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The parasomnia defence: expert evidence in criminal trials

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The Parasomnia Defence: Expert Evidence in Criminal Trials

There are increasing numbers of defendants seeking to rely on the occurrence of sleepwalking or some other parasomnia in their defence to a criminal charge. Consequently this has become a matter for public concern, particularly in relation to sexual assaults committed after alcohol consumption. This study used ethnographic methods to understand how the expert witnesses assess the accused in these cases, and then present their evidence to the jury. It also looked at the two-way interactions between law and medical science, and the difficulties each field has with the other. Sleepwalking in particular is an under-researched condition, with the basic phenomenology not fully explored yet. The experts must often rely on professional experience and give opinions, rather than relying on solid scientific evidence. Juries rarely return the special verdict, and victims are left dissatisfied by the incredible nature of the defence. The law pertaining to automatism and insanity is complicated and out of step with medical science. The Law Commission has recently examined this tricky area of law and recommended reform. The study concludes that the standard of expert evidence is generally good, although further work is needed to examine the specifics of how opinion and test results are presented to the jury. A number of recommendations are made about the standard of admissibility, legal reform and future directions of research.

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Introduction

0.1 Background to the project

My background is that my first degree was medicine and I worked in the NHS for several years (not in the area of sleep medicine). I later changed career and took the Graduate Diploma in Law at Keele University. My interest in the sleepwalking defence came from a discussion with a medical colleague, during preparation for postgraduate medical exams, of an infamous sleepwalking homicide case. I discussed the case of Parks with two consultant neurologists during clinic. They both expressed doubt that the heinous acts Parks committed could have been genuinely committed during an episode of sleepwalking. One consultant was quite adamant that patients during an episode of sleepwalking or psychomotor epilepsy would not be violent, and that such defences were spurious.

They are not the only sceptics – in 1981 Sir Martin Roth stated that

> 'behaviour of the type exhibited in the legal cases of murder or other violent crimes during sleep-walking is, to my knowledge, unknown. The phenomena in question appear to be peculiar to courts of law.'[1]

A similar opinion appeared in the tabloid press from a prominent psychiatrist, Dr Cosmo Hallstrom following high profile cases (see below). Sometime later I studied for the graduate diploma in law and found the legal doctrine of insane and non-insane automatism intriguing because of the almost complete divorce of the legal definitions

[1] ROTH, M. (1981) Modern psychiatry and neurology and the problem of responsibility. In HUCKER, S.J., WEBSTER, C.D. and BEN-ARON, M.H. (eds.). *Mental disorder and criminal responsibility*. Toronto: Butterworths.

and doctrines from the medical understanding of disease processes. In fact, nearly every doctor I interviewed considered the internal/external divide doctrine nonsensical. This prompted my curiosity about how expert evidence on parasomnias is: 1) provided; 2) treated by the courts; and 3) whether the criminal justice system affects the way that expert evidence is provided. My main question was whether the sleepwalking defence was valid or a legal fiction akin to the semi-apocryphal "Twinkie defence".[2]

0.2 Exploration of the topic

On exploration of the literature I found that there was considerable disagreement between expert witnesses in some cases,[3] and I wanted to find out the reasons for this. There are no legal criteria for assessing sane automatism equivalent to the *McNaughtan Rules*,[4] apart from the unhelpful formulations e.g. "total loss of control", which is very difficult if not impossible to apply to sleepwalking. All the experts have the same guiding principles from the court, so I wanted to determine what other factors are operating that might explain a range of opinions from the same facts. One factor I examined was how evidence-based the expert evidence was, which threw up some interesting issues about over-reliance on so-called "objective" tests. Forensic sleep disorders is an area where expert opinion is still very important, just like the area of child

[2] POGASH, C. (2003) 2003-last update, *Myth of the 'Twinkie defense'* / The verdict in the Dan White case wasn't based on his ingestion of junk food. Available: http://www.sfgate.com/health/article/Myth-of-the-Twinkie-defense-The-verdict-in-2511152.php.

[3] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-36.; PRESSMAN, M.R., MAHOWALD, M.H., SCHENCK, C.H., CRAMER BORNEMANN, M.A., MONTPLAISIR, J.Y., ZADRA, A., PILON, M., GRUNSTEIN, R., BUCHANAN, P.R. and TACHIBANA, N. (2009) 'Sleep-related automatism and the law' (letter to the editor). *Medicine, Science and the Law*, 49(2), pp. 139-43.

[4] *R v M'Naghten* (1843) 10 Cl & F 200; spelling used in this thesis taken from Moran's monograph ((1981) *Knowing Right from Wrong: The Insanity Defence of Daniel McNaughtan*. New York: The Free Press.)

abuse where the role of opinion has been so controversial.[5]

Sleepwalking trials are increasingly reported in the media, and they are often sensational in nature. The reports often imply a tenuous basis for the defence. The media interest reflects a genuine increase in the use of the sleepwalking defence, which is due to a combination of high profile trials, increasing awareness among the legal profession, and greater availability of diagnostic testing and medical expertise. Consequently, there has been public debate about the proof "required" for an acquittal due to sleepwalking (although sane automatism is actually a "denial-of-proof" defence). In the case of *Jeal* (unreported), the accused was charged with rape and acquitted, and there was an article in the Daily Mail about the injustice to his victim and the defence of automatism in general.[6] I learned from his solicitor that in fact he was acquitted on grounds of mistake as to consent. The case prompted comments such as:

> 'A rape is a rape and should be treated as such.' (Harry Cohen, MP)
>
> 'I would like to see some sort of reverse burden of proof where the defendant has to come up with evidence to prove they have a history of sleepwalking, doctors' reports, and witnesses. Otherwise anyone can simply say 'I was asleep'.' (DC Richard Rock, Hampshire Police).[7]
>
> 'People do sleepwalk and they do strange things in their sleep, but it is usually is no more complex than grinding the teeth or smacking the lips—at most they may get up and make a cup of tea. I would think it was extremely difficult to perform such a

[5] ROBERTS, A. (2008) 'Drawing on expertise: legal decision-making and the reception of expert evidence'. *Criminal Law Review*, 6, pp. 443-62.
[6] KOSTER, O. (2008) 'How could the man who 'raped' me be cleared because he was sleepwalking'. *Daily Mail* (Nov 15th).
[7] JAMIESON, A. (2008) 'Victim speaks out after man cleared of rape while sleepwalking'. *Daily Mail* (Nov 15th).

> complex manoeuvre as having sexual intercourse while asleep—especially if the other person is unwilling' (Cosmo Hallstrom, Fellow of the Royal College of Psychiatrists (FRCP), from Harry Cohen's speech proposing a Bill to amend to the Sexual Offences Act 2003[8] ; Harry Cohen MP was also the primary sponsor for Early Day Motion 463 'Automatism as a defence in law' on 14th Dec 2009[9]. NB: Dr Hallstrom is neither a sleep medicine specialist nor a forensic psychiatrist).

Reports like this lead to public disquiet and frank disbelief over sleepwalking acquittals. This particular article even led to an attempt to change the law. This thesis considers the way expert witnesses present their evidence about parasomnias in criminal trials to assess whether this is justified. Whilst forensic psychiatrists have the *MacNaughtan Rules* to guide, or possibly restrict, their evidence, there are no equivalent guidelines for medical evidence supporting a defence of sane automatism. Automatism is defined as involuntary action, but 'voluntary action', 'will', and 'act' are defined in terms of each other in the law. The case law is confusing and inconsistent and it is a welcome development that the Law Commission are preparing a report on insanity and automatism as part of the tenth programme, project seven. They have consulted with the Sleep Medicine section of the Royal Society of Medicine among other stakeholders. Their discussion document sets out a number of reforms, which I discuss in Chapter 9. It is apparent from the literature that although in most cases there is common ground between expert witnesses, there is on occasion profound disagreement about whether a particular episode represents a parasomnia or not. There are particular issues that are controversial, such as the role of alcohol in triggering sleepwalking.

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[8] See Appendices M & N
[9] See Appendix O

0.3 My approach

My research used semi-structured interviews to elicit how forensic sleep experts conform their opinions on alleged parasomnia episodes to the demands of the criminal justice system. I also looked at whether the training and specialty of forensic sleep experts affect their opinions. Is the expert evidence given affected by preconceptions and/or ideologies? Do the expert witnesses have any concerns over how their evidence is treated by the criminal justice system? Is the expert evidence given robust and reliable? The data from the interviews were analyzed to see if the views expressed had any implications for the law on automatism or the way expert evidence is received.

As well as the empirical work, I have done library-based work on the normative side of the basis for the parasomnia defence and how to reconcile the medical and legal aspects of automatism. The basis for legal automatism has been analyzed and criticized by several commentators, including RD Mackay, RF Schopp and B McSherry. Additionally the Law Commission has recently examined the law on insanity and automatism. I examined their criticisms of the current law and proposals for reform in light of my data.

I have disseminated some of my findings at the Socio-Legal Studies Association Conference at De Montfort University, Apr 3rd 2012; Faculty of Forensic and Legal Medicine Conference in Edinburgh, May 12th 2012; Centre of Social Ethics and Policy Senior Seminar Series at the University of Manchester, Oct 17th 2012; the International Academy of Law and Mental Health Conference in Amsterdam, July 2013; and the British Sleep Society Conference in Edinburgh, October 2013; “Forensic sleep medicine and expert evidence” at the London Sleep Medicine Course on Mar 19th 2014; seminar

on media representations of sexsomnia with Gethin Rees at the Institute of Criminal Justice Research, University of Southampton on 26th Mar 2014; “Non-insane automatisms - A perspective from sleep” at the Mason Institute, University of Edinburgh, on April 9th 2014; presentations on “His bizarre defence won the backing of an expert’: Ambiguity in the media reporting of sexsomnia defences” in collaboration with Gethin Rees, and “Capacity versus character: How should we approach excuses for personality-altering medical conditions?” at the SLSA Conference, Aberdeen on April 10th 2014; “Sleepwalking and Gender-based Violence” at the North West Gender Conference, Lancaster University on Apr 22nd 2014; and “Assessment of forensic parasomnias and the rules of evidence” at the FORREST Conference on Law and Science, Northumbria University on July 3rd 2014. I also organized a medico-legal seminar on automatism at Keele University on Jun 14th 2013, to promote dialogue between doctors and lawyers and provide input for the Criminal Law Commissioner.

In addition to the examination of the sleepwalking defence specifically I have also examined the wider issues surrounding the assessment of criminal responsibility and the law on automatism generally. As Buchanan put it

> ‘interpretations of what constitutes automatism, the legal concepts of actus reus and mens rea, approaches defining consciousness, and neuroethological ideas like fixed action patterns and central pattern generators are established and evolving concepts’.[10]

It is my hope that this thesis will contribute to the process of evolution. Finally, Prof

[10] BUCHANAN, P.R. (2011) Sleep Sex. *Sleep Medicine Clinics*, 6(4), pp. 417-428.

Coles's[11] comment on an article I sent was

> 'It is a comprehensive overview of our current knowledge -- or lack, thereof! There is clearly a knowledge vacuum here and, as a result, an urge to fill it.'[12]

It was humbling and a welcome reminder of both the perils of failing to drive knowledge in this field forward, and the greater perils of filling the gaps with flawed science.

Acknowledgments

I owe a big debt of gratitude to Professors Martin Wasik and Clive Hawkins, my joint supervisors, for their mentoring and supervision through the PhD process. I must also thank Dr Martin Allen (who has been almost a third voluntary supervisor) and his colleagues, Ann Cooper and Nathalie Bryan, for teaching me about sleep medicine and sleep studies, and listening to my ideas about my research. The sleep expert community have been amazingly helpful - I have thoroughly enjoyed talking to so many enthusiastic and knowledgeable people, who have taught me so much about their special interest and given so generously of their time. This research would not have been possible without the help of those British and North American sleep experts. They were very willing to share and keen to learn about my results. In particular I must thank Professor Rosalind Cartwright and Drs Mark Pressman, Jonathan Bird, Irshaad Ebrahim, and Chris Idzikowski. I have had productive discussions and collaborations with Drs Renata Riha, Ian Morrison, Gethin Rees and Cedric Gilson, and some of this has gone into my thesis. The latter two also provided some useful feedback on some

[11] Author of 'Scientific Support for the Legal Concept of Automatism. Psychiatry, Psychology and Law', who kindly gave me permission to reproduce the table on p. 200.
[12] Personal communication

parts of my thesis. I must also thank the members of the academic community with whom I've had illuminating and informative conversations - Prof Antony Duff, Prof E. Michael Coles, Dr Giuseppina D'Oro, Dr Simon Barnes, Dr (now Prof) Gerben Meynon, Dr Filippo Santoni di Sio, and the attendees of the Keele medico-legal seminar to name but a few. Last but not least my wife has supported me through my magnum opus amid many hardships.

Medical and legal technical terms are defined in the glossary. Quotes that are not cited are from interview data.

Chapter 1: An Introduction to Parasomnias

1.1 Definition

Parasomnias have been defined as

> 'unpleasant or undesirable behavioral or experiential phenomena that occur predominantly or exclusively during the sleep period'.[1]

The AASM definition is

> 'a group of sleep disorders broadly defined as undesirable physical or experiential events that occur within entry into sleep, within sleep, or during arousals from sleep'.[2]

Abnormal states related to sleep were recognized in Homer's time,[3] with an incident in *The Odyssey* (volume 10) where Elpenor appears to have a confusional arousal when woken suddenly from sleep. He then falls from the roof, breaking his neck. Parasomnias can be primary sleep disorders, or secondary to another disorder. Primary parasomnias are classified according to the sleep state they occur in - rapid eye movement (REM) sleep or non-rapid eye movement sleep (NREM) sleep - although there are a number of miscellaneous disorders which do not correspond to a particular sleep state. It is important then at this stage to explain the rudiments of sleep physiology and staging.

1.2 Sleep Physiology and Staging

As Mahowald *et al* state,

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[1] MAHOWALD, M.W. and CRAMER BORNEMANN, M.A., (2010). Chapter 94 NREM Sleep-Arousal Parasomnias. In KRYGER, M., ROTH, T., and DEMENT, W. (eds.). *Principles and Practice of Sleep Medicine*. 5th Ed. Philadelphia: Saunders, pp 1075-1082, 1075

[2] AMERICAN ACADEMY OF SLEEP MEDICINE (2005) *International classification of sleep disorders: diagnostic and coding manual*. 2nd Ed. Westchester, IL: American Academy of Sleep Medicine.

[3] Generally considered to have lived in the 7th or 8th century BC

> 'the concept that sleep is simply the passive absence of wakefulness is no longer tenable'.[4]

It is not the case that the brain lies dormant during sleep[5] , although some parts are inactive. Indeed some parts of the brain are more active than during wakefulness. The fact that loud noises, touch and bright lights can awaken us indicates there is some rudimentary awareness of the environment during sleep. Additionally the sleeping brain will distinguish between sounds that might indicate some danger (or the need for a baby to be fed) and the usual sounds of the night, and even between one's own name spoken and another's.[6] The systematic study of the sleeping brain was made possible with the development of electroencephalography (EEG) in 1929. By 1937, Loomis, Harvey and Hobart had classified sleep in five stages, A to E[7]. There is a time line of relevant events in sleep research at Appendix F.

The current understanding is that the brain is normally in one of three states – wakefulness, NREM sleep or REM sleep. Parasomnia arises when the brain is simultaneously in, midway or oscillating rapidly between, two of these states (see Fig. 1 below).[8] NREM sleep is divided into three stages in the American Academy of Sleep Medicine (AASM) system in current use (stage N3 combines stages 3 and 4 of the obsolete Rechtschaffen and Kales [R&K] scoring system). The depth of sleep increases

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[4] MAHOWALD, M.W., SCHENCK, C.H., ROSEN, G.M. and HURWITZ, T.D. (1992) The Role of Sleep Disorder Center in Evaluating Sleep Violence. *Archives of Neurology*, 49(June), pp. 604-7.

[5] Horne provides an illustration of the active nature of sleep in *Sleepfaring* – animals have to come out of hibernation periodically to sleep (HORNE, J. (2007) *Sleepfaring: A journey through the science of sleep*. Oxford: OUP, p.9.).

[6] Perrin, Garcia-Larrea et al. (1999).

[7] A – interrupted alpha; B – low voltage; C – spindles; D – spindles plus random; E – random (LOOMIS, A.L., HARVEY, E.N. and HOBART, G.A. (1937) Cerebral states during sleep, as studied by human brain potentials. *Journal of Experimental Psychology*, 21(2), pp. 127-44).

[8] MAHOWALD, M.W., CRAMER BORNEMANN, M.A. and SCHENCK, C.H. (2009) Behavior and Parasomnias (RSBD). In STICKGOLD, R. and WALKER, M. (eds.) *The Neuroscience of Sleep*. Academic Press, pp. 18-21.

from stage N1 to stage N3, but there is not necessarily a simple progression through the stages - the subject can and will revert to a lighter stage (for sample epochs and hypnogram see Appendix K). Anything that deepens and/or fragments sleep will increase the chance of a NREM parasomnia. The proportion of deep or slow-wave sleep (SWS or stage N3) varies according to a number of factors such as (i) sleep deprivation; (ii) consumption of central nervous system (CNS) depressants e.g. sedatives, alcohol;(iii) fever; and (iv) hypersomnia e.g. due to Kleine-Levin Syndrome.[9]

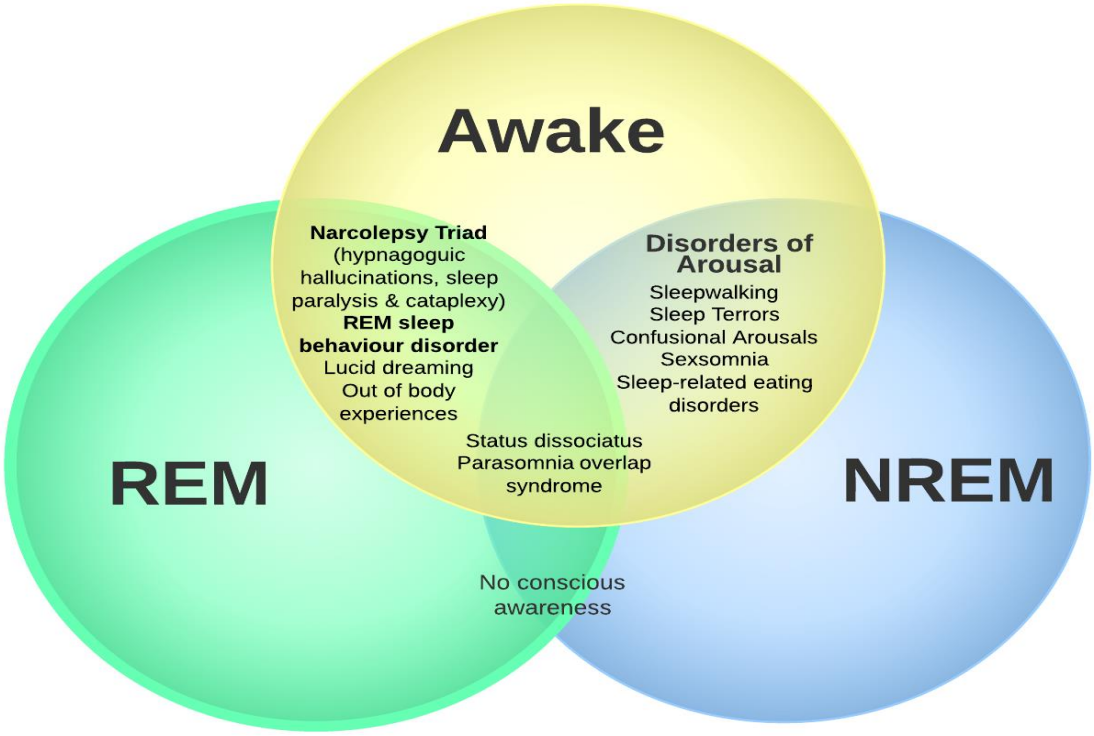

Figure 1 Intersection of NREM and REM sleep and wakefulness

Factors that affect sleep fragmentation include (i) stress; (ii) sleep-disordered breathing;

[9] CARSKADON, M.A. and DEMENT, W.C. (2011) Monitoring and staging human sleep. In KRYGER, M.H., ROTH, T., and DEMENT, W.C. (eds.). *Principles and practice of sleep medicine*. 5th Ed. St Louis: Elsevier Saunders, pp. 16-26; MAHOWALD and CRAMER BORNEMANN (2010), see footnote 1

(iii) alcohol consumption (although it is a sedative, there is a rebound effect later in the night); (iv) environmental factors such as noise, room temperature, and disturbance by bed partner, children or pets; and (v) endogenous stimuli such as pain, itching or periodic limb movements (PLMS).[10] Many chronic medical disorders are associated with sleep fragmentation – the arthritides, fibromyalgia, Parkinson's disease, Alzheimer's disease, gastro-oesophageal reflux, and asthma among others.[11]

After about 90 minutes, REM sleep will be entered. This cycle repeats itself through the night, approximately every 90 minutes with the amount of REM sleep with each cycle increasing. Thus the proportion of NREM and REM sleep varies during the night, with NREM sleep predominating in the first third of the night. This means that NREM parasomnias tend to occur in that first third. REM parasomnias rarely occur within an hour of sleep onset, unless sleep deprivation or narcolepsy leads to early onset of REM sleep. The sleeper is not paralyzed during NREM sleep. During REM sleep there is paralysis, except for the eye muscles (and the muscles of respiration). This loss of muscle tone (atonia) is picked up by the chin electromyogram (EMG) leads, which detect electrical activity in the mentalis and submentalis muscles. This stage of sleep is where we have detailed dreams, and without this paralysis we might act out our dreams with potentially disastrous results (as occurs in REM sleep behaviour disorder). This stage of sleep is lighter (dubbed "paradoxical sleep"), and the person in a REM parasomnia is much more easily woken than from a NREM parasomnia. They will remember their dreams clearly and become more quickly orientated and alert.

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[10] PRESSMAN, M.R. (2007) Factors that predispose, prime and precipitate NREM parasomnias in adults: Clinical and forensic implications. *Sleep Medicine Reviews*, 11, pp. 5-30.

[11] GUILLEMINAULT, C., KIRISOGLU, C., BAO, G., ARIAS, V., CHAN, A. and KASEY, K. (2005) Adult chronic sleepwalking and its treatment based on polysomnography. *Brain*, 128, pp. 1062-69.

1.3 Sleep Pathophysiology

Any condition where the brain is between the states of NREM sleep, REM sleep, and wakefulness may manifest bizarre behaviour. States between NREM sleep and wakefulness are disorders of arousals. Disorders of arousal of *forensic* importance are:

- Confusional arousals (also known as sleep drunkenness, sleep inertia or somnolentia, *l'ivresse du sommeil* [French] and *Schlaftrunkenheit* [German])
- Sleep terrors (also known as night terrors, incubus attacks, *parvus nocturnes* and NREM nightmares)
- Sleepwalking (also known as somnambulism and noctambulism)
- Sexsomnia (this is not considered a distinct subtype by all - see below)
- Nocturnal paroxysmal dystonia

The REM parasomnias are:

- Rapid eye movement sleep behaviour disorder (RBD)
- Parasomnia overlap syndrome

There are other relevant causes of unwanted or unusual behaviours during sleep:

- Nocturnal epilepsy e.g. nocturnal frontal lobe epilepsy (NFLE), which can be inherited as an autosomal dominant condition
- Obstructive sleep apnoea (as a precipitant of a parasomnia e.g. confusional arousal)
- Post-traumatic stress disorder
- Narcolepsy

- Sleep-related dissociative states
- Status dissociatus (a rare parasomnia associated with a breakdown of the boundaries between the three states)

The diagnosis of primary parasomnia must involve the exclusion in some instances of other causes, particularly nocturnal epilepsy and sleep-disordered breathing (SDB).[12] The parasomnias that are most important forensically are sleepwalking, sleep terrors and sexsomnia. This is because these are the parasomnias where the most complex behaviour is exhibited, and there will be difficult questions over where the behaviour was voluntary or not. Confusional arousals can occur in anyone, but sleepwalking is the commonest pathological[13] parasomnia.

1.4 NREM Parasomnias

NREM parasomnias tend to occur during the first third of the night, when there is the greatest amount of slow wave sleep. A confusional arousal occurs during or just after awakening from NREM sleep. It can occur in anyone, and can result in a violent reaction to forcible rousing of the subject. This phenomenon is recognized by soldiers:

> ‘A common belief among young soldiers living in the barracks, propagated by the “barracks lawyer”, is that a soldier could not be court martialled for striking someone attempting to wake him if the conduct occurs during the first few seconds of waking.

[12] See glossary for definition of terms
[13] That is, it usually requires a predisposition.

While simplistic, this belief contains a kernel of truth.'[14]

Confusional arousals typically last 30 seconds to a minute, although some last up to five minutes. They are more likely to occur from deep sleep and are much more common in children. This is the main parasomnia that is recognized as a non-insane automatism, as there needs to be no predisposition and it always requires an external trigger. Sleep-disordered breathing may result in frequent confusional arousals, and can also trigger sleepwalking. Cartwright believes that the shooting by Ricksgers was due to a confusional arousal induced by obstructive sleep apnoea.[15] He shot his wife with a revolver he kept under his pillow (see section **3.5.3**).

Sleep terrors are characterized by the sufferer sitting up in bed, and emitting a blood-curdling scream. They usually occur during the first third of the night (REM nightmares tend to occur in the second half of the night). Episodes can also occur during daytime naps, so 'sleep terrors' is the preferred term to 'night terrors'. They occur most commonly between the ages of five and seven, affecting up to six per cent of children. It affects less than one per cent of adults, and is much more likely to be associated with psychopathology in them. A sleep terror can then result in a confusional arousal. Sleep terrors can result in directed and purposeful violence relating to the content of the night terror. The cases of *Frasier*[16] and *Thomas*[17] were probably sleep terror-related.

1.4.1 Sleepwalking is the commonest parasomnic condition, estimated at between one and four per cent of the adult population. The prevalence in childhood is up to 10 to

[14] DAVIDSON, M.J. & WALTERS, S. (1993) "United States v. Berri: The Automatism Defense Rears Its Ugly Little Head." *The Army Lawyer*, (October), pp. 17-26.
[15] NOFZINGER, E.A. and WETTSTEIN, R.M. (1995) Homicidal behavior and sleep apnea: a case report and medicolegal discussion. *Sleep*, 18(9), pp. 765-82.
[16] YELLOWLEES, D. (1878) 'Homicide by a Somnambulist'. *Journal of Mental Science*, 24, pp. 415-58.
[17] DE BRUXELLES, S. (2009) Man with rare sleep illness who killed his wife of 40 years during nightmare is declared innocent. *Times* (Nov 21st).

30%.[18] Ohayon's study of the UK adult population found a prevalence of 2.0 per cent.[19] It follows that most childhood sleepwalkers do not become adult sleepwalkers. Conversely, it is uncommon for someone to be an adult sleepwalker if they were not a sleepwalker as a child or adolescent, although one study puts the figure as high as 16.9 per cent. Brain injury (traumatic and non-traumatic) can cause adult onset sleepwalking.[20] Drugs may also induce sleepwalking: propanolol, lithium, valproic acid, paroxetine, amitriptyline, venlafaxine, bupropion, zolpidem and zopiclone[21], sodium gamma oxybutyrate, and quetiapine and other atypical antipsychotics[22]. However in most cases these are simply reports of possible adverse effects, with no confirmation of their parasomnic nature. Given that many of these reactions have been in people with a psychiatric disorder, alternative explanations such as sleep-related dissociative episodes are possible or even probable. In the case of propanolol, nightmares are a known side-effect and might be confused for RBD. Several of the reports cite sleep eating, which is not always parasomnic and is correlated with psychological and psychiatric disorders to a much greater extent than parasomnias.[23] In particular, there have been widespread media reports in the USA of acts committed under the influence of Ambien (zolpidem, also marketed as Stilnoct). The so-called "Ambien defence" has received great scrutiny, especially given the prominent warnings in the patient

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[18] PARTINEN, M. (1994). Epidemiology of sleep disorders. In KRYGER, M.H., ROTH, T. and DEMENT, W.C. (eds.). *Principles and practice in sleep medicine*. 2nd Ed. Philadelphia: WB Saunders, pp. 437-52.
[19] OHAYON, M.M., GUILLEMINAULT, C. and PRIEST, R.G. (1999) Night terrors, sleepwalking, and confusional arousals in the general population: their frequency and relationship to other sleep and mental disorders. *Journal of Clinical Psychiatry*, 60(4), pp. 268-76.
[20] LOPEZ, R., JAUSSENT, I., SCHOLZ, S., BAYARD, S., MONTPLAISIR, J. and DAUVILLIERS, Y. (2013) Functional Impairment in Adult Sleepwalkers: A Case-Control Study. *Sleep*, 36(3), pp. 345-51.
[21] Lopez (2013), see footnote 20.
[22] DAGAN, Y. and KATZ, G., (2013). A Case of Atypical Antipsychotic-induced Somnambulism: A Class Effect. *Journal of Clinical Psychiatry,* **74**(4), pp. 370
[23] HOWELL, M.J., SCHENCK, C.H. and CROW, S.J. (2009) A review of nighttime eating disorders. *Sleep Medicine Clinics*, 13(1), pp. 23-34.

information leaflets (c.f. *Hardie*). 'Z-drugs' (zolpidem, zopiclone) induce amnesia and confused and/or disinhibited behaviour, and these impairments will not *automatically* excuse the accused from any illegal acts (see *Kingston*, **6.2.4**). Such episodes must be carefully distinguished from genuine parasomnia[24] (see comments about the medico-legal significance of amnesia at **6.2.1**). The "Ambien defence" is probably the inspiration for the recent cinematic release 'Side Effects' (see **2.1.1**). Alcohol and other agents acting on gamma-aminobutyric acid (GABA) receptors (including benzodiazepines and Z-drugs) affect memory more than motor skills, and therefore seem a more plausible explanation than parasomnia for some of the more complex behaviours (see below). Those with behaviour triggered by Z-drugs will usually lack a family history of parasomnias.

The typical sleepwalker just sits up or walks around looking for something, and goes back to bed without incident. More complex behaviour has been described, including driving, cooking and eating food, texting and emailing.[25] However, the texts and emails do not have the same content as texts and emails sent by an awake person. For example, one patient sent an email saying

> 'I don't get it. please esplain LUCY!!
>
> cOME TOMORROW AND SORT THIS HELLHOLE Out!!!!!
>
> Dinner & drinks, 4;00pm shars house. Wine and caviar to bring only. everything else

[24] VINCENT, N. (2013) April 18th 2013-last update, The Stilnox defence: automatism or amnesia? Available: http://nicolevincent.net/?p=385.; TEACHER, B.E. (2010) Sleepwalking Used as a Defense in Criminal Cases and the Evolution of the Ambien Defense. *Duquesne Criminal Law Journal*, 1(Summer), pp. 127-38.

[25] MORRISON, I., RUMBOLD, J.M.M. and RIHA, R.L. (2013) Medicolegal aspects of complex behaviours arising from the sleep period: A review and guide for the practising sleep physician. *Sleep Medicine Reviews*, 18(3), pp. 249-60.

a guess? MANANA XXOO D'[26]

There is some debate about sleep-related driving and sleep-related eating; sleep driving in particular is associated with Z-drugs rather than sleepwalking,[27] although Mahowald and Schenck's long distance driver was not taking any medication.[28] Sleep-related eating disorder (SRED) and nocturnal eating syndrome (NES) are seen as distinct entities; SRED is considered parasomnic and NES is not.[29]

The triggering factors recorded by sleepwalking patients in one case-control study were:

Trigger	**% reported**
Stressful events	52.04% (n=51)
Strong positive emotions	41.84% (n=41)
Sleep deprivation	26.53% (n=26)
Alcohol	12.24% (n=12)
Intense physical activity	5.10% (n=5)[30]

1.4.2 Sexsomnia is considered either as a distinct parasomnia, a variant of sleepwalking, or behaviour caused either by sleepwalking or confusional arousal. Other terms that are used include 'sexual behaviour during sleep', 'abnormal sexual behaviour in/during sleep', 'atypical sexual behaviour during sleep' (ASBS), 'somnambulistic sexual behaviour', 'sleep-related abnormal sexual behaviour' or 'sleepsex'. These may

[26] SIDDIQUI, F., OSUNA, E. and CHOKROVERTY, S. (2009) Writing emails as part of sleepwalking after increase in Zolpidem. *Sleep medicine*, 10, pp. 262-64.
[27] PRESSMAN, M.R. (2011) Sleep and Drug-Impaired Driving Overlap Syndrome. *Sleep Medicine Clinics*, 6(4), pp. 441-45; PRESSMAN, M.R. (2011) Sleep Driving and Z-Drugs: sleepwalking variant or misuse of drugs? *Sleep Medicine Reviews*, 15, pp. 285-92.
[28] SCHENCK, C.H. & MAHOWALD, M.W. (1995) A Polysomnographically Documented Case of Adult Somnambulism With Long-Distance Automobile Driving and Frequent Nocturnal Violence: Parasomnia With Continuing Danger as a Noninsane Automatism? *Sleep*, 18(9), p.765.
[29] VETRUGNO, R., MANCONI, M., FERINI-STRAMBI, L., PROVINI, F., PLAZZI, G. and MONTAGNA, P. (2006) Nocturnal eating: sleep-related eating disorder or night eating syndrome? A videopolysomnographic study. *Sleep*, 29(7), p. 949.
[30] Lopez (2013), see footnote 20.

be used as synonyms for sexsomnia or simply a description of the behaviour regardless of cause (see below).

