcohol (Tay, 2005, pp. 220–221). In other words, the threat of certainty of apprehension would operate as a general deterrent against drink-driving (evidenced by the reduction of crashes), rather than as a specific deterrent through the apprehension of more offenders.

Another Australian study by Briscoe (2004) found that, despite an increase in the severity of drink-driving penalties in New South Wales in 1998, there was a statistically significant *increase* in vehicle accident rates after the introduction of the penalties. When exploring why this seemingly paradoxical result occurred, Briscoe noted that there was a reduction in the 'intensity of drink-driving enforcement around the [same] time that the drink-driving penalties were raised' (Briscoe, 2004, p. 925), suggesting that the level of perceived certainty of apprehension declined just as the new penalties were introduced. The reduction in perception of the certainty of apprehension seems to have trumped the increase in the severity of penalties.

Nagin and Pogarsky's experimental study of cheating, the self-serving bias and impulsivity (2003, pp. 182–185) explored the effects of variation in the threatened certainty and severity of punishment and found that, consistent with earlier research, the deterrent effect of certainty of punishment was larger than that of the severity of punishment.

That the *certainty* of apprehension deters to a greater extent than the *severity* of punishment confirms the cognitive bias known as the 'availability heuristic'. This cognitive bias proposes that people will judge the likelihood of uncertain events (such as being apprehended for a crime) by how readily

examples of the event can be called to mind and that this may depend on factors that are unrelated to the actual probability of the event (Jolls, Sunstein and Thaler, 1998, p. 1477). For example, rare but highly publicised events – such as a terrorist attack – are often incorrectly judged as being more likely to occur than under-reported but very common events – such as a car accident.

Recent incidents of police enforcement (or a visible police presence) are more likely to be called to mind by a potential offender than the particulars of a (real or imagined) example of the imposition of a severe sentence for the crime being contemplated. As a result, Darley (2005, p. 204) notes that:

in contrast to attempts to reduce crime rates by increasing the severity of the sentence for the crime, campaigns that make salient in the mind of the public the possibility of being caught ... are often successful.

Deterring the deterrable

While the deterrent effect of the certainty of apprehension has been confirmed by numerous studies, Pogarsky (2002) has challenged the basis on which this strong effect has been observed. Pogarsky proposes that potential offenders should be assigned to three different populations (Pogarsky, 2002, pp. 432–433): *acute conformists*, who comply with the law for reasons other than the threat of sanction, the *incorrigible*, who cannot be dissuaded, regardless of the sanction, and the *deterrable*, who occupy the middle ground and who 'are neither strongly committed to crime nor unwaveringly conformist' (Pogarsky, 2002, pp. 432–433; citing Nagin and Paternoster, 1993, p. 471).

Deterrence theory necessitates that only those deterrable individuals will be affected by changes in either the severity of threatened sanctions or the certainty of apprehension. Jacobs (2010, p. 417) emphasises this critical requirement of 'deterrability':

If deterrence describes the perceptual process by which would-be offenders calculate risks and rewards prior to offending, then deterrability refers to the offender's capacity and/or willingness to perform this calculation.

Studies comparing the deterrent effect of severity to the deterrent effect of certainty of apprehension have 'aggregated deterrable and undeterrable individuals alike, even though the latter heed *neither* aspect of sanction threats' (Pogarsky, 2002, p. 435; emphasis in original). Instead, 'the most probative evidence would come from studies that directly compared any deterrent effect among groups differing in criminal propensity' (Wright et al., 2004, p. 186). Currently, there is a lack of such targeted research.

The willingness (and, arguably, the ability) to engage in the 'calculation' Jacobs (2010) describes – and on which deterrence depends – will vary widely according to the type of offender and the kind of offence. For example, at one end of the spectrum of 'consideration' prior to offending may lie commercial drug trafficking by a non-addict, run as an illegitimate business, involving the offender making ongoing calculations of the costs and benefits of crime. At the other end of the spectrum may lie a violent assault by an intoxicated young offender, reacting impulsively to a perceived threat or provocation.

