Article

How psychological research on consciousness can enlighten the criminal law

by Deborah W Denno

INTRODUCTION

In *Regina v Parks* (95 DLR 4th 27 (1992)), the 23-year-old defendant got up from his bed and, while sleepwalking, drove 14 miles to his in-laws' house. There he brutally stabbed and beat his mother-in-law to death and attempted to kill his father-in-law. Both crimes seemed entirely motiveless and Parks immediately turned himself into the police. Investigation later showed that Parks had a long family history of sleep disorders, as well as episodes of disorder documented by his prison cellmates and laboratory observation. Relying on experts, Parks successfully presented a defence of unpremeditated homicide and attempted homicide during a sleepwalking episode. He was totally acquitted of all charges.

Park's attorneys had contended that it was highly unlikely that Parks would be dangerous again:

(1) there were no documented cases of repeated violent somnambulism so that the probability of recurrent violent somnambulism was insignificant;

(2) experts testified that Park's sleepwalking was a rare occurrence triggered by a combination of precipitating factors (sleep deprivation and high stress) that were unlikely to recur together; and

(3) avoidance of this stress combination, in addition to normal sleep hygienic measures plus drug treatment to consolidate sleep and reduce deep sleep, would likely prevent recurrence. Indeed, after the acquittal, Parks was put on medication and his sleepwalking episodes ceased.

Park's acquittal is consistent with current law, accepting the court's presumption that Parks was actually sleepwalking and therefore unconscious. The criminal law, in particular, presumes that most human behaviour is voluntary and that individuals are consciously aware of their acts. Individuals who act unconsciously, such as sleepwalkers, are viewed as not acting at all. They can be totally acquitted even if their behaviour resulted in a serious crime.

Some neuroscientific research suggests, however, that unconscious influences dominate our thoughts and conduct. If this is so, most human behaviour is not conscious or voluntary in the way that the criminal law presumes. Rather, consciousness exists in degrees depending in part upon how much our awareness is retrievable from memory.

This schism between law and science is not new. It reveals a long-standing tension between two views of human behaviour: free will and determinism. Historically, the criminal law has reached a compromise. It generally treats conduct as autonomous and willed because that approach seems most feasible given the complexity and constraints of the criminal justice system. Yet, it also recognises elements of determinism by providing defences or mitigating circumstances.

THE CONFLICT BETWEEN LAW AND SCIENCE

New concerns arise over the validity of the criminal law's compromise between free will and determinism when legal doctrines increasingly conflict with modern neuroscientific research on conscious and unconscious processes. For example, neuroscientists complicate the criminal law's common-sense or 'folk psychology' notions of an active conscious agent exercising intentions, beliefs, desires, choices, voluntary conduct — free will; instead, they study behaviour reductionistically in terms of physical causes and effects explained by the function (or malfunction) of the brain. However, if in fact there is a relatively more limited basis for the folk psychology concepts of free will and responsibility, how do we interpret the concepts of criminal responsibility that are regularly applied by courts handling criminal cases?

My current research, briefly summarised in this essay, attempts to confront this clash between legal and scientific perspectives on consciousness by proposing ways in which law and science may mesh with some degree of resolution. I illustrate these proposals in the context of a number of different types of criminal law cases and doctrines concerning voluntary acts but excluding omissions, which have been discussed eloquently and in depth elsewhere. In line with other commentators, my research is guided by a fundamental premise concerning criminal responsibility: Until proven otherwise, common sense beliefs about people's behaviour, including beliefs about responsibility and free will, are valid and respectable.

Consciousness and the Criminal Law's Voluntary Act Requirement

There are four major parts to my research. Part I examines the criminal law's voluntary act requirement, particularly in the context of Model Penal Code (MPC), s. 2.01, which never specifically defines the term 'voluntary' but rather provides six examples of what that term does or does not include. The Model Penal Code Commentaries leave the work of defining voluntariness to the courts, which generally have adopted the terms 'automatism' and 'unconsciousness', respectively, to reflect the fact that the requirement can be applied either to the *actus reus* (act) or *mens rea* (mental state) elements of a crime.