Sleep sex has a number of causes:

- Non-REM parasomnia, sleepwalking and confusional arousal (although
- Sleep disordered breathing
- RBD
- Sleep epilepsy
- Sleep-related dissociative disorders
- Medication
- Malingering[31]

Clinical estimates are often low, because patients are reticent about volunteering such symptoms and physicians may not ask directly about them. Guilleminault *et al* found that four per cent of sleepwalkers exhibit ASBS,[32] but a more recent study found eight per cent of those referred with sleep disorders reported ASBS (how many of these were sleepwalkers is not known).[33] Unpublished data suggest 1 in 10 sleepwalkers exhibit ASBS.[34] A Norwegian telephone survey found that 2.7% of the adult general population reported sexual acts during sleep at least once in the last three months.[35] There is a figure of one per cent of the US population cited in the literature,[36] but its origin seems

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[31] BUCHANAN, P.R. (2011) Sleep Sex. *Sleep Medicine Clinics*, 6(4), p. 417

[32] GUILLEMINAULT, C., MOSCOVITCH, A., YUEN, K. and POYARES, D., 2002. 'Atypical Sexual Behavior During Sleep'. *Psychosomatic Medicine*, 64, p. 328-336.

[33] CHUNG, S.A., YEGNESWARAN, B., NATARAJAN, A., TRAJANOVIC, N. and SHAPIRO, C.M. (2010) Frequency of Sexsomnia in sleep clinic patients. *Sleep*, 33(Abstract Supplement), pp. A226.

[34] Personal communication from Ian Morrison and Renata Riha.

[35] BJORVATN, B., GRØNLI, J. and PALLESEN, S. (2010) Prevalence of different parasomnias in the general population. *Sleep medicine*, 11(10), pp. 1031-1034.

[36] XU, M. (2009) Sexsomnia: A Valid Defence to Sexual Assault? *J. Gender Race & Justice*, 12, pp. 687-712.

to be an estimate given in an interview with “David Saul Rosenberg” (probably a misnomer of David Saul Rosenfeld).[37] Nielsen’s study found that 16.8% of undergraduates reported they often had dreams associated with sexual arousal; only 21.7% said that they never had such dreams.[38] His work suggests that state dissociation is much more common than previously appreciated. This may have important implications for the defendant accused of sexual offences committed during sleep - however the participants were asked about sexual arousal, rather than any interaction with bed partners. Further research is required to see what forms of behaviour are associated with these dreams and whether they cause interpersonal difficulties and the potential for criminal charges. It has been suggested that the typical sexsomniac will desist when the partner refuses their advances, but not in the forensic cases.[39]

Sleep sex can be categorized according to the related harm:

1. Annoying to bed partner but not harmful. For example sexual moaning and sexually related sounds.
2. Annoying to bed partner and at times harmful to index case. Examples of this category include violent masturbation with bruising and soreness of the genital area.
3. Harmful to bed partner or others, where sex was forcibly imposed on the bed

[37] PASICK, A. (2000) 13 Jan 2000-last update, *An Unconscious Love Life - 'Sleepsexers' Remember Nothing in the Morning*. Available: http://www.rense.com/ufo6/sleepsex.htm.
[38] NIELSEN, T., SVOB, C. and KUIKEN, D.(2009) Dream-enacting behaviors in a normal population. *Sleep*, 32(12), pp. 1629-1636.
[39] Personal communication from Ian Morrison.

partners.[40]

This classification may not be particularly sensitive to sexual behaviour during sleep with potential medico-legal consequences.

1.5 REM Parasomnia

Rapid eye movement sleep behaviour disorder (RBD) was first described as a distinct clinical entity in 1986 by Schenck *et al*.[41] It consists of REM sleep without atonia (RSWA) with abnormal dreams which are then acted out. This discovery had been predicted by a condition induced in cats by surgical lesions of the brainstem near to the locus coeruleus. It usually occurs in males over 50 years of age, and often precedes the diagnosis of a neurodegenerative disorder (e.g. Parkinson's disease, dementia with Lewy bodies or multiple system atrophy) by several years. It can be induced by drugs such as propanolol, tricyclic antidepressants, selective serotonin re-uptake inhibitors, venlafaxine and caffeine. RBD can also be induced by stress, and there are reports of an association with post-traumatic stress disorder.[42] Also the discontinuation of REM suppressant agents such as alcohol, amphetamines, cocaine and imipramine can induce RBD,[43] possibly via rebound increase in REM sleep. Narcolepsy[44] is often

[40] Guilleminault (2002, see footnote 32).
[41] SCHENCK, C.H., BUNDLIE, S.R., ETTINGER, M.G. and MAHOWALD, M.W. (1986) Chronic behavioral disorders of human REM sleep: a new category of parasomnia. *Sleep* 9(2), pp. 293-308.
[42] HUSAIN, A.M., MILLER, P.P. and CARWILE, S.T. (2001) REM sleep behavior disorder: Potential relationship to post-traumatic stress disorder. *Journal of Clinical Neurophysiology*, 18, pp. 148-157.
[43] SCHENCK, C., HURWITZ, T. and MAHOWALD, M. (1993) 'REM sleep behavior disorder: an update on a series of 96 patients and a review of world literature'. *Journal of Sleep Research*, 2, pp. 223-31.
[44] A disorder marked by excessive daytime sleepiness, uncontrollable sleep attacks, and sudden attacks of loss of muscle tone (cataplexy)

associated with RBD, where the prerequisite RWSA is present in 50% according to one study.[45] It is also common in narcolepsy to go straight into REM sleep, which can also happen after extreme REM deprivation. One estimate of the incidence of RBD from Ohayon's study of sleep violence is 0.5%.[46]

Episodes of RBD involve complex and varied motor behaviour, often related to dream enactment. This feature is enough to diagnose "probable RBD", but video-PSG is required to make a definite diagnosis. Dream enactment occurs in normal individuals[47] and dream-like mentation can also occur with sleepwalking and sleep terrors[48] - see Savarin's account in Appendix P and discussion below for an example. Also OSAHS can resemble RBD - this may be because arousals from REM can result in acting out a dream during a confusional arousal. Another feature of RBD is that the dream content is altered, with much more confrontation, aggression and violence.[49] The victim typically dreams he is the victim of aggression. This has been disputed; however, the patients studied were on a treatment (clonazepam) which may alter dream content.[50] Schenck describes the typical sufferers of RBD as particularly "calm and pleasant" individuals,[51]

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[45] DAUVILLIERS, Y., ROMPRE, S., GAGNON, J., VENDETTE, M., PETIT, M. and MONTPLAISIR, J. (2007) REM Sleep Characteristics in Narcolepsy and REM Sleep Behavior Disorder. *Sleep*, 30(7), pp. 844-9.

[46] OHAYON, M., CAULET, M. and PRIEST, R. (1997) 'Violent Behavior During Sleep'. *Journal of Clinical Psychiatry*, 58, pp. 369-76.

[47] Nielsen (2009), see footnote 38.

[48] OUDIETTE, D., CONSTANTINESCU, I., LECLAIR-VISONNEAU, L., VIDAILHET, M. and SCHWARTZ, S.E.A.(2011) Evidence for the Re-Enactment of a Recently Learned Behavior during Sleepwalking. *PLoS ONE*, 6(3), pp. e18056.

[49] Schenck(1993), see footnote 43

[50] D'AGOSTINI, A., MANNI, I., LIMOSANI, I., TERZAGHI, M., CAVALLOTTI, S. and SCARONE, S. (2012) Challenging the myth of REM sleep behavior disorder: No evidence of heightened aggressiveness in dreams. *Sleep medicine*, 13(6), pp. 714 -19; UGUCCIONI, G., GOLMARD, J., DEFONTRÉAUX, A.N., LEU-SEMENESCU, S., BRION, A. and ARNULF, I. (2013) Fight or flight? Dream content during sleepwalking/sleep terrors vs rapid eye movement sleep behavior disorder. *Sleep Medicine Clinics*, 14, pp. 391-398.

[51] SCHENCK, C.H. (2005) *Paradox Lost: Midnight In The Battleground Of Sleep And Dreams*. Minneapolis: Extreme Nights LLC.

but a recent study showed no particular personality types were associated with idiopathic RBD.[52] It may be that the spouses or bed partners of people with long-standing RBD only stay with them if these violent sleep behaviours are out of character and their waking characteristics make up for the night-time problems. Alternatively it has been suggested this apparent calmness is in fact the apathy of the neurodegenerative disorders associated with RBD.[53] Usually the eyes are closed during an episode, and the patient rarely stands up or walks around – therefore the victim of any violence is almost always the bed partner. They are also much more easily awoken, which reduces the harm they inflict. Despite the high frequency of harmful behaviour, the average diagnostic delay in one study was 8.7 years.[54]

1.5.1 Schenck analyzed Savarin's account of a somnambulist monk[55] after Schulz & Curtin categorized it as an example of RBD,[56] and details the features that point to sleepwalking:

1) The monk was a known sleepwalker, who opened doors and had his eyes open
2) The monk was acting purposively based on his dream and knew where to go
3) The episode happened shortly after falling asleep, far more typical for a NREM parasomnia[57]

This demonstrates that even an expert can be misled by the history. Similarly, Brian Thomas's episode suggested RBD as a possibility (see **3.4.2**). In fact video-PSG and

[52] SASAI, T., INOUE, Y. and MATSUURA, M. (2012) Do patients with rapid eye movement sleep behavior disorder have a disease-specific personality? *Parkinsonism & related disorders*, 18(5), pp. 616-618.
[53] D'Agostinin (2012), see footnote 50.
[54] WHITE, C., HILL, E.A., MORRISON, I. and RIHA, R.L. (2012) Diagnostic Delay in REM Sleep Behavior Disorder (RBD). *Journal of Clinical Sleep Medicine*, 8(2), pp. 133-36.
[55] In "Physiologie du Gout" - see Appendix P
[56] SCHULZ, P. and CURTIN, F. (2004) An early description of REM sleep behaviour disorder. *Sleep*, 27, pp. 116-17.
[57] Schenck (2005), see footnote 51.

his medical history suggest he suffered a sleep terror (or alternatively parasomnia overlap syndrome). Pressman, Mahowald and Schenck published a useful article on the issue of distinguishing sleep terrors from RBD.[58]

1.5.2 Parasomnia overlap syndrome is where the person has both NREM and REM parasomnias. They have RBD plus either sleepwalking or sleep terrors typically. Status dissociatus is a term coined by Mahowald and Schenck for an extreme and persistent form of state dissociation characterized by a "complete breakdown of state-determining boundaries", with simultaneous features of wakefulness, NREM sleep and REM sleep.[59]

1.6 Genetics of Parasomnias

All the parasomnias are known to be familial to a greater or lesser degree, with the exception of RBD (although several of the conditions causing RBD can be inherited). Pedigrees[60] of severe parasomniacs often show a high proportion of different parasomnias among relatives – the greater the number of close relatives with parasomnia, the worse the parasomnia is likely to be. The sleep pedigrees of some of the most dramatic examples of sleepwalkers have been reviewed in the literature.

1.6.1 This is the sleep disorder pedigree for Scott Falater, who stabbed his wife 44 times and then drowned her in the pool:

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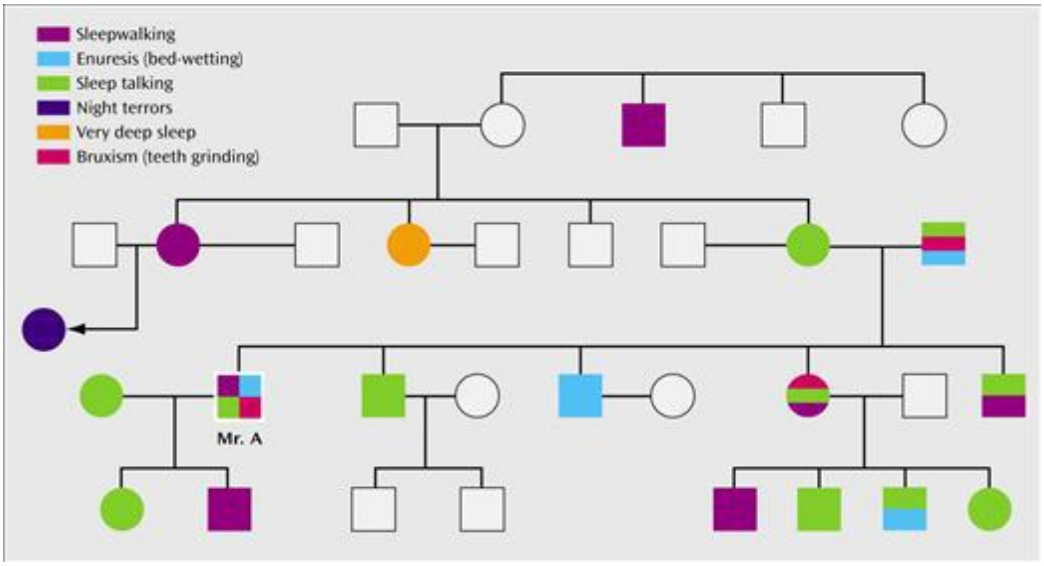
[58] PRESSMAN, M.R., MAHOWALD, M.W. and SCHENCK, C.H. (2005) Sleep terrors/Sleepwalking - Not REM Behavior Disorder. *Sleep*, 28, pp. 278-79.

[59] MAHOWALD, M.W. and SCHENCK, C.H. (1998) Chapter Ten: Dissociated States of Wakefulness and Sleep. In LYDIC, R., and BAGHDOYAN,H.A. (eds.). *Handbook of Behavioral State Control: Cellular and Molecular Mechanisms*. CRC Press, pp. 143-58.

[60] A pedigree in this context means the medical histories of blood relatives.



(figure reproduced from 'Sleepwalking Violence: A Sleep Disorder, a Legal Dilemma, and a Psychological Challenge',(Cartwright 2004) by kind permission of Rosalind Cartwright – Scott Falater is 'Mr A'). It details his relatives (circles are females, squares males) and their diagnoses as per the colour key chart.

1.6.2 Another infamous sleepwalker is Kenneth Parks, a Canadian 'gentle giant' who drove 23 km to his in-laws house and killed his mother-in-law and seriously injured his father-in-law. Like Scott Falater, he had a strong family history of sleep disorders. Twenty members of his family suffered parasomnias or related phenomena: (sleepwalking=5, sleeptalking=7, nocturnal enuresis=5, and sleep terrors=3;[61] there is no full Parks family pedigree for sleep disorders in the literature). Three had been known to leave the house while sleepwalking.

1.6.3 These two cases illustrate that a relevant history for sleepwalking must include other sleep disorders: night terrors, nocturnal enuresis (bed-wetting), night terrors, sleep talking and bruxism (grinding the teeth and clenching the jaw). The parasomnia with the strongest genetic component is sleep terrors. Up to 90% of sufferers have a family history of sleep terrors or sleepwalking. Interestingly, similar episodes can be produced

[61] Schenck (2005), see footnote 51.

by benzodiazepine antagonists;[62] this suggests a plausible mechanism for inheritance. Twin studies have demonstrated that there is a substantial genetic contribution to sleepwalking; 80% of adult sleepwalking in males and 36% of adult sleepwalking in females[63]. There has been one genetic locus identified recently at chromosome 20q12-q13.13,[64] and sleepwalking is also linked to certain HLA types.[65] It is not known what the mode of inheritance is - it has been hypothesized as multi-factorial or autosomal recessive with incomplete penetrance. Sleepwalking and sleep terrors seem to have a common genetic predisposition.[66] The amount of slow wave sleep, which affects the likelihood of parasomnia, is influenced by a specific gene, the retinoid acid receptor beta encoding gene or Rarb.[67]

1.6.4 Guilleminault found a link between inherited abnormalities of the lower jaw and upper airway and sleep disorders - 33 out of 50 subjects of a highly selected group of seven families.[68] He has also found a strong link between sleep disordered breathing and non-REM parasomnias that fail to respond to conventional treatment - in a retrospective analysis he found that almost all sleepwalking resistant to drug treatment was due to sleep-disordered breathing. This is largely based on diagnosing UARS,

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[62] Benzodiazepines are sedative/hypnotics such as temazepam and diazepam.

[63]HUBLIN, C., KAPRIO, J., PARTINEN, M., HEIKKILA, K. and KOSKENVUO, M. (1997) Prevalence and genetics of sleepwalking: A population-based twin study. *Neurology*, 48, pp. 177-81; in Bram Stoker's *Dracula*, Lucy Westenra is a sleepwalker as was her mother – the first description of hereditary sleepwalking.

[64] LICIS, A.K., DESRUISSEAU, D.M., YAMADA, K.A., DUNTLEY, S.P. and GURNETT, C.A. (2011) Novel genetic findings in an extended family pedigree with sleepwalking. *Neurology*, 76, pp. 49-52.

[65] HLA=Human Leukocyte Antigen; strong associations with particular HLA types may indicate an autoimmune component to a disease; however the associations with sleepwalking do not suggest this.

[66] KALES, A., SOLDATOS, C.R., BIXLER, E.O., LADDA, R.L., CHARNEY, D.S., WEBER, G. and SCHWEITZER, P.K. (1980) Hereditary factors in sleepwalking and night terrors. *British Journal of Psychiatry*, 137, pp. 111-118.

[67] MARET, S., FRANKEN, P., DAUVILLIERS, Y., GHYSELINCK, N.B., CHAMBON, P. and TAFTI, M. (2005) Retinoic acid signaling affects cortical synchrony during sleep. *Science*, 310, pp. 111-13.

[68] CAO, M. and GUILLEMINAULT, C. (2010) Families with sleepwalking. *Sleep medicine*, 11(7), pp. 726-734.

which requires an oesophageal pressure transducer. A prospective study of CPAP or surgical treatment for those failing to respond to first-line treatment found that compliant patients reported no sleepwalking events over six months.[69] Anecdotally, sleep physicians in the UK do not see the same degree of SDB in their patients, and there has been no reproduction of these results by other researchers. Whether or not upper airway resistance syndrome is a distinct clinical entity is debated.[70]

1.7 Sleep Medicine and Diagnosis of Parasomnias

The area of sleep medicine was recognized as a specialty by the American Medical Association in 1996. Here in the UK it is not even recognized as a subspecialty. It is a special interest of clinicians from a number of specialties - neurology, neuropsychiatry, psychiatry, respiratory medicine and clinical psychologists. There is only one clinician practising in the UK with a sleep medicine qualification - Professor Williams, who is board-certified in sleep medicine.[71] The British Sleep Society was founded in 1989. It is a multi-disciplinary body reflecting the different groups that are involved in sleep medicine and research – physicians, psychologists, sleep technologists, physiologists and medical sociologists. The diagnosis of most medical disorders rests largely with the patient's history - that is, their account of their condition. This is slightly complicated in parasomnias[72] because the most informative accounts will usually be from other people

[69] GUILLEMINAULT, C., KIRISOGLU, C., BAO, G., ARIAS, V., CHAN, A. and KASEY, K. (2005) Adult chronic sleepwalking and its treatment based on polysomnography. *Brain*, 128, pp. 1062-69.
[70] DOUGLAS, N.J. (2000) Upper Airway Resistance Syndrome Is Not A Distinct Syndrome. *American Journal of Respiratory and Critical Care Medicine*, 161(5), pp. 1413-15.
[71] There is no UK recognized qualification in sleep medicine.
[72] The same would be true for most types of epilepsy

- bed partners, family and flatmates - since the patient will generally be unaware during the parasomnia (although he or she may give accounts of finding themselves in another room in the night having walked there from wherever he or she was sleeping, or have incomplete vague memories). Usually the clinician takes these accounts at face value, but there will be circumstances where he cannot (see **2.9**). Sleepwalking in particular is diagnosed on the patient's history, as video-polysomnography (video-PSG) is not considered diagnostic (but see below). It is the only parasomnia that the International Classification of Sleep Disorders (current version ICSD-3)[73] states is diagnosed clinically. Where the account is from the victim, their account may not be accurate for several reasons - fear affecting their recall, desire to see the accused punished, or disbelief. In some cases of sleepwalking, just like some cases of epilepsy, even experts may be unable to tell at the time if the person was sleepwalking - as expert No 29[74] related

> 'most people who have small children have found their children sleeping someplace you didn't want them sleeping, they're asleep on the couch or they're asleep on the floor at midnight and you want them in their bed so you think you wake them up and you carry on a conversation with them and the child goes off to bed and goes to sleep, and in the morning has absolutely no recollection whatsoever of being awakened or the conversation, doesn't know how they got into bed'.

Another interviewee described exactly this type of experience with his own children.

1.7.1 The process of performing video-polysomnography is very labour-intensive.

[73] AMERICAN ACADEMY OF SLEEP MEDICINE. (2014) *International Classification of Sleep Disorders*. 3rd Ed. American Academy of Sleep Medicine.
[74] Where experts asked for their quotes to be unattributed, a numerical designation has been used.

Simply applying the various electrodes and sensors to the patient and checking them takes about an hour. The number of these varies between centres, particularly the number of EEG electrodes. The American Academy of Sleep Medicine recommends eight for assessment of parasomnias - two occipital, two central, two frontal and two reference electrodes[75]. There are several phases to analyzing and reporting a sleep study, and it takes several hours. Every epoch (thirty seconds of data) is assigned a sleep stage (see Appendix K for some sample epochs). It is time-consuming but essential – the current computerized systems are insufficiently accurate for either clinical or forensic purposes. It is essential for the instructing lawyer to ensure that the video-PSG is staged and analyzed by a "blinded"[76] expert. Some sleep experts routinely do at least two nights of video-polysomnography, relying on the second night's results only. However, many sleep studies in the non-forensic setting are one night only, so this means that the expert interpreting the study is not comparing like with like.

1.7.2 As with any medical disorder, it is important to bear in mind the differential diagnoses. These will include:

- Malingering
- Psychogenic states
- Drug or alcohol induced states of amnesia and/or disinhibition
- Epilepsy

To this list we may need to add factitious parasomnias (see case study at section **2.9**).

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[75] IBER, C., ANCOLI-ISRAEL, S., CHESSON, A., QUAN, S., for the American Academy of Sleep Medicine. (2007)*The AASM manual for the scoring of sleep and associated events: rules, terminology and technical specifications*. 1st Ed. Westchester, IL: American Academy of Sleep Medicine.

[76] That is, they are not aware of the details of the case prior to assessment of the polysomnogram.

1.7.3 Nocturnal dissociative disorders are typically associated with a childhood history of sexual or physical abuse. They are hysterical fugue episodes, and often similar episodes occur during daytime as well. Observation over several days as an inpatient may be necessary to diagnose dissociative episodes. Mahowald and Schenck reported a series of 8 patients out of 150 consecutive patients referred for evaluation of sleep-related injuries. Two of the eight fulfilled the DSM-III-R criteria for Multiple Personality Disorder (MPD). The other six, although not fulfilling the criteria, were strongly suspected of having MPD.[77]

Nocturnal epilepsy can be extremely difficult to distinguish from sleepwalking. It has been hypothesized that both sleepwalking and nocturnal frontal lobe epilepsy activate the central pattern generators.[78] The accurate detection of nocturnal epilepsy requires the full panel of EEG electrodes[79], rather than the AASM recommended set or the set for simply staging sleep.

1.8 Sleepwalking and Polysomnography

There is no agreement in the literature on diagnostic features of sleepwalking on the video-PSG, apart from an actual sleepwalking episode. This is unlikely to occur during

[77] SCHENCK, C.H., MILNER, D.M., HURWITZ, T.D. and MAHOWALD, M.W. (1989) Dissociative disorders presenting as somnambulism. Polysomnographic, video and clinical documentation (8 cases). *Dissociation*, 11, pp. 194-204.

[78] TASSINARI, C.A., RUBBOLI, G., GARDELLA, E., CANTALUPO, G., CALANDRA-BUONAURA, G., VEDOVELLO, M., ALESSANDRIA, M., GANDINI, G., CINOTTI, S., ZAMPONI, N. and MELETTI, S. (2006) Central pattern generators for a common semiology in fronto-limbic seizures and in parasomnias. A neuroethologic approach. *Neurological Sciences*, 26(3 Supplement), pp. s225-s232.

[79] E.g. international 10-20 system (21 electrodes).

testing and as such *may* indicate malingering[80] - apparent “sleepwalking” episodes are not always definitive proof because movement artefacts affect the EEG signal. If there *is* clear EEG evidence of the behaviour arising *during* sleep or from a state arising from deep sleep (N3), malingering can be excluded. There are a number of features on polysomnography which are suggestive of sleepwalking:

- a higher proportion of SWS, especially when very fragmented
- increased arousal index (arousals per hour)
- increased relative power of low delta activity
- hypersynchronous delta activity
- increased cyclic alternation pattern[81]

1.8.1 Some forensic sleep experts believe that spectral analysis of EEGs is a reliable method for diagnosing sleepwalking. The method involves computerized analysis of EEG frequencies during slow wave sleep, as opposed to visual scoring of epochs. This shows greater numbers of micro-arousals, wake after sleep onset, and a decrease in slow-wave activity during the first sleep cycle, in sleepwalkers.[82] It is not universally agreed that it is suitable for forensic diagnosis, even when blinded assessment is used.[83] Cartwright and Guilleminault report the use of spectral analysis in expert testimony, and they demonstrated that the specific markers persist after the index event

[80] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-136.
[81] BANERJEE, D. and NISBET, A. (2011) Sleepwalking. *Sleep Medicine Clinics*, 6(4), pp. 401- 415.
[82] GUILLEMINAULT, C., POYARES, D., ABAT, F. and PALOMBINI, L. (2001) Sleep and wakefulness in somnambulism: A spectral analysis study. *Journal of Psychosomatic Research*, 51, pp. 411-16.
[83] GAUDREAU, H., JONCAS, S., ZADRA, A. and MONTPLAISIR, J. (2000) Dynamics of Slow-Wave Activity During the NREM Sleep of Sleepwalkers and Control Subjects. *Sleep*, 23(6), pp. 755-60.

(see **3.5.3** for further details).[84] Both sleep deprivation and sudden arousals improve the diagnostic utility of the video-PSG in sleepwalking,[85] although there is disagreement about their utility in the forensic setting.[86]

1.9 Summary

Parasomnias are disorders characterized by a state somewhere between wakefulness and sleep. They are not uncommon in the general population. Parts of the brain remain active that are normally dormant in sleep, which explains the behaviour seen. Assessment by an experienced clinician is essential and the diagnosis of some common parasomnias remains clinical. The utility of sleep studies is debated.

[84] CARTWRIGHT, R.D. and GUILLEMINAULT, C. (2013) Defending Sleepwalkers with Science and an illustrative case. *Journal of Clinical Sleep Medicine*, 9(7), pp. 721-26.
[85] PILON, M., MONTPLAISIR, J. and ZADRA, A. (2008) Precipitating factors of somnambulism: Impact of sleep deprivation and forced arousals. *Neurology*, 20(June 10th), pp. 2284-90.
[86] MAHOWALD, M., CRAMER BORNEMANN, M. and SCHENCK, C. (2007) Finally- sleep science for the courtroom. *Sleep Medicine Reviews*, 11(1), pp. 1-3.

Chapter 2: Forensic Parasomnias

2.1 Forensic Parasomnias in Fiction

Sleepwalking often appears in fiction - perhaps the best known fictional sleepwalker is Lady MacBeth (Act 5, scene 1):

> Gentlewoman: Neither to you nor any one; having no witness to confirm my speech.
>
> [Enter LADY MACBETH, with a taper]
>
> Lo you, here she comes! This is her very guise; and, upon my life, fast asleep. Observe her; stand close.
>
> Doctor: How came she by that light?
>
> Gentlewoman: Why, it stood by her: she has light by her continually; 'tis her command.
>
> Doctor: You see, her eyes are open.
>
> Gentlewoman: Ay, but their sense is shut.
>
> Doctor: What is it she does now? Look, how she rubs her hands.
>
> Gentlewoman: It is an accustomed action with her, to seem thus washing her hands: I have known her continue in this a quarter of an hour.
>
> LADY MACBETH: Yet here's a spot.
>
> Doctor: Hark! she speaks: I will set down what comes from her, to satisfy my remembrance the more strongly.
>
> LADY MACBETH: Out, damned spot! out, I say!--One: two: why, then, 'tis time to

do't.--Hell is murky!--Fie, my lord, fie! a soldier, and afeard? What need we fear who knows it, when none can call our power to account?--Yet who would have thought the old man to have had so much blood in him.

Doctor: Do you mark that?

LADY MACBETH: The thane of Fife had a wife: where is she now?— What, will these hands ne'er be clean?--No more o' that, my lord, no more o' that: you mar all with this starting.

Doctor: Go to, go to; you have known what you should not.

Gentlewoman: She has spoke what she should not, I am sure of that: heaven knows what she has known.

The account reflects the notion that the somnambulist speaks the truth and expresses repressed memories and desires in their sleep.

2.1.1 It is not surprising that forensic sleep disorders appear a number of times in fiction - the public are understandably intrigued and horrified by the prospect of someone killing in their sleep. The most recent cinematic release to deal with this was *Side Effects.* The film deals well with some of the issues surrounding sleep disorders and the potential responsibility of prescribers for illegal acts triggered by adverse drug reactions. The basic plot is that a fictitious drug that can cause sleepwalking is blamed for a homicide (see **1.4.1** re “Ambien defence”). The film makers had clearly done their research, even if there are some minor quibbles (for example, there is a case the defence attorney describes that resembles *Falater*, except in this instance he is acquitted).

One particular exchange that illustrated an important issue in forensic sleep disorders

occurred between Dr Banks, one of the main protagonists, and his wife. She asks "Did the person do the thing? Are they guilty?" and he replies "In this case, those are two very different things"[1]. There was also a good discussion in court of legal responsibility and consciousness. During his testimony, Dr Banks compares the mental state of a sleepwalker with an insect:

> Dr Banks (DB): What makes us human, what differentiates us from let's say insects, is that we have consciousness, an awareness of what we're thinking and what we're doing. If for example I'm hungry, I'm consciously aware of that, and so I go to the fridge and I make myself a sandwich.
>
> Defence Attorney (DA): So you intend to make a sandwich.
>
> DB: Yes.
>
> DA: So what you're saying is that to have intent, you must also have consciousness?
>
> Prosecution Attorney: Objection Your Honour. The question calls for a legal conclusion, not a medical one.
>
> Judge: Overruled. You may continue.
>
> DB: Consciousness provides a context or meaning for our actions - if that part of you doesn't exist, then basically we are functioning much like an insect where you just respond instinctively without a thought to what your actions mean.
>
> DA: And that part, that meaning to action, does that exists when we're asleep?
>
> DB: No.
>
> DA: So without consciousness, how do we prove intent?

[1] About 42 minutes in (DVD version)

DB: I don't believe we can. (Personal transcript of DVD 49- 51 mins)

That comparison is interesting, as it could be argued that mammals are a better example as their functioning is closer to humans. The point that motor functions are separate and distinct from the faculties that make us human and morally and legally responsible is well made. However, an expert witness would not be asked to comment on legal questions like this in reality.

The uncomfortable possibility the film raises is that a motivated and educated person could simulate a sleepwalking defence. It is a possibility that most if not all forensic sleep experts will concede, and probably one that is already in the mind of juries. One famous example of malingering is one of the Hillside Stranglers, Kenneth Bianchi, who fooled a number of psychiatrists with claims of multiple personality disorder. A number of textbooks on psychology were found at his home by police.[2]

2.1.2 Other examples of actual or potential forensic sleepwalking in film and TV include:

- *In My Sleep* where the protagonist wonders if he has murdered his best friend's wife whilst sleepwalking.[3]
- Sexsomnia featured in *Law and Order: Special Victims*[4] and *Desperate Housewives.*[5]
- A case of homicide in the first series of *Perry Mason*[6] .
- Sleepwalking and sexsomnia in *Midsomer Murders*[7].
- *Steptoe and Son*: A Loathe Story[8] - here Harold goes to bed after a humiliating

[2] CHALEFF, G. (1988) The Hillside Strangler: People v. Buono. *Litigation*, 14(4), pp. 23-58.
[3] 2010 cinematic release
[4] Season 9, episode 2
[5] Season 7, episode 2
[6] "The Case of the Sleepwalker's Niece"
[7] Series 12, episode 7: "The Great and The Good"

defeat at badminton by Albert, his father. He gets up in the night and walks through the house, eyes closed. He gets a cleaver from the kitchen and goes to decapitate his father in bed. Albert wakes up, and shouts at Harold and throws a glass of water over him, which wakes him. He is perplexed and horrified at what he had been about to do.[9]

- Father Jack Hackett sleepwalking in the nude in *Father Ted* [10].

2.2 Forensic Parasomnias and Their Assessment

The diagnosis of any condition is potentially more complicated in the forensic setting, where there may be an incentive to deceive the specialist (see below at **2.9** for other circumstances where this may apply). The sleepwalker has to rely on the account of others to confirm his sleepwalking, combining diagnosis and corroboration. The fact that the eye witness to the index episode is often the victim is potentially problematic, but it appears that usually the victim's account is truthful even when it serves to exculpate the defendant. A particular issue is that the expert instructed by the defence often is not permitted to interview the victim, and so may not have all the evidence required for an authoritative opinion. They will have access to witness statements and the prosecution expert's report, but they will not be able to ask their own questions of the witness. Particular details can be very important - if the person has his eyes closed, this indicates RBD rather than a NREM parasomnia. In homicide cases, this important detail

[8] Series 7, episode 5
[9] This episode strongly resembles the account by Savarin of a somnambulist monk in "Physiologie du Gout" (see Appendix P).
[10] Series 2, episode 6: "The Plague"

might not be known as the only eye witness is dead. This makes the genuine parasomniac's defence more difficult. Brian Thomas's episode resembled RBD, so when testing did not show RBD, his defence may have failed. Fortunately his NREM parasomnia was recognized by the sleep experts involved (see **3.4.2**).

2.2.1 Technology has arguably added little to the diagnosis of sleepwalking (although not some other parasomnias). Eye witness accounts combined with a prior history of sleep disorder continue to be the most important part of forensic sleep evaluation, and modern testing is generally just supportive of the clinical assessment. At least one forensic sleep expert doesn't use video-PSG (except to rule out nocturnal epilepsy) and others use the test to rule out or rule in disorders other than simple parasomnias e.g. nocturnal epilepsy or SDB. Expert 29 stated

> 'sleep studies are of absolutely no value whatsoever after the fact - period'

adding

> 'sleep studies end up as in the Falater case just being a smokescreen. It just confuses everybody. And you get people arguing over things that are totally irrelevant, and the jury, how can they be expected to sort through all of this testimony about sleep studies, when in fact the sleep studies should not be allowed in the courtroom because they're irrelevant.'