Even within the limitations of bounded rationality and bounded willpower, it is difficult to imagine the offender in the latter example engaging in even negligible consideration of the consequences of his or her criminal behaviour, let alone weighing up the threat of a future penalty. Research (Giancola and Corman, 2007, p. 649) has shown that alcohol intoxication:

disrupts cognitive functioning ... creating a 'myopic' or narrowing effect on attentional capacity. Consequently, alcohol presumably facilitates aggression by focusing attention on more salient provocative, rather than less salient inhibitory, cues in a hostile situation.

In other words, alcohol may exaggerate and distort the present bias to the point that the consequences of criminal behaviour (both immediate and future consequences – including the discounted cost of a future penalty) simply do not enter into the offender's decision-making process. In those circumstances, it is very unlikely that the offender will be deterred, even if he or she has knowledge of there being a severe penalty for the particular offence, or knowledge that he or she is certain to be apprehended and punished, or indeed both.

Although the estimates vary considerably, Australian research suggests that alcohol is involved in 23% to as much as 73% of all assaults (Morgan and McAtamney, 2009, p. 2; citations omitted) and around 44% of all homicides (Morgan and McAtamney, 2009, pp. 2–3; citations omitted). In light of those estimates and estimates of the prevalence of mental illness among prisoners (discussed above), there are significant limitations on general deterrence and the number of offences and, in particular, the type of offenders, that the threat of punishment can possibly deter.

Summary

This section has examined evidence of the strength of imprisonment as a general deterrent. The research suggests that imprisonment has a negative but generally insignificant effect upon the crime rate, representing a small positive deterrent effect.

Deterrence studies have most often examined two forms of marginal general deterrence – changes to the severity of punishments and changes to the certainty of apprehension. The research demonstrates that increases in the severity of punishment (most commonly by lengthening sentences of imprisonment) have no corresponding increased deterrent effect upon offending.

It has been proposed that harsher punishments do not deter for a number of reasons, including a lack of impact of actual punishment levels on perceptions of punishment and the 'present bias' of most offenders, who discount the severity of distant punishments in favour of meeting immediate needs. Where changes in severity have demonstrated a deterrent effect, the lengthy terms of imprisonment required may represent a disproportionate response to the criminal behaviour. It has also been suggested that the allocation of resources needed for lengthy terms of imprisonment could reduce more crime (than that generated by a general deterrent effect) if reallocated to enforcement, parole or community-based sentences.

Increases in the certainty of apprehension consistently show a significant positive general deterrent effect. However, emerging research has qualified the strength of those findings, suggesting that studies should separate (and then compare) 'deterable' and 'non-deterable' populations. Research also suggests that the prevalence of 'non-deterable' offending – for example, offending in the context of alcohol intoxication – may significantly impact the effectiveness of general deterrence.

Specific deterrence

Introduction

This section examines the empirical studies and criminological literature from the last 10 years on the effectiveness of imprisonment as a *specific* deterrent. It briefly outlines the theory of specific deterrence and its basis in the subjective experience of imprisonment. An examination of the evidence of the effects of imprisonment on reoffending follows. This examination suggests that imprisonment has no effect on deterrence, and in a number of studies imprisonment is shown to be criminogenic – in other words, it causes or is likely to cause criminal behaviour. The section also includes a discussion of specific deterrence and young offenders and presents the similar conclusions that the empirical research in that area provides.

The scope of specific deterrence

As discussed above, *general* deterrence holds that the imposition of sanctions by the criminal justice system will act as a threat to all potential offenders. *Specific* deterrence holds that an individual offender's experience of an actual criminal sanction – particularly imprisonment – will deter that individual from reoffending.

Specific deterrence is therefore less likely to be a relevant purpose of sentencing when the risk of reoffending is very low. This is particularly so for those offenders whose offending behaviour was the result of circumstances that are highly unlikely to be repeated – such as a momentary lapse in attention while driving that results in an offence of culpable driving. While the sentence imposed against such an offender may potentially operate as a *general* deterrent (although, as discussed, this may be unlikely), specific deterrence of the individual concerned may be redundant.

