

**BOOK REVIEW: D WILSON *GENETICS, CRIME AND JUSTICE* (EDWARD ELGAR, CHELTENHAM, 2015)**

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The dominant motif in criminal law is that people make choices, and if a criminal act/omission is committed, punishment is justified as a desert for an improper choice or to deter future improper choices. This assumption of choice and therefore of control over behaviour is also the starting point for many aspects of the political and economic structure of the current world.

At the same time, it is relatively well established that many convicted people have not made fully rational choices. Hence the prevalence of mental disorder amongst prison inmates;<sup>1</sup> and the success of problem-solving courts, with their emphasis on finding solutions to allow people to manage the features of their lives that drive their actions. In other words, many people who are involved in the criminal justice system have constrained capacity to make choices.

Indeed, some have questioned the idea that humans as a whole — not just those in criminal settings — engage in rational behaviour. Instead, they posit that the concept of decision-making through cost-benefit analyses is a rationalisation. An alternative explanation is that behaviour is a more primal process whereby most actions are the product of drives and other factors that operate instead of rational planning. Writing in 1996, George Loewenstein concluded that “there is little evidence beyond fallible introspection supporting the standard decision-theoretic assumption of complete volitional control of behavior”.<sup>2</sup>

That in turn leads to various questions, ranging from the high-level questions of the propriety of the system of crime and punishment that is in operation; down to the more pragmatic questions of how to use the evidence of constrained choices in the context of the current criminal justice system. Debra Wilson’s informative text explores both the normative and practical questions, focussing on one of the developing areas of research as to what might be a significant causative factor in criminal behaviour, namely genetic predispositions. Importantly and usefully, the book also collates a wealth of material from scientific literature and organises it in a digestible fashion.

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<sup>1</sup> It has recently been noted that 91% of prisoners currently in New Zealand prisons have had either a mental disorder or a substance abuse disorder at some stage in their lives, and for 62% (and 75% of female prisoners) there was such a disorder within the last 12 months of the survey: D Indig, C Gear and K Wilhelm *Comorbid Substance Use Disorders and Mental Health Disorders among New Zealand Prisoners* (New Zealand Department of Corrections, Wellington, 2016). A study published in 1998 indicated that 84% of prisoners (based on a study at Wanganui Prison) had received a traumatic brain injury during their lives: TV Barnfield and JM Leathem “Incidence and Outcomes of Traumatic Brain Injury and Substance Abuse in a New Zealand Prison Population” (1998) 12 *Brain Injury* 455–466.

<sup>2</sup> G Loewenstein “Out of Control: Visceral Influences on Behavior” (1996) 65 *Organizational Behavior and Human Decision Processes* 272 at 276.

After a brief context-setting history of the use made of genetic arguments as to behaviour being conditioned, chapter 3 discusses the use of genetic testing in criminal investigations, particularly in the form of DNA collection and retention, and the ethical issues arising. This sets the background to the main purpose of the book, which starts in chapter 4 with an outline of the growing body of research indicating a genetic marker that predisposes individuals to heightened levels of aggression. Importantly, science suggests that the genetic markers interact with various environmental factors. There is, it is worth noting, a further field developing, namely epigenetics, which traces the interaction between “nature and nurture” factors in explaining conduct and suggests that genetic markers may be modified by adverse circumstances.

The summary of the science and the wider issues around its use leads to the comprehensive discussion in chapter 5 of arguments that have been deployed in criminal litigation, primarily in the USA, as to the presence of a genetic component that may explain (and even excuse) behaviour, or at least provide a sensible line of mitigation. As these real cases demonstrate, lawyers have sought to introduce the science within the existing criminal justice structure.

Chapter 6 then turns to the wider questions of the very nature of the criminal justice system, and explores whether the evidence of genetic predispositions should cause us to reformulate our approach to punishment. This involves posing the question of whether the criminal justice system should be based on evidence as to how people operate rather than our theory of the rational decision-maker; whether the philosophical concept of free will is so dominant as a legal concept that the science should not make a difference; or whether there is some middle ground.

Dr Wilson calmly suggests that the current system is sufficiently flexible to be able to take into account the developing science. However she proceeds to outline the ethical issues that are likely to arise if the scientific evidence becomes strong enough to suggest that we need to move towards a system that recognises the importance of a differential approach to those whose genetic make-up leads to different reactions on their part.

This is a book that will be of great interest to those who think about criminal justice issues, whether from more liberal or more public-protection positions. The former will be interested to explain behaviour in a way that suggests a person has not simply revealed a choice for anti-social behaviour. Those who focus on protection may be interested more in the potential to identify risk and the possibility of preventive action. Common to both should be a realisation that science can help to explain why a minority of people in society seem less able to avoid engaging in criminal conduct.

In addition to those who consider these issues from a policy perspective, there is a great deal in this book that is of value to those whose main interest is in making use of the criminal justice system as it currently exists. For example, if a defendant presents with a repeated tendency to engage in violent conduct despite the repeated use of typical criminal justice responses, namely sentences of increasing

severity (including, perhaps, the application of the three strikes regime), it may be that there should be an investigation into why the defendant is not responding in a rational way. Expert evidence relating to mental disorder of one form or another may provide relevant evidence of the need to approach the management of the defendant in a different way. Similarly, as Dr Wilson highlights, there may be influences in the genetic make-up of the defendant that should be investigated to provide a rationale for seeking a different response to the conduct.

In short, this book provides a readable and insightful introduction to the intersection between criminal law and science. These insights are already being used in some contexts and may form a significant backdrop to discussions as to how responses to criminal conduct should reflect our state of knowledge about the drivers of human behaviour.