Many interviewees disagreed with this position, arguing that sleep studies may provide valuable corroboration of a sleep disorder. There is much debate over the significance of certain non-specific findings however. Where sleep disordered breathing triggers parasomnias, effective management will generally greatly reduce or eliminate parasomnic episodes. By contrast, video-PSG is essential to diagnose RBD (because

of the other possibilities for dream-enacting behaviour), which is commonly associated with violence against the bed partner. However, they rarely get out of bed, so their harmful acts are less likely to reach the attention of the criminal justice system except when serious harm results. Some experts insist on 'blinded' assessment of forensic sleep studies, but most do not. There have been no studies to assess the impact of 'blinding' on the reporting of sleep studies.

2.2.2 The exact pathophysiology of sleepwalking is uncertain, but functional neuroimaging in one patient showed that activity in the frontal lobe was suppressed, and activity in the limbic system increased.[11] Intracerebral EEG recordings, again in a single patient, showed that during confusional arousals there was activation of the motor and cingulate areas, whilst delta wave activity characteristic of slow wave sleep persisted in the prefrontal cortex.[12] Certainly the violent and sexual behaviour exhibited is consistent with the limbic system. The violent behaviour is usually only a reaction to opposition [13] – so the advice is that rather than confront a sleepwalker, one should gently guide them back to bed. The defensive rage exhibited has been studied in animal models, and contrasts with the other main form of aggression, predatory attack. Defensive rage is reactive, affective and impulsive. Predatory attack is pre-meditated and goal-orientated. It is not generally accepted that sleepwalking- related violence is caused by a switch from sleepwalking to sleep terror as Levy and Cartwright suggest

[11] BASSETTI, C., VELLA, S., DONATI, F., WIELEPP, P. and WEDER, B. (2000) Research Letter: SPECT during sleepwalking. *Lancet*, 356(Aug 5th), pp. 484-85.
[12] TERZAGHI, M., SARTORI, I., TASSI, L., DIDATO, G., RUSTIONI, V., LORUSSO, G., MANNI, R. and NOBILI, L. (2009) Evidence of Dissociated Arousal States During NREM Parasomnia from an Intracerebral Neurophysiological Study. *Sleep*, 32(3), pp. 409-412.
[13] PRESSMAN, M. (2007) 'Disorders of arousal from sleep and violent behavior: the role of physical contact and proximity'. *Sleep*, 30, pp. 1039-47.

(Levy[14] cites Cartwright's account of violence at the end of a sleepwalking episode associated with sudden interruption - this description is more suggestive of confusional arousal, which is well recognized to arise out of sleepwalking[15]).

Involvement of the fusiform gyrus is suggested by the problem with recognition of faces seen in sleepwalking, most vividly demonstrated by Kenneth Parks where he described attacking a woman without being aware that it was his mother-in-law (see **3.5.1**). Shneerson and Ekirch also report this phenomenon.[16] Some experts believe that the longer episodes represent a merging of sleepwalking into a secondary dissociative episode[17]. Sleepwalking could be considered a variety of dissociative disorder, albeit not psychogenic in nature (see below at **2.3**, **2.4**). Podolsky states

> 'Somnambulistic activity is closely related to a form of behaviour known as a fugue. In a true fugue the individual suddenly leaves his previous activity and does something which has no apparent relation to what he has just been doing, and for which he has complete amnesia. In somnambulism there is an identical dissociation except that it begins during sleep.'[18]

These studies of brain function have only looked at single patients, so it is impossible to draw any firm conclusions about the general population of sleepwalkers from them. It cannot be assumed that sleepwalking has only one phenotype, and there is some evidence to the contrary - some patients exhibit much more complex behaviours than

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[14] LEVY, N. and BAYNE, T. (2004) Doing without deliberation: automatism, automaticity, and moral accountability. *International Review of Psychiatry*, 16(3), pp. 209-15.
[15] CARTWRIGHT, R. (2004) Sleepwalking Violence: A Sleep Disorder, a Legal Dilemma, and a Psychological Challenge. *American Journal of Psychiatry*, 161(7), pp. 1149-58.
[16] SHNEERSON, J.M. and EKIRCH, A.R. (2011) The Clinical Features of Sleep Violence in Arousal Disorders: A Historical Review. *Sleep Medicine Clinics*, 6(4), pp. 493-98.
[17]Personal communication K Dembny, C Idzikowski.
[18] PODOLSKY, E. (1961) Somnambulistic homicide. *Medicine, Science and the Law*, 1, pp. 260-65.

the majority. This may however be a reflection of having a ‘stronger dose’ of sleepwalking genes - the current theory is that sleepwalking may be a polygenic disorder. Certainly Kenneth Parks and Scott Falater had strong family histories. It is better understood what occurs in the brain during RBD, where the sufferer is acting out their dreams because of lack of the usual muscular paralysis that occurs during rapid eye movement sleep. The sufferer’s eyes will be closed, and on awakening he will vividly remember the dream.

2.2.3 Sleep experts, like epilepsy specialists, rarely witness episodes (and if they do observe events in the sleep lab there has to be a high index of suspicion of malingering[19] – and so are heavily reliant on eye witness accounts. Video-polysomnography is neither specific nor sensitive enough to rule in or rule out sleepwalking by itself. According to Bonkalo the characteristics that distinguish those report violent behaviours in sleep are:

- Male sex (47/50)
- Age 27-48
- A strong childhood and/or family history of sleepwalking
- Nocturnal enuresis
- Nightmares
- Agitation on awakening[20]

Sleep-related violence is much more common in males than females in all reported series, especially between the ages of 15 and 44. Other risk factors include:

[19] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-136.
[20] BONKALO, A. (1974) Impulsive acts and confusional states during incomplete arousal from sleep: criminological and forensic implications. *Psychiatric Quarterly*, 48, pp. 400-409.

- Limb jerking[21]
- More stressors
- Disturbed sleep schedule
- Excessive use of caffeinated beverages
- Drug abuse
- Less slow wave sleep[22]

In any case, as Mahowald pointed out

> '[You] can prove someone is a sleepwalker… But that is only Part 1 of a two-part question. The second question is whether he was sleepwalking on the night of the murder. Only God can answer that.'[23]

Even if only God can answer the question authoritatively, the jury has to provide an answer. The expert is there to help them come to the best answer possible. This principle applies generally to causes of automatism, such as epilepsy (generally psychomotor) and hypoglycaemia. The most important criteria for assessing forensic sleepwalking episodes (apart from the nature of the act itself) are:

- Previous history of sleepwalking, usually in childhood or adolescence (unless there is a precipitating event e.g. head injury)
- Confusion and bewilderment on the part of the accused, with no attempts to conceal the crime
- The crime is motiveless and out of character

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[21] OHAYON, M., CAULET, M. and PRIEST, R. (1997) 'Violent Behavior During Sleep'. *Journal of Clinical Psychiatry*, 58, pp. 369-76.
[22] MOLDOFSKY, H., GILBERT, R., FRANKLIN, A. and MACLEAN, A. (1995) 'Sleep-Related Violence'. *Sleep*, 18(9), pp. 731-9.
[23] STRYKER, J. (1999) 1999-last update, *'Sleepstabbing:The strange science of sleep behavior and one verdict: Guilty!'* . Available: http://www.salon.com/1999/07/08/sleepwalking/.

2.2.4 There have been more extensive criteria published in the literature. Fenwick listed criteria for assessing parasomniacs in 1987:

History

1. Family History. It is essential to enquire in detail about other family members who sleepwalk or have had night terrors.

2. Childhood sleepwalking. It is common for the onset of sleepwalking to be in early childhood.

3. Adolescent sleepwalking. Although most sleepwalkers start in childhood, a few do begin in adolescence. However, most adolescent sleepwalkers have a childhood history of sleepwalking.

4. Late onset sleepwalking and night terrors are rare [see below]. They usually only occur after a precipitating cause, for example head injury. Regard with suspicion any episode of sleepwalking or night terror in an adult which is said to be the first episode.

Specific Factors

1. Episodes will only occur during slow-wave sleep, and thus are most likely to occur within two hours of sleep onset.

2. There must be disorientation on awakening. A straight arousal into clear consciousness is unlikely to occur on awakening from a sleep automatism. Such an arousal usually indicates an arousal from dreaming sleep.[24]

3. Any witness to the event should report inappropriate automatic behaviour,

[24] Note that in 1987 RBD had not yet been described.

preferably with an element of confusion.

4. There must be amnesia for the event. Memories are poorly recorded during stage 4 sleep[25] and are equally poorly recalled. It is possible for fragments of distorted memory to be retained.

5. Trigger factors are important. Drugs, alcohol, excessive fatigue and stress can all precipitate a sleep automatism.

6. If there is a sexual element in the crime, enquire carefully for sexual arousal (penile tumescence in men); its presence makes a sleep automatism highly unlikely.[26]

7. The nature and quality of the previous sleep mentation must be that of stage 4 sleep. It should be non-narrative, non-dreamlike, with only a vague visual content, and consist mostly of thoughts and feelings.

8. Attempts to conceal the crime are most unusual. As the crime is committed in the absence of consciousness, and followed by amnesia, the natural response on awakening is to summon help immediately.

9. There may be a previous history of violence during a sleep automatism, and some people may have a tendency to violent behaviour.

10. It is helpful if the crime can be shown to be motiveless and out of character for the individual.[27]

NB: It is now recognized that adult onset sleepwalking is not rare. This guidance

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[25] R&K scale

[26] It is now recognized that because sleepwalking/sexsomnia occurs *out of* N3 sleep (rather than *during* N3 sleep), an erection is perfectly consistent with a NREM parasomnia.

[27] FENWICK, P. (1987) Somnambulism and the Law: A Review. *Behavioral Science and the Law*, 5(3), pp. 343-57.

precedes the discovery of RBD, so naturally excludes any phenomena related to REM sleep.

Mahowald *et al* in 1990 also formulated guidelines for the evaluation of sleep violence, which largely correspond with Fenwick's criteria:

1. There should be reason (by history or formal sleep laboratory evaluation) to suspect a bona fide sleep disorder. Similar episodes, with benign or morbid outcome, should have occurred previously.
2. The duration of the episode is usually brief (minutes).
3. The behavior is usually abrupt, immediate, impulsive, and senseless- without apparent motivation. Although ostensibly purposeful, it is inappropriate to the total situation, out of (waking) character for the individual, and without evidence of premeditation.
4. The victim is someone who merely happens to be present and who may have been the stimulus for the arousal.
5. Immediately following return of consciousness, there is perplexity or horror, without attempt to escape or to conceal or cover up the action. There is evidence of lack of awareness on the part of the individual during the event.
6. There is usually some degree of amnesia for the event; however, this amnesia need not be complete.
7. In the case of NT/SW or sleep drunkenness, the act may:

   (a) occur upon wakening (rarely immediately upon falling asleep) - usually at least one hour after sleep onset

   (b) occur upon attempts to awaken the subject, or

(c) have been potentiated by alcohol ingestion, sedative/hypnotic administration, or prior sleep deprivation[28]

2.2.5 The history gathered from family and friends is usually sufficient to make an accurate diagnosis of sleepwalking (or other parasomnia), but this cannot tell us if on the night in question the episode was sleepwalking (or other parasomnia). The requirement for the crime to be motiveless and out of character is understandable but in some circumstances problematic. This was an issue with Michael Ricksgers and Scott Falater - there was a possible motive in each case. However, human experience suggests that with hindsight and close scrutiny a plausible motive for murder could be found in most marriages.

In two recent UK cases the expert opinion was that the accused genuinely suffered a parasomnia but nonetheless the episode in question was not parasomnic in nature (John Docherty in Glasgow[29] and Stephen Davies in Swansea,[30] both reported in the national press). The US forensic sleep expert Cramer Bornemann has stated the majority of forensic sleepwalking cases "are bogus";[31] however, he has also stated he would not have a sleepwalker as a partner on safety grounds. A two or three night sleep study is considered necessary for reasonable reliability, because the unfamiliar situation of the video-PSG will affect sleep quality (the first night's results are usually discarded in this case, which is problematic for comparison with typical non-forensic sleep studies).

[28] MAHOWALD, M., BUNDLIE, S., HURWITZ, T. and SCHENCK, C. (1990) 'Sleep Violence – Forensic Science Implications: Polygraphic and Video Documentation'. *Journal of Forensic Sciences*, 35(2), pp. 413-32.
[29] JOHNSON, S. (2011) Taxi driver who said he stabbed wife while sleepwalking jailed for six years. *Daily Telegraph* (Apr 2nd).
[30] SMITH, R. (2011) Sexsomniac cleared of raping teen girl; Ex backs up sleep defence after living with his illness for years. *The Mirror* (July 5th).
[31] CRAMPTON, S. (2009) Sleepwalking: you wouldn't credit what you can do whilst you're meant to be at rest. *Times* (Sept 19th).

This is very difficult practically if the accused is on remand, and if the prisoner can travel to a facility for a forensic sleep study (for example, the Edinburgh Sleep Centre[32] or Broadmoor Hospital) the study will be of far better quality and therefore more likely to be diagnostic. Sleep studies will also pick up sleep-disordered breathing which can precipitate parasomnias, whether snoring sufficient to cause arousals, upper airway resistance syndrome (UARS) or obstructive sleep apnoea/hypopnoea syndrome.

2.2.6 The recurrence of harmful acts due to parasomnias is extremely rare, and so the assessment of future dangerousness is generally straightforward. However, Mahowald and Schenck recommend that some parasomnic patients be categorized as constituting a continuing danger, and outpatient supervision of treatment is appropriate in these cases.[33] Treatment for parasomnias is generally very successful. Pharmacotherapy is usually clonazepam or other benzodiazepines, and melatonin can be useful for REM parasomnias. Alternative treatments including psychological therapies,[34] and behavioural interventions such as alarms to awaken the sleepwalker if he opens the bedroom door. Where the parasomnia is triggered by sleep-disordered breathing, it is important for the patient to comply with treatment, which may include non-invasive ventilation via a face mask which forms a seal over the nose or mouth (continuous positive airways pressure or CPAP). Compliance can be monitored electronically - this

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[32] Currently closed.

[33] SCHENCK, C.H. & MAHOWALD, M.W. (1995) A Polysomnographically Documented Case of Adult Somnambulism With Long-Distance Automobile Driving and Frequent Nocturnal Violence: Parasomnia With Continuing Danger as a Noninsane Automatism? *Sleep*, 18(9), pp. 765-772

[34] HURWITZ, T.D., MAHOWALD, M.W., SCHENCK, C.H., SCHLUTER, J.L. and BUNDLIE, S.R. (1991) A Retrospective Outcome Study and Review of Hypnosis as Treatment of Adults with Sleepwalking and Sleep Terror. *Journal of Nervous and Mental Disease*, 179(4), pp. 228-33; KALES, J.D., CADIEUX, R.J., SOLDATOS, C.R. and KALES, A. (1982) Psychotherapy with night-terror patients. *American Journal of Psychotherapy*, 36, pp. 399-407; SCHENCK, C.H., MILNER, D.M. and HURWITZ, T.D. (1989) A polysomnographic and clinical report of sleep related injury in 100 adult patients. *American Journal of Psychiatry*, 146, pp. 1166-73.

is required by the DVLA where sleep apnoea affects driving, and supervision (but not treatment) can be mandated by the courts but only when an accused is found NGRI. Surgery and mandibular advancement devices[35] are alternative treatments for SDB.

2.3 The Spectrum of Behaviour

Various forms of unwanted behaviour are commonly reported during sleepwalking and other parasomnias, some merely anti-social or harmful to the sleepwalker only but many that are potentially criminal outside the home. Sleepwalkers may injure or even kill themselves (parasomniac pseudo-suicide[36]); for example, Sam Torrance, the golfer, injured himself sleepwalking in 1994.[37] The sleepwalker is more danger to himself than anyone else. Urinating in a cupboard or sleepwalking in the nude will normally only result in embarrassment if the sleepwalker is among family or friends. The same behaviour in a hotel might result in arrest for indecent exposure.

Nocturnal wandering in the nude is apparently very common according to a survey commissioned by Travelodge, whose staff reported a sevenfold increase in “nude sleepwalking” (over 400 cases in one calendar year).[38] Staying in a hotel on business is associated with several factors that can trigger sleepwalking - sleeping in an unfamiliar setting, high pressure work situations or long distance travel during the day, and frequently alcohol late at night. How many of these incidents are actually sleepwalking

[35] These prevent the lower jaw dropping back and so keep the airway open.
[36] MAHOWALD, M., SCHENCK, C., GOLDNER, M., BACHELDER, V. and CRAMER BORNEMANN, M. (2003) Parasomnia pseudo-suicide. *Journal of Forensic Sciences*, 48(5), pp. 1158-62.
[37] GLASGOW HERALD. (1994) Brand races ahead as Montgomery bows out. *Glasgow Herald* (Sep 3rd).
[38] TELEGRAPH. (2007) ‘Hotels train staff for naked sleepwalkers’. *Telegraph* (Oct 25th).

is open to debate, given the frequent prominent role of alcohol. One incident of nude sleepwalking in a hotel was the subject of a multi-million pound defamation suit, after colleagues spread rumours about Donal Kinsella who entered the room of a female colleague whilst sleepwalking.[39]

2.3.1 Violence behaviour during sleep (VBS) is relatively common (see below for more details), occurring in up to 2.1% of adults in the UK,[40] and reported by the majority of sleepwalkers. Ohayon found that only five out of 313 reporting VBS talked to a physician about this.[41] Dream enactment behaviour was found to be remarkably common by Nielsen. They asked about several behavioural manifestations including aggressive movements, and also sexual arousal. Unfortunately there was no examination of sexual behaviour *per se,* so it is difficult to know the medico-legal importance of the behaviour found.[42] This frequency of minor incidents is not reflected in the reported criminal trials, and it seems that most minor offences are dealt with informally. Sleepwalkers do not seek out their victims and seldom go far (although Savarin's somnambulist monk illustrates that there are exceptions to this rule), so their victims will usually be family or friends who are probably aware of their condition and so far less likely to involve law enforcement. The sleepwalker will be at greater risk when sleeping outside their home. Confusional arousals result in less complex behaviour and

[39] PITEL, L. (2010) Sleepwalking businessman awarded £8.5m over 'juicy' press release. *Times* (Nov 19th).
[40] OHAYON, M., CAULET, M. and PRIEST, R. (1997) 'Violent Behavior During Sleep'. *Journal of Clinical Psychiatry*, 58, pp. 369-76.
[41] OHAYON, M.M., and SCHENCK, C.H. (2010) Violent behavior during sleep: prevalence, comorbidity and consequences. *Sleep medicine*, 11(9), pp. 941-946.
[42] NIELSEN, T., SVOB, C. and KUIKEN, D. (2009) Dream-enacting behaviors in a normal population. *Sleep*, 32(12), pp.1629-1636.

are related to proximity in 100% of cases versus 40-90% of sleepwalking cases.[43]

2.3.2 Table 1 sets out several of the features that help decide whether an episode truly represents a parasomnia.

[43] Pressman (2007), see footnote 13.

Table 1: Features that support or refute a parasomnia defence (adapted from a table developed with R Riha and I Morrison[44]

Strong reason to support defence	Reason to support defence	Neutral	Reason to reject defence	Strong reason to reject defence
Reliable eye witness account absolutely consistent with parasomnic behaviour		"Accused didn't appear to be asleep"		Reliable eyewitness account totally inconsistent with parasomniac behaviour
Unable to identify close relatives and friends [ID 90]		Mumbled conversations		Conversations that relate to previous events
		Minor Intoxication	Major intoxication[45]	Alcohol-related episode where alcohol known trigger[46]
	Confused behaviour	Complex learned behaviour such as driving		Evidence of planning
	Difficulty navigating obstacles	Navigating familiar environments	Navigating unfamiliar environments	Evidence of working memory or higher cortical function
	Sexual activity with bed partner			Seeks out partner for sexual activity
	Reaction to confrontation, victim nearby			Seeks out victim
	No motive or advantage from event		Clear motive	
	Activity contrary to waking sexual orientation, no evidence of sexual arousal (sexual offences)		Sexual attraction	
	Shock and horror at actions, inconsolable.	Denial		

[44] MORRISON, I., RUMBOLD, J.M.M. and RIHA, R.L. (2014) Medicolegal aspects of complex behaviours arising from the sleep period: A review and guide for the practising sleep physician. *Sleep Medicine Reviews*,18(3), pp.249-60.
[45] Some experts argue major intoxication rules out the defence.
[46] On the grounds that this indicates culpable prior fault

Previously diagnosed parasomnia behaviour in keeping with episode	Personal and family history of parasomnias and/or sleep disorders, especially when verified by several parties	Parasomnia or sleep disorder was diagnosed retrospectively[47]		No previous history of parasomnia
	Out of character		Consistent with character	
		Total amnesia or very fragmented memories		Clear memory for events
	Roused with difficulty and confused on arousal		No change in state when confronted and responds appropriately to situation	
	Immediately identifies behaviour as parasomnia			Attempts to cover up illegal act (see above)
		Lack of specific findings on video-PSG		

This table is based on a combination of the literature and expert opinion (from my collaborators on the paper and interview data). It can be seen from this table that very few features are good indicators that an episode is parasomnic in nature, and the expert witnesses will often couch their testimony as the episode being "consistent with" a particular parasomnia. This also acknowledges the fact that in many cases malingering cannot be excluded.

2.3.3 Many of these features concern the facts of the case, which are for the jury to decide. It is appropriate for the sleep expert to state whether or not in his opinion certain actions were compatible with parasomnia, as the expert witness is able to address the ultimate issue. An example of such an analysis by Pressman is included in Appendix D. There he details 66 particulars of Scott Falater's actions (see below at **3.5.2** for more

[47] CARTWRIGHT, R. (2000) Sleep-related violence: does the polysomnogram help establish the diagnosis? *Sleep medicine*, 1, pp. 331-35.

details of the case). Where these analyses are based on suppositions about the functions that are disabled during sleepwalking, caution is necessary since this is not known with any degree of certainty. A case in point is the exclusion of sleepwalking cases by Fenwick in 1987 where sexual arousal was present, but subsequently it was recognized that this is entirely consistent with sleepwalking (see above at **2.2.4**). Cartwright considers that spatial awareness and fine motor coordination can be preserved,[48] and Schenck lists a number of different functional disorders that can be caused by parasomnias, and concludes that

> 'A full range of activations, and dynamic associations, dissociations and recombinations of these Parasomnia components exists during sleep and during arousals from sleep, for all age groups and for both genders.'[49]

However, he does not believe there are different subtypes of sleepwalking, just a range of manifestations depending on the circumstances. Riha does believe there are different phenotypes. Several sleep experts observed that there is a small group of patients with much more complex behaviour. The particular triggering events vary from person to person. Sexsomnia is an example of a very specific trigger and type of behaviour, although there is no consensus on whether sexsomnia is merely a subtype of sleepwalking or a distinct and separate clinical entity. Some experts consider that true sexsomnia rarely involves leaving the bed. A recent poster presentation at the Dubrovnik Conference on Cognitive Science looked at spatial awareness during sleepwalking and the authors found that 'while the majority of sleepwalkers stay within a

[48] Cartwright (2000), see footnote 47
[49] SCHENCK, C.H. (2005) *Paradox Lost: Midnight In The Battleground Of Sleep And Dreams*. Minneapolis: Extreme Nights LLC, at p. 26.

known environment during a somnambulistic episode, the ones who wander into a previously unknown space seem to have approximately the same level of spatial orientation and coordination'.[50]

2.3.4 The issues with the spectrum of possible behaviour illustrate a key issue with forensic sleep disorders. There is a dearth of research, and the literature is dominated by case reports which often only expand the repertoire of possibilities. There has been some systematic study, and Cramer Bornemann of the Minnesota group is compiling a case series from referrals to Sleep Forensics Associates. An Italian group have analysed the published case reports, and they conclude that there is a need for an international consensus on assessment of forensic sleep disorders.[51] However, the evidence base to justify any such consensus is not there at the current time. The continued analysis of the same case reports merely emphasizes the lack of proper research on this area. Also more studies that look at violent and sexual behaviour during parasomnia *outside* the forensic setting are needed. There are of course a number of trials where the parasomnia defence was raised and the experts were unanimous one way or the other. For example, Stephen Reitz was convicted of murdering Eva Weinfurtner, his lover, in California in 2004. Although family and friends testified that he was a sleepwalker, he had been violent in the past towards his lover and once threated to "gut her like a fish". The assault had been sustained and frenzied. Most of the experts agreed that this was not a sleepwalking episode (see further details

[50] MITROVIC, M. and KATIC, L. (2013) Sleepwalking Movement Behaviour: A Study on (Somnambular) Perception of Space, V. Dubrovnik Conference on Cognitive Science, 16-19 May 2013 2013 (the full paper is in preparation).

[51] INGRAVALLO, F., POLI, F., GILMORE, E.V., PIZZA, F., VIGNATELLI, L., SCHENCK, C.H., PLAZZI, G. (2014) Sleep-related violence and behavior in sleep: a systematic review of medical-legal case reports *Journal of Clinical Sleep Medicine* 10(8), pp. 927-35.

at **3.5.4**).

By contrast, Brian Thomas was acquitted for strangling his wife. He had a strong history of parasomnias, and he was a "decent man and a devoted husband" according to Judge Nigel Davis. He had no motive, his brother stating

> 'They were a loving couple and always like that together. He has always been a loving husband and a family man.'[52]

Both the sleep experts instructed agreed that this episode was sleep-related, most likely a sleep terror (see further details at **3.4.2**).

The circumstances of the death of Reeva Steenkamp's death at the hands of Pistorius raise the possibility of a confusional arousal[53]. This was raised with the defence team, who responded that they would not be running this defence as Oscar did not claim to have been confused when he shot the person he believed to be an intruder. The possibility of a confusional arousal would arguably render having a firearm under one's pillow inadvisable (see **3.5.5** for the case of Michael Ricksgers).

2.4 Complex Behaviour

Those people who show particularly complex behaviour in the night need careful evaluation. The folk psychological beliefs held by jurors may lead them to make erroneous conclusions about the compatibility of certain actions with parasomnia, and this is one of the major tasks of an expert witness to correct these and why they need to

[52] DE BRUXELLES, S. (2009) Man with rare sleep illness who killed his wife of 40 years during nightmare is declared innocent. *Times* (Nov 21st).
[53] Personal communication from Dr Nisbet.

be clinicians with extensive experience of patients with parasomnia. Many motor tasks associated with parasomnias seem incompatible with sleep to the layperson, but the level of consciousness, presence or absence of executive function and duration are much more important. Thus a list of the features of an episode is useful (see Appendix D for an example), especially where the particular acts may be ambiguous or their interpretation heavily dependent on context. This enables the jury to reach its own, possibly different, conclusions. For example, driving a highly familiar route is compatible with automaticity,[54] but navigating an unfamiliar one is not. As expert 29 stated

> 'the behaviours that a lot of these people exhibit are really extraordinary, and if you take regular sleepwalking, ones that do not have forensic implications, the behaviours can be extraordinary, you don't have to extrapolate very far from the clinical complex sleepwalking population to the forensic behaviour. The behaviours can be extraordinarily protracted and extraordinarily complex, and sometimes they end up with medico-legal consequences, but often the ones that don't are still as impressive.'

To an extent, the literature is not helpful, as the considerable number of case reports generally highlight rare and extreme instances of parasomnia. An example is the case of Parks; individually, the aspects of the episode were possible during sleepwalking (although rare manifestations), but collectively the possibility of the entire episode representing sleepwalking is more and more remote with each complex behaviour. Some sleep experts believe that more complex behaviour occurs during a confusional arousal at the end of a sleepwalking episode, but confusional arousals are short-lived.

[54] See **5.7** for an explanation of automaticity.

Some sleep experts believe that the longer sleep behaviours represent a merging of parasomnia with a psychogenic dissociative episode. Others believe that these episodes e.g. Kenneth Park's homicidal bout are purely dissociative in nature. One expert commenting on the possibility that Parks' episode was a sleep-related fugue stated

> 'it probably makes more sense in terms of the complexity of driving a car and handling all of that that you're looking at something other than sort of "normal" sleepwalking. It doesn't fit that, for that length of time and that complexity of movement'. (Butler)

Several experts differentiated "common or garden" sleepwalkers from the patients with more complex and problematic behaviour who often had extensive psychopathology. One expert when asked about distinguishing sleep-related dissociative states from parasomnia remarked

> 'I think that's difficult to say and I suppose what it boils down to is what terminology you use … I'm not sure how big a difference it makes what you call it.'

Whether sleep-driving is a true variant of sleepwalking is disputed by Pressman, particularly because most of the reported instances were associated with Z-drugs (zolpidem and zopiclone) and other hypnotics.[55] He considered that at least some of the episodes were a combination of somnambulism and drug effects. Vincent and others have also questioned whether the "Stilnox defence" (Stilnox is a brand of zolpidem) is

[55] PRESSMAN, M.R. (2011) Sleep and Drug-Impaired Driving Overlap Syndrome. *Sleep Medicine Clinics*, 6(4), pp. 441-45; PRESSMAN, M.R. (2011) Sleep Driving and Z-Drugs: sleepwalking variant or misuse of drugs? *Sleep Medicine Reviews*, 15, pp. 285-92.

really automatism or simply amnesia.[56]

The importance of this distinction depends on what verdicts and disposal options are available - if the accused can only be acquitted by reason of insanity, then the diagnosis is irrelevant (except to guide disposal). If a sleepwalker can receive a plain acquittal, then the diagnosis is very significant. The label of legal insanity is highly undesirable to most defendants, because of the stigma associated with mental illness generally and in particular with 'insanity'; with being so mentally impaired as to be excused criminal punishment. Certainly someone who suffered a homicidal dissociative episode would require psychiatric treatment and detainment for public safety. This would not generally be considered appropriate for a sleepwalker.[57]

All the participants considered that parasomnia equated to medico-legal automatism, except those who believed in islands of lucidity or marked heterogeneity of parasomnic episodes. The 'islands of lucidity' hypothesis is that the sleepwalker can ascend to a higher level of consciousness before returning to a state of legal automatism. If this is the case, then actions consistent with a higher level of consciousness are still compatible with a parasomnic episode. If this is not possible, then any action suggestive of a higher level of consciousness rules out parasomnia from that point in time onward. If the level of consciousness can vary in this way, then the process of determining criminal responsibility is separate from the determination of whether or not the episode was parasomnic. Weiss and del Busto noted

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[56] VINCENT, N. (2013) April 18th 2013-last update, *The Stilnox defence: automatism or amnesia?* Available: http://nicolevincent.net/?p=38; TEACHER, B.E. (2010) Sleepwalking Used as a Defense in Criminal Cases and the Evolution of the Ambien Defense. *Duquesne Criminal Law Journal*, 1(Summer), pp. 127-38.

[57] Nor is it possible in the UK, subsequent to the enactment of the Domestic Violence, Crime and Victims Act 2004.

> ‘Parasomnias can be considered both mysterious and paradoxic. Actions during sleep can range from simple to complex, raising a fundamental question as to the nature of consciousness, often believed to be a mystery. In addition, these behaviors seem paradoxic, because they seem directed and purposeful and yet occur during a state of relative unconsciousness. One must ask, “What physical actions are possible during a sleeping state?” before judging whether free will was compromised or even absent. Whether those behaviors can be considered purposeful, voluntary, or culpable is a matter for evolving jurisprudence.’[58]

It may be that as our understanding of parasomnias evolves, we will move away from the syllogism that sleepwalking=sleep=lack of responsibility as per the Latin aphorism ‘*In somno voluntas non erat libera’* (A sleeping person has no free will). This makes the parasomnia defence in effect a status defence. We know now that sleep is not a passive state, so the assumption may well also be questioned. Although parasomnias arise out of sleep, with the exception of RBD the person is not truly asleep, as Podolsky states

> ‘[a]lthough such persons appear to be walking in their sleep, they are not asleep in the normal sense of the word. Their perceptions are often quite acute.’[59]

Certainly some experts consider that parasomnic (especially sleepwalking) episodes needed to be evaluated on an individual basis for capacity and therefore criminal responsibility, because of the heterogeneity seen. This would entail an assessment less orientated simply to the diagnosis of parasomnia. Given the lack of definition of the

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[58] WEISS, K.J. and DEL BUSTO, E. (2011) Early American Jurisprudence of Sleep Violence. *Sleep Medicine Clinics*, 6(4), pp. 469-82.
[59] Podolsky (1961), see footnote 18.

relevant capacity in English law (except for “total loss of control”), this is potentially problematic.

Where complex behaviour is associated with violence, the sleep physician must be careful not to validate or excuse such behaviour as parasomnia without a solid basis (see **Section 2.8** and **2.9** below about the problem of malingerers). Indeed, one of my interviewees states in her letters to patients with psychogenic nocturnal dissociative episodes associated with violence that any potentially criminal actions by the patient would not be due to parasomnia. The reverse, reassuring patients that their actions would be excused on the grounds of parasomnia, would seem unwise, with the potential for inciting criminal behaviour by patients in the knowledge they would be exonerated by their sleep physician.

2.5 Freud, Rumination and Stress

During the first half of the twentieth century, the Freudian school of psychoanalysis led to the assumption that sleepwalkers might be acting out repressed desires. The psychiatrist and psychoanalyst Freud practised during the highly repressive Victorian age, when many of his patients would have been unable to express their feelings and desires to anyone but a doctor. It seems quite plausible that sleep-related dissociative disorders were more common in that era. One interviewee commented

> ‘the reason we got interested in this area is that in the seventies, when we started our sleep program, we were teaching the party line, which was that adults who had sleepwalking and sleep terrors had psychiatric disease, because that’s what the book

said, and that's what the articles said.'