Critics have argued that, compared to general deterrence, the logic behind specific deterrence is 'murky' (Nagin, Cullen and Jonson, 2009, p. 119) and that confusion has been generated by the described overlap between 'the impact of punishment on potential offenders' and 'the impact of punishment on the offender' when these processes are separate and distinct (Nagin, Cullen and Jonson, 2009, p. 119; citations omitted). The critical focus of specific deterrence – at least from an economic perspective – is whether punishment influences an offender's perceptions of the costs of future offending.

The experience of imprisonment

The experience of imprisonment in influencing the perceptions of the costs of future offending is highly subjective, and '[t]he precise effects on perceptions or expectations of being in prison ... are not straightforward and likely to hinge on a number of contingencies' (Nagin, Cullen and Jonson, 2009, p. 124).

It is conceivable that the subjective experience of imprisonment may vary considerably between offenders, particularly in minimum-security prisons, where the regular (and mandated) provision of food, shelter and some limited autonomy may constitute a better day-to-day experience for some inmates than the life they experienced outside. For those offenders, the experience of imprisonment may not act as a specific deterrent to reoffending. It is unlikely, however, that the experience of an offender in a supermaximum-security (or 'supermax') prison, involving frequent isolation and severe physical controls, is subjectively preferable to an offender's experience of life outside of prison.

In those circumstances, specific deterrence theory would suggest that, all things being equal, an offender released from a supermax prison would be specifically deterred from reoffending to a greater degree than a similar prisoner who had experienced a non-supermax prison. However, a recent study of supermax inmates in the United States did not find evidence of a specific deterrent effect (Mears and Bales, 2009). After controlling for a wide range of variables, including demographic characteristics, disciplinary infractions, time served, offence seriousness and prior criminal record, the authors found that supermax inmates were equally as likely to reoffend as non-supermax inmates. Additionally, it was found that supermax offenders were more likely to reoffend for violent crimes than non-supermax inmates. This finding confirmed the results of a study that compared prisoners on either side of the cut-off between different security levels – and the assignment of prisoners to those prisons with corresponding conditions – and found 'no evidence that harsher confinement conditions reduced recidivism' (Chen and Shapiro, 2007, p. 3).

It appears that harsher prison conditions do not necessarily discourage future offending and that, paradoxically, the experience of imprisonment may exert a criminogenic effect – in other words, a crime-producing effect – by providing a criminal learning environment, by labelling and stigmatising offenders as criminals or by simply constituting an ineffective way of addressing the underlying causes of crime, as discussed further below (Nagin, Cullen and Jonson, 2009, pp. 127–128).

Imprisonment and reoffending

The failure of imprisonment to act as a deterrent for a significant number of offenders is evident in both the post-imprisonment recidivism rate, and the number of prisoners in custody who have served a prior term of imprisonment.

A 2007 study on recidivism in Victoria showed that, of the prisoners released from a sentence of imprisonment in 2002–03, over 34.7% were convicted of further offences and returned to prison within two years of release (Holland, Pointon and Ross, 2007, p. 13). The proportion of offenders returning to prison was highest for young offenders, with 55.7% of offenders aged 17–20 years returning to prison within two years (Holland, Pointon and Ross, 2007, p. 15).

In Victoria, almost half (49%) of all adult prisoners in custody at 30 June 2010 had a known prior sentence of adult imprisonment (Australian Bureau of Statistics, 2010b, p. 34). At a national level, over half (54.6%) of all adult prisoners in custody on that date had also served a sentence in an adult prison prior to the current episode (Australian Bureau of Statistics, 2010b, p. 37).

A number of literature reviews examining the effects of imprisonment on reoffending have been conducted over the last 10 years. One of the most recent, by Nagin, Cullen and Jonson (2009), found that imprisonment had either no effect or a mildly criminogenic effect upon reoffending when compared to non-custodial or community-based sanctions. The authors concluded that their analysis of the evidence of the deterrent effects of imprisonment 'casts doubt on claims that imprisonment has strong specific deterrent effects' (Nagin, Cullen and Jonson, 2009, p. 115).