Discussion includes an analysis of how the Model Penal Code's requirement reflects the law and psychology preceding and during the era in which it was developed — the 1950s. This era was influenced in part by Freudian psychoanalytic theory and its early predecessors. The MPC in no way adopts the psychoanalytic theories or philosophies of Freud or his predecessors: however, it does espouse the commonly held belief of a theoretical dichotomy between conscious and unconscious thought processes. Other legal scholars, doctrines and statutes that influenced the Model Penal Code's development, particularly cases from England, Australia, Canada, Scotland, Ireland, and New Zealand, also embraced this belief.

The MPC's voluntary act provision was strikingly progressive and creative at the time it was introduced. However, it no longer reflects the MPC's goal of incorporating modern interdisciplinary science. Part I concludes by contending that there appears to be no valid scientific basis for a voluntary act dichotomy because consciousness and unconsciousness are a matter of degree, existing in terms of 'more or less' rather than 'either/or'.

How Consciousness is Defined and Researched

Part II of my research examines a range of different definitions of consciousness to provide a framework for discussing how theories and research on consciousness can be applied to criminal law doctrine. In general, consciousness is defined as a person's subjective self-awareness — the sum of that person's thoughts and feelings, circumstances and sensations. An important component of consciousness is that it arises from, and interlinks with, unconscious and conscious mental activities.

Part II also examines the development of theories of consciousness and why scientific interest in the topic is relatively recent. From about 1920 to 1960, behaviourism, which dominated psychology, held the view that conscious and unconscious processes were simply not significant subjects to study: behaviour could be more easily and accurately explained in terms of reflexes and conditioned responses. At the same time, Freudian psychoanalytic theory was also highly influential, particularly in medical schools, although it was criticised for lacking empirical validation. The 1970s brought a growing disenchantment with both behaviourism and Freudian psychoanalytic theory, heralding an era of cognitive science that acknowledged the reality and significance of non-Freudian conscious and unconscious processes.

Part II next examines this new cognitive science. The research suggests that, even more than previously thought, our behaviour is dominated by unconscious and conscious influences that we may not be able to perceive consciously, or control. Some empirical work shows that unconscious processes are capable of more complex thinking than conscious processes, and that our unconscious can influence substantially our emotions and acts.

Perhaps most strikingly, there is evidence that our ability to have consciousness propels our belief that we act freely and voluntarily even though the science of consciousness suggests that our behaviour is determined. For example, some studies indicate that individuals act before they are aware that they are acting, even though their consciousness can eventually veto their further behaviour. While such research is ongoing and needs additional validation, it is also sophisticated and expanding rapidly. Moreover, despite the typical differences and debates among cognitive scientists, one notion becomes clear: There is no consensus of scientific support for the concept of an unconscious-conscious dichotomy.

The Confusion Between the Criminal Law's Involuntary Act and Insanity Defences

Part III of my research examines how the voluntary act requirement, interpreted by courts primarily through the defences of automatism and unconsciousness, conflicts conceptually and substantively with other key criminal law defences, primarily insanity. The significance of this discussion focuses on two realities: (1) individuals who successfully argue defences of automatism or unconsciousness can be acquitted totally, whereas (2) individuals who plead insanity can be committed for long periods of time. Individuals who are unsuccessful at either approach can receive a severe penalty, including the death penalty in the United States.

These differentials are particularly problematic because courts may adjudicate similar individuals differently based upon the courts' (oftentimes unclear) understanding of these defences and the science that underlies them. Moreover, science shows that there is an enormous diversity in the ways that people can be unconscious. The Model Penal Code Commentaries recognised the potential for this kind of confusion in their discussion of the voluntary act requirement; it appears that their prediction has been realised.

PROPOSED SOLUTIONS TO THE PREDICAMENT OF CONSCIOUSNESS AND VOLUNTARINESS

Part IV of my research considers possible solutions to this predicament. Suggestions range from the total

abolition of an explicit statement of the voluntary act requirement to an act-requirement based on degrees of consciousness, rather than a dichotomy. I propose a three-tiered compromise between these two extremes.