Hartman's case series from a tertiary centre in London published in 2001 found a high incidence of psychiatric disorders in their population (see below).[60] The general consensus now is that the sleepwalker's actions do not reflect conscious, subconscious or unconscious desires - but even if they do, the paralysis of executive functioning means they are not criminally responsible. Indeed, the presence of a feasible motive is considered to rule out automatism (which is a reflection of the difficulties in determining whether or not someone was an automaton). This is problematic - as mentioned above, it is probably the case that a motive for murder could be found in many marriages. Some sleep experts believe that where a person is stressed and ruminating over something prior to falling asleep, this mental rehearsal may "prime" them to commit those complex actions whilst sleepwalking. For example, Kenneth Parks was very stressed about going to see his in-laws the following day to tell them about his gambling debts and forthcoming trial for embezzlement. Scott Falater was under considerable stress at work, and had been planning to repair the pool motor the next day. Cartwright believes that both men had been primed to perform their complex actions. Schenck also believes in a priming effect, where actions that have been ruminated over become lodged in procedural memory and manifest during parasomnias (however he believes that Falater was most likely in a sleep fugue). This priming effect relates purely to the complex motor actions rehearsed mentally rather than any intention to commit harm. If premeditation of harm were followed by those actions during parasomnia, this would

[60] HARTMAN, D., CRISP, A.H., SEDGWICK, P. and BORROW, S. (2001) Is there a dissociative process in sleepwalking and night terrors? *Postgraduate Medical Journal*, 77, pp. 244-9.

pose questions of culpability (cf *Gallagher*[61] and see **6.2.3**). A study by Oudiette confirmed that recently learned behaviour can be acted out during sleep.[62] This is part of the process of memory consolidation. Other sleep experts believe that these actions arise out of either full consciousness or a dissociative state.

There is the risk that patients with nocturnal dissociative episodes will be misdiagnosed as having a parasomnia (see previous section). Hartman's case series found that two out of 22 patients exhibited dissociative behaviours, but it is questionable whether they had genuine parasomnias (although the paper states there was polysomnographic confirmation of the diagnosis, sleep studies are not generally considered reliable in diagnosing sleepwalking). It seems more likely given the descriptions that the patients were exhibiting sleep-related dissociative disorder.

2.6 Risk Assessment

The medical and legal literature of forensic sleep disorders is relatively sparse, partly due to the apparent rarity of serious harm to others during parasomnias. Cartwright estimated in 2000 that there were sixty-eight cases where sleepwalking was invoked as a defence to murder reported in the forensic literature,[63] whilst Ebrahim counted approximately 100 in 2009.[64] The occurrence of potentially harmful behaviour during

[61] *Attorney-General for Northern Ireland v Gallagher* [1963] A.C. 349
[62] OUDIETTE, D., CONSTANTINESCU, I., LECLAIR-VISONNEAU, L., VIDAILHET, M. and SCHWARTZ, S.E.A. (2011) Evidence for the Re-Enactment of a Recently Learned Behavior during Sleepwalking. *PLoS ONE*, 6(3), pp. e18056.
[63] See footnote 47
[64] EBRAHIM, I.O. and SHAPIRO, C.M. (2010) Medico-legal consequences of parasomnias. In THORPY, M.J. and PLAZZI, G. (eds.). *The Parasomnias and Other Sleep-Related Movement Disorders*. Cambridge: Cambridge University Press, pp. 81-96.

sleep on the other hand is relatively common. The risk of recurrence of *serious* harmful behaviour due to sleepwalking is extremely low, and there have been very few cases recorded. It is not known exactly why this is the case. One explanation is that, as Schenck puts it, the more extreme acts that lead to involvement of the criminal justice system arise from a "perfect storm" of circumstances which would be very unlikely to recur. However, Schenck and Mahowald do not consider that this is always the case, and recommend the medico-legal concept of 'parasomnia with continuing danger as a non-insane automatism'.[65] This is a reflection of the politico-legal milieu of the USA where indefinite hospitalization is the common disposal under the insanity defence. Another explanation for the lack of recurrence is that sufferers receive and adhere to an effective treatment regime. Treatment is generally very effective at reducing sleepwalking and other parasomnias. Clonazepam is the first line drug but other treatments have been used including non-pharmacological modalities – hypnotherapy and cognitive behavioural therapy work by enabling sufferers to cope with stress better (a common trigger).[66] Violence may be recurrent with the other parasomnias, and violence towards the bed-partner is a particular issue with RBD.

The exact prevalence of violence during sleepwalking is difficult to ascertain because violence probably makes it far more likely for sleepwalkers to seek referral. Another difficulty is that the studies of violence do not necessarily distinguish between self-injury, injury to others and damage to property. Ohayon (1997) in a study of the UK population by telephone interviews found that 2.1 per cent of adults reported currently experiencing

[65] See footnote 33
[66] Hurwitz (1991), Kales (1992), Schenck (1989), see footnote 34.

violent or injurious behaviour during sleep.[67] This survey used a validated computerised diagnostic tool, but nonetheless this is probably an overestimate of violence related to parasomnia given the estimated prevalence. However, of the 106 subjects reporting VBS, only 15 (0.3 per cent of the population) had actually hurt themselves or their bed partner. The incidence of VBS in males was 2.6 per cent and in females 1.7 per cent. These figures are likely to include confusional arousals and violence not truly related to sleep, as there was no assessment by a sleep specialist. Moldofsky found that 59% of consecutive patients with sleep terrors and sleepwalking reported harmful behaviours (but only 9 of the 26 were harmful to other people [14 per cent of the total],[68] and Guilleminault (1995) found in a retrospective review that 70 per cent of patients were 'violent' (but only 41 per cent of their patients were violent to others, rather than only injuring themselves).[69] A case-control study found that among 95 confirmed sleepwalkers there was a history of violent and dangerous sleep related behaviour in 57.9 per cent (n=55).[70] In 31.2 per cent (n=30) of the sample the harm was directed to self, and in 45.8 per cent (n=44) it was directed at the bed partner. It also found that violent behaviour causing moderate to severe injury to the patient had occurred in 10.6 per cent (n=ten, eight males). Violent behaviour towards the bed partner requiring medical care had occurred in 6.4 per cent (n=five, four males). The most consistent risk factor for violence is sex, being 1.6-2.8 times more common in males with arousal

[67] Ohayon (1997), see footnote 40
[68] MOLDOFSKY, H., GILBERT, R., FRANKLIN, A. and MACLEAN, A. (1995) 'Sleep-Related Violence'. *Sleep*, 18(9), pp. 731-9.
[69] GUILLEMINAULT, C., MOSCOVITCH, A. and LEGER, D. (1995) Forensic sleep medicine: nocturnal wandering and violence. *Sleep*, 18, pp. 740-748.
[70] LOPEZ, R., JAUSSENT, I., SCHOLZ, S., BAYARD, S., MONTPLAISIR, J. and DAUVILLIERS, Y. (2013) Functional Impairment in Adult Sleepwalkers: A Case-Control Study. *Sleep*, 36(3), pp. 345-51.

disorders.[71] There are two main explanations posited for this difference: firstly that males are biologically more pre-disposed to violence (as evidenced by the male preponderance of ictal and peri-ictal aggression;[72] and secondly that males due to their greater size and strength are more likely to injure females than vice versa. Press reports of trials show an even greater preponderance of males[73] (it should be noted that 90 per cent of murders are committed by males).[74]

Violence is more commonly associated with RBD than with disorders of arousal. In rapid eye movement sleep behavior disorder (RBD) 97% of injuries inflicted by males.[75] This partly reflects the much higher proportion of male sufferers (90%), but differing sex ratios for violence in RBD due to different causes suggests a genuine biological cause. Assault of sleeping partners occurred in 64% (n=53) of patients with RBD in Olson's study, two suffering attempted strangulation.[76]

Another risk factor which this author found on examination of press reports of trials is the accused being a current or former member of the armed forces[77]. The reasons for

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[71] SICLARI, F., KHATAMI, R., URBANIOK, F., NOBILI, L., MAHOWALD, M.W., SCHENCK, C.H., CRAMER BORNEMANN, M.A. and AND BASSETTI, C.L. (2010) Violence in sleep. *Brain*, 133, pp. 3494-3509.

[72] RODIN, E. (1973) 'Psychomotor epilepsy and aggressive behavior'. *Archives of General Psychiatry*, 28, pp. 210-3; DELGADO-ESCUETA, A., MATTSON, R., KING L, GOLDENSOHN, E., SPIEGEL, H. and MADSEN, J.E.A. (1981) Special Report. The nature of aggression during epileptic seizures. *New England Journal of Medicine*, 305, pp. 711-6; MARSH, L. & KRAUSS, G.L. (2000) 'Aggression and violence in patients with epilepsy'. *Epilepsy & Behavior*, 1, pp. 160-8; TASSINARI, C.A., RUBBOLI, G., GARDELLA, E., CANTALUPO, G., CALANDRA-BUONAURA, G., VEDOVELLO, M., ALESSANDRIA, M., GANDINI, G., CINOTTI, S., ZAMPONI, N. and MELETTI, S. (2006) Central pattern generators for a common semiology in fronto-limbic seizures and in parasomnias. A neuroethologic approach. *Neurological Sciences*, 26(3 Supplment), pp. s225-s232.

[73] See Chapter 4 - the male: female ratio for violent crimes (including sexual assaults) was 29:1.

[74] COOPER, A. & SMITH, E.L. (2011) *Homicide Trends in the United States*, 1980-2008. NCJ 236018. Bureau of Justice Statistics.

[75] Siclari (2010), see footnote 71

[76] OLSON, E.J., BOEVE, B.J., and SILBER, M.H. (2000) 'Rapid eye movement sleep behavior disorder: demographic, clinical and laboratory findings of 93 cases'. *Brain*, 123, pp. 331-9.

[77] Seven out of 41 (17 per cent) defendants were currently or previously in the armed forces - see Chapter 4.

this preponderance are not known, but the drinking culture may contribute and two of the defendants had been diagnosed with post-traumatic stress disorder. Moldofsky found that stress, excess caffeinated beverages, drug use, a disturbed sleep schedule and less slow-wave sleep all increased the risk of violence.[78] Alcohol has an inconsistent effect on sleepwalking and some believe there is no link,[79] but it is generally acknowledged by UK experts as a trigger for some sleepwalkers whilst reducing sleepwalking in others or having no effect (see further below).

It has been suggested that individuals who repress their emotions are more likely to be violent sleepwalkers. The tendency for sleepwalking has a physical basis and is commonly associated with a family history of sleep disorders, but it is recognized that psychological factors can trigger a particular episode, and stress is a well-known precipitant of sleepwalking. For that reason cognitive behavioural therapy that helps the sleepwalker deal with stress is beneficial. Stress is also a confounding factor for the effect of alcohol on sleepwalking, given that alcohol is frequently used more when people are stressed.

One factor that decreases the level of violence suffered by partners is the precaution of sleeping in a separate room, therefore any survey of violence needs to ask about safety and security measures employed. One patient in Olson's study constructed a plywood barrier to separate him from his wife.[80] One patient slept in a straitjacket for his own

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[78] See footnote 68.

[79] PRESSMAN, M., MAHOWALD, M.W., SCHENCK, C.H., and CRAMER BORNEMANN M. (2007) Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations. *Journal of Sleep Research*, 16, pp. 198-212; PRESSMAN, M.R., MAHOWALD, M.W., SCHENCK, C.H., CRAMER BORNEMANN, M.A., BANERJEE, D., BUCHANAN, P. and ZADRA, A. (2013) Alcohol, sleepwalking and violence: lack of reliable scientific evidence. *Brain*, 136(2), pp. e229.

[80] See footnote 76.

safety, having already suffered a fracture of the spinous process of the third cervical vertebra.[81] Another sustained a hangman's fracture (a fracture of the odontoid process), which as the name suggests often results in death. A number of apparent suicides are suspected to have been parasomnic episodes.[82] The fact that a couple continue to share a bed does not rule out serious problems; partners may decline to sleep apart for a number of reasons:

- denial;
- marital harmony[83] ;
- episodes not thought sufficiently frequent;
- feeling sorry for partner affected by parasomnia; or
- simply no spare bedroom.[84]

Sexual behaviour during sleep (SBS) was first reported in the modern literature in 1955 by Langeludekke,[85] followed in 1986 by Wong who described masturbation during sleep[86]. 'Sexsomnia'[87] is the specific term for abnormal sexual behaviour related to parasomnia.[88] As Fenwick states, the rise in cases of sexsomnia can be largely attributed to social changes:

> 'There has been a major shift in social behaviour. It is now not unusual after an all-night party for young single people to sleep over at a friend's house; but of more

[81] Mahowald (1990), see footnote 28.
[82] Mahowald (2003), see footnote 36 at page 187.
[83] One interviewee reported that a patient's wife told him if they didn't sleep together, then the marriage was effectively over.
[84] Schenck (2005), see footnote 49.
[85] LANGELUDDEKE, A. (1955) Crimes committed during sleep. *Nervenarzt*, 26, pp. 28-30.
[86] WONG, K.E. (1986) Masturbation during sleep: a somnambulistic variant? *Singapore Medical Journal*, 27, pp. 542-43.
[87] Sometimes mis-described as "sexomnia" or "sexomania" in the press.
[88] SHAPIRO, C., TRAJANOVIC, N. and FEDOROFF, J. (2003) Sexsomnia – A New Parasomnia? *Canadian Journal of Psychiatry*, 48(5), pp. 311-17.

> significance, it is now socially acceptable for men and women to sleep together in the same room and even in the same bed, even if they have not known each other, or known each other well.'[89]

The reported cases of sexsomnic sexual assaults in the UK have usually occurred after consumption of large amounts of alcohol by the accused, and often also by the victim. Normally a victim of a sexual assault would wake upon being touched and so most putative sexsomnia cases are sexual assaults rather than rape. Where the victim is intoxicated, the accused may achieve penetration before she (or he) awakes. An internet survey of sexual behaviour in sleep found that although the authorities were much more likely to be involved in cases where there was sexual contact with minors, the prevalence of such paraphilias[90] did not seem much different from that observed in the general population (as far as this can be estimated).[91] It is true that sexual behaviour and orientation may be different during sexsomnic episodes. Similarly although sexsomnia episodes are more evenly distributed between the sexes, forensic sexsomnia cases are almost always males. An Australian case illustrates the different attitude to sexsomnia in women, with sexual activity during sleep seen as a problem for the affected woman but not a criminal issue.[92]

The experience of Cramer Bornemann in the USA is somewhat different. He describes the typical sexsomnia case he encounters as being the divorced or separated man who has his daughter over for a sleep-over when he has to share a bed with her due to lack

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[89] FENWICK, P. (1996) 'Sleep and Sexual Offending'. *Medicine, Science and the Law*, 36(2), pp. 122-134.

[90] Psychosexual disorders in which sexual gratification is obtained through highly unusual practices that are harmful or humiliating to others or socially repugnant, such as voyeurism or paedophilia.

[91] TRAJANOVIC, N., MANGAN, M. and SHAPIRO, C. (2007) Sexual behavior in sleep. *Social Psychiatry & Psychiatric Epidemiology*, 42, pp. 1024-31.

[92] NOWAK, R. (2004) Sleepwalking woman had sex with strangers. *New Scientist*, (15th Oct).

of space.[93]

2.7 Alcohol and Sleepwalking

One of the most contested areas of the sleepwalking defence is the role of alcohol in triggering sleepwalking (there is further discussion of the controversy in Chapter 9). The prominent North American sleep experts believe that there is no good evidence that alcohol triggers forensic sleepwalking episodes (whether violent or sexual behaviour) at all. The Sleep Forensics Associates group refuse to testify in cases involving significant alcohol ingestion. Schenck states this position is based on the policy issue that it is impossible to distinguish alcoholic intoxication from sleepwalking. They also point to a lack of research and to the studies that show that consumption of alcohol has a clinically insignificant effect on the amount of slow-wave sleep. The basis of the claim that this effect is clinically insignificant is not entirely clear, but the comparison is made with the effect on slow wave sleep of sleep deprivation (a recognized trigger for sleepwalking and other NREM parasomnias).

Most British experts agree that alcohol appears to precipitate sleepwalking in some sleepwalkers on the basis that a small minority of sleepwalkers report an association. The sceptics contend that factors associated with alcohol consumption such as a late night and stress may in fact be responsible for the apparent connection. Also the patients and eyewitnesses will be often unable to distinguish alcohol-related episodes

[93] CRAMER BORNEMANN, M.A. (2013) Sexsomnia: A Medicolegal Case-Based Approach in Analyzing Potential Sleep-Related Abnormal Sexual Behaviors. In KOTHARE, S.V. and IVANENKO, A. (eds.). *Parasomnias: Clinical Characteristics and Treatment*. New York: Springer, pp. 431-61.

from true parasomnias - the effects of alcohol on the brain are remarkably similar to that seen in the limited studies of sleepwalking. The major difference is the effect of alcohol on the cerebellum, which will cause unsteadiness and slurring of speech. All of those agree that as greater amounts of alcohol are consumed, it is increasingly likely that the behaviour is related to alcohol intoxication rather than sleepwalking. The discussion at the medico-legal seminar on automatism at Keele confirmed this consensus, with the caveat that most sleepwalkers report alcohol has either no effect on or reduces their sleepwalking. A recently published case-control study also found an association, with 12% of sleepwalkers reporting that alcohol exacerbated their sleepwalking.[94] Ebrahim reviewed the literature on alcohol and sleep and came to a different conclusion to Pressman *et al.*[95] There are other experts who agreed with Ebrahim about some of the problems with Pressman's review, particularly the selection of more generic papers on alcohol and sleep that did not address the relevant questions. Ebrahim argues that only nine out of the 19 studies are relevant. The majority (seven) of these nine studies show significant increase in slow-wave sleep for the first two to four hours of sleep (which is the relevant period for NREM parasomnias).[96] Another relevant point is that since the effect occurs in a minority of sleepwalkers, studies of the general population of sleepwalkers may be inappropriate anyway.

This weak positive association between sleepwalking and alcohol consumption means that when large amounts of alcohol are consumed, the experts in the Sleep Clinic

[94] Lopez (2013), see footnote 70.
[95] See footnote 79.
[96] Personal communication of unpublished letter.

Group[97] rely on the Alcohol Provocation Test (APT) to prove that alcohol is a relevant trigger for sleepwalking for the defendant. The procedure involves a three-night sleep study. The first night's results are "discarded" – its purpose is to acclimatise the subject to the test conditions (see comments above at **1.7.1** about the issues with this). The second night is the "diagnostic baseline" night, to see what occurs during sleep in the absence of alcohol. The third night is the alcohol challenge night, where the subject consumes the amount of alcohol that will achieve the blood alcohol levels calculated to have been present during the episode of harmful behaviour. The presence of parasomnias or parasomnia-related signs is considered to indicate a *capacity* to respond to alcohol consumption with a parasomnia episode. On the other hand, a negative APT neither rules out alcohol as a trigger nor a parasomnic episode as the cause of the behaviour. The extent of variation across different nights for the same subject makes the designation of the second night as a 'baseline' questionable. The proponents of the APT state that the case report by Hartmann validates the test. Patient P.H. consumed two typical cocktails on nights 2 to 4 of four non-consecutive nights of polysomnography with the following result:

> 'On Night 2, 1½ hours after sleep onset, he began talking and cursing in his sleep, disconnected himself from the electrodes, got up, and wandered down the hall; he looked confused and could not be awakened for a time by the technician. This episode was very similar to some of P.H.'s milder sleepwalking episodes as

[97] The Sleep Clinic Group *at the time* of the study comprised Peter Fenwick, Irshaad Ebrahim, Chris Idzikowski, and Adrian Williams.

described by his wife.'[98]

Abstinence from alcohol led to full resolution of his nocturnal wandering. The difficulty with this case report is that we do not know what stage of sleep this behaviour arose from, so we cannot be sure this was sleepwalking. It has been stated that a "sleepwalking" episode during polysomnography is a ground to suspect malingering.[99] One of the experts who formerly used the APT now disavows its use.

The main basis of the sceptic's position is the scientific data on the effect of alcohol on sleep, although there are other policy and legal justifications. There are several criticisms of the APT listed in the review of alcohol and sleepwalking by Pressman *et al*:

'1. This test was specifically created for legal purposes and has never been used in clinical settings.

2. This test lacks any data regarding its sensitivity, as there are no reports of the effects of alcohol at any dose on clinically diagnosed sleepwalkers.

3. This test lacks any data on its specificity, as it has never been tested on normal controls or patients with other types of sleep disorders.

4. There are no normative data on which to base clinical or forensic decisions.

5. The basic premise of alcohol testing that alcohol increases SWS [slow wave sleep] and arousal threshold is supported by only six of 19 published research studies.

6. No episodes of sleepwalking have been reported during alcohol studies.

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[98] HARTMANN, E. (1983) Two Case Reports: Night Terrors With Sleepwalking - A Potentially Lethal Disorder. *Journal of Nervous and Mental Disease*, 171(8), pp. 503-5.

[99] Ebrahim (2008), see footnote 19.

7. At the time of the criminal act most defendants were chronic alcohol users, but at the time of the sleep study they have been abstinent for months or years. The alcohol provocations thus cannot be a ‘recreation’.

8. Administering a large quantity of alcohol to someone who is no longer tolerant to large quantities of alcohol is potentially dangerous.

9. Other factors present at the time of the crime cannot be duplicated including:

a. sleep quantity and patterns for at least 1 week;

b. stress levels;

c. use of other legal or illegal drugs.

10. Trigger for episode unknown

11. Other people, including victims not present in sleep laboratory.

12. Sleep laboratory is sound shielded.

13. Sleep laboratory is absolutely dark.

14. Numerous electrodes and sensors placed on patient may disrupt sleep.

15. Sleep laboratory practices can disrupt usual sleep patterns.

16. Abstinent alcoholics have very poor quantity and quality of sleep.

17. Abstinent alcoholics have frequent arousals in sleep.

18. Administration of alcohol may result in an increase in SWS in abstinent defendants whose SWS has not dropped to very low levels.

19. Administration of alcohol to individuals whose baseline level of SWS during

abstinence has remained low may not show any increase in SWS.

20. Administration of alcohol is known to increase the severity of OSA and cause a change from simple snoring to sleep apnea. Sleep apnea is associated with frequent arousals from sleep. Frequent arousals from sleep may reduce SWS.

21. Presence of arousals or HSDWs [hypersynchronous delta waves] is not diagnostic of sleepwalking.'[100]

Also it is not possible to "fail" the APT e.g. a negative result does not rule out parasomnia. Arousals seen on video-PSG in the intoxicated patient may not have the same significance as arousals in the non-intoxicated patient. What is uncontroversial is that alcohol may exacerbate OSAHS and upper airways resistance syndrome, by relaxing the muscles in the upper airways as noted at (20) above. Where these conditions trigger parasomnia, it seems an entirely defensible conclusion that alcohol will exacerbate that parasomnia. The role of large amounts of alcohol and the use of the APT is a particular concern for Pressman and colleagues. Their review emphasizes the lack of solid evidence that alcohol increases the likelihood of sleepwalking, but provides no positive evidence to support the conclusion that a certain level of alcohol consumption rules out sleepwalking as a defence. However, he does not disapprove of testimony based on clinical experience about the effect of alcohol on sleepwalking, especially if qualified - simply expert testimony containing claims there is scientific evidence to prove that alcohol can trigger sleepwalking. He also disagrees with the use of the APT, in which he is not alone. It was not possible as part of this project to study

[100] PRESSMAN, M., MAHOWALD, M.W., SCHENCK, C.H., and CRAMER BORNEMANN M. (2007) Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations. *Journal of Sleep Research*, 16, pp. 198-212.

how the results of the APT are presented in court, on grounds of time and cost. Alcoholic blackout is an important differential diagnosis for sleepwalking. Alcohol and Z-drugs have an almost identical effect on the brain as sleepwalking, except alcohol affects the cerebellum more (leading to slurred speech and unsteadiness), and both alcohol and Z-drugs affect memory more than motor skills. Some sleep experts believe it is impossible to reliably distinguish clinically alcohol intoxication from sleepwalking or sexsomnia (presumably in the lack of the cerebellar signs mentioned above). It would also be a reasonable position to take that alcohol-induced sleepwalking ought not to be an excuse, being a consequence of alcoholic intoxication as per *Finegan v Heywood*[101] (albeit a rare consequence). Regardless of the scientific support for a link, there is a compelling policy argument for not considering alcohol-related parasomnic episodes as an excuse. It is also a perfectly ethical position to consider that the accused is entitled to argue any defence that the law allows, that the expert witness is there to assist the jury, and that it is for the jury to decide rather than the expert witness.

2.8 Malingering

An important aspect of any forensic clinical assessment for loss of capacity or conditions that may cause loss of capacity is the capability to detect malingering. All the sleep experts I spoke to started from an assumption that the defendant was not sleepwalking until persuaded otherwise. All the experts with a substantial workload spoke of cases they refused to take, because there were insufficient facts to support

[101] [2000] S.L.T. 905

putative parasomnia. On the other hand, there were few cases where they felt there was definite subversion - only one expert reported a case where he felt the defendant had been “put up to it” by his lawyer (for further details, see **8.5.11**). There have been cases where a parasomnia was claimed but later an alternative story was presented, such as Sean Freaney, who was convicted of murder at Oxford Crown Court.[102] He initially claimed he had been sleepwalking but changed his defence to that of erotic asphyxiation after expert evidence did not support his claims. In other cases like that of Zack Thompson,[103] even though he dropped the sleepwalking claim, it cannot be assumed that this entails fabrication on his part. An individual who is amnesic for the criminal act in question will be genuinely seeking an explanation for that loss of memory.

Outside of criminal proceedings, Mahowald et al report an individual who attended for assessment whom they suspected was malingering. The man reported increasingly violent episodes directed at his wife, apparently arising during sleep, including chasing her with a hammer. After exhaustive testing, no sleep disorder was diagnosed. It was suspected he was trying to have his violent behaviour legitimised in case he was ever charged with a violent offence, including murder.[104] One sleep expert described a patient whose wife alleged episodes of sleepwalking and sexsomnia that could never be substantiated on testing and circumstantial evidence suggested the accounts were untrue (personal communication - see below at **2.9** for further details) and other sleep experts report similar patients where there was reason to believe the accounts of a bed

[102] SUMNER, R. (2011) Bicester man sentenced for strangling murder. *Oxford Journal* (Mar 10th).
[103] DOLAN, A. (2012) Jail for rapist who said he was sleepwalking. *Daily Mail* (Mar 30th).
[104] MAHOWALD, M., SCHENCK, C. and CRAMER BORNEMANN, M. (2005) Sleep-related Violence. *Curr Neurol Neurosci Rep*, 5, pp. 153-8.

partner were factitious. Where the accused has some memory for the events but denies this, it might be possible by neurological testing to detect this - what might be considered advanced forms of lie detection. However as Allen puts it

> 'Because there is no unique response pattern associated with lying, methods that are subsumed under the rubric "deception detection" do not assess lying per se, but instead assess various processes associated with deception.'[105]

There are two main modalities that have been studied, "brain fingerprinting" and fMRI lie detection. "Brain fingerprinting" refers to the detection of the P300 event-related potential (ERP) or the related P300-MERMER (memory and encoding related multifaceted electroencephalographic response), particular brain signals that occur when the person is presented with familiar information, aka as the "guilty knowledge test". Thus if the accused denied any memory of certain events that only a conscious guilty party would know, the detection of the P300-ERP or P300-MERMER would suggest that the person was deliberately concealing that guilty knowledge.

Functional MRI has been used to try and detect lying. A company called "No Lie MRI" markets its services for a variety of uses. Functional MRI was used in a Channel 4 series, most notably on two of the so-called "Tipton Taliban"[106]. It works by producing images of the activation of parts of the brain when questions are asked. It relies on the assumption that different parts of the brain are activated when the person is telling the truth than when they are lying. However, these associations are based on MRI studies in artificial situations, where the subjects are being asked to lie; furthermore, there is

[105] ALLEN, J.J. (2008) Not Devoid of Forensic Potential, but... *American Journal of Bioethics*, 8(1), pp. 27-28.
[106] *Lie Lab,* broadcast in 2007.

nothing at stake, unlike in the criminal justice system. It may well be prone to countermeasures.

Although there have been attempts to introduce such evidence into courts in the USA, the only case where such evidence has been admitted was in the Indian trial of Aditi Sharma for the murder of her former fiancée. The technique used was the Brain Electrical Oscillations Signature (BEOS) test.[107] The consensus is that the technique is not sufficiently proven.[108] It is difficult to see how any of these techniques would be helpful in the person who is amnesic for some other reason, the commonest being alcoholic intoxication or blackout.

2.9 Factitious or Induced Parasomnia

A few interviewees related cases where it appeared that the bed partner's accounts of the patient's sleep behaviour were fabricated. Since the description of Munchhausen's Syndrome by Proxy by Meadow in 1977,[109] doctors have been aware that children can be the victim of a parent or carer who alleges or manufactures illness in the child. The term factitious or induced illness is preferred now, decoupling the diagnoses of victim and perpetrator. The victims are anyone who will neither refute the fabrication nor disclose the induction of illness, so children under the age of 6 or adults with mental impairment and/or communication difficulties e.g. dementia or severe mental handicap

[107] DANAHER, J. (2010) Scientific evidence and the criminal law: Lessons from brain-based lie detection. *Judicial Studies Institute Journal*, 1(1), pp. 1-37.
[108] Allen (2008), see footnote 103
[109] MEADOW, R. (1977) Munchausen Syndrome By Proxy: The Hinterland of Child Abuse. *The Lancet*, 310(8033), pp. 343-45.

are the usual victims. To these categories we propose adding a group to which we all belong periodically, the sleeping. In any condition where the person is unaware of or amnestic for his behaviour, allegations of misconduct can be fabricated. With epilepsy, dissociative states or simple alcohol intoxication the person will be usually aware of a period for which they have amnesia. By contrast, with sleepwalking and other parasomnias it is perfectly feasible that the individual returns to bed with no indications of a parasomnic event – thus the person will have no reason to suspect fabrication of the event.

2.9.1 The perpetrator of the fabrication or induction of illness will have some secondary gain; often there may be a need for medical attention. However there may be other reasons, for example monetary gain or resolution of interpersonal difficulties. The presence of these issues should therefore prompt suspicion in combination with a vulnerable patient and a pattern of symptoms that could be induced or fabricated. It is well recognized that individuals can fabricate claims of sleepwalking themselves for secondary gain, most commonly when seeking a defence to criminal charges (or simply embarrassing behaviour). Forensic sleep experts universally have a high degree of scepticism about claims of sleepwalking. Schenck reports in *Paradox Lost* that the Minnesota Regional Sleep Disorders Centre has

> ‘extensively evaluated several men who claimed to have had a violent parasomnia, and concluded that they most likely planned to intentionally harm or kill a spouse, for which they would invoke a parasomnia defense for non-culpability.’[110]

Reports of trials also show that known sleepwalkers will claim to have been

[110] See footnote 49.

sleepwalking during an episode that is completely inconsistent with a parasomnia – an example is the recent trial in the UK of Stephen Davies where although an expert witness agreed that Davies had episodes of sexsomnia, he did not have one on the night in question (for more details see Chapter 4). Thus even the confirmed diagnosis of sleepwalking/sexsomnia *per se* should not provide a defence to potentially criminal harmful behaviour. Again, Schenck acknowledges this in *Paradox Lost* warning that:

> 'there will be cases in which a malingerer also has a parasomnia, which if documented in the sleep lab may allow that person to succeed with the plan of malingering in which a reputed parasomnia is a central feature.'

Another example of factitious or induced parasomnia is where genuine sleep disorders are induced in children by a caregiver; mostly sleep apnoeas induced by suffocation.

2.9.2 In the cases of factitious parasomnia described by my interviewees, there was no physical or clinical evidence to support the allegations of parasomnia (sexsomnia and violent sleepwalking), and there were domestic circumstances that suggested a motive for fabrication by the bed partner. Several of the sleep experts I spoke to had such cases, but unfortunately few of them could remember sufficient details to report them. Nisbet commented

> 'I've seen one case where a patient with REM sleep behaviour disorder and memory problems whose wife … I wouldn't necessarily say she was angling for a divorce, she was so angry with him, she was exaggerating the condition and making it worse than it was … it took 2 or 3 times of seeing them before one could fully appreciate there was that going on.'

Two other centres described a patient where it was felt that the wife was fabricating

allegations of sexsomnia. In particular, it seems that spousal resistance to sleeping in separate beds where there are reportedly frequent and serious incidents of violence or aggression may be a marker for factitious parasomnia. The inability to capture episodes in the sleep laboratory has no significance, given the usual lack of the regular bed partner and the unfamiliar surroundings, but resistance to home monitoring may also suggest fabrication.

2.10 Summary

Parasomnias are relatively common, but episodes rarely lead to the sufferer facing criminal prosecution. The most probative facts relate to the nature of the act itself, but a close second are the details of the family and medical history, especially accounts from bed partners, family and friends of previous episodes. Tests are not definitive, and even a firm diagnosis of a parasomnia does not determine the mental state of the accused at the time of the criminal act. The complexity of actions that are possible during parasomnia often surprises both laypeople and doctors who do not specialize in sleep medicine, so it is essential for lawyers to instruct a suitably qualified and experienced expert with a substantial regular exposure to patients with parasomnia. Episodes where there has been consumption of alcohol require a careful assessment of the relative likelihoods of the episode being related to intoxication or parasomnia.

There is a clear need for more research into the prevalence of harmful behaviour due to parasomnia. Clinicians should ask their parasomnia patients about potentially harmful behaviour and warn them about risky situations such as sharing a bed with a stranger.

There may also be a need to educate the public about the potential for harmful behaviours during sleep.