The results confirm the review from a decade earlier by Gendreau, Goggin and Cullen (1999), who examined 50 studies dating from 1958, using quantitative methods to determine whether prison reduced criminal behaviour or recidivism. The result of this meta-analysis demonstrated that imprisonment generated slight increases in recidivism. The study also showed that lower risk offenders in particular could be negatively affected by being in prison. The authors concluded that imprisonment could not be expected to reduce criminal behaviour through a specific deterrent effect. Instead, they argued that prison should be used to punish and incapacitate chronic, higher risk offenders (Gendreau, Goggin and Cullen, 1999).

Although the results of specific deterrence studies tend to demonstrate that imprisonment has no deterrent effect or a slightly criminogenic effect upon offenders, it is useful to separate the studies into their different methodologies for the purpose of analysis and comparison.

Experiments and 'natural experiments'

The 'gold standard' for measuring the effect of imprisonment upon specific deterrence would be to conduct an experiment and randomly assign half the similar offenders to imprisonment and half to a non-custodial sentencing order. While such a proposal would seem ethically questionable, one such example of this experimental design has occurred, as described by Killias, Aebi and Ribeaud (2000). In that study, eligible offenders were randomly assigned to either 14 days' imprisonment or a 14 day community-based order. In the two-year follow-up period both groups (and a further comparison group of community corrections offenders) were measured on the frequency of the offenders' reoffending or their subsequent contact with police. No difference was found between the three groups in relation to subsequent police contact, and so imprisonment showed no specific deterrent effect.

A more recent study by Green and Winik (2010, p. 359) took advantage of a 'natural experiment' in the form of the random assignment of offenders to a panel of nine judges. The judges varied widely in terms of their punitive approaches and their tendency to sentence offenders to either imprisonment or probation. After accounting for incapacitation effects, the study found that imprisonment seemed to have little net effect on the likelihood of reoffending, and so demonstrated no specific deterrent effect, confirming the results of Tait (2001).

Another two recent studies have taken advantage of large-scale natural experiments, where there has been an external variation in prison sentences at the individual level. The experiments allowed researchers to identify the specific deterrent effects of imprisonment, separate from their incapacitation effects.

The first, a 2009 study by Maurin and Ouss (2009), examined the consequences of a French collective pardon granted to inmates on Bastille Day in July 1996. Individuals in prison before 14 July 1996 received a reduction in their sentence of one week, along with an additional week for every month remaining on their sentence at 14 July 1996 (up to a maximum of four months). Five years after release, the rate of recidivism for inmates released after Bastille Day – who had received a reduced sentence – was about 12% greater than the rate of recidivism for those released before Bastille Day – who had received no reduction in sentence.

The second, a 2009 study by Drago, Galbiati and Vertova (2009), examined 22,000 prisoners whose sentences were 'commuted' under the Collective Clemency Bill passed by the Italian Parliament in July 2006. That legislation reduced the sentences for all offenders who had committed a crime before 2 May 2006 by three years. Those prisoners with less than three years to serve on their sentence – approximately 40% of the

prison population at the time – were immediately released. The law provided, however, that if the former prisoners reoffended within a five-year period, in addition to any new sentence, they would have to serve the amount of their sentence that had been, in effect, suspended.

The authors found that for every one month that was suspended – in other words, for every one month that the former prisoner would have to serve if convicted for reoffending within the following five years – there was a 1.3% reduction in the probability of reoffending. Unlike the French study (Maurin and Ouss, 2009), in which the prisoners received a reduction in sentence without the condition of suspension, the Italian study (Drago, Galbiati and Vertova 2009) examined a release of prisoners where the threat of an increased sanction for reoffending continued after their release. The immediacy of this threat may have countered the future discounting effect of the present bias. Also, it was found that the longer the time that was served, the less deterrent effect, which 'points to an overall criminogenic effect' (Nagin, Cullen and Jonson, 2009, p.167) of imprisonment.