A Three-Tiered Approach

The voluntary act requirement should be retained because it is bedrock of the criminal law. However, the requirement should be substantially simplified in its language and constitute three tiers:

(1) voluntary acts,

(2) involuntary acts,

(3) semi-voluntary acts.

The third category of semi-voluntary acts would incorporate cases that have previously been included in the first two categories. This approach presumes that knowledge about the unconscious prompts a view of individuals as being both more and less culpable than we used to think.

This three-tiered approach to voluntariness would rely on consciousness research as well as a layperson's assessment of how that research should be interpreted in the context of our current norms and values. Philosophies of punishment and sentencing structures should vary according to the extent of an individual's intentions, their conscious awareness of their behaviour, and social mores.

My research then illustrates the three-part approach with some selected cases. The analysis focuses on individuals who may be at risk of repeating their semi-voluntary (but dangerous) behaviour, the category that has created the most concern for courts. The Part suggests that some individuals who have a history of engaging in one or more semi-voluntary criminal acts — or who have a background indicating the potential for such acts — be considered 'conscious' or 'aware' of their propensity and therefore assume the responsibility to avoid such acts in the future. This recommendation reflects the current state of the law that holds individuals to be negligent or reckless if they are aware of the propensity to act involuntarily (for example, in the case of voluntary intoxication).

Lastly, there is some consideration of how the three-part approach would fit more readily with the currently existing *mens rea* requirements that emphasize different states of 'awareness.' Indeed, consciousness research could help fine-tune our current standards of culpability.

How the Three-tiered Approach Would Apply to a Criminal Case

One way to illustrate the three-tiered approach is by returning to the defendant in *Regina v Parks*, the sleepwalking case discussed in this essay's introduction. Parks was acquitted and had a number of convincing mitigating factors in his favour. At the same time, however, the case scenario is troubling.

Using some of the 10 criteria (a-j) listed in a New York interest of justice statute as a guide (see *N.Y. Crim. Proc. Law*, McKinney (2001), § 210.40(1) (a-j)), the facts point to potential problems: (a) Park's crimes were extremely serious (murder and attempted murder) as were the circumstances surrounding them (the brutality of the stabbing and beating); accordingly, (b) the extent of harm caused was very grave. While (d) Park's character seemed strongly in his favour because of lack of motive (he apparently got along well with his in-laws), his sleepwalking condition was problematic; Parks had a family history of sleepwalking and documented sleep disorders of his own. Moreover, Parks had recently lost his job because he had stolen $30,000 from his employer – a crime for which he was prosecuted. Parks said he needed the money because of losses incurred while betting on horses.

Aggregate statistics on sleepwalkers, as well as expert testimony, would suggest that Park's dismissal would not be a threat to the safety or welfare of the community (h); at the same time, however, it seems that the expert testimony was based on the presumption that Parks would be taking medication and following a more stress-free life. The public may not feel confident in the criminal justice system (g) knowing that Parks was free and unsupervised. According to one of the concurring and dissenting justices in the case, the trial court should make an order to keep the peace by imposing on Parks certain conditions (*e.g.* specific treatment) consistent with the trial court's preventive powers. At the same time, if Parks was truly sleepwalking and unconscious, there is (c) no evidence of guilt because he has no *mens rea* and (f) there would be no purpose and effect of imposing a sentence on him. Presumably, deterrence would be either limited or ineffective, and retribution unjust under the circumstances.

This kind of balancing test suggests that a complete acquittal for Parks would not be warranted. Park's history of sleep and financial disorders is a double-edged sword; the evidence appears exculpatory for this particular offence but inculpatory considering the potential for future dangerousness. Moreover, under this essay's three-part requirement, Park's behaviour could be considered semi-voluntary if unconsciousness were defined more narrowly and the legitimacy of Park's alleged cordial relations with his in-laws scrutinised more carefully. On a conscious level it seemed that Parks was appreciative of the support and affection his in-laws showed him; however, there may have been some latent hostility toward them as well because they had become involved in helping him sort out his financial affairs. His culpability would depend on how aware he was of this hostility and the possible consequences of it (violence toward others).