Chapter 3: Sleepwalking and Other Parasomnias as a Defence

"In all of us, even in good men, there is a lawless wild-beast nature, which peers out in sleep." (Socrates)

3.1 Forensic Sleepwalking – Historical Cases and Case Reports

Sleepwalking and other parasomnias have been recognized as a defence for many years in the UK, treated for the majority of that time as a non-insane but latterly as an insane automatism (although recent cases may indicate a swing back to non-insane automatism). The notion that persons are not responsible for illegal acts committed during sleep goes back centuries further. It is rarely used as a defence, although increasing awareness of sleep disorders, improved diagnostic tests and high- profile trials has seen the number of referrals to forensic sleep experts increase exponentially; Dr Idzikowski reports one enquiry per week. The proportion of referrals seen as bona fide varied between 10 and 80%. Cartwright reported in 2000 that there were sixty-eight cases where sleepwalking was invoked as a defence to murder reported in the forensic literature.[1] It seems that the sleepwalking defence occurs most commonly in Anglophone common law countries. Riha commented

> 'I sometimes give talks in Europe and my colleagues in Prague for instance, although they're in neurology departments, say they hardly ever see people presenting with

[1] CARTWRIGHT, R. (2000) Sleep-related violence: does the polysomnogram help establish the diagnosis*? Sleep medicine*, 1, pp. 331-35.

> sexsomnias – now whether that's under-reported or [some other reason] that's difficult to tell'

The reasons for this disparity are not clear - it has been attributed to cold war fixations on the threat of Soviet totalitarianism with films like "Invasion of the Body Snatchers":

> 'These were allegories about the way in which good, free-thinking American citizens can be possessed by alien forces that turn them into zombies - automatons who were following the directions not of their own minds but of the minds of others.'[2]

However, the pre-occupation with the "missing defendant" predates this, as Eigen relates in detail (see **Section 3.5**).

3.2 Pre-1800

It has been recognized since at least the Council of Vienne (1313)[3] that a sleeper should not be held responsible for killing or injuring someone, and they reported instances of homicides by sleeping persons. In the 15th century the phenomenon of "murderous sleepwalkers" was described.[4] The sixteenth-century canonist Covarrubias stated that the act of a sleeper was not a sin unless he deliberately arranged matters beforehand. The jurist Matthaeus in the seventeenth century considered that the sleepwalker deserved punishment if "he harboured enmity against that person"[5] and the

[2] COLES, E.M. and JANG, D. (1996) A Psychological Perspective on the Legal Concepts of "Volition" and "Intent". *Journal of Law and Medicine*, 4(August), pp. 60-71.
[3] The fifteenth Ecumenical Council of the Roman Catholic Church held 1311-12 in France
[4] EKIRCH, A.R. and SHNEERSON, J.M. (2011) Nineteenth-Century Sleep Violence Cases: A Historical View. *Sleep Medicine Clinics*, 6(4), pp. 483-91.
[5] WALKER, N. (1968) *Crime and Insanity in England Volume One: The Historical Perspective*. Edinburgh: Edinburgh University Press, pp.166-7.

Scot Mckenzie expressed a similar sentiment:

> 'Such as commit any crime whilst they sleep, are compared to Infants…and therefore they are not punisht, except they be known to have Enmity against the person killed; or that Fraud be otherways presumable: quo casu they be punisht extra ordinem.'[6]

In 1600 the knight von Gutlinge, when awoken from sleep, stabbed his friend to death. He was found guilty and executed. Colonel Culpeper in 1686 apparently shot a Guardsman and his horse during a dream;[7] he was found guilty of manslaughter whilst insane, and was pardoned a few weeks later. In 1791 a Silesian woodcutter Bernard Schedmaizig awoke from sleep and killed his wife confusing her for an intruder. His state was described as *Schlaftrunkenheit* or "sleep drunkenness".[8] These early accounts tend to suggest confusional arousals. Although the diagnosis of sleep disorders was not as sophisticated and of course no tests were available, nonetheless where there is sufficient detail we can be reasonably confident that these episodes represent parasomnias.

3.3 Post-1800

The Victorian public was familiar with somnambulism and related states of mental absence such as hypnotism, as documented by Eigen.[9] In 1853 Sarah Minchin, a 17-

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[6] *The Laws and Customs of Scotland in Matters Criminal*, (1678) Edinburgh.
[7] Robert MacNish in *The Philosophy of Sleep* relates a simplified version of the tale, changing the name to Sir Peter Lely who is acquitted.
[8] BONKALO, A. (1974) Impulsive acts and confusional states during incomplete arousal from sleep: criminological and forensic implications. *Psychiatric Quarterly*, 48, pp. 400-409.
[9] EIGEN, J.P. (2003) *Unconscious Crime: Mental Absence and Criminal Responsibility in Victorian London*. Baltimore, MD: The Johns Hopkins University Press.

year old servant girl who had stabbed one of her master's children in the middle of the night, put forward a sleep-related defence but this did not succeed.[10] It has been suggested she suffered sleep terrors as her mother confirmed she often screamed in the night. The possibility of somnambulism was raised after comparing her behaviour to a description of somnambulism in Taylor's *Medical Jurisprudence.*[11]The doctor who testified to the court, Henry Bullock (a house surgeon rather than a forensic psychiatrist) was not convinced.[12] The case attracted no publicity and she was sentenced to three months in jail on the relatively minor count of unlawfully wounding (although she had been charged with attempted murder and grievous bodily harm). Esther Griggs was tried in 1858 for throwing her baby to its death from a first floor window after having a nightmare (or more likely night terror) that the house was on fire. The grand jury refused to indict her.[13] These early cases were not recorded by law reporters but by journalists – a trend that continues to the current day as their salaciousness often outweighs their legal importance. The Griggs case was also reported in the second edition of Bucknill and Tuke's *Manual of Psychological Medicine* (1862). A famous case from the 19th century in Scotland involved Simon Fraser, a known sleepwalker who threw his 18-month-old son against a wall, killing him. Fraser was not formally acquitted according to Walker - the Court 'deserted the diet *simpliciter*' (that is, the trial was abandoned; the jury returned a narrative verdict – "The jury find that the panel killed his child when he was unconscious of the nature of the act which he committed, by reason of a condition arising from somnambulism; and that the panel was not responsible"). Fraser was

[10] *R v Sarah Minchin,*(1853) The Proceedings of the Old Bailey, case 725 (Jun 13th)
[11] The Hunter's Tale; Eigen (2003), see footnote 8
[12] Ekirch (2011), see footnote 4.
[13] Walker (1968), see footnote 5.

advised by the judge not to sleep in the same room as anyone else in an ad hoc arrangement. The case was reported in the medical literature with the warning that "[s]omnambulism is a condition so obscure and ill-defined, and might so easily be simulated and used as a cloak for crime, that considerations of public safety make it necessary to examine the patient's history very closely".[14] I would suggest that since 1878 the same caveat has continued to apply.

There is an earlier case, Albert Tirrell who in 1846 in Boston reportedly killed a prostitute by slitting her throat and then set fires to destroy the evidence. Although many sources state the defence of sleepwalking succeeded, Weiss and del Busto found that this was not the case:

> 'The prosecutor demanded that, by law, the jury state the grounds for acquittal. "The Foreman of the Jury stated that the question of somnambulism had not entered into the consideration of the Jury.'[15]

A notable contemporary forensic psychiatrist, Isaac Ray, believed Tirrell was malingering. In Kentucky, the case of *Fain v Commonwealth* was reported in 1879. The accused had a history of sleepwalking and shot a hotel porter when the victim had tried to awaken him. He was acquitted of manslaughter on appeal.

3.3.1 Wharton, a noted lawyer of the time, set out criteria for responsibility in somnolentia, some of which are still recognized now (see Fenwick and Mahowald & Schenck criteria at **2.2**):

> 'a. A general tendency to deep and heavy sleep must be shown, out of which the

[14] YELLOWLEES, D. (1878) Homicide by a Somnambulist. *Journal of Mental Science*, 24, 415-58.
[15] WEISS, K.J. and DEL BUSTO, E. (2011) Early American Jurisprudence of Sleep Violence. *Sleep Medicine Clinics*, 6(4), pp. 469-82.

patient could only be awakened by violent and convulsive effort (in other words, a history of relevant sleep disorder) ….

e. The act must bear throughout, the character of unconsciousness.

f. The actor himself, when he awakes, is generally amazed at his deed, and it seems to him almost incredible. Generally speaking he does not seek to evade responsibility, thought there are some unfortunate cases in which, the wretchedness of the sudden discovery overcomes the party himself, who seeks to shelter himself from the consequences of a crime of which he was technically, though not morally, guilty.'[16]

In the 1880s, a French detective Robert Ledru was asked to investigate the murder of a man on the beach in Le Havre. He came to the conclusion that he himself must have shot the victim after seeing his characteristic footprint (with the big toe missing) and realising his own socks were wet. The police were reluctant to accept his "confession", but on confinement in the cells with a gun at hand, he shot at the guards during a sleepwalking episode. Ledru was exiled to the country.[17] In 1893 in France there was a case reported where a servant shortly after falling asleep shot two people. Charcot, the famous French physician, gave an opinion on an attempted murder during apparent somnambulism where a servant injured his landlady and another employee with a gun.[18]

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[16] Weiss (2011), see footnote 15

[17] PODOLSKY, E. (1961) Somnambulistic homicide. *Medicine, Science and the Law*, 1, pp. 260-65; LOOK AND LEARN. (2012) Jan 2012-last update, *Chief Inspector Ledru, the policemen who caught...himself.* Available: http://www.lookandlearn.com/blog/15523/chief-inspector-ledru-the-policeman-who-caught-himself/.

[18] BROUARDEL, P., MOTET, D. and GARNIER, P. (1893) Affaire Valrof. Double tentative de meurte. Somnambulisme allegue. *Annales d'hygiene publique et de medecine legale*, 29, pp. 407-524.

3.3.2 The modern reporting of cases of forensic sleepwalking probably begins with Podolsky in 1961, although there had been two case series on *Schlaftrunkenheit* or "sleep drunkenness" (confusional arousal in English) in German by Gudden in 1905 and Schmidt in 1943. Podolsky commented on a number of historic cases, including Ledru.[19] Most of these early case reports involve homicide and all the accused were men. This preponderance of males persists into modern times – all but two of the cases reported in the recent press have involved male defendants. The preponderance is even more pronounced for violent or sexual crimes. Generally the successful sleepwalking defence resulted in acquittal on the grounds of sane automatism in England, until the case of *Burgess*[20] (although one defendant was detained in Broadmoor, so presumably had been found 'guilty but insane', the direction at the time under The Trial of Lunatics Act 1883).[21]

3.4 Sleepwalking trials in the UK

3.4.1 The most controversial sleepwalking case heard in the UK is probably *Lowe* – like the case of Parks, dramatic and dividing sleep experts about whether or not it was truly a parasomnic episode. Lowe battered his father to death during a prolonged assault which had several features atypical of a sleepwalking automatism. He sought out his victim; the episode lasted some time, involving at least four separate attacks in the

[19] Podolsky (1961), see footnote 16.
[20] [1991] 2 WLR 1206
[21] HOPWOOD, J.S. & SNELL H.K. (1933). Amnesia in Relation to Crime. *British Journal of Psychiatry*, 79, pp. 27-41.

night;[22] and there were disorganized and ineffective attempts to clear up the blood. The case report published in *Medicine, Science & the Law*[23] prompted heated discussion in the forensic sleepwalking community. Pressman *et al* argued that the amount of alcohol consumed by the defendant made the defence of sleepwalking untenable, and that the Alcohol Provocation Test used was unvalidated. The case was described as "the first sleepwalking murder in the UK" by Ebrahim, apparently ignoring *Fraser* from the previous century, and the admittedly contentious *Boshears*.[24] Lowe was found not guilty by reason of insanity, and received an admission order. He was released after ten months. His sentencing occurred before the Domestic Violence, Crime and Victims Act 2004 came into effect, which restricts commitment for a hospital order to those with a mental disorder within the Mental Health Act 1983 that requires specialist treatment.

3.4.2 More recently, there has been the case of Brian Thomas at Swansea Crown Court, on trial for the murder of his wife.[25] Mr Thomas had a strong history of sleep disorders - he had been a sleepwalker since childhood. However, he attributed erectile dysfunction to his medication for depression and Parkinson's disease, and so would periodically omit to take them so he could make love to his wife. One such occasion was the holiday with his wife in July 2008. He took their campervan to West Wales for a romantic break. Their sleep was disturbed by boy-racers in the car park where they were staying overnight. Later that night he had a dream that someone was on top of his

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[22] PRESSMAN, M.R., MAHOWALD, M.H., SCHENCK, C.H., CRAMER BORNEMANN, M.A., MONTPLAISIR, J.Y., ZADRA, A., PILON, M., GRUNSTEIN, R., BUCHANAN, P.R. and TACHIBANA, N. (2009) *Sleep-related automatism and the law* (letter to the editor). Medicine, Science and the Law, 49(2), pp. 139-43.

[23] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-136.

[24] TIMES. (1961) U.S. Sergeant is cleared of murder. *Times* (Feb 8th) News,5.

[25] DE BRUXELLES, S. (2009) Man with rare sleep illness who killed his wife of 40 years during nightmare is declared innocent. *Times* (Nov 21st).

wife in the campervan. He went to pull the man off by pulling at his neck. In the morning he realised he had in fact strangled his wife and called 999, stating

> “I think I've killed my wife. Oh my God. I thought someone had broken in, I must have been dreaming or something. What have I done?”

It is not clear whether his sleep disorder was REM sleep behaviour disorder (RBD) or night terrors. The diagnosis of Parkinson’s disease might suggest REM sleep behaviour disorder, which is associated with neurodegenerative diseases, and he was the right age for RBD. However the diagnosis of Parkinson’s disease seems dubious given that he often did not take his trihexyphenidyl. The video-PSG suggested that a night terror was the likely cause – there was sleep apnoea and periodic leg movements causing arousals but nothing else. The detail and content of the dream recalled goes against simple sleepwalking which occurs during non-REM sleep where the mentation is more emotions with less detail and less aggression. The issue at trial was whether or not the appropriate verdict was plain acquittal or the special verdict. Evidence was heard by the prosecution about the low likelihood of recurrence. As well as the two sleep experts, a forensic psychiatrist approved under Section 12 of the Mental Health Act 1983 gave evidence. She was not a sleep expert and simply gave evidence about whether or not Mr Thomas had a mental disorder that required hospital treatment. This is probably due to Section 24 of the Domestic Violence, Crime and Victims Act, which precludes a hospital order where the condition is not a mental disorder under the Mental Health Act. However it does not hinge on whether or not the condition is a ‘disease of the mind’. It was decided that there were no public safety issues, at which point the prosecution offered no further evidence. The jury were directed by the trial judge to acquit.

3.4.3 The case of Lowe and the accompanying publicity saw the beginning of the upward trend in the sleepwalking defence and inquiries by solicitors to sleep experts (figures kind courtesy of Dr Fenwick).

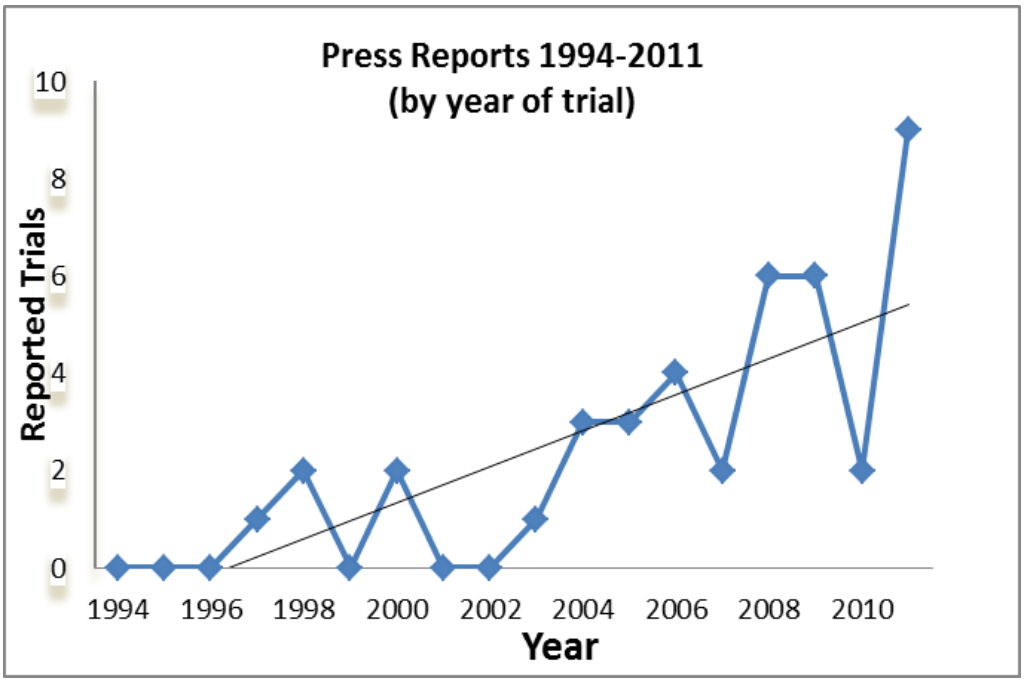

Fig 1: Graph of increasing numbers of referrals to Peter Fenwick plus the numbers of trials reported in the press

Some are highly speculative – one sleep expert described an enquiry about the possibility of automatism due to sleepwalking in a case where the solicitor's client violently assaulted someone during the day whilst wide awake. On the other hand, another expert witness had a case referred to him for assessment where the possibility of sleepwalking had not been raised by the defendant or his solicitors despite a strong personal history. Although a finding of guilt cannot necessarily lead to the conclusion that the defence was spurious, on occasion the defendant will completely change his defence or plea when the experts do not support a sleepwalking defence. For example, Goldie had claimed to his victims of child sexual abuse (but not in court) that he suffered

sexsomnia.[26] Freaney, convicted of the murder of his partner at Oxford Crown Court, had initially claimed he was sleepwalking but changed his defence to one of erotic asphyxiation.[27] Unfortunately these defences, although recognized as spurious and rejected, are presented as evidence for the lack of credibility of sleepwalking defences generally - rather than evidence that the experts can and do detect malingerers. There are no figures on how often the sleepwalking defence is presented, but given the collective experience of British sleep experts it seems unlikely that there are more than 30 cases per year. There are also no figures on how many incidents occur during sleepwalking that do not progress through the criminal justice system.

3.4.4 Sleep clinicians universally agree that sleepwalkers do strange things during somnambulistic episodes in situations where there is no secondary gain and therefore no reason to malinger. They sometimes put themselves in considerable danger. Mahowald reported one sleepwalker who wears a hospital restraint jacket in bed after sustaining a cervical fracture falling from a window during a parasomniac episode.[28] There have been several pseudo-suicides reported.[29] Nocturnal wandering is apparently very common in hotels, as previously noted (see **2.3**). In fact unwanted behaviour is often the trigger for seeking medical help for a problem that is generally seen as a source of amusement rather than an illness. Thus it is not surprising that a substantial proportion of those relying on the sleepwalking defence have not sought medical help

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[26] BBC NEWS. (2011) 2011-last update, *Dunfermline man who blamed 'sexsomnia' jailed for abuse*. Available: http://www.bbc.co.uk/news/uk-scotland-edinburgh-east-fife-13682135.

[27] OXFORD MAIL. (2011) Jurors take just 20 minutes to convict killer Sean Freaney. *Oxford Mail* (Mar 10th).

[28] MAHOWALD, M., BUNDLIE, S., HURWITZ, T. and SCHENCK, C. (1990) 'Sleep Violence – Forensic Science Implications: Polygraphic and Video Documentation'. *Journal of Forensic Sciences*, 35(2), pp. 413-32.

[29] MAHOWALD, M., SCHENCK, C., GOLDNER, M., BACHELDER, V. and CRAMER BORNEMANN, M. (2003) 'Parasomnia pseudo-suicide'. *Journal of Forensic Sciences*, 48(5), pp. 1158-62.

prior to their arrest.

3.4.5 Minor episodes of violence appear to be common, but recurrence of serious violence is rare. One sleepwalking expert considered that compulsion of treatment was not necessary because the sleepwalker would automatically seek medical advice and comply with measures to reduce the risk of recurrence. One participant recounted the concerns of one man acquitted on the grounds of sleepwalking:

> 'he contacted [his attorney] and … the forensic psychologist, because he was off meds, and he'd begun to have sleepwalking behaviours which were of concern. Nothing violent, but because he was now back to sleepwalking and given this previous history, it caused him huge anxiety.'

There are no recorded second trials of individuals for serious crimes where sleepwalking was argued in defence, so it is not known what approach would be taken (in one instance where a sleepwalker committed a second violent act, he pleaded guilty). Schenck & Mahowald suggest that those acquitted once of parasomnia with a known trigger e.g. excessive alcohol consumption should not be permitted the defence subsequently.[30] In the case of *Finegan v. Heywood,* a man who knew that excessive alcohol consumption triggered his sleepwalking was convicted of drink driving whilst sleepwalking. This conviction was on the basis that his state of automatism was self-induced.[31] Even the sleep experts who are persuaded that alcohol is a significant trigger for sleepwalking believe that those with a previous history of harmful behaviour

[30] SCHENCK, C.H. & MAHOWALD M.W. (1998) An Analysis of a Recent Criminal trial Involving Sexual Misconduct with a Child, Alcohol Abuse and a Successful Sleepwalking Defence: arguments supporting two proposed new forensic categories. *Medicine, Science and the Law*, 38(2), pp. 147-52.

[31] [2000] S.L.T. 905; in the recent case of *Queally*, (BBC NEWS, 2014-last update, Available: http://www.bbc.co.uk/news/uk-england-suffolk-30088748 'Sleep driving' jockey Tom Queally banned.) District Judge Knight commented that the law had previously ruled that sleepwalking was no defence to drink driving. It is not known which case she was referring to.

following alcohol consumption should not be exonerated. Judge Tyrer in *Pooley* directed the jury that if alcohol was the sole trigger for his sleepwalking, then this was self-inflicted and not an excuse.[32]

3.4.6 Although sleepwalking and sexsomnia are often triggered by external stimuli, for example something that causes a sudden awakening or the presence of a bed partner, it is questionable whether these would count as an external cause in law (see **5.6.1**). Martin JA in *Rabey* found that "the ordinary stresses and disappointments of life which are the common lot of mankind"[33] were not the type of events that could support the defence of sane automatism, which contrasts with the ordeal of the accused in *R v T*[34] who had been raped. Lord Lane came to a similar conclusion in *Burgess:*

> 'the possible disappointment or frustration caused by unrequited love was not to be equated with something such as concussion'.[35]

Similarly the presence of a bed partner is fundamentally different from an unusual and unexpected event like the attack of a swarm of bees or being struck by a stone, and so it is arguable this precipitating factor would not be sufficient to render sexsomnia a sane automatism. In any case, the argument prevailed in *Burgess* that

> 'although sleepwalking can no doubt be triggered by external factors such as stress, such factors are merely to be regarded as external triggers of a condition the primary source of which is internal to the accused.'[36]

In other words, the presence of an external trigger does not fundamentally alter whether

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[32] BUCKS HERALD. (2007) 'Man Cleared of Rape after Sleepwalking Defence'. *Bucks Heralds* (Jan 18th).
[33] (1981) 79 Dominion Law Reports 435
[34] [1990] Criminal Law Review 256
[35] [1991] 2 WLR 1206
[36] MACKAY, R. (1995) *Mental Condition Defences in the Criminal Law*. Oxford: Clarendon Press, at p. 46.

or not the condition is considered to have an internal cause. In *Hennessy,* the presence of stress, anxiety and depression did not mean that the defendant's hyperglycaemia had an external cause. Lord Lane states

> '[t]hey constitute a state of mind which is prone to recur. They lack the feature of novelty or accident, which is the basis of the distinction drawn by Lord Diplock in Reg. v. Sullivan'.[37]

3.5 Sleepwalking cases in Other Common Law Jurisdictions

3.5.1 Perhaps the most infamous case of homicidal somnambulism is the case of Parks. The Parks case truly divides the expert witness community, and for this reason should not be held up as an archetypal forensic sleepwalking episode (although it is often used as such in discussions of legal philosophy, for example). Parks was a 23 year old Canadian 'gentle giant'[38] who in 1987 killed his mother-in-law and severely injured his father-in-law with a kitchen knife. He drove 23 km to his in-laws' house, negotiating at least one set of traffic lights. Afterwards he reported himself to the police station, bloodied knife in the car, saying

> "I just killed someone with my bare hands; Oh my God, I just killed someone; I've just killed two people; My God, I've just killed two people with my hands; My God, I've just killed two people. My hands; I just killed two people. I killed them; I just killed two people; I've just killed my mother- and father-in-law. I stabbed and beat them to death. It's all my fault".

[37] *R v Hennessy* [1989] 2 All ER 9
[38] Frequent childhood sleepers are often tall, apparently due to the effect of their sleep disorder on growth hormone production

Only then did he realise that he had severed several tendons to his hand, which required extensive surgery and would ordinarily have been extremely painful.[39]

This episode has several features not typical of sleepwalking – his behaviour was very complex, lasted for at least 25 minutes[40] and he had sought out his victims. On the other hand, he was bewildered and shocked by the effects of his actions, utterly remorseful, made no efforts to conceal his crimes and handed himself in, and had no animosity towards his victims. His indifference to his own wounds and failure to recognize his parents-in-law also points to dissociation, whether parasomnic or psychogenic. He had a history of sleepwalking, sleeptalking and childhood enuresis and a strong family history of sleep disorders including sleepwalking, adult enuresis, nightmares and sleeptalking. He had been under considerable personal stress, racking up large debts due to his gambling addiction. He had embezzled $30,000 from his employers to fund his gambling and consequently lost his job. Secondary to this he was suffering insomnia – and sleep deprivation worsens parasomnias.

The court heard medical evidence that sleepwalking was not considered a neurological or psychiatric problem and that the likelihood of recurrence of violent somnambulism. Furthermore they found that the cause of his impairment was the natural state of sleep, rather than sleepwalking, and therefore couldn't constitute insanity:

> 'Accepting the medical evidence, the respondent's mind and its functioning must have been impaired at the relevant time but sleep-walking did not impair it. The

[39] (1992) 95 Dominion Law Reports 27; [1992] 2 SCR 871; BROUGHTON, R., BILLINGS R, CARTWRIGHT, R., DOUCETTE, D., EDMEADS, J., EDWARDS, M., ERVIN, F., ORCHARD, B., HIL, L.R. and TURRELL, G. (1994) Homicidal Somnambulism: A Case Report. *Sleep*, 17(3), pp. 253-64; KRYGER, M. (1995) Sleep Medicine and the Law. *Sleep*, 18(9), pp. 721-23

[40] Broughton (1994), see footnote 39.

cause was the natural condition, sleep.'[41]

The reasoning behind this conclusion is given by Galligan JA

> 'According to the doctors, when the respondent attacked Mr. and Mrs. Woods he was in a state of sleepwalking. But the impairment of his mind and its functioning was not the result of his sleepwalking, it was the result of his being asleep. The impairment of his faculties of reason, memory and understanding coincided with his sleepwalking, but sleepwalking did not cause the impairment.'[42]

They also considered the two approaches to distinguishing between sane and insane automatism, the continuing danger theory and the internal/external dichotomy. La Forest J quotes Martin JA in *Rabey*

> 'The internal cause approach has been criticized as an unfounded development of the law, and for the odd results the external/internal dichotomy can produce; see Williams, Textbook of Criminal Law (2nd ed. 1983), at pp. 671-76; Stuart, Canadian Criminal Law (2nd ed. 1987), at pp. 92-94; Colvin, supra, at p. 291. These criticisms have particular validity if the internal cause theory is held out as the definitive answer to the disease of the mind inquiry. However, it is apparent from the cases that the theory is really meant to be used only as an analytical tool, and not as an all-encompassing methodology. As Watt J. commented in his reasons in support of his charge to the jury in this case, the dichotomy "constitutes a general, but not an unremitting or universal, classificatory scheme for 'disease of the mind'".'[43]

He was acquitted, and his plain acquittal was upheld on appeal. Many forensic sleep

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[41] *R v Parks* (1990) 73 O.R. (2d) 129 (CA); 56 CCC (3d) 449 [PDF not paginated].
[42] *Parks* (CA), see footnote 41.
[43] *Parks* (SC) see footnote 38 at pp.901-02.

experts express doubt that Parks was sleepwalking, suggesting that he was in a dissociative state instead. Others cite the case to support the defence of sleepwalking in similar circumstances, which is a fundamental misunderstanding of the status of a jury verdict. The Canadian court heard testimony from various experts that sleepwalking was not a psychiatric disorder. *Burgess* was distinguished on the grounds of wholly different medical evidence (although the facts were similar). The Canadian doctrine on sleepwalking was partly based on the assertion that since sleepwalking arises from a normal condition, sleep, it could not be an insane automatism. It was however asserted that no one factor was determinative. In *Stone* this principle was further developed into an approach which considered several factors but with the issue of public safety most determinative of the appropriate verdict, as Bastarche J comments:

> "The internal cause theory and the continuing danger theory should not be viewed as alternative or mutually exclusive approaches to the disease of the mind inquiry. Rather, a holistic approach should be adopted under either or both of these approaches to the inquiry may be considered by trial judges. It is therefore more appropriate to refer to the internal cause factor and the continuing danger factor. In addition to these two factors, policy factors may also be considered in determining whether the condition the accused claims to have suffered from is a disease of the mind."

This change in approach is reflected in the decision in the sexsomnia case of *Luedecke* where it was held that sleep disorders should be judged on the basis of continuing danger and so the verdict of not criminally responsible on account of mental disorder

should have been left to the jury.[44]

Various explanations for the failure for the prosecution to adduce expert evidence in *Parks* were related to me in my interviews, including: a belief on the part of the prosecution lawyers that the defence was not credible; that the sleepwalking defence was so strong that no medical evidence could be offered; and accusations of coercion of expert witnesses by the North American "sleepwalking mafia".[45] I spoke to the Honourable Mr Justice Gary Trotter and Dr Brian Butler, who were both involved with the case. They explained that it was a strategic decision by the Crown attorney, who believed that the jury would use their common sense and convict him despite all the medical evidence adduced by the defence. In particular, the Crown did not want to risk the jury returning the special verdict. I established that there was medical evidence *against* the episode being sleepwalking, given by the late Professor Oswald[46] amongst others. The prosecution team were aware of this evidence; however, on the weight of medical opinion they felt the defence was legitimate.

3.5.2 Another dramatic case where sleepwalking was the basis of the defence was *Arizona v Falater*.[47] The defendant stabbed his wife 44 times and then returned to drown her in the pool. It appears he went to repair the pool motor in his sleep and it is presumed that his wife tried to lead him back to bed. The knife used in the repair was the murder weapon. He had changed his clothes and taken out his tools prior to the assault. Afterwards he put the tools back, changed back and bandaged his hand. The neighbour, woken by dogs barking and a woman screaming, saw Falater motion to his

[44] *R v Luedecke* [2008] ONCA 716
[45]Personal communication from one of my interviewees, who asked for the comment to be unattributed.
[46] Personal communication.
[47] CARTWRIGHT, R. (2004) Sleepwalking Violence: A Sleep Disorder, a Legal Dilemma, and a Psychological Challenge. *American Journal of Psychiatry*, 161(7), pp. 1149-58.

dogs to stay down. He then rolled his wife into the pool, at which point the neighbour called the police. When the police arrived he was not aware that his wife was dead and assumed the police were hunting for the assailant.

He had a strong history of sleepwalking and there were circumstances of sleep deprivation and considerable stress at work leading up to the episode where he. He had no discernible motive, and this was totally out of character – he testified that his wife was his only friend. However the episode had several atypical features. Falater returned to drown his wife, apparently still alive, after the frenzy of stabbing. There were efforts to conceal evidence, bloody clothing and the murder weapon being placed in a Tupperware container, put inside a rubbish bag and placed within the wheel-well of his car. A neighbour witnessed Falater signalling to his dog to lie down. Ultimately, the jury did not believe that the episode was sleepwalking, and returned a verdict of guilty. Mr Falater's son has qualified as an attorney and continues to pursue a gubernatorial pardon.

Pressman was the expert witness instructed by the State of Arizona in *Falater*, and he notes 65 details of the incident. Some of these are inconsistent with sleepwalking e.g. actions that demonstrated that working memory was functional (see Appendix D). Not all his conclusions are uncontroversial - there has been work on spatial perception in sleepwalking that suggests that the ability to navigate may be retained. It was also established that it was unlikely that the Tupperware box in which the bloody clothes and weapon were stashed was normally in the car boot, given the effect of the ambient temperature in Phoenix on the plastic used. He also maintained that there was a motive for murder (Yarmila Falater had genital warts which may have indicated marital

infidelity).

Cartwright, who was involved in both cases either as a consultant or as an expert witness, considers that both these cases are consistent with sleepwalking.[48] Parks had been due to meet his in-laws the following day to admit to his considerable gambling debts, a meeting which he was apparently very anxious about. Likewise Falater had planned to fix the pool motor the next day that he was working on when apparently disturbed by his wife. Thus they were both acting out the plans they had for the next day. They were both under extreme stress, acted out of character and had no apparent motive for the homicides. None of these features make the case for sleepwalking specifically, and would fit with a hysterical dissociative episode also. Even if this was the case, the defendants would not be criminally responsible (but would be legally insane).

3.5.3 Cartwright describes the case of "The Good Neighbour",[49] with further details in a co-authored article.[50] The accused was considered "a stable, big, all-around decent guy", and he was often asked to look after his neighbours' houses when they were out of town. In the period in question, he was under a great deal of stress - his wife had had a difficult pregnancy and was staying with her mother. He had a busy day, keeping himself going with caffeinated drinks into the evening. During the night, he crossed the road into a neighbour's house (not one of those he had been asked to look after). He entered the house and went into the bedroom where he allegedly stroked the leg of the neighbour's daughter in bed. The daughter led the confused man out of the house, and he slept for the rest of the night. The daughter didn't mention it to her boyfriend or

[48] Cartwright (2004), see footnote 47.
[49] CARTWRIGHT, R. (2010) *The Twenty-four Hour Mind*. New York: Oxford University Press, at pp. 102-104.
[50] CARTWRIGHT, R.D. and GUILLEMINAULT, C. (2013) Defending Sleepwalkers with Science and an illustrative case. *Journal of Clinical Sleep Medicine*, 9(7), pp. 721-26.

phone the police at the time. He was well known to be a sleepwalker. The case went to court charged as home invasion and intent to commit a sexual assault, but the jury were persuaded he was sleepwalking and he was acquitted. It was not possible to perform sleep studies with the addition of caffeine, as there was insufficient time prior to trial to obtain institutional ethical approval. This case contributes to Cartwright's theory that excess caffeine consumption triggers sleepwalking (Howard and D'Orban, and Moldofsky also found caffeine consumption to be associated with sleepwalking[51]). In both cases, the person was under considerable stress and suffering sleep deprivation, which are generally accepted triggers of sleepwalking.