Matching studies

Matching studies involve comparing the reoffending rates of offenders sentenced to imprisonment with a similar population sentenced to a punishment other than imprisonment, controlling, as much as possible, for all other factors.

In an Australian study released in 2010 on the effect of prison on adult reoffending, Weatherburn (2010) examined the specific deterrent effect of imprisonment for offenders convicted of either burglary or non-aggravated assault. The study matched pairs of offenders convicted of each offence using a number of variables – including offenders having the same priors, the same number of appearances, the same number of concurrent offences and the same bail status – with the critical difference being that one member of the pair received a full-time prison sentence while the other did not.

The author then measured the length of time until reoffending for the matched pairs and found that, for the offence of burglary, prison exerted no significant effect on the risk of recidivism. For non-aggravated assault, however, imprisonment appeared to increase the risk of further offending, at least for that particular offence. The author concluded that – while the results may not generalise to other types of offenders – as a result of these findings, 'it would be unwise to imprison offenders when the only reason for doing so is a belief in the specific deterrent effect of prison' (Weatherburn, 2010, p. 10).

This finding confirms the result of a 2002 study that evaluated the deterrent effect of imprisonment by comparing recidivism

rates for a sample of offenders sentenced to prison with a matched sample of offenders placed on probation (Spohn and Holleran, 2002). The offenders were matched on the basis of their background characteristics, prior criminal record and predicted probability of incarceration, in order to isolate imprisonment as the one differing variable. That study (Spohn and Holleran, 2002, p. 350) found:

Contrary to deterrence theory, offenders who were incarcerated were significantly more likely than those who were put on probation to be arrested and charged with a new offense.

The findings of the French experiment (Maurin and Ouss, 2009) that simple release has no specific deterrent effect, and the findings of the Italian experiment (Drago et al., 2009) that release on a suspended sentence demonstrated a specific deterrent effect, are in accordance with the findings of Lulham, Weatherburn and Bartels (2009), which examined the issue of breach of suspended sentences. That study matched the rates of reoffending for offenders on a suspended sentence to the rates of reoffending for those released from imprisonment. The authors found that 'there was a significant tendency for the prison group to re-offend more quickly on release than the suspended sentence group' (Lulham, Weatherburn and Bartels, 2009, p. 10).

Another example of where the threat of an increased sanction – specific to an individual offender – has had a measurable deterrent effect is the study by Helland and Tabarrok (2007) of the Californian 'three-strikes' laws. Those laws provided that for a third strike-eligible offence a mandatory penalty of 25 years to life (with a minimum to serve of 20 years before parole) would be imposed.

This study compared the future offending of individuals convicted of two strike-eligible offences with offenders convicted of one strike-eligible offence who were then charged with a second strike-eligible offence but were ultimately convicted of a non-strike-eligible offence. In other words, the study compared offenders with two strikes to those with just one, but whose initial conditions (both groups having originally been charged with a second strike-eligible offence) were similar. Using these two groups provided data that were easily matched, with few differences in observable characteristics.

The authors found that arrest rates were 15%–20% lower for the group of offenders convicted of two strike-eligible offences, compared to those convicted of one strike-eligible offence (Helland and Tabarrok, 2007, p. 326). However, the authors then went on to calculate the imprisonment costs for California of the 'three-strikes legislation' required to obtain this level of reduced recidivism, and reached the staggering figure of US\$4.6 billion (Helland and Tabarrok, 2007, p. 328).

Why doesn't the experience of prison deter reoffending?