If Park's behaviour were classified as semi-voluntary, the court would consider the dangerousness and complexity of Park's acts, as well as probe more deeply the presumption that no motive for his acts existed. While a court could

decide that Park's case should be dismissed under an interest of justice statute, there would be no determination on its merits. As a semi-voluntary defendant, such a dismissal would constitute his one bite of the apple.

If Parks ceased his treatment regimen and/or committed another crime (depending on whatever agreement was made as a condition for his dismissal) the court could grant the prosecution's application to resubmit Park's original indictment to a grand jury. This procedure contrasts sharply with the complete acquittal Parks would normally receive if he were found to have acted unconsciously (the actual outcome of *Parks*), or, at the other extreme, his potential candidacy for life imprisonment. In the United States, Parks would be eligible for the death penalty if he were found to have acted consciously and in a premeditated manner.

CONCLUSION

There are all sorts of line-drawing dilemmas throughout the criminal law. However, my research indicates that the problems with the voluntary act requirement are particularly acute:

(1) The requirement is the initial filter (at least conceptually) for all individuals potentially eligible for the criminal justice system. It therefore assesses actors with the widest possible range of mental states, behaviours and potential defences, because the system has yet to determine if they should proceed or be acquitted entirely. A forced "voluntary/involuntary" dichotomy amidst such heterogeneity can produce particularly artificial choices with potentially extreme variations in sanctions for similar types of behaviours depending on how they are categorised (*e.g.* involuntary, insane, voluntary and dangerous).

(2) Other criminal law doctrines (such as culpability) have a relatively broader line-drawing selection (for example, the four mental states under the Model Penal Code) within a more homogenous group of individuals (persons who have already been determined to commit only voluntary acts). Therefore, the line-drawing choices and their consequences are far less extreme than those faced by voluntariness determinations.

(3) Voluntariness determinations rely relatively more on factual medical/psychological information than do other dichotomous conceptions (such as reasonableness versus unreasonableness), which depend on jurors' views of appropriate social and moral norms of behaviour. The criminal justice system presumes that jurors know what kind of behaviour is unreasonable based on their own kinds of life experiences. Insanity determinations also have a strong normative component, even though expert testimony and legal standards provide guidance. Yet, involuntariness doctrines or jury instructions commonly offer specific examples of what that term means (for example, unconsciousness due to sleepwalking) because jurors typically are not going to know otherwise (insanity provisions do not contain such specific examples). In this sense, the science of involuntariness (and unconsciousness) is particularly critical.

My research concludes that the criminal law, as it currently exists, is sufficiently robust to incorporate new research on consciousness without being dismantled philosophically. Consciousness research does not threaten the criminal law's free will foundation any more than traditionally accepted science and doctrines. Rather, the research enlightens our normatively held beliefs and values. Potential claims to the contrary predict, prematurely, a type of deterministic society and individual that may exist only in novels. Time will tell, but that time has not yet arrived.

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Note: This essay summarizes a larger, forthcoming, article entitled 'Crime and Consciousness: Science and Involuntary Acts'. For reprints of this article, please contact Deborah Denno, Fordham University School of Law, 140 West 62nd Street, New York, New York 10023, USA.

Powers and process in revenue law

C Stefanou and H Xanthaki, *A Legal and Political Interpretation of Article 215(2) [new Article 288(2)] of the Treaty of Rome: The individual strikes back*, Ashgate Dartmouth 2000, ix + 236 pp, £ 39.95.

This monograph is an interesting piece of the puzzle depicting the relationship between the individual and the state (national and European). The authors have drawn relevance from different disciplines (law, political science, international relations) and constructed some basic assumptions to support their thesis. Stefanou and Xanthaki's pivotal point is a detailed analysis and a splendid case-law codification of the non-contractual liability regime *ante* and *post Francovich*, which builds their argument that Article 215(2) EC could be utilised as the procedural basis for joint liability of EU institutions and member states (and their authorities) for failure to implement Community law.