3.5.4 In the case of Stephen Reitz his actions were extremely violent, but not entirely out of character. He launched a frenzied attack on the married woman with whom he had been having an affair, stabbing and beating her to death. Their relationship had been volatile, with evidence of domestic violence. Reitz claimed he had a history of sleepwalking, and stated he had killed his girlfriend during a dream where he struggled with an intruder. He had consumed alcohol and cocaine that night. The wounds in his victim's neck were like those he inflicted on sharks (he was a commercial fisherman). He had a history of sleepwalking, and during a sleep study he actually had a violent sleep terror.[52] Nonetheless the jury convicted him of first degree murder.

3.5.5 Michael Ricksgers shot his wife with a .357 Magnum. He suffered severe obstructive sleep apnoea, and he claimed that he shot his wife during a dream about an

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[51] HOWARD, C. and D'ORBAN, P.T. (1987) Violence in sleep: medico-legal issues and two case reports. *Psychological Medicine*, 17(4), pp. 915-25; MOLDOFSKY, H., GILBERT, R., FRANKLIN, A. and MACLEAN, A. (1995) 'Sleep-Related Violence'. *Sleep*, 18(9), pp. 731-9.

[52] SLEEP FORENSICS ASSOCIATES. (2013) 2013-last update, *Case Studies: Sleepwalking*. Available: http://sleepforensicsassociates.com/caseStudies/cases-sleepwalking.php.

intruder.[53] The prosecution argued that he was planning to leave his wife, and that the shot was aimed. He is serving life without parole. If these men have been wrongly convicted, their refusal to accept their guilt on grounds of their sleep disorder will likely thwart attempts to get parole.

3.6 Summary

It has been recognized for centuries that sleepers can harm others, and accepted that this behaviour is not blameworthy. Increasing awareness of parasomnias and better access to sleep studies and sleep physicians have led to these conditions being used as the basis for a defence more and more frequently, at least in common law countries. Whether or not parasomnias are always an insane automatism is uncertain, given the lack of definitive rulings on external triggers. There are some indications that judicial pragmatism has resulted in dangerousness replacing external factors as the determining criterion of the type of automatism (see **6.5.2**). The issue of prior fault seems to be neglected in the consideration of lack of criminal responsibility due to automatism.

[53] NOFZINGER, E.A. and WETTSTEIN, R.M. (1995) Homicidal behavior and sleep apnea: a case report and medicolegal discussion. *Sleep*, 18(9), pp. 765-82.

Chapter 4: Parasomnia Trials in the Media

4.1 Press Reports Database: Methods

There were two main reasons for analyzing press reports of parasomnia trials. The first is that sleepwalking (or other parasomnia) cases are rarely to be found in law reports – the law is settled and consequently parasomnia trials are usually decided at the court of first instance (although some are reported in the academic medico-legal literature). Only cases that are appealed are covered in the official law reports. However, trials that are not appealed *are* frequently reported in the press, and hence the press is an important albeit flawed source of information for parasomnia trials as a whole. The second purpose of this study is to see if media coverage appears generally to be fair, or is prejudicial to defendants relying on the parasomnia defence, by analyzing the language used to report the verdicts. An analysis was made by the author of press reports of criminal proceedings in the UK from 1994 to 2011 where sleepwalking or another parasomnia was reported as the basis of the defence. There were 41 cases in total.[1] The terms "**sleepwalking**" OR "**sexsomnia**" AND "**trial**" were used for the search on the Nexis UK database of UK newspaper articles. Also a search of major news websites was conducted via Google. The time frame was from 1996 when several major newspapers first had an online presence up until July 2011. The main report of the verdict was chosen for each newspaper. Duplicate reports (typically where local newspaper all featured the same article) were eliminated. Post-verdict reporting affected

[1] This includes one case, Jeal, where the basis of the defence was misreported (see **4.3.2**).

the content of the articles, with the conclusions of the story affected by the verdict returned by the jury. However, post-verdict reports could feature a degree of editorializing without running the risk of contempt of court. The sleepwalking defence attracts a lot of media attention, but it is apparent from speaking to expert witnesses and from barristers' web pages that not all sleepwalking trials are reported in the media. Peter Fenwick estimated back in 1994 that there were 15 trials per year of violent sleepwalkers,[2] and that was prior to the widespread recognition of sexsomnia.[3] Some cases are reported in the medical literature, but since the trial of *Burgess*[4] there have been no new points of law raised with regards to the sleepwalking defence. The substantive law is controversial, and widely criticised in criminal law texts, but appears to be settled. For these reasons, I conducted a search of the Nexis database for newspaper articles about trials where the defence of sleepwalking or another parasomnia was presented. The time frame was from 1994 when several major newspapers first had an online presence up until July 2011. All trials where sleepwalking or another parasomnia was mentioned as the basis of a defence were included, whether or not the defence was run at trial. One example where the defence was dropped is the case of Sean Freaney, who was convicted of murder at Oxford Crown Court.[5] He initially claimed he had been sleepwalking but changed his defence to that of erotic asphyxiation after expert evidence did not support his claims.

There have been a number of high profile parasomnia trials in recent years, one of the

[2] ROFFEY, M. (1994) 'But I was asleep through the whole thing, your honour': Sleepwalking isn't always comic; people can get hurt, writes Monique Roffey. *The Independent* (Sep 25th).
[3] The term 'sexsomnia' was coined in 2003, although sexual activity in sleep was recognized prior to this.
[4] [1991] 2 WLR 1206
[5] OXFORD MAIL. (2011) Jurors take just 20 minutes to convict killer Sean Freaney. *Oxford Mail* (Mar 10th).

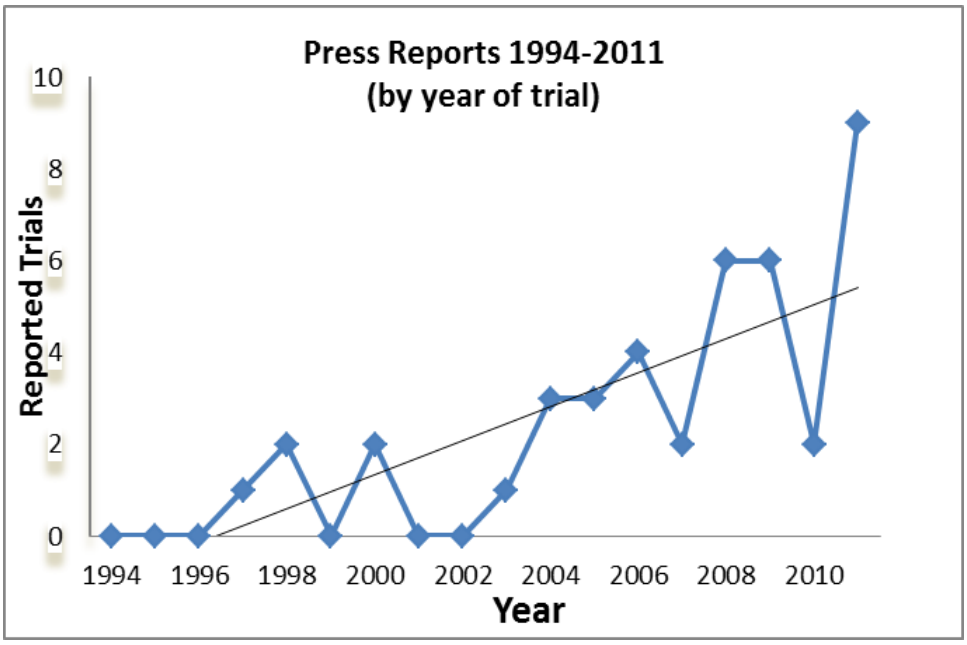
best known being that of Brian Thomas in 2009 who strangled his wife in their campervan (see **3.4.2**).[6]

4.2 Results

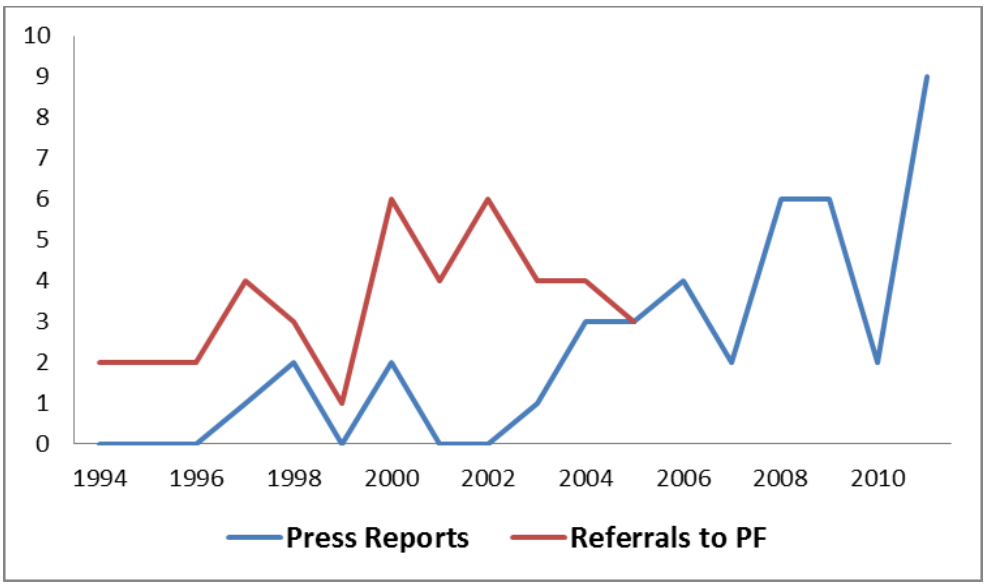
The collected data were analysed for year of trial, jurisdiction/court, age and sex of defendant, offence(s) charged, outcome, prior history of sleepwalking, whether alcohol was involved, and number and type of newspapers in which reports appeared. A general trend for increasing numbers of trials being reported in the press was seen, although the numbers are too low to draw definite conclusions and the most recent figures are probably affected by the Brian Thomas trial. The trial of Lowe in 2005 saw a rise in referrals to one eminent sleep expert (see **Graph 1**), and the most active expert witnesses all reported a similar increase in referrals as awareness of sleep disorders increases among the legal profession, which suggests that the increase in the number of trials reported is not simply down to greater press interest but due to a genuine increase in the use of the sleepwalking defence. The increased awareness of sleepwalking as a possible excuse is not an unalloyed benefit and one expert witness commented that ‘It’s a barrister’s playground.’

[6] DE BRUXELLES, S. (2009) Man with rare sleep illness who killed his wife of 40 years during nightmare is declared innocent. *Times* (Nov 21st).

4.2.1



Graph 1 Number of trials reported in the press



Graph 2 – Referrals per year to Peter Fenwick (up to 2005) overlaid on press reports per year (with thanks)

Demographics: The average age of the accused was 37.1 years of age. The male: female ratio was 39: 2.

Jurisdiction:		**Court:**	
England & Wales	**32**	Crown Court	**29**
Scotland	**8**	Magistrates' Court	**5**
Northern Ireland	**1**	High Court	**2**
		Sheriffs' Court	**5**[7]

There are a few striking findings. The first is the high number of cases in which the accused was serving or had served, in the armed forces – 7 out of 41(17%). It is also remarkable that there were only two cases where the accused was female. The medico-legal literature reports a male preponderance with a ratio in violent arousal disorders of 1.6-2.8 to 1, and higher for rapid eye movement sleep behaviour disorder, with 97% of injuries inflicted by males.[8]

[7]The Scottish Sheriffs' Courts deal with some sexual offences, hence the greater proportion of cases dealt with by this court than by the English Magistrates' Courts.

[8] SICLARI, F., KHATAMI, R., URBANIOK, F., NOBILI, L., MAHOWALD, M.W., SCHENCK, C.H., CRAMER BORNEMANN, M.A. and AND BASSETTI, C.L. (2010) Violence in sleep. *Brain*, 133, pp. 3494-3509.

4.2.2

Offences

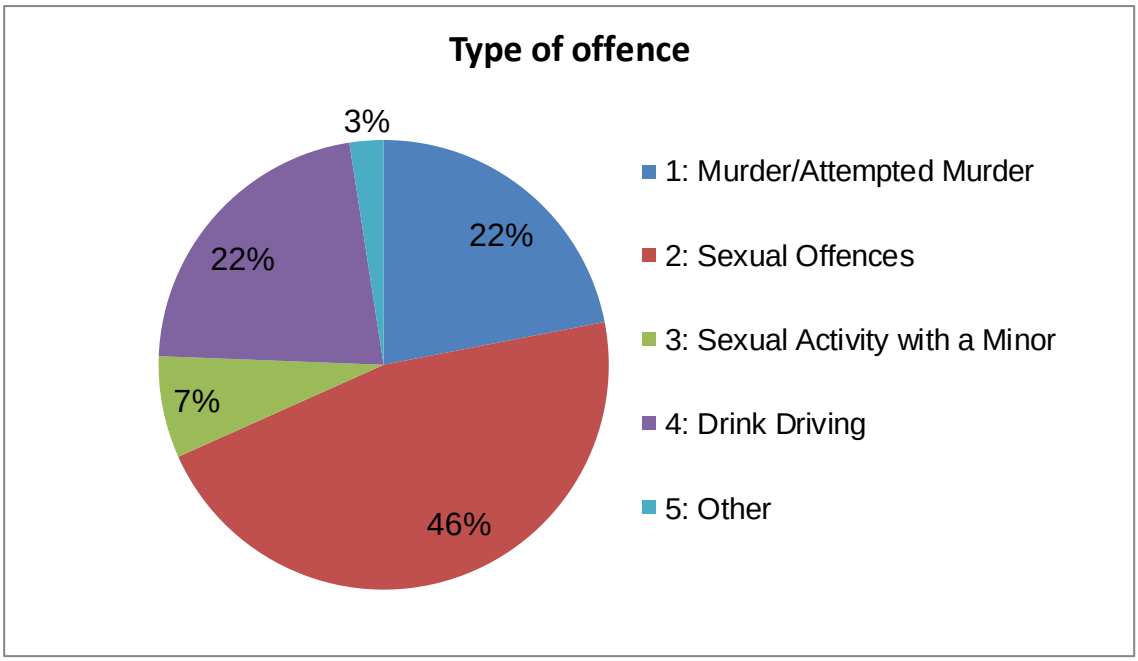


Figure 2

Numbers of cases:

1: **22%**		Murder	**7**
		Attempted Murder	**2**
2. **46%**		Indecent Assault	**4**
		Sexual Assault	**7**
		Rape	**8**
3. **7%**	Sexual Activity with a Minor		**3**
4. **22%**		Drink Driving	**9**
5. **3%**	Other (Criminal Damage)		**1**

The offences charged were mostly sexual offences, homicide and drink driving (see Figure 2). The fact that the offences that go to trial are serious ones is no surprise – there is anecdotal evidence less serious offences are either dealt with outside of the criminal justice system, fail to secure funding for expert opinions and sleep studies, or

sleep studies are performed but the evidence is not tested in court.[9] It appears, for example, that nude sleepwalking is very common in hotels, but staff are trained to deal with it informally and sympathetically rather than treat it as a criminal act.[10] Also most of the acts are perpetrated towards family or friends, who will usually be aware of the sleepwalker's condition, and so the criminal justice system is never involved at all. The male preponderance in the press reports and in the literature may reflect the greater ability of males to inflict serious harm. Also, female sexsomnia is probably less likely to involve the police due to social and physiological differences – female sexual aggression is perceived differently and penetration would require active male participation. As mentioned above, seven defendants currently, or had previously, served with the armed forces. Of these, two had been diagnosed with post-traumatic stress disorder (PTSD) and in another his experiences in the Gulf War were blamed for precipitating his parasomniac episode.

4.2.3 Parasomnia:

Sleepwalking	**20**
Sexsomnia	**9**
Defendant changed plea before or during trial	**3**[11]
Confusional arousal	**3**
Miscellaneous	**6**[12]

[9] Personal communication from Dr Idzikowski.
[10] TELEGRAPH. (2007) 'Hotels train staff for naked sleepwalkers'. *Telegraph* (Oct 25th).
[11] In 2 cases defendants changed their plea to guilty; in the other case the defendant maintained his innocence but changed the basis of his defence to erotic asphyxiation in a sex game gone wrong. In all those cases it was due to lack of support for a sleepwalking defence. There were other cases where the defendant pleaded guilty but maintained that they were sleepwalking (drink driving cases).
[12] In 3 cases the parasomnia was not specified; in one case the diagnosis was probably night terror; in one case there was not in fact any parasomnia claimed (*Jeal*); and in one case the defence was on the basis of sleepwalking or other cause of automatism.

Prior History of Parasomnia (where reported):

Yes **3**

No **1**

Family History of Parasomnia (where reported):

Yes **22**

No **5**

Precipitating event/factor (where reported):

Yes **13**

- PTSD **2**
- War experiences **2**
- Stress **5**
- Medications **3**[13]
- Sleep apnoea **1**

No **4**

Consumption of alcohol before the episode

Yes **28**

No **2**

4.2.4 Verdict:

Convicted	**18** (44%)
Acquitted	**22** (54%)
Not guilty by reason of insanity	**1** (2%)

Seven defendants admitted their guilt at or before the trial. In two cases (both drink driving) it was accepted that the defendant was sleepwalking, but nonetheless they were convicted.[14] In another case of drink driving the defendant admitted guilt and received an absolute discharge on the basis of his sleepwalking, a disposal which usually suggests that the court found no moral culpability. In seven cases either the prosecution offered no evidence (3 cases) or the jury was directed by the judge to acquit (4). Jason Jeal was acquitted on the grounds of mistake as to consent rather than sleepwalking. Mark Phillips was convicted at the Crown Court but his conviction

[13]In one case withdrawal from treatment for his parasomnia

[14]Cf BBC NEWS, 2014-last update, 'Sleep driving' jockey Tom Queally banned. Available: http://www.bbc.co.uk/news/uk-england-suffolk-30088748

was quashed on the basis that the jury did not hear all the medical evidence.[15] The most surprising finding is that in only one case did the jury return the special verdict (in one further case since the sampling time frame a defendant was found NGRI). Given the precedent in *Burgess*[16] that sleepwalking is an insane automatism, one might have expected that this would be the normal outcome in these cases. My discussion with one barrister (involved in an unreported case) confirmed that some judges do not direct the jury that sleepwalking is an insane automatism or even to consider the special verdict. A jury so directed would have to choose between a conviction and an outright acquittal.

4.2.5 The importance of alcohol as a triggering factor in sleepwalking is probably the most contentious area in the forensic setting, and certainly an issue many of the reports highlighted. It seems all the expert witnesses agree that small amounts of alcohol can trigger sleepwalking in a small proportion of sleepwalkers. However, sleepwalking has a number of features in common with alcohol intoxication – amnesia, reduced control and reduced consciousness. The voluntarily intoxicated defendant has no defence on the basis of his intoxication (although he may lack the *mens rea* for crimes of specific intent). Alcohol was involved in the majority of cases reported (28 out of the 30 cases where alcohol consumption was mentioned). Given the contentious role that large amounts of alcohol are said to play in sleepwalking episodes, this is rightly of public concern.

4.3 Misreporting

[15] WALTON, S. (2008) Sex case man in legal bid; Cleared sleepwalker wants to prevent change in law. *Middlesborough Evening Gazette* (Dec 8th) News, 1.
[16] [1991] 2 WLR 1206

4.3.1 There are a number of cases where my research has uncovered gross misreporting of criminal trials. In the case of Stephen Davies, the expert witness, Dr Idzikowski, agreed that Davies did suffer from sexsomnia but testified that the episode in question was not sexsomnia. The press reports, however, stated that the expert witness supported the defence of sexsomnia. There were several later corrections, which stated that his defence was not sexsomnia but a plain denial of rape.[17] Davies's complaint to the Press Complaints Commission about the Guardian newspaper, on the grounds that his trial was misreported as sexsomnia, was upheld (Press Complaints Commissions Case 4853).[18] In fact the defence was three-stranded and did include the defence of sexsomnia. The jury was apparently not sure that the defendant had no reasonable belief of the victim's consent, and so they acquitted him. The newspaper misreporting of the case might be partly explained by its complexity, but probably arose because the court reporter was present for one part of the expert testimony, but not the crucial part.[19]

4.3.2 *Jeal* was misreported in the press as a sleepwalking defence - he *was* a sleepwalker, but in fact he argued that he had made a mistake as to consent.[20] His story as told to me by his solicitor is as follows: he had been visiting friends and was going to be staying overnight in their spare bedroom. He had an argument with his wife, before falling asleep on the couch. His wife went home instead. The couple whose house it was also had an argument, and the woman then went and slept in the spare

[17] DAILY MAIL. (2011) Sep 6th 2011-last update, 'Stephen Davies' (a correction). Available: http://www.dailymail.co.uk/home/article-2033139/Stephen-Davies.html.
[18] PRESS COMPLAINTS COMMISSION. (2011) Sept 27th 2011-last update, *Stephen Davies and Eleanor Parker v The Guardian about Accuracy*. Available: http://complaints.pccwatch.co.uk/case/4853/.
[19] Personal communication from Dr Idzikowski
[20] KOSTER, O. (2008) 'How could the man who 'raped' me be cleared because he was sleepwalking'. *Daily Mail* (Nov 15th).

room. Mr Jeal woke up on the couch, and then went to the spare bedroom. Assuming the woman in the bed was his wife, he proceeded to have sexual intercourse with her. The jury acquitted on this basis - sleepwalking was not argued at all.

4.3.3 This reporting error was compounded when the issue of automatism as a defence in rape cases was then taken up by Harry Cohen, then MP for Leyton and Wanstead. He submitted an early day motion about the Jeal case proposing a change in the law which would have denied the defence of automatism to those accused of sexual offences. He commented

> ‘A rape is a rape and should be treated as such.’

However, it seems he was happy for parasomnia to be argued as an insane automatism from his speech in the Commons where he stated

> ‘The expert medical opinion presented evidence that sleepwalking was a mental abnormality and could deem the defendant legally insane. The judge accepted that, but the series of more recent cases to which I have referred have overridden that decision as far as rape is concerned.’[21]

This is also suggested by his Early Day Motion which stated that he

> ‘considers that those are not proper defences for rape or murder which warrant walking free without any consequence and if they are now deemed to be so, represent a massive legal loophole; further considers that anyone who kills or commits rape cannot be considered completely safe to walk free in the community without much more extensive tests to check that they will not act in the same manner again and that the seriousness of the act should require detention for such

[21] _

tests in all cases'.[22]

Other comments about the case were:

'I would like to see some sort of reverse burden of proof where the defendant has to come up with evidence to prove they have a history of sleepwalking, doctors' reports, and witnesses. Otherwise anyone can simply say 'I was asleep'.'(DC Richard Rock, Hampshire Police).[23]

'People do sleepwalk and they do strange things in their sleep, but it usually is no more complex than grinding the teeth or smacking the lips—at most they may get up and make a cup of tea. I would think it was extremely difficult to perform such a complex manoeuvre as having sexual intercourse while asleep—especially if the other person is unwilling'. (Cosmo Hallstrom, Fellow of the Royal College of Psychiatrists (FRCP), from Harry Cohen's Early Day Motion 15th Oct 2008. NB: Dr Hallstrom is neither a sleep medicine specialist nor a forensic psychiatrist).

It is extremely worrying that attempts can be made to change the law that are based on an erroneous account of a trial.

4.3.4 Although the case is outside the sampling period of my study, news reports in March 2012 provide a vivid illustration of some of the problems. When Zack Thompson was sentenced at Nottingham Crown Court, DC Paula Winfield commented that

*"*Sleepwalking as a criminal defence had never been successfully challenged in a sexual offence before. But we could not let that discourage us from doing all we could to achieve justice for a young woman who has been through such a traumatising

[22] HANSARD, 15th Oct 2008-last update, Early Day Motion 463 sponsored by Harry Cohen. Available: <http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm081015/debtext/81015-0003.htm>
[23] JAMIESON, A. (2008) Victim speaks out after man cleared of rape while sleepwalking. *Daily Mail* (Nov 15th).

ordeal."[24]

She added

> "We hope this conviction sends out the message that sleepwalking can no longer be a safe defence in cases of rape.'[25]

It was certainly not a "first", and, of course, the traumatic nature of her ordeal is no indicator that the defendant was not sleepwalking. The underlying assumption in the police officer's remark is that a dangerous new legal defence has now been successfully challenged in its entirety. Graham Buchanan for the Crown Prosecution Service stated

> 'Prosecutors have worked long and hard to make this happen, including securing evidence from the scene from the Portuguese authorities and identifying and assessing necessary medical experts to show that a defence of sleepwalking was not valid in this case.'[26]

The sleepwalking defence had been challenged before; Dr Pressman, the expert witness involved, had agreed that another defendant, Brian Thomas, *was* asleep when he strangled his wife, and there had also been other convictions in sexsomnia cases. Pressman is well known for his robust rebuttals of the sleepwalking defence, especially where alcohol is involved. The quote carries the implication that the expert witness may have been chosen on the basis of this approach rather than his generic expertise. However, the CPS did respond and stated that a number of other professionals were

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[24] JENKINS, R. (2012). Rapist is jailed after expert challenges sleepwalking defence. Times (Mar 30th) News.
[25] DOLAN, A. (2012) Jail for rapist who said he was sleepwalking. *Daily Mail* (Mar 30th).
[26] FURNESS, H. (2012) Rapist jailed after "sleepwalking" claim rejected in legal first; A man has been jailed for raping a 17-year-old girl after his claim to have been sleepwalking was rejected by international experts in a landmark case. *Telegraph* (Mar 30th) News.

approached as potential expert witnesses, but apparently none could provide expert evidence for various reasons.

4.4 The Media Discourse

4.4.1 The literature on media reporting of crime shows consistently that violent and interpersonal crimes (which represent only a small proportion of offences reported to the police or prosecuted in court) are featured disproportionately in the media.[27] There is also a focus on the unusually deviant. [28] Chibnall described eight professional imperatives of crime reporting:

- Immediacy
- Dramatization
- Personalization
- Simplification
- Titillation
- Conventionalism
- Structured access
- Novelty[29]

Sleepwalking trials satisfy the imperative of novelty; they often provide titillation,

[27] REINER, R. (2007) Media-made criminality: the representation of crime in the mass media. In MAGUIRE, M., MORGAN, R. and REINER, R. (eds.). *The Oxford Handbook of Criminology*. 4th Ed. Oxford: Oxford University Press, pp. 302-40.
[28] ERICSON, R., BARANEK, P. and CHAN, J. (1987) *Visualising Deviance*. Milton Keynes: Open University Press.
[29] CHIBNALL, S. (1977) *Press Ideology: The Politics and Professionalism. Law and Order News: An Analysis of Crime Reporting in the British Press*. London: Tavistock.

especially in cases of sexsomnia; and the media reports often employ dramatization, personalization (prominent use of quotes from victims), simplification (omission of salient corroborating facts) and conventionalism ('the lawyers are at it again'). Thus we can see how the 'backwards rule' (or 'inverted pyramid') results in

> 'news, entertainment, and infotainment media [taking] the least common crime or justice event and make it the most common crime or justice image.'[30]

There is little research on how the so-called "new media" (largely characterized by immediacy and lack of regulation) will affect the presentation and public perception of crime, but it seems likely to lead to lazy repetition of similar if not identical reports which will tend towards the superficial. Ray Surette comments that the increased immersion in the new media will mean that

> 'Directly experienced reality will lose its social pre-eminence to mediated knowledge.'[31]

This may have considerable consequences for public faith in the criminal justice system.

4.4.2 Specifically in parasomnia cases, the tone of media reports is frequently sceptical. The exception to this was the case of Brian Thomas, perhaps because it seemed so clear-cut and was a personal tragedy for the man involved. More generally, press reports imply that the jury was almost forced to acquit the defendant because he claimed to be sleepwalking. The press, particularly the tabloids, seem to subscribe to Packer's Crime Control model of criminal process, which emphasizes the importance of safety, rather than the Due Process model, which stresses the need for the state to

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[30] SURETTE, R. (2011) *Media and Crime and Justice in the Twenty-First Century. Media, Crime and Criminal Justice: Images, Realities, and Policies*. 4th Ed. Wadworth: Cengage Learning.
[31] Surette (2011), see footnote 27.

prove to the criminal standard that the defendant was at fault.

It is often stated or implied in the press reports that ‘anyone could claim to be sleepwalking and so get off’. In fact no sleep expert would consider supporting such a defence if the defendant did not have a clear history (established from family and friends) of sleepwalking, usually since childhood. In the cases considered in this study, no defendants were acquitted without a history of sleepwalking, although in some cases its importance was only appreciated only after the harm had occurred. There is even more press scepticism about cases of sexsomnia than there is in cases of homicidal somnambulism, possibly because the activity appears to the lay-person to be less consistent with sleepwalking. The more complex behaviour enacted during sexsomnia is consistent with the known science, but the circumstances in which many of these offences occur differ from the cases reported in the literature where proximity is essential – usually the victim is in bed with the sexsomniac.

4.4.3 Further analyzing the contents of the press reports, the author examined the reports of trials resulting in verdicts of not guilty, not proven (a verdict available only in Scotland) or not guilty by reason of insanity. I also looked at the reporting of trials where, although the defendant was found guilty, the claim that the defendant had been sleepwalking at the time was believed (all drink driving cases). I have summarized the collective reporting of each trial rather than including all individual reports; otherwise the results would be skewed by the much greater number of reports about certain trials.

I graded the reporting of trials as:

- Prejudicial 33% (8/24)
- Sceptical 25% (6/24)

- Balanced 29% (7/24)
- Supportive 13% (3/24)

This assessment is, of course, subjective but based on consideration of the following criteria: language used to describe the argument for sleepwalking; reporting of corroborating events and testimony; inclusion of expert testimony; inclusion of other sleepwalking cases, especially extreme ones; and inclusion of prejudicial quotes from the victim, relatives of the victim or lobbying bodies.

Prejudicial reports were those that included quotes from lobbying groups or victims or their families that expressed disbelief at the verdict and other sceptical comments. Sceptical reports were those that relayed a sense that the jury had been bamboozled by the criminal justice system by words such as “after claiming” or included the more extreme sleepwalking trials reported in incredulous terms. Supportive reports emphasized the relevant supporting facts, expert testimony, lack of motive and/or personal tragedy for the accused.

4.4.4 The reports often described acquittals in terms that suggested that juries had been swayed by a dubious defence, or by lawyers and unethical “experts” colluding to persuade ordinary people to forsake common sense. The defence was often described in terms such as “setting a ridiculous example”, “bizarre”, “ludicrous” or “beggared belief”. The following are a sample of quotes from press reports to illustrate particular themes:

Quotes expressing disbelief:

> “I despair with these people. It actually shows how simple these magistrates and judges are” - Mike Jobbins (Campaign Against Drink Driving [CADD]) on the Stephen

Hearn case.[32]

‘Road safety campaigners yesterday said the decision to acquit the Solihull computer analyst "beggared belief" and set a dangerous precedent’ (Stephen Hearn case).[33]

“I find it deeply disturbing. As a society we seem to want to find any reason not to name something as rape” - Prof Liz Kelly, the director of Child and Women Abuse Studies at London Metropolitan University commenting on the James Bilton case.[34]

“He didn’t appear to be asleep” – the victim in the Warren Kelly case.[35]

“We just feel totally numb by it all. I don't believe that he was sleepwalking. I don't know what was going through his head” - mother of the victim in the Ecott case.[36]

‘An alarming number of terrible acts, then, have been committed, we are told, by individuals who are in this strange trance-like state which absolves them of any responsibility for their actions. A viewpoint which, the grieving families of the victims might feel, is just a little too convenient.’ (Ecott case).[37]

Quotes that might imply that the jury had little choice because of the claims of sleepwalking:

‘An alleged sex attacker who claimed he must have been sleepwalking if he molested his young babysitter has been cleared’ (Iain Tarkenter trial).[38]

‘A man accused of raping a woman was yesterday cleared by a jury after claiming he

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[32] EVENING TIMES. (2003) Sleepwalker escapes drink-drive charges. *Evening Times*, (Feb 28th) 3.
[33] DAILY STAR. (2003) Snoozer Road Rage. *Daily Star* (Mar 1st) News.
[34] STOKES, P. (2005) Sleepwalker cleared of three rapes. *Daily Telegraph* (Dec 20th).
[35] SUN. (2009) Sleeping groper in the clear. *Sun* (Mar 4th) News, 30.
[36] SALKELD, L. (2007) 'Sexsomniac' RAF man sobs as he is cleared of raping girl in his sleep. *Daily Mail* (Sep 25th).
[37] CLARKE, N. (2007) Can you be a killer in your sleep? *Daily Mail* (Aug 9th).
[38] EVENING CHRONICLE. (2000) Sleepy man is cleared of attack. *Evening Chronicle* (Oct 4th) Local News, 2.

suffered from sleepwalking' (James Bilton case).[39]

'An RAF man was yesterday cleared of raping an underage girl after claiming he had been sleepwalking' (Kenneth Ecott case).[40]

Quotes expressing concerns about public safety:

"What worries and concerns me is that this verdict has given him a new lease of life to go and do it again to somebody else" - victim's mother in the Ecott case.[41]

"There's no way he's an appropriate person to be teaching kids. Whether he did it in his sleep or not seems irrelevant to me. He still admitted what he did in open court" - mother of child at the school where Allan Kellman worked.[42]

'the reality is that the 33-year-old financial advisor is a convicted drunk driver who continues to pose a threat to himself and unsuspecting road users' (Graham Finegan's appeal).[43]

Quotes expressing policy concerns about the availability of the sleepwalking defence:

"It may well be other people accused of serious crime will try and avail themselves of this defence." DCI Durkin in the Lowe case.[44]

'You can go into court and say: "Sorry I did that, I was sleepwalking." Mike Jobbins, chairman of CADD in the Hearn case.'[45]

"This is setting a ridiculous example and others will try it on now." Jack Sparrow,

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[39] GIBB, F. (2005) Rape trial jury accepts defence of sleepwalking. *Times* (Dec 20th) News.
[40] SMITH, R. (2007) Not a rapist.. a sexsomniac; Sleepwalker cleared of attack at party. *The Mirror* (Aug 5th) News,18.
[41] Salkeld (2007), see footnote 33.
[42] TURNER, K. (2002) Sex scandal sir is back at school; Staff warn of walkout pounds 50,000 to stay home gulf trauma defence. *Daily Record* (Jun 7th) News,7.
[43] MADELEY, G. (2000) This man has a rare sleepwalking disorder. When he drinks he goes into a trance and gets behind the wheel of his car. Last week appeal judges gave him his licence back. Is it a licence to kill? *Daily Mail* (Apr 1st).
[44] PERRONE, J. (2005) Sleepwalker cleared of murdering father. *Guardian* (Mar 19th), 6.
[45] Evening Times (2003), see footnote 29 .