There are a number of reasons why the experience of prison may result in a greater rate of reoffending, rather than having a deterrent effect upon offenders. Nagin, Cullen and Jonson (2009, p. 126) identify three main reasons:

- First, prisons can act as a *criminal learning environment* in which prison sub-cultures – acting in opposition to the 'pro-social' or rehabilitative environment intended by the state – encourage and reinforce criminal behaviour. Prisons are 'marked by the presence of cultural values supportive of crime that can be transmitted through daily interactions' and, as a result, 'criminal orientations are potentially reinforced' (p. 126).
- Second, prisons may exert a *labelling effect*. This results from both publicly stigmatising a person as a 'criminal', which reinforces a criminal identity, and the subsequent reaction from society to that criminal identity. The consequences include denying future opportunities (such as employment), enforcing prolonged association with offenders and eroding social 'ties to family and to the conventional social order' (p. 126). The severing of social ties reduces the offender's 'stakes in conformity' resulting in a reduced incentive for law-abiding behaviour (Spohn, 2007, p. 31).
- Third, prison may simply be an inappropriate response to the criminality of most offenders, failing to treat the underlying causes of criminal behaviour. Research to identify what form of treatments might address the factors predicting recidivism suggests that 'deterrence-oriented interventions' and 'mere incarceration absent a treatment component' are inappropriate interventions because they fail to achieve 'meaningful reductions in recidivism' (Nagin, Cullen and Jonson, 2009, pp. 127–128). Prison may be appropriate for high-risk offenders (p. 128), but:

[t]he danger is that inappropriate treatments—including imprisonment—can have a criminogenic effect on low-risk offenders, transforming those with low chances of [reoffending] into those destined to offend again.

Additionally, Jacobs (2010) identifies a number of responses by offenders to punishment (including imprisonment) that may result in recidivism. Offenders may commit additional crimes as a way to 'lash out' at what might be perceived as 'capricious, unjust, or unfair' sanctions (Jacobs, 2010, p. 419; citations omitted); offenders may be subject to the 'resetting' effect of the gambler's fallacy (discussed above), thinking that 'lightning won't strike twice' (Jacobs, 2010, p. 419; citations omitted); offenders may think they have learned from their experience of crime and lower their perceived certainty of detection when subsequently offending (emboldened by the optimism bias, discussed above);

and finally offenders who have been imprisoned are, by that fact, subject to a selection bias and may be 'simply the most committed offenders who ... report a greater likelihood of future offending' (Jacobs, 2010, p. 419; citations omitted).

A recent Victorian study of recidivism (Holland, Pointon and Ross, 2007) found that particular groups of prisoners were at greater risk of reoffending within two years of release, including younger offenders and Indigenous offenders. These findings were also confirmed by Smith and Jones (2008) and Zhang and Webster (2010). The higher rate of recidivism among younger offenders suggests that, particularly for vulnerable groups, imprisonment does not create a specific deterrent effect.

Specific deterrence and young offenders

In Victoria, the sentencing of young offenders in the Children's Court does not include the purpose of general deterrence. However, the purpose of specific deterrence may be justified by the 'suitability' and 'accountability' principles in sections 362(1)(e)–(f) of the *Children, Youth and Families Act 2005* (Vic) (Power, 2011, [11.1.4]).

A recent New South Wales study of 206 juvenile offenders measured the extent to which offenders perceived the court hearing in which they were sentenced to be a deterrent, and whether they felt either stigmatised or reintegrated by the process (McGrath, 2009). These interview data were then compared to the offenders' subsequent reoffending. The study tested two hypotheses: first, that individuals who rated their risk of arrest in the event of future offending as being higher would be less likely to reoffend (measuring estimates of *certainty* as a deterrent) and second, that those individuals who received what they considered to be a more severe sentence would be less likely to reoffend (measuring *severity* as a deterrent).

The results of the study confirmed the first hypothesis, because perceived certainty of apprehension acted as a deterrent. However, the results failed to support the second hypothesis, and the imposition of a penalty perceived to be severe by the offender did not act as a deterrent. This is in accordance with previous research (Doob and Webster, 2003; Nagin, 1998; von Hirsch et al., 1999). McGrath (2009, pp. 37–38) noted that:

The failure to observe a relationship between any of these measures of severity and recidivism comprises strong evidence against the proposition that harsh punishments are an effective deterrent to future criminal activity.

Another study by Weatherburn, Vignaendra and McGrath (2009) found that juveniles given custodial orders were no less likely to reoffend than juveniles given non-custodial orders. The study found no statistically significant criminogenic effect;

however, it confirmed the finding that prison exerts no specific deterrent effect, consistent with evidence from previous studies. The authors concluded that custodial penalties 'ought to be used very sparingly with juvenile offenders' given 'the absence of strong evidence that [custodial penalties] act as a specific deterrent' (Weatherburn, Vignaendra and McGrath, 2009, p. 6).

The recent Australian findings may be explained in part by Canadian researchers Cesaroni and Bala (2008, p. 450; citations omitted), who note the potential risks associated with imprisonment of young offenders:

Those youths who have pro-social values at the time of incarceration may be placed with others who have anti-social attitudes; after their release, youths may be more likely to associate with other adolescents whom they have met in custody, and may therefore be more likely to join gangs. Being in custody also appears to have a negative effect on their long-term job stability, and hence may contribute to reoffending.

A study by Ashkar and Kenny (2008) showed that where imprisonment did seem to generate a specific deterrent effect in juveniles, it was as a result of 'bullying and victimisation, dislocation from important others and fearful perceptions of adult corrections' (Ashkar and Kenny, 2008, p. 594). These effects exist independently of the intent of the state to rehabilitate the juvenile offenders and have significant human rights implications. Instead of rehabilitation, the authors found that 'the incarceration experience failed to provide ... the necessary skills to promote and sustain positive change' and the author concluded that 'incarceration alone is unlikely to have any significant impact on recidivism' (Ashkar and Kenny, 2008, p. 595).

Summary

This section has examined literature reviews and recent empirical studies on the effectiveness of imprisonment as a *specific* deterrent. The available research suggests that imprisonment has either no effect upon reoffending or a criminogenic effect. There are a number of reasons for the failure of the experience of imprisonment to deter offenders from reoffending, including that imprisonment may create a criminal learning environment, imprisonment may label and stigmatise offenders and imprisonment may be an inappropriate way to address the underlying causes of crime.

Humane conditions within prison itself do not appear to contribute to the lack of a deterrent effect, as harsh prison conditions have been shown to generate a similar lack of deterrent effect and, for some crimes, a greater rate of recidivism. As with adult offenders, young offenders do not appear to be deterred by imprisonment, and some studies show a criminogenic effect. Given the aims of rehabilitation and reintegration, the lack of evidence for a specific deterrent effect suggests that custodial penalties for young offenders should be used sparingly and for purposes other than specific deterrence.

Concluding remarks

The evidence from empirical studies suggests that the threat of imprisonment generates a small general deterrent effect. However, the research also indicates that increases in the severity of penalties, such as increasing the length of imprisonment, do not produce a corresponding increase in the general deterrent effect.

A consistent finding in deterrence research is that increases in the certainty of apprehension and punishment demonstrate a significant increase in the deterrent effect. This result is qualified by the need for further research that separates deterrable from non-deterrable populations. It has been suggested that the significance of certainty of apprehension exhibiting a deterrent effect may be overstated in studies that combine these populations.

The research shows that imprisonment has, at best, no effect on the rate of reoffending and is often criminogenic, resulting in a greater rate of recidivism by imprisoned offenders compared with offenders who received a different sentencing outcome. Possible explanations for this include: prison is a learning environment for crime, prison reinforces criminal identity and may diminish or sever social ties that encourage lawful behaviour and imprisonment is not an appropriate response to the needs of many offenders who require treatment for the underlying causes of their criminality (such as drug, alcohol and mental health issues). Harsh prison conditions do not generate a greater deterrent effect, and the evidence shows that such conditions may be criminogenic.

In Victoria, deterrence represents only one of the purposes for the imposition of a sentence to be considered by a court alongside punishment, rehabilitation, denunciation and community protection. The purposes of punishment and denunciation are essentially ends in themselves, referable directly to the offender and the criminal behaviour, without need of justification by reference to the potential crime-reducing consequences of punishment and denunciation. However, the other purposes of sentencing – deterrence, rehabilitation and community protection – do not merely respond to the criminal behaviour, but also aim to achieve a reduction in crime.