CADD in the Bough case.[46]

'The ruling could have far reaching implications for future assault cases'(Darren Greenwood trial).[47]

'Campaigners last night warned that the not proven verdict handed down to James Thomas could open the floodgates for similar defences in future.'[48]

Quotes critical of the judiciary:

> *"*It is ludicrous - the courts do not take drinking and driving seriously. To them it is a motoring offence and to us at CADD it is a criminal offence." Mike Jobbins, chairman of CADD in the Hearn case.[49]
>
> "By his own admission he could have killed himself or someone else. Yet, three appeal court judges have controversially allowed Finegan to stay on the road" (Graham Finegan's appeal).[50]

Some of these quotations indicate that the media discourse is more about the criminal justice system in general, rather than the sleepwalking 'defence'. The sleepwalking defence is clearly uncommon, but the discourse is about a supposedly dysfunctional criminal justice system which defies common sense. A headline from a Daily Mail article summed up the attitude of some sections of the press:

'The sexsomnia defence finally fails: Delivery driver jailed for sexual assault (even though he claims to have been asleep)'.[51]

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[46] GARDNER, A. (2004) Drink driving? No.. I was sleepwalking; Court let-off for motorist. *Sunday Mirror* (Oct 3rd) Features, 10.
[47] DAILY TELEGRAPH (2010) 'Sexsomniac' cleared by jury. *Daily Telegraph* (October 29th) News, 2.
[48] ROBERTSON, G. and ROSE, G. (2011) Sleepwalker is cleared of raping teenage girl. *The Scotsman* (Jan 15th).
[49] Evening Times (2003), see footnote 29.
[50] Madeley (2000), see footnote 40.
[51] REYNOLDS, E. (2012) The sexsomnia defence finally fails: Delivery driver jailed for sexual assault

However, the reporting of the Machin case illustrates the ambivalence of the media about sexsomnia.[52]

4.4.5 It would be a mistake, however, to consider the media in an entirely negative way. It was noticeable that the local press tended to have superior coverage of trials and more balanced reporting. For example, the Yorkshire Post report on the James Bilton trial included his personal and family history of sleepwalking and the features of the episode that were consistent with sleepwalking and sexsomnia.[53] By contrast, the Mirror report contained none of these details.[54] To some extent this may reflect the use by local newspapers of specialist court reporters that learn their trade over a period of time. National media coverage of crime is clearly unrepresentative of social reality and not just because sections of the media have a particular political agenda. This discourse may involve exposing injustice and promoting law reform. The discourse in other cases resembles that of Dershowitz's polemic about criminal defences in the USA, *The Abuse Excuse*[55] — a preoccupation with expert evidence being perverted to defeat the ends of justice. The famous example is the "Twinkie Defense" which entered the public consciousness[56] and indeed legal mythology as the archetypal exploitation of junk science by unethical lawyers who claimed that over-consumption of Twinkies made Dan

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(even though he claims to have been asleep). *Daily Mail* (Apr 21th) News; notably contradicts their assertion about the Thompson case being the first time the sleepwalking defence had been rebutted.

[52] REES, G. and RUMBOLD, J.M.M. (2014) 'His bizarre defence won the backing of an expert': Ambiguity in the media reporting of sexsomnia defences, Presentation at the Socio-Legal Studies Association conference, Apr 10th, 2014.

[53] HEMMINGS, J. (2005) Jury clears man of raping woman friend after 'sleepwalking' defence. *Yorkshire Post* (Dec 20th).

[54] KEY, I. (2005) Jury clear sleepwalk 'rape' man. Mirror (Dec 20th) News, 11.

[55] DERSHOWITZ, A.M. (1994) *The Abuse Excuse*. New York: Time Warner.

[56] It receives a mention in Buffy the Vampire Slayer (*Out of Mind, Out of Sight*) and the X-Files (*Sein Und Zeit*).

White kill Harvey Milk.[57] The comments about believability reflect the tendency from some areas of the press to appeal to the common sense of the public, although generally there was deference to medical experts.[58] This ignores the cardinal feature of parasomnia cases, which is that the condition and behaviour seen is far outside the experience of the ordinary person.

Many of the press reports focussed on the amount of alcohol consumed by the defendant, and on eyewitness accounts that suggested that the defendant did not appear to be sleepwalking. This position is supported by some forensic sleep experts e.g. Pressman and colleagues who argue that those claiming the sleepwalking defence who have drunk large amounts of alcohol would have no defence otherwise and therefore that

> '[c]laims of alcohol-induced parasomnias presented solely to circumvent the laws of voluntary intoxication should be understood for what they are and rejected'.[59]

The effect of media reporting on perceptions of the sleepwalking defence, especially the sexsomnia defence, can be seen in the complaint by Stephen Davies (see above) who tried to distance himself from the use of the sexsomnia defence – despite arguing it in court.

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[57] POGASH, C. (2003) 2003-last update, *Myth of the 'Twinkie defense'* / The verdict in the Dan White case wasn't based on his ingestion of junk food. Available: http://www.sfgate.com/health/article/Myth-of-the-Twinkie-defense-The-verdict-in-2511152.php. In fact, Twinkies were never mentioned specifically. The consumption of junk food was suggested as an effect of Dan White's disturbed mental state, not a cause of it.

[58] REES, G. and RUMBOLD, J.M.M. (2014) *'His bizarre defence won the backing of an expert'*: Ambiguity in the media reporting of sexsomnia defences, Presentation at the Socio-Legal Studies Association conference, Apr 10th, 2014 2014.

[59] PRESSMAN, M., MAHOWALD, M.W., SCHENCK, C.H., and CRAMER BORNEMANN M. (2007) Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations. *Journal of Sleep Research*, 16, pp. 198-212.

4.5 Conclusion:

The conclusions from this research can only be tentative, given that press reports are an incomplete and unreliable record of sleepwalking trials. It also has to be noted this study looked at post-verdict reporting only (although most of the press stories were post-verdict, due to the shortage of court reporters). This explains the use of critical quotes from relatives or other parties to avoid liability for defamation when the verdict was not guilty (also, victim impact statements are a source of easy copy). The considerable male preponderance in reported press cases is consistent with the medico-legal literature. It was notable the number of drink driving offences that were reported. It might be expected that strict liability offences might attract more use of the defence of automatism, and drink driving is one of the more serious strict liability motoring offences. In these cases, even when the sleepwalking was accepted by the court, it did not normally result in acquittal (although it did affect the sentencing).

There were a few cases where the sleepwalking defence was initially claimed by the defence but not argued in court after sleepwalking experts found no support for it. The apparent over-representation of defendants who were serving, or had previously served, with the armed forces may merit further research to ascertain the reasons for this. PTSD may play a part in this association. PTSD is associated with RBD, and RBD may also be misdiagnosed as PTSD.[60]

The newspapers are generally sceptical of the sleepwalking defence, which is arguably

[60] HUSAIN, A.M., MILLER, P.P. and CARWILE, S.T. (2001) REM sleep behavior disorder: Potential relationship to post-traumatic stress disorder. *Journal of Clinical Neurophysiology*, 18, pp. 148-57.

a valid position to take in an opinion piece, although it should not get in the way of fair and accurate reporting of ongoing criminal trials. They were most critical when the accused had consumed substantial amounts of alcohol, which is not unreasonable given the policy issues and the consensus among forensic sleep experts that these cases are problematic. However, when reporting took a highly critical tone, this was often at the expense of including important corroborating features and comment by sleep experts. Although not directly disputing the verdict in acquittals, quotes from victims, relatives and lobby groups were sometimes provided to imply that the claims of the defendants were beyond belief. Although there is deference to medical experts and therefore ambivalence about the defence as a whole, the general discourse in the reports considered in this chapter was largely one of how defence lawyers can hoodwink juries and so foil justice; in effect that the sleepwalking defence is just another “Twinkie defence” - proposed by desperate lawyers, backed up by junk science and swallowed by bewildered or gullible jurors.

Chapter 5: Mental Condition Defences and Parasomnias

History of the Mental Condition Defences of Insanity and Automatism

5.1 Insanity Defence

There are several reasons forwarded for the legal status of insanity. Historically, the insane were considered cursed by the gods and adding to their divine punishment was seen to be unjust (*satis furore ipso punitur* – literally “punished sufficiently by madness”). Or the insane lacked ‘discretion’; that is, they did not fully understand the consequences of their actions (a broader definition than many later insanity tests). Or the insane lack *mens rea* (*actus non facit reum nisi mens sit rea* – “the act does not make [a person] guilty unless the mind should be guilty”). In more modern times, the specific insanity defence is seen by some jurists as a status excuse or a *sui generis*, that relates not to “what the actor did or believed, but to what kind of person he is”. This entails that the insanity defence is much more than a simple denial of *mens rea* (see re insanity defence and strict liability offences). As Moore puts it

> ‘the "unofficial" version of the insanity test-the test as actually applied by psychiatrists and jurors-restricts the excuse of legal insanity to those who are so lacking in rationality that they are popularly considered crazy. This is because those psychiatrists and jurors have glimpsed a moral truth: the very status of being crazy precludes responsibility.’[1]

[1] MOORE, M.S. (1985) Causation and the Excuses. *California Law Review*, 73(4), pp. 1091-1149.

Insanity both deprives the actor of his pre-morbid character and leaves him unable to make free choices[2]. He is no longer a moral agent nor susceptible to deterrence.

5.2 Prior to the 16th Century

It has been appreciated from very early times that some people cannot be held responsible for their actions. The Bible contains the story of David feigning insanity to avoid the attentions of Achish, king of Gat[3], and in Plato's *Laws* insanity was exculpatory. Similarly the notion that wicked intent (or *dole* as it is called in Scottish law) was required for full criminal responsibility was alluded to in the Code of Hammurabi, itself based on Sumerian antecedents. *Justinian's Digest* (6th century) is the earliest context in which insanity is considered an excuse.[4] The first specific mention of an insanity defence is in Mohammedan law, c. 622 AD.[5]

Generally only those who were clearly insane to the layman's eye were excused – the 'wild beast' (in the sense of a dumb animal, lacking rationality - often understood as 'wild' in the sense of raging) of Bracton or the simpleton with the moral understanding of a child under 14. A child under 12 or 14 (depending on the century) lacked 'discretion' (see above), although children over 7 (the age of first communion and the end of infancy in Roman law) were deemed to know right from wrong and could consequently

[2]It can be argued that the defendant with an arrest of mental development never loses the status excuse pertaining to childhood of *doli incapax*.
[3] 1 Samuel 21:12-14
[4] WALKER, N. (1985) The Insanity Defence Before 1800. *Annals of the American Academy of Political and Social Science*, 477(1), pp. 25-30.
[5] DEARMAN, H. (1961) 'Criminal Responsibility and Insanity Tests: A Psychiatrist Looks at Three Cases' 47(8): 1388-98. *Virginia Law Review*, 47(8), pp. 1388-98.

be put on trial. Walker suggests therefore that insanity in the early second millennium was defined as not knowing the nature of one's acts, rather than the later cruder notion of not knowing right from wrong. In modern times, it is also generally the first limb of the *McNaughtan Rules* that a defendant relies on - that he did not "know the nature and quality of the act he was doing" - rather than the second limb, that "he did not know he was doing what was wrong".

In pre-Norman England the insane person's relatives (or friends) would pay compensation for his crimes, even homicide[6] (this option was available to all under the principle of 'buy off the spear or bear it'). By the eleventh century certain wrongs could not be atoned for by compensation, but were 'botless' and punishable by death and the forfeiture of property. This was the first emergence of a separate criminal law. As a consequence of having emerged from civil law, these early crimes were strict liability. However, the Church had great influence on the law, and promoted the importance of *mens rea.* The Church was involved in the process of trial by ordeal, and it may be that the insane were spared trial by ordeal. The tenth-century laws of Aethelred and Cnut emphasized leniency (although not exemption) for those committing misdeeds involuntarily or unintentionally. Interestingly, the 'Laws of Henry the First' mention a requirement of relatives of the insane not just to pay to compensation but to keep him from causing further harm (sometimes the insane were put in the care of the church). This is the first recorded measure for social control of the criminally insane in England. The lack of detailed comment in these early documents such as Glanville's *On the Laws*

[6] THORPE, B. (1840) *Ancient Laws and Institutes of England*. London.

and Customs of the Kingdom of England written in the twelfth-century[7] may reflect on an informal mechanism where the priests or sheriffs made arrangements for the safety of the community – for example the case of Richard of Cheddestan in 1270 who was confined by the Sheriff in prison. The proper procedure was for the jury to decide on insanity and the King would decide on disposal, as pronounced in 1212 –

> 'The King must be consulted about an idiot who is in the prison because in his witlessness he confessed that he is a thief, although in fact he is not to blame.'

Throughout the 13th century this more formal mechanism was used increasingly often, in parallel with the establishment of trial by jury. The estates of the insane were not forfeited but managed on their behalf by the Crown. Somewhere between the 13th century and the 16th century it became the regular practice for the insane to be acquitted rather requiring the royal pardon. The defence of insanity appears to have only been applied to capital cases, although of course many crimes were so punishable. There was no formed concept of unfitness to stand trial (although some defendants had not 'recovered their senses' sufficiently to be tried),[8] only the inability to plead on the basis of being deaf and/or mute.

5.3 Sixteenth and Seventeenth Centuries

The first clear case of an acquittal on grounds of insanity is in 1505 when a man accused of the murder of an infant was found to be of unsound mind at the time of the

[7] DE GLANVILLE, R. (1812) *Treatise on the laws and customs of the Kingdom of England*. London.
[8] WALKER, N. (1968) *Crime and Insanity in England Volume One: The Historical Perspective*. Edinburgh: Edinburgh University Press, at pp 219-20.

murder, and thus freed.[9] It was recognized by the eminent jurists Coke and Hale that lunatics were capable of periods of lucidity, a fact also reflected in the thirteenth-century Statute of the King's Prerogative. Coke and Hale also agreed that an insane person was unfit for trial (but they ought to be 'absolutely mad').[10] It was also recognized that 'partial insanity', while not excusing, could be a mitigating factor. Hale also recognized the disorder of *dementia affectata*, or 'induced witlessness', mental states induced by drink or drugs. This was not an excuse to a crime unless induced by a negligent physician or caused by "the contrivance of his enemies" (c.f. *R v Kingston*), or where heavy drinking had caused 'an habitual or fixed phrenzy' (possibly the chronic neurological sequelae of chronic alcohol abuse such as alcoholic encephalopathy and Wernicke's encephalopathy).

By the sixteenth century a crude test was used to determine whether or not a person was an idiot,[11] severe sub-normality being a reason for acquittal as per the trial in 1685 of Francis Tims at the Old Bailey for theft.

5.4 Eighteenth and Nineteenth Centuries

The statutory special verdict was introduced at the very end of the 18th century as a reaction to the acquittal of Hadfield for attempting to kill King George III. This replaced the common law insanity defence (which results in a plain acquittal) for trial by

[9] Walker (1968), see footnote 8 at page 26.
[10] Walker(1968), see footnote 8 at pp. 221-22.
[11] Walker (1968) see footnote 8: 'He who shall be said to be a Sot and Idiot from birth is such a person who cannot account or number twenty-pence, nor can tell his Father or Mother, not how old he is &c so as it may appear that he hath no understanding of Reason what shall be his Profit or what for his Loss."" (page 36) This test applied more to the management of his property.

indictment only. Thus when the insanity defence is successful in the magistrates' court, there are no disposal options available. The Criminal Lunatics Act 1800 had only one disposal option – detention at His or Her Majesty's pleasure.

Hadfield was a veteran of the First War of the Coalition, and had been part of the bodyguard of the Duke of York at the battle of Lincelles, where he received a serious head wound from a sabre. It was clear that prior to the injury he had been a loyal and brave subject. It was likely that the visible head injury (counsel invited the jury "to inspect the membranes of the brain itself") and his previous loyal service helped persuade the jury that this behaviour was contrary to his pre-morbid character. This was the first case where the concept of partial insanity was accepted as the basis of an acquittal. Hadfield's counsel, Erskine, argued that delusion "unaccompanied by frenzy or raving madness [was] the true character of insanity". Hadfield's delusion was that he must die to save the world, but he could not die by his own hand. Thus he contrived to be killed in the course of an assassination attempt.[12]

It is no coincidence that many of the early insanity acquittals involved charges of treason. It meant the accused had a mandatory 15 days before trial (Bellingham, whose victim was the Prime Minister, was hanged the same day) and the right to counsel.[13] It has been speculated that the insanity defence was a way of discrediting assassins. Moran argues persuasively that the Chartist Daniel McNaughtan, who tried and failed to assassinate Robert Peel, far from being delusional, had a genuine and well-founded

[12] MORAN, R. (1985) The Origin of Insanity as a Special Verdict: The Trial for Treason of James Hadfield (1800). *Law & Society Review*, 19, pp. 487-519.
[13] O'REILLY-FLEMING, T. (1992) From beasts to bedlam: Hadfield, the Regency crisis,M'Naghten and the 'mad' business in Britain, 1788–1843. *Journal of Psychiatry and Law*, 20, pp. 167-90, at p.169.

fear of Tory spies and was motivated by politics rather than psychosis.[14] It is also the case that McNaughtan arguably fails to satisfy the *McNaughtan Rules* (nor does Hadfield).

Prime Minister Gladstone stated that the removal of the threat of punishment for the insane was

> 'an inducement...to morbid minds for the commission of crime by an apparent declaration of innocence in the teeth of the facts.'[15]

It was considered by many (and most influentially perhaps Queen Victoria) that the insane could still be deterred by the threat of punishment, and so the Trial of Lunatics Act 1883 replaced the special verdict of 'not guilty by reason of insanity' with 'guilty of the act but insane at the time' (reminiscent of the verdict in some US states of 'guilty but mentally ill'). The previous wording was reinstated by the Criminal Procedure (Insanity) Act 1964, which still applies today.

5.5 Automatism

Automatism has several different definitions[16]. Medical automatisms are stereotyped, non-purposeful and repetitive behaviours, occurring during psychomotor seizures. They are most commonly oral (e.g. lip smacking or chewing) or manual (e.g. patting or fumbling). These behaviours would be unlikely to cause any difficulties for the court.

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[14] MORAN, R. (1981) *Knowing Right from Wrong: The Insanity Defence of Daniel McNaughtan*. New York: The Free Press.

[15] EIGEN, J. (2007) An Inducement to Morbid Minds. In: DUBBER, MD & FARMER, L (ed) *Modern Histories of Crime and Punishment*. Stanford: Stanford University Press.

[16] In this thesis, automatism refers to non-insane automatism, unless otherwise stated. Insane automatism is referred to simply as insanity.

Legal automatism, however, is defined as either total loss of voluntary control (non-insane) or by the *MacNaughtan Rules* (insane), but there are a number of different formulations (see below). Fenwick defined medico-legal automatism as follows:

> 'An automatism is an involuntary piece of behaviour over which an individual has no control. The behaviour is usually inappropriate to the circumstances, and may be out of character for the individual. It can be complex, co-ordinated and apparently purposeful and directed, though lacking in judgment. Afterwards the individual may have no recollection or only a partial and confused memory for his actions. In organic automatisms there must be some disturbance of brain function sufficient to give rise to the above features.'[17]

Yet another way to define medico-legal automatism would be mental absence, or the "missing defendant" as Eigen puts it - a defendant whose incapacity is not due to a partial delusion affecting their perception of their actions, but due to a partial or total lack of consciousness resulting in their actions being both unintentional and involuntary. In fact, non-common law jurisdictions often use the term "unconsciousness" to describe these states in their criminal codes.

5.5.1 History

Prior to 1800, the defendant might as well argue temporary insanity as "automatism" (the term was not in use at that time), since the common law insanity defence[18] available resulted in a plain acquittal. Eigen quotes John Hunter describing a patient who appeared to "want [a] connection between the mind and the body". The description

[17] FENWICK, P. (1987) Somnambulism and the Law: A Review. *Behavioral Science and the Law*, 5(3), p. 343-57.
[18] Still applicable in the magistrates' courts (see **5.9**)

sounds more like a dissociative episode.[19] In 1827 one defendant stated that

> 'My mind was overcome in a moment … and of my being at the time I did so misconduct myself in a way of total absence of thought, never contemplating such a crime.'[20]

Another defendant stated

> 'It was like a dream to me, when I saw the deed was done it struck me with terror instantly.'[21]

Eigen discusses how the Victorian jurors might have responded to the 'missing defendant', who did not fit the lay understanding of insanity. He describes the notion of crimes committed whilst sleepwalking or under hypnotic suggestion as being committed by another self, in a parallel with multiple personality disorder (MPD, also known as Dissociative Identity Disorder or DID). MPD/DID has created novel problems for the criminal justice system in the USA at least (discussed further at **6.2.2)**. Examples of crimes committed in a state of automatism include the sleep-related cases previously mentioned of Esther Griggs and Simon Fraser, but also the case of Elizabeth Carr who was found "not guilty on the grounds of unconsciousness" in 1857 after she cut her daughter's hand off during an episode of "epileptic vertigo"[22]. She apparently mistook her daughter's arm for a loaf of bread during an episode that sounds like dissociation or a complex partial seizure.

5.5.2 As Windeyer J. commented in *R v Ryan,*

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[19] EIGEN, J.P. (1995) Witnessing Insanity: Madness and Mad-Doctors in the English Court. Yale University Press, at p.167.
[20] Eigen (1995), see footnote 19 at p.170.
[21] Eigen (1995, see footnote 19 at p.173.
[22]Epileptic vertigo and the related entity larval epilepsy, neither of which are recognized now, manifested themselves in occasional bouts of violence. Epileptic vertigo or *vertige epileptique* includes complex partial seizures in Herpin's classification (Eadie 2002).

> ‘That an act is only punishable as a crime when it is the voluntary act of the accused is a statement satisfying in its simplicity. But what does it mean? What is a voluntary act? The answer is far from simple, partly because of the ambiguities of the word ‘voluntary’ and its supposed synonyms, partly because of imprecise, but inveterate, distinctions which have long dominated men’s ideas concerning the working of the human mind.’[23]

There have been numerous attempts to define automatism in the case law, which attest to the difficulties:

- ‘total destruction of voluntary control’ (Lord Taylor CJ in *Attorney-General’s Reference (No2 of 1992)*); [24]
- “acting involuntarily in the sense that his actions are independent of his will, and therefore not subject to any conscious control” (Tompkins J in *R v Campbell*);[25]
- “an act which is done by the muscles without any control by the mind such as a spasm, a reflex action or a convulsion; or an act done by a person who is not conscious of what he is doing such as an act done whilst suffering from concussion or whilst sleepwalking” (Lord Denning in *Bratty v. Attorney General for Northern Ireland*);[26]
- “the mind does not go with what is being done” (Viscount Kilmuir L.C. in *Bratty v. Attorney General for Northern Ireland*);

[23] *Ryan v R* (1966-7) 121 Crim LR 205 at para 18
[24] [1994] QB 91
[25] (1997) 15 CRNZ 138
[26] [1963] AC 386

- “all the deliberative functions of the mind must be absent” (North P. in *R v Burr*).[27]

As it can be seen, all these descriptions vary – in particular the last two seem to describe something far more like unconsciousness than involuntariness. They all tend to suffer from the use of terms like ‘will’ and ‘voluntary’, which are not defined satisfactorily in the law. The courts assume that the juror knows what these terms means, and so leave the issue to the realm of folk psychology. This assumption seems dubious, given the difficulties lawyers have in defining what they mean. As Windeyer J states in *Timbu Kolian v R*,

> ‘one of the difficulties comes from the need to relate will to acts, and to define precisely the distinction, commonly accepted by lawyers, between intention and volition. These words are used glibly; and often with little definition of the sense in which they are used’.[28]

The terms ‘voluntary’, ‘will’ and ‘act’ are largely defined with respect to each other - a ‘willed act’ is voluntary, an act requires ‘will’, a ‘voluntary’ act is willed. This is perhaps one area where the recommendations of the Law Commission would (if adopted) bring some much needed clarity (see Chapter 9), as the proposed new mental condition defence does not rely on this distinction.

5.5.3 The term ‘automatism’ was first used by lawyers in the case of *Harrison-Owen*.[29] Automatism has different meanings in medicine (stereotyped non-purposeful behaviour occurring during psychomotor seizures) and psychology (see **6.3.2**) than it does in law.

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[27] [1969] NZLR 736 (CA)
[28] (1968) 119 Crim LR 47 at p.62
[29] (1951) 35 Cr App R 108

The basis of the legal defence of automatism is the requirement in the common law for a voluntary act. The decision in *Woolmington v DPP*[30] was that the prosecution has the burden of proof for all the elements of the offence (except where reverse burdens are required by statute). It was also confirmed in *Woolmington* that all the common law defences except insanity required only an evidential burden to be satisfied by the defence[31], but thereafter the burden is on the prosecution to disprove it beyond reasonable doubt. This exception is considered by some to be an historic anomaly.[32] The comprehensive nature of the automatism defence and burden of proof on the prosecution quickly led to limitations on the defence. In the important case of *Hill v Baxter*[33] it was established that there was an evidential burden which must be discharged by the defence before the issue of automatism could be put to the jury. If there was no such evidence then the judge should tell the jury to ignore the defence. This means that medical evidence is nearly always required to get the automatism defence off the ground.[34] Once the evidential burden has been satisfied, the burden of proof in the automatism defence is on the prosecution. The prosecution must prove that there was a voluntary act that satisfied the *actus reus* requirement for the offence. This is still the position today.

The external factor doctrine also emerged in the case law (see below) in a policy-based attempt to limit plain acquittals to cases where there are only minimal public safety concerns. Hughes LJ states

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[30] [1935] A.C. 462
[31] This applies to self-defence, duress and the now obsolete defence of provocation.
[32] JONES, T. (1995) Insanity, automatism, and the burden of proof on the accused*. Law Quarterly Review*, 111, pp. 475-516.
[33] [1958] 1 QB 277
[34] The exception being an episode of sneezing (*Woolley* [1998] C.L.Y. 914)

> ‘It is well known that the distinction drawn in Quick between external factors inducing a condition of the mind and internal factors which can properly be described as a disease can give rise to apparently strange results at the margin.’[35]

Automatism was described by Lawton LJ in *Quick* as a

> ‘quagmire…seldom entered nowadays save by those in desperate need of some kind of a defence.’[36]

Table 1 summarizes some of the differences between the automatism and insanity defences:

Type of automatism	**Non-insane**	**Insane**
Burden of proof	Prosecution*	Defence
Standard of proof	Beyond reasonable doubt	On balance of probabilities
Definition	Total loss of voluntary control	*M’Naghten Rules*‡
Verdict	Not guilty	Not guilty by reason of insanity
Disposal	Free without restrictions	Can be supervised or detained in hospital

*Once the evidential burden has been satisfied
‡See **9.5.2** for further discussion about the definition of insane automatism

Table 1 Differences between automatism and insanity/insane automatism

[35] *R v Coley* [2013] EWCA Crim 223
[36] *R v Quick* [1973] QB 910

5.6 Limits to the Automatism Defence

The limits to the defence of automatism are:

- An 'internal' cause (which would lead to a finding of insanity instead)
- Voluntary intoxication with drink or drugs
- Prior fault

5.6.1 An internal cause

The internal/external dichotomy doctrine has strong roots in policy, and emerged with the cases of *Charlson* and *Kemp*[37]. Charlson attacked his son, hitting him over the head with a mallet and throwing him out of the window. This behaviour was attributed to a brain tumour.[38] The defence did not raise the defence of insanity, and he was acquitted by the jury. Kemp hit his wife over the head with a hammer. He suffered arteriosclerosis affecting the brain, and Devlin J, as he then was directed the jury that this must be considered a 'disease of the mind'; the verdict of guilty but insane was returned (both cases were decided at the court of first instance). *Bratty* confirmed that *Kemp* was the correct decision.

In *Quick* it was asserted that "disease of mind" applied to any internal cause, and thus individuals suffering epilepsy (*Sullivan*) and sleepwalking (*Burgess*) could not rely on the automatism defence, but must instead rely on the insanity defence[39]. The courts took the view that any internal cause might be liable to recur, and so poses a question of public safety. However, the opposite is not always true. A blow to the head is likely to

[37] *R v Charlson* [1955] 1 All ER 859; *R v Kemp* [1957] 1 QB 399
[38] The evidence for this was quite tenuous.
[39] *R v Sullivan* [1983] 3 WLR 123; *R v Burgess* [1991] 2 WLR 1206

be a one-off occurrence, but some other external causes (as defined in the case law) are quite likely to recur. The best example of this is hypoglycaemia[40] produced by insulin administration, since most diabetics who take insulin need to take it for the rest of their life. This is ironic given that one of the motives behind distinguishing external causes was the desire not to detain diabetics in special hospitals. As Lawton L.J. commented in *Quick*

> ‘No mental hospital would admit a diabetic merely because he had a low blood sugar reaction; and common sense is affronted by the prospect of a diabetic being sent to such a hospital, when in most cases the disordered mental condition can be rectified quickly by pushing a lump of sugar or a teaspoonful of glucose into the patient's mouth.[41]

However, he acknowledged that this argument had its limitations, and felt that if the condition was a “disease of the mind”, it should still be considered insanity - regardless of whether the treatment required for the condition was physical or psychiatric, and regardless of how transitory the condition was:

> ‘If an accused is shown to have done a criminal act while suffering from a "defect of reason from disease of the mind," it matters not whether the condition of the mind is curable or incurable, transitory or permanent: see per Devlin J. in Reg. v. Kemp [1957] 1 Q.B. 399, 407. If the condition is transitory, the Secretary of State may have a difficult problem of disposal; but what happens to those found not guilty by reason of insanity is not a matter for the courts.’ (p 918)

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[40] Hypoglycaemia is a state of low blood sugar, which when severe causes impaired consciousness.
[41] *R v Quick* [1973] QB 910 at p918. Although Quick might have succeeded in arguing automatism, his prior fault due to not eating properly, and drinking alcohol, might have persuaded the jury to convict nonetheless.

This comment demonstrates that his Lordship was explicitly rejecting continuing dangerousness as the deciding criterion between non-insane and insane automatism. Furthermore, he is contradicting his own inference that the sensible means of disposal should dictate the classification of a disorder. The crucial factor was the distinction between internal and external causes, because a

> 'malfunctioning of the mind of transitory effect caused by the application to the body of some external factor such as violence, drugs, including anaesthetics, alcohol and hypnotic influences cannot fairly be said to be due to disease.' (p 922)

This opinion presaged the decisions that epilepsy and sleepwalking are insane automatisms in *Sullivan* and *Burgess* respectively. Similarly hypoglycaemia due to an insulinoma would be an insane automatism.

There are a number of other ways of assessing the need for continuing treatment and monitoring to protect the public. In *Bratty* Lord Denning commented that

> 'It seems to me that any mental disorder which has manifested itself in violence and is prone to recur is a disease of the mind. At any rate it is the sort of disease for which a person should be detained in hospital rather than be given an unqualified acquittal.'[42]

This was an excellent formulation in this author's opinion (bar the inclusion of 'mental' rather than 'medical'), but it was disavowed in *Quick* by Lawton LJ for the reasons given above. The Canadian approach is to assess the condition in the round, as La Forest J states in *Parks* after citing Martin JA in *Rabey* with approval

> 'The internal cause approach has been criticized as an unfounded development of

[42] *Bratty v Attorney-General for Northern Ireland* [1963] AC 386 at p412.

> the law, and for the odd results the external/internal dichotomy can produce; see Williams, *Textbook of Criminal Law* (2nd ed. 1983), at pp. 671-76; Stuart, *Canadian Criminal Law* (2nd ed. 1987), at pp. 92-94; Colvin, supra, at p. 291. These criticisms have particular validity if the internal cause theory is held out as the definitive answer to the disease of the mind inquiry. However, it is apparent from the cases that the theory is really meant to be used only as an analytical tool, and not as an all-encompassing methodology. As Watt J. commented in his reasons in support of his charge to the jury in this case, the dichotomy "constitutes a general, but not an unremitting or universal, classificatory scheme for 'disease of the mind'".[43]

There are particular objections to characterizing everyday events as "external causes". Take the example of a defendant sleeping with his usual bed partner, where their proximity triggers unwanted sexual activity. Characterizing this as an external cause is problematic, given the safety issues. A condition that is triggered so easily should be considered an "internal cause" (see **3.4.6**). The search for an external cause, no matter how mundane or tenuous, can represent an attempt to divert the jury away from the special verdict.

5.6.2 Voluntary intoxication with drink or drugs

For policy reasons, voluntary intoxication with drink or drugs is not normally a defence - although it can in extreme and unusual circumstances be a defence to certain crimes (of so-called specific intent) when the effect of intoxication is so profound that the defendant could not form the intention required for the offence. An example of this is *Lipman*, who had taken LSD and hallucinated that he was being attacked by snakes.

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[43] *R v Parks* (1992) 95 Dominion Law Reports 27

During this episode, he killed a woman by stuffing sheets down her throat. He lacked the necessary intent for murder, but his recklessness in taking LSD satisfied the *mens rea* for manslaughter.[44] Voluntary intoxication does not include all instances of voluntary ingestion of intoxicating substances, as the case of *Hardie* demonstrates. The defendant had taken some diazepam tablets on the advice of his partner, whose tablets they were. He set fire to the flat in which they lived whilst under the influence of the drug, and was charged with arson, contrary to section 1(2) and (3) of the Criminal Damage Act 1971. This offence requires intention or recklessness, and so is an offence of basic intent. His conviction was quashed on the ground

> 'that the jury should have been directed that if they concluded that by taking the drug a defendant could not appreciate the risks to property and persons from his actions, they should consider whether the taking of the drug was itself reckless.'[45]

It is assumed by the courts that everyone knows about the effects of alcohol, but the reasonable man would not necessarily know the effects of prescription drugs – therefore *Hardie* was not objectively reckless.[46] Virgo argues that

> 'Intoxication is not deliberate if the intoxicant is taken solely for medicinal, sedative or soporific purposes.'[47]

In *Bailey* it was held that the defendant's failure to eat food after administration of insulin was not to be treated in the same way as voluntary intoxication with drink and drugs, on the grounds that

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[44] *R v Lipman* [1970] 1 Q.B. 152
[45] R v Hardie [1985] 1 WLR 164
[46] Objective recklessness is where the reasonable man would have thought the act or omission was reckless. Subjective recklessness is where the defendant realised the act or omission was reckless (barring the effect of voluntary intoxication).
[47] VIRGO, G. (1993) The Law Commission Consultation Paper on intoxication and criminal liability: Part 1: Reconciling principle and policy. *Criminal Law Review*, pp. 415-25.

> ‘It is common knowledge that those who take alcohol to excess or certain sorts of drugs may become aggressive or do dangerous or unpredictable things, they may be able to foresee the risks of causing harm to others but nevertheless persist in their conduct. But the same cannot be said without more of a man who fails to take food after an insulin injection. If he does appreciate the risk that such a failure may lead to aggressive, unpredictable and uncontrollable conduct and he nevertheless deliberately runs the risk or otherwise disregards it, this will amount to recklessness. But we certainly do not think that it is common knowledge, even among diabetics, that such is a consequence of a failure to take food and there is no evidence that it was known to this appellant. Doubtless he knew that if he failed to take his insulin or proper food after it he might lose consciousness, but as such he would only be a danger to himself unless he put himself in charge of some machine such as a motor car, which required his continued conscious control.’[48]

Bailey was decided on a subjective standard,[49] as the court held that

> ‘if the accused knows that his actions or inaction are likely to make him aggressive, unpredictable or uncontrolled with the result that he may cause some injury to others and he persists in the action or takes no remedial action when he knows it is required, it will be open to the jury to find that he was reckless.’ (p 765)

This ruling also suggests that the standard depends on the offence, so carelessness or negligence with blood sugar management will be sufficient for prior fault in driving offences. However, in *Quick* Lawton LJ stated that

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[48] *R v Bailey* [1983] 1 WLR 760

[49] RUMBOLD, J. and WASIK, M. (2011) 'Diabetic drivers, hypoglycaemic unawareness, and automatism'. *Criminal Law Review*, pp. 863-72.

> ‘A self-induced incapacity will not excuse[], nor will one which could have been reasonably foreseen as a result of either doing, or omitting to do something, as, for example, taking alcohol against medical advice after using certain prescribed drugs, or failing to have regular meals while taking insulin.’ (p922)

This suggests an objective test - something that “could have been reasonably foreseen”, rather than something that had actually been foreseen by the defendant. This quotation does not refer to the inference of negligence or recklessness, and suggests that all forms of self-induced capacity are no excuse (unlike in *Bailey*). These decisions were prior to the decision in *R v G and R*[50], which restored the subjective (*Cunningham*[51]) standard for recklessness. It is also now the case that diabetic patients are well-educated on the risk of hypoglycaemia and the symptoms and signs to be aware of (so the defendant with diabetes would be more likely to be held objectively or subjectively reckless).

Some experts strongly believe that alcohol-induced parasomnia ought not to be a legal excuse. Pressman cites the Scottish case of *Finegan v Heywood* in support of this position. In this case Finegan had consumed alcohol, which he knew sometimes caused him to sleepwalk. He drove someone else’s car in a parasomnic state, and was charged with drink-driving and other offences. Pressman states that the case was *“*treated as a case of voluntary intoxication only”, and this interpretation is seemingly supported by the comments of the Lord Justice-General (Rodger), who stated

> ‘Approaching the matter in that way and having reviewed the relevant authorities, the court held at p 46: ‘In the law of Scotland a person who voluntarily and deliberately

[50] [2003] UKHL 50
[51] *R v Cunningham* [1957] 2 QB 396

> consumes known intoxicants, including drink or drugs, of whatever quantity, for their intoxicating effects, whether these effects are fully foreseen or not, cannot rely on the resulting intoxication as the foundation of a special defence of insanity at the time nor, indeed, can he plead diminished responsibility.' Although their Lordships were not, of course, thinking of the situation where the voluntary consumption of alcohol for its intoxicating effect induced a transitory state of parasomnia, we consider that the same approach should be applied in such a case.'[52]

Another reading of the case is that the basis of rejecting automatism was prior fault – the behaviour was due to a

> 'transitory state of parasomnia which was the result of, and induced by, deliberate and self induced intoxication.' (para10)

The immediate cause was recognized to be parasomnia, even if the trigger was alcohol. It would be superfluous for the court to declare that alcohol intoxication is no defence to drink-driving. In the case of *Quick*, the Court of Appeal held that the defence of automatism should have been left to the jury, even though the effect of his alcohol consumption on his blood sugar raised a question of prior fault (which the jury might have found sufficient ground for a conviction). Similarly, alcohol withdrawal leading to psychosis was not excluded as a cause of insanity in *Harris*[53], nor the effects of a head injury resulting from alcohol intoxication in *Stripp*.[54] Lord Birkenhead LC in *Beard* stated that:

> 'drunkenness is one thing and the diseases to which drunkenness leads are different

[52] *Finegan v Heywood* [2000] S.L.T. 905 at para 10
[53] [2013] EWCA Crim 223
[54] (1978) 65 Cr App R 318

things, and if a man by drunkenness brings on a state of disease which causes such a degree of madness, even for a time, as would have relieved him from responsibility if it had been caused in any other way, then he would not be criminally responsible'.[55]

Any state of automatism caused in whole or part by alcoholic intoxication should arguably be excluded from supporting the defence. This is what the Law Commission recommended, even when other factors were operating as in *Pooley* and *Stripp*[56]. In *Pooley*, automatism due to parasomnia could have been triggered by alcohol, stress and/or jet lag.[57] In *Stripp*, the defendant was intoxicated, but had also suffered a head injury.[58] The same principle applies with diminished responsibility, where intoxication due to drink or drugs is not fatal to the defence. An example is the case of *Dietschmann*,[59] who had been drinking but argued diminished responsibility on the basis of an adjustment disorder. Despite the alcohol, the defence was still available if his abnormality of mind had substantially impaired his mental responsibility.

The major issue in *Finegan v Heywood* was public safety, but Finegan's reduced culpability was reflected in his successful appeal against sentence.[60] Scotland is a civil law jurisdiction with a different approach to automatism from common law jurisdictions, so this decision might not be followed in England and Wales. Although sleepwalking is a legal automatism, and so is a complete defence even to crimes of strict liability, in several cases the driver has not been acquitted even when the fact of sleepwalking was

[55] (1920) 14 Cr App R 160
[56] LAW COMMISSION. (1995) *Legislating the Criminal Code: Intoxication and Criminal Liability*. Law Comm No 229. London: HMSO, Recommendation 7, described at 6.40-6.45.
[57] BUCKS HERALD. (2007) 'Man Cleared of Rape after Sleepwalking Defence'. *Bucks Herald* (Jan 18th).
[58] (1978) 65 Cr App R 318
[59] [2003] 1 AC 1209
[60]It made little sense nor enhanced public safety to ban Finegan from voluntarily driving for an episode of involuntary driving.

accepted by the court.[61] It is not clear what the legal bases of these decisions are; it has been argued that the insanity defence does not apply to strict liability offences, but see below at **5.9.1**.

5.6.3 Prior fault

As pointed out in *Quick*, those who are responsible for their condition may not be permitted the defence of automatism. Even before the term 'automatism' had been used in the courts, the case of *Kay v Butterworth* was decided on the issue of prior fault. A man fell asleep at the wheel and drove into a column of American soldiers marching on the road. The bench had acquitted the defendant on the basis that he was temporarily unconscious, but on appeal to the High Court it was found that

> 'he was guilty of … driving dangerously and without due care and attention, it being immaterial that he was not conscious of his actions when the accident happened, since he was under a duty to stop as soon as he felt the onset of drowsiness.'[62]

Similar principles apply in other cases involving driving, such as drivers who suffer hypoglycaemic episodes at the wheel or those who drive in the knowledge of a medical condition that may result in loss of control.[63] The customary legal analysis is that the requisite *mens rea* is negligence in driving or continuing to drive. The *actus reus* may be getting behind the wheel or continuing to drive. The *actus reus* in driving offences is a continuous and continuing act during which period of time the relevant culpable failure occurred. The policy reasons for this approach are clear - public safety demands that

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[61] BBC NEWS, 2014-last update, 'Sleep driving' jockey Tom Queally banned. Available: http://www.bbc.co.uk/news/uk-england-suffolk-30088748

[62] (1945) 61 Times Law Reports 452

[63] [2009] EWCA Crim 1533; [1997] RTR 457; EWCA Crim 921; RUMBOLD, J. and WASIK, M. (2011) 'Diabetic drivers, hypoglycaemic unawareness, and automatism'. *Criminal Law Review*, pp. 863-72.

drivers take reasonable precautions to prevent accidents.

The same analysis is difficult to apply to alcohol-related sleepwalking incidents. Where the person knows that alcohol triggers their sleepwalking, they will be taken to have the requisite minimal *mens rea* of negligence if they voluntarily ingest alcohol. If they know that alcohol triggers sleepwalking *with harmful behaviour*, they arguably satisfy the *mens rea* for recklessness if they drink. However, it is difficult to determine whether the relevant *actus reus* requirement is satisfied for the harm caused. For example, if they get behind the wheel whilst sleepwalking, there is no voluntary act of driving (unlike the untreated epileptic who gets behind the wheel, for example). Any other actions taken during a parasomnic episode that cause harm would also fail to constitute the *actus reus* of the relevant crime.

5.7 Total Loss of Control

This is a key issue, and is the other major hurdle to the success of the defence of automatism. It was affirmed in *Attorney-General's Reference (No2 of 1992)* that automatism requires a "total destruction of voluntary control".[64] Although some might argue that this might only apply to driving cases, or strict liability crimes, as Herring comments

> 'there is nothing in the judgment of the Court of Appeal in Attorney-General's Reference (No. 2 of 1992) that explicitly restricts their discussion to driving

[64] [1994] QB 91

offences'.[65]

The assumption that a successful defence always requires a total loss of control is clearly problematic. Bird, Newson and Dembny note

> 'Complete lack of consciousness and control rarely accompanies a potentially criminal act; hence, difficult judgments need to be made about the degree of loss of consciousness and attention at the specific time.'[66]

Similarly Marks has noted in the context of the case of *Clarke*[67] that the legal definition of automatism would, if taken literally, preclude the most basic human activities, even walking. For him, the episode of hypoglycaemia caused Mr Clarke to

> 'behave as an automaton able to perform certain habitual tasks but unable to appreciate their social consequences'.[68]

Mackay contends that

> 'if this [total loss of voluntary control] was the true basis of automatism, then the defence would virtually be restricted to spasms, convulsions, and reflex acts which is clearly not the case.'[69]

Husak states:

> 'The normative work thought to be done by the act requirement may be accomplished more effectively by supposing that criminal liability requires control.'[70]

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[65] HERRING, J. (2006) *Criminal Law: Text, Cases and Materials*. 2nd Ed. Oxford: OUP, p.709 .
[66] BIRD, J., NEWSON, M. and DEMBNY, K. (2009) Epilepsy and automatism. In YOUNG, S., KOPELMAN, M. and GUDJONSSON, G. (eds.). *Forensic Neuropsychology in Practice*. 1st Ed. Oxford: Oxford University Press, pp. 165-91.
[67] [2009] EWCA Crim 921
[68]From Professor Marks' medical report on Mr Clarke; permission was given to access this and quote from it.
[69] MACKAY, R. (1995) *Mental Condition Defences in the Criminal Law*. Oxford: Clarendon Press, p63.
[70] HUSAK, D. (2006) Rethinking the Act Requirement. *Cardozo Law Review*, 28, pp. 2437-60.

We have to clarify what meaning of automatism we intend. Sometimes actions such eating and brushing our teeth are described as automatisms, and such analogies have been used at trial. However, this conflation of everyday motor activities that we ordinarily do without thinking about them, with the states associated with loss of capacity leads to confusion. Wigley talks about 'automaticity', the commonly recognized experience whereby we can automatically perform well-practiced tasks.[71] This phenomenon can be observed with all 'overlearned' behaviours that arise from procedural memory rather than declarative memory. However a car driver who is in automaticity (or on 'autopilot') and thinking about other things whilst driving a familiar route will be brought out of his reverie when something untoward occurs. This is fundamentally different from the person in a state of automatism, who cannot do this. Legal automatism requires automaticity in combination with unconsciousness (in the sense of unawareness).[72]

These distinctions are not purely theoretical - in the Australian case of *R v Ryan,*[73] they were very relevant. The defendant was convicted of an armed robbery where he had shot and killed the garage attendant. He pleaded guilty to manslaughter, but in the state of New South Wales, there was a felony-murder rule which rendered any homicide in the course of a felony murder rather than manslaughter. This meant that any argument based on the lack of intent to kill was irrelevant. Ryan's contention was that when he had the sawn-off shotgun trained on the garage attendant, a sudden movement by the

[71] WIGLEY, S. (2007) Automaticity, Consciousness and Moral Responsibility. *Philosophical Psychology*, 20(2), pp. 209-25.
[72] Levy and Bayne go further and differentiate agency into four categories: deliberative agency; conscious agency; automatic agency; and automatistic agency (LEVY, N. and BAYNE, T. (2004) Doing without deliberation: automatism, automaticity, and moral accountability. *International Review of Psychiatry*, 16(3), pp. 209-15).
[73] (1966-7) 121 Crim LR 205

attendant made him pull the trigger reflexly. He argued that this was an involuntary act. In support of his version of events, when the police recreated the scenario, the officer holding the gun reflexly pulled the trigger when the officer playing the garage attendant moved. It was argued that his action was non-voluntary, rather than involuntary. Elliott compared his reaction to "the sudden movement of a tennis player retrieving a difficult shot; not accompanied by conscious planning, but certainly not involuntary." [74]

Given all this, on what basis was Ryan's conviction upheld? The court held that by holding a gun on the garage attendant in this way, primed to react, Ryan's act was

> 'a consequence probable and foreseeable of a conscious apprehension of danger, and in that sense a voluntary act.'(Windeyer J) [75]

Thus Ryan was guilty on the basis of pointing a loaded gun at the garage attendant, rather than the fact that he pulled the trigger. Just as the tennis player retrieving the difficult shot is praiseworthy for his reflex action, likewise Ryan was blameworthy for his reflex action. Further, if Ryan had had a legal reason for holding a gun on his victim (for example, if he was detaining a criminal), then the shooting would have been excusable.

Neuroscientists describe Type 1 and Type 2 behaviour. Type 1 behaviour is fast, automatic and unconscious. It relies on heuristics derived from previous experience to allow fast reactions, which from an evolutionary perspective are vital for reflex actions in a survival situation. Type 2 behaviour is slow, deliberate and conscious. It allows for the evaluation of novel situations where a number of different factors are relevant to

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[74] ELLIOT, I.D. (1968) Responsibility for Involuntary Acts: Ryan v the Queen. *Australian Law Journal*, 41, pp. 497-508.

[75] *Ryan* (1966-7), see footnote 72 at para 20.

decision-making.[76] Type 1 behaviour corresponds to Levy's and Bayne's latter categories of automatic and automatistic agency, and Type 2 behaviour corresponds to the former categories of deliberate and conscious agency.[77] Ryan in this situation exhibited Type 1 behaviour, which involved no conscious intent to shoot the attendant, as Elliot emphasized above. Wigley examines how the agent can be held morally responsible even for automatic and automatistic behaviour, and the example of Ryan shows that we can also hold the agent criminally responsible. Automatic or automatistic agency alone is not a sufficient basis to deny criminal responsibility, because of the possibility of prior fault.

Moore states that

> 'Cases of sleepwalking, post-hypnotic acts, and similar acts are often sufficiently complicated that they appear to be intelligently directed actions. In such cases, one is loathe not to attribute these acts to some agency, but if not to X [the defendant], then to whom?' [78]

The Victorian answer to this dilemma was that the person has two souls, one being responsible for sleep behaviour. It has been argued by Bayne[79] and others that agency is a marker for consciousness. However, we can easily find counter-examples from the animal kingdom that dispute the attribution of *moral* agency. Although we may punish a dog for running off with a string of sausages, we do not consider the animal a criminal. Even though chimpanzees can be trained to perform complex motor tasks such as

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[76] TALMI, D. and FRITH, C.D. (2010) Neuroscience, Free Will and Responsibility. In SINNOTT-ARMSTRONG, W. and NADEL, L. (eds.). *Conscious Will and Responsibility*. 1st Ed. OUP USA, pp. 124-33.
[77] See footnote 71.
[78] MOORE, M.S. (1979) Responsibility and the unconscious. *S Cal L Rev*, 53, pp. 1563-1678.
[79] BAYNE, T. (2013) Agency as a Marker of Consciousness. In CLARK, A., KIVERSTEIN, J. and VIERKANT,T. (eds.). *Decomposing Will*. OUP USA, pp. 160-180.

driving[80], they lack the deliberative functions to do so to socially acceptable standards - for example, they can be trained to stop at a red light, but they will drive off at a green light no matter whether it is safe or not.[81] The question is not whether the sleepwalker has any level of consciousness at all, but whether this is the level and type of consciousness to which we would attribute criminal responsibility.

Schopp and Moore both examined the issues of voluntariness and intentionality, and came to similar conclusions. Santoni de Sio analyzes the similarities in their models for criminal responsibility, and concludes that they

> 'seem to agree that the presence of a minimal belief-desire-behaviour combination is not in itself a sufficient condition for the presence of a voluntary action, i.e. the product of a person or an agent.'[82]

As Schopp puts it, the actor who is a practical reasoner

> 'selects an action-plan through a causal process that allows access to the comprehensive set of wants and beliefs. In contrast, the actor who selects an action-plan in a state of impaired consciousness acts without the benefit of the causal force that would ordinarily be exerted by certain wants and beliefs that constitute reasons for acting in a certain manner.'[83]

Moore expresses very similar thoughts:

> 'volitions must be responsive to all (or at least a fair sample) of what one desires,

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[80]Tony Zappone reported on a chimpanzee given a ticket in the state of Florida; however, a judge ruled that there was no requirement for a chimpanzee to hold a driving license.

[81] CALISHER, C.H. (2008) What do we know about anything? *Croatian Medical Journal*, 49(3), pp. 436-440.

[82] SANTONI DE SIO, F. (2006) Razionalità, identità, controllo: le condizioni soggettive dellaresponsabilità. *Rivista di Filosofia*, XCVII(1), pp. 33-58 (translation provided by author).

[83] SCHOPP, R. (1991) *Automatism, Insanity and the Psychology of Criminal Responsibility*. Cambridge: Cambridge University Press, at p.148.

> believes, and intends. And this is what being asleep, being unconscious, or being hypnotized prevents. These states seems to break the unity of consciousness that allows volitions to be formed that are responsive to all of one's desires, beliefs, and intentions, and not just responsive to a small subset.'[84]

The vital incapacity of automatism is the inability to evaluate one's actions, rather than the inability to form the requisite intent. The sleepwalker can form the intention to eat or have sex, but this action is not truly voluntary. The concept of the practical reasoner displaces the intangible 'will' or 'volition' as the source of moral agency (for further discussion, see **6.3.3** and **6.4.3**). The practical reasoner can weigh up choices and choose to comply with the law and/or the moral standards of his community. The person who has lost these capacities should not be held criminally responsible. This view is reflected in the Law Commission's proposed new mental condition defence of 'not criminally responsible by reason of recognized medical condition' which focusses on the capacity for practical reasoning (see **9.6.5**).

5.8 Parasomnia Case Law

Although the possibility of committing harmful acts whilst asleep has been recognized for centuries, it is only from the mid-nineteenth century in the British Isles that there are recorded acquittals. There are occasional examples of the same practical outcome being achieved by a different mechanism, such as the prosecution being stayed by the

[84] MOORE, M.S. (1993) *Act and Crime: The Philosophy of Action and its Implications for the Criminal Law*. Oxford: OUP.

court (*Fraser*)[85] or the jury refusing to indict the defendant (*Griggs*).[86] Even before the important modern case of *Burgess,* some sleepwalkers were found guilty but insane (in accordance with the special verdict which operated between 1882 and 1964)[87] but generally they were simply acquitted. In *Bratty* the view was that sleepwalking cases fell within automatism and not insanity. After the decisions in *Quick* and *Sullivan*, however, which established that non-insane automatism always required an external cause*,* sleepwalking as a form of legal automatism was anomalous until *Burgess* was decided. However, juries often still return a plain acquittal even in cases where the illegal act is not disputed by the defence. The basis for this practice is unclear, but several expert witnesses report that juries were not directed on the issue of whether or not the parasomnia in question was insane or non-insane. It may well be the focus was on whether the defendant acted without intent (lack of *mens rea* rather than automatism, see **6.5.1**). The author is only aware of one case where the judge correctly directed that the accused could only be acquitted on the basis of insane automatism if he was arguing sleepwalking as a defence (the Zack Thompson case presided over by Judge Milmo[88]). The case of Brian Thomas is another example where the current law appeared not to be applied by the trial judge, as he directed the jury to return a plain acquittal despite the evidence for insanity.

The decision in *Burgess* is not straightforward, and it is notable that the Canadian

[85] YELLOWLEES, D. (1878) *Homicide by a Somnambulist*. Journal of Mental Science, 24, 415-58.
[86] WALKER, N. (1968) *Crime and Insanity in England Volume One: The Historical Perspective*. Edinburgh: Edinburgh University Press, pp.168-9.
[87] HOPWOOD, J.S. & SNELL H.K. (1933). Amnesia in Relation to Crime. *British Journal of Psychiatry*, 79, pp. 27-41.
[88] DOLAN, A. (2012) Jail for rapist who said he was sleepwalking. *Daily Mail* (Mar 30th).

Supreme Court in *Parks*[89] distinguished *Burgess* on the facts. The defendant assaulted a female friend during a dissociative episode:

> 'He remembered waking up, coming into focus and feeling confused. It then dawned on him that he was holding Miss Curtis down on the floor. He had no memory of hitting her at all, either with the bottle or with the video recorder. He had run away after the incident and had driven round the countryside.'[90]

The two defence experts concluded that this was somnambulism, but the prosecution expert, Dr Fenwick, believed that the episode was probably a hysterical dissociative episode rather than somnambulism. The jury returned the special verdict, but we do not know the basis for that decision. Although *Burgess* has been interpreted as holding that sleepwalking should be treated as an insane automatism, it is by no means clear. The Appeal Court stated

> 'It seems to us that on this evidence the judge was right to conclude that this was an abnormality or disorder, albeit transitory, due to an internal factor, whether functional or organic, which had manifested itself in violence. It was a disorder or abnormality which might recur, though the possibility of it recurring in the form of serious violence was unlikely. Therefore since this was a legal problem to be answered on legal principles, it seems to us that on those principles the answer was as the judge found it to be.' (Lord Lane CJ)[91]

This seems to be a very qualified decision: "on this evidence…this was an abnormality or disorder…due to an internal factor, whether functional or organic." Burgess had not

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[89] (1992) 95 Dominion Law Reports 27
[90] [1991] 2 WLR 1206 at p.97.
[91] *Burgess*, see footnote 89, at p.101

argued that there were any external triggers for the episode. Fenwick states that although sleepwalking was likely to recur, violence was not:

> 'Serious violence fortunately is rare. Serious violence does recur, or certainly the propensity for it to recur is there, although there are very few cases in the literature - in fact I know of none - in which somebody has come to court twice for a sleep walking offence. This does not mean that sleep walking violence does not recur; what it does mean is that those who are associated with the sleeper take the necessary precautions. Finally, should a person be detained in hospital? The answer to that is: Yes, because sleep walking is treatable. Violent night terrors are treatable. There is a lot which can be done for the sleep walker, so sending them to hospital after a violent act to have their sleep walking sorted out, makes good sense.'[92]

By contrast, the courts and Crown Prosecution Service in recent years (see **6.5.2** and the case of Brian Thomas at **3.4.2**) have focussed more on the issue of continuing danger and benefit from treatment in deciding whether the insanity verdict should be considered. Mr Justice Nigel Davis directed the jury to return a plain acquittal, which seems contrary to the settled law on automatism and insanity, after the prosecution offered no further evidence following expert testimony.

5.9 Parasomnias and Mental Condition Defences

Although *Burgess* is quoted as clear authority that sleepwalking is an insane automatism because it has an internal cause, the ambiguities in the judgments make it

[92] Burgess, see footnote 90, at p. 101.

quite possible to try to distinguish many sleepwalking cases on the medical facts, just as the Canadian Supreme Court did in *Parks.* Often this is done on the grounds of an external trigger. Some forensic sleep experts consider that nearly all episodes of sleepwalking should be considered automatism, because serious violent sleepwalking episodes are due to an unique set of circumstances highly unlikely to recur rather than any particular propensity (which is supported by the extreme rarity of recurrent harm in sleepwalkers). Expert 29 comments that

> 'sleepwalking is part of the human condition – anybody can be induced to sleepwalk, I believe, under certain circumstances'.

So despite the ruling in *Burgess,* in all bar two of the acquittals reported in the press from 1996 to date, the defendant received a plain acquittal rather than the special verdict (*Lowe* [2005] and *Fallon* [2013]).[93] It is likely the reason for this in many cases is that the defence were arguing lack of *mens rea* rather than automatism *per se* (see **6.5.1**). Even where the mental condition is a disease of the mind, if it does not amount to legal insanity it can be used to argue lack of *mens rea,* as per *Clarke*[94] (see further at **6.5.1**). However, if the defence is arguing lack of *mens rea,* the judge *may* direct that the issue of insanity needs to be considered because the *McNaughtan Rules* are satisfied.

5.9.1 Sleepwalking is a marked exception in the examples of automatism. Revisiting Lord Denning's comments in *Bratty*, he states

> 'an act which is done by the muscles without any control by the mind such as a

[93] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-136; ALLEN, V. (2013) Justice has betrayed me, says victim as judge frees attacker who claims he is a sexsomniac. *Daily Mail* (Oct 19th).
[94] (1972) 56 Cr. App. R. 225

> spasm, a reflex action or a convulsion; or an act done by a person who is not conscious of what he is doing such as an act done whilst suffering from concussion or **whilst sleepwalking**.' [emphasis mine][95]

This is a bipartite definition, involving the two distinct concepts of involuntariness and limited or impaired consciousness (or awareness).

The popular perception is that sleepwalkers are still sleeping, but this is not strictly true – they are in a state somewhere between wakefulness and NREM sleep (see **1.2** and **Figure 1**). Is there any objective basis for treating sleepwalking as legal automatism while excluding very similar conditions like dissociative states? It is arguable that the very term "sleepwalking" and a large dose of folk psychology explain its exceptional status in criminal law. In fact, it is often used as the archetypal example of legal automatism. Does sleepwalking really fit the legal definition better than other causes of automatism though? As we have seen, an essential requirement for legal automatism is "total destruction of voluntary control" (from *Attorney-General's Reference (No 2 of 1992)*[96] which confirmed the decisions in *Watmore v Jenkins*, *Broome v Perkins* (both diabetic drivers suffering hypoglycaemia), *R v Isitt*, and *Roberts v Ramsbottom*[97][but contrast the civil case *Mansfield v Weetabix*[98]]).

In the cases of *R v Quick* and *R v T*[99] the defendants could not have committed their crimes if they had lost all voluntary control. Quick possessed the necessary control of his arms to assault his patient, and T was definitely aware of her actions in robbing her victim (for more details see **6.2.3**). Nonetheless they lacked the necessary intention or

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[95] [1963] AC 386, at p.409.
[96] [1994] QB 91
[97] [1962] 2 QB 572; [1987] RTR 321; [1978] RTR 211; [1980] 1 WLR 823
[98] [1998] 1 WLR 1263
[99][1973] QB 910; [1990] Crim LR 256

mens rea, due to hypoglycaemia and a dissociative state respectively. In *R v Rabey* where the triggering event was considered part of "the ordinary stresses and disappointments of life which are the common lot of mankind"[100]- such psychological vulnerability was considered to be a disease of mind (rightly in this author's opinion). By contrast the reaction of a normal person to overwhelming events as in *R v T* (who had been raped) is deemed "psychological blow automatism". Some commentators criticize the distinction between the defendants in *Rabey* and *T*. If acute post-traumatic stress disorder (PTSD) qualifies as non-insane automatism as per *T*, chronic PTSD is indubitably considered a disease of the mind. The differentiation between the two is hard to sustain, and even harder to precisely define.

It has been confirmed that the insanity defence can be pleaded in the magistrates' courts.[101] The disposal options available under the statutory special verdict do not apply, so (see above at **5.4**). this defence, if successful, results in a plain acquittal (the *McNaughtan Rules* still apply). There is some debate as to whether or not the common law insanity defence can be pleaded for strict liability offences (which may explain the decisions in sleepwalker/drink driving cases). The decision in *DPP v Harper* was that the insanity defence is not applicable where the crime requires no *mens rea.*[102] Herring comments

> 'it made no reference to an earlier decision, *Hennessy,* which had stated that insanity was a defence to a strict liability offence. Secondly, the reasoning used in *DPP v Harper* was suspect. It was claimed that insanity is a denial of *mens rea*; however, if

[100] (1981) 79 Dominion Law Reports 435 at para 76.
[101] *R v Horseferry Road Magistrates Court ex parte K* [1997] QB 23
[102] [1997] 1 WLR 1406

that was all insanity was there would be no need to have a special defence of insanity because any defendant who was legally insane would simply be able to claim they lacked the *mens rea* of the offence.'[103]

Many legal commentators agree with this analysis (including this author). The problems of a lack of *mens rea* approach have been highlighted in US reforms of the insanity defence (see below).

The number of plain acquittals suggests that the current law is not being applied. The issue of insanity appears to be bypassed. The reasons for this are not clear; it could be pragmatism, Crown Prosecution Service policy, judicial reluctance to consider the insanity defence for parasomnias, and/or expert witness or juror opposition to the insanity defence for non-psychiatric conditions. The Law Commission voiced concerns over the use of medical conditions to argue lack of *mens rea* in their discussion document (see further at **6.5.1**).[104]

5.9.2 Because of the difficulties in proving the sleepwalking defence, HHJ Milmo has suggested that the sleepwalking killer might argue diminished responsibility rather than automatism[105]. Denno has made a similar suggestion, a middle option which unlike the current plea of diminished responsibility would apply to all offences. Her argument is that this outcome is fairer than the lottery of guilty versus not guilty.[106] Coles and Jang came to the same conclusion

'that public concern about offenders claiming to have committed a crime while in a

[103] HERRING, J. (2006) *Criminal Law Text, Cases and Materials*. 2nd Ed. Oxford: Oxford University Press, p.717.
[104] LAW COMMISSION. (2013) Criminal Liability: Reforming Insanity and Automatism. London: Law Commission, at Ch 2.18, 2.34
[105]Personal communication.
[106] DENNO, D.W. (2003) A Mind to Blame: New Views on Involuntary Acts. *Behavioral Sciences and the Law*, 21, pp. 601-18.

state of automatism[107] could be ameliorated by recognition of diminished responsibility and a reduced sentence as an alternative to absolute acquittal.'[108]

Morse suggested a general plea of guilty but partially responsible (GPR).[109] Whether or not defendants would welcome this middle option to taking their chances between being found guilty and an outright acquittal is arguable. There would also be an issue with fair labelling for the victims and wider public. Diminished responsibility applies to a range of offences in California and South Africa, reducing the category of the crime.[110] This relies on there being a lesser offence to fall back.

5.10 Disposal

The special verdict gave the courts the power to detain the insane defendant who had been acquitted by a jury. This meant detention at His or Her Majesty's pleasure e.g. indefinite detention, prior to 1991. Prior to the acceptance of "partial insanity"[111] as exculpatory, those found legally insane were so profoundly ill that civil confinement was routine. When capital punishment was the penalty for convicted murderers, pleading insanity may have represented a more attractive option for the defendant. When capital punishment was abolished, the prospect of indefinite detention became so unattractive that the insanity defence became practically obsolete - especially after the introduction

[107] In the psychological sense of automatism - see **6.3.2**.
[108] COLES, E.M. and JANG, D. (1996) A Psychological Perspective on the Legal Concepts of "Volition" and "Intent". *Journal of Law and Medicine*, 4(August), pp. 60-71.
[109] MORSE, S.J. (2003) Diminished Rationality, Diminished Responsibility. *Ohio St. J. Crim. L.*, 1, pp. 289-308.
[110] WASIK, M. (1982) Partial excuses in the criminal law. *Modern Law Review*, (Sept), pp. 516-33.
[111] Lucid individuals with delusions, as per Erskine in *Hadfield*.

of the partial defence of diminished responsibility in the Homicide Act 1957.[112] This inflexibility also made automatism an attractive option