Imprisonment has its place in the criminal justice system. Lengthy terms of imprisonment may be justified to achieve the purposes of punishment and denunciation, to protect the community by the incapacitation of an offender or to provide time for rehabilitative treatment.

In light of the empirical evidence, however, it is critical that the purposes of sentencing be considered independently – according to their own merits – and that caution be exercised when imprisonment is justified as a means of deterring all crimes and all kinds of offenders.

Glossary

Absolute deterrence

The manner in which crime is reduced or prevented by the existence of the criminal justice system as a whole, rather than through the threat or imposition of a particular criminal sanction.

Aggregate study

In sentencing, an aggregate study is a research methodology that compares overall rates of crime and imprisonment across a jurisdiction, or between jurisdictions, rather than at the level of individual offenders.

Cognitive bias

A cognitive bias is the human tendency to make systematic errors in judgment, knowledge and reasoning. Such biases can result from the use of information-processing shortcuts called 'heuristics' (defined below).

Criminal learning environment

Social learning theory suggests that people learn behaviour from their own immediate environment, through reinforcement, punishment and observation of social influences (including the influence of peers, superiors and role models). A criminal learning environment is one in which a person learns criminal, rather than law-abiding, behaviour.

Criminogenic

A criminogenic effect is one that produces – or tends to produce – crime or criminality.

General deterrence

A sentencing purpose aimed at the reduction of crime by the threat or example of a criminal sanction, directed at all potential offenders.

Heuristic

An experience-based technique for problem solving, learning or processing information. Heuristic methods are used to find solutions quickly, when an exhaustive process is impractical. Examples of this method include using a 'rule of thumb', an educated guess, an intuitive judgment or 'common sense'.

Incapacitation

A sentencing purpose aimed at the reduction of crime by physically preventing offending, usually through imprisonment of the offender.

Informal deterrence

The manner in which crime is reduced or prevented through the influence of social norms that generate the threat of informal (non-legal) sanctions, such as the prospect of rejection by peers or of ostracism from a social group.

Labelling effect

Labelling theory (also known as social reaction theory) suggests that labels that describe behaviour may further lead to that behaviour, particularly if the label is negative or stigmatising. One effect of labelling a person as 'criminal' may be that the person then conforms to that description. Another effect of labelling may be that the person labelled is then subjected to prejudice; for example, by being labelled an 'offender', a person may find it more difficult to maintain employment or social relationships, thereby increasing the risk of criminal behaviour.

Matching study

A research methodology in which pairs of offenders are matched for as many identical variables as possible and are differentiated only by the experimental variable. The matching of offenders attempts to isolate any difference in measured outcomes to the experimental variable.

Meta-analysis

A systematic review that combines and analyses findings from pre-existing studies, providing a summary or synthesis of an area of research.

Perceptual study

A research methodology that involves collecting data from individuals by measuring their responses to questions in the form of interviews or questionnaires. Perceptual studies often use scenarios to elicit individuals' predicted future behaviour.

Proportionality

A common law sentencing principle requiring that, when offenders are sentenced, the overall punishment must be proportionate to the seriousness of the offending behaviour.

Specific deterrence

A sentencing purpose aimed at the reduction of crime through the imposition of a criminal sanction that discourages a particular offender from reoffending.

Totality

A common law sentencing principle requiring that, where an offender is at risk of serving more than one sentence, the overall effect of the sentences must be just, proportionate and appropriate to the overall criminality of the total offending behaviour.

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Legislation and Bills

- Children, Youth and Families Act 2005* (Vic).
- Crimes (Mental Impairment and Unfitness to be Tried) Act 1997* (Vic).
- Sentencing Act 1991* (Vic).

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This paper is designed to consider some of the methodological issues that arise when measuring informed public opinion about sentencing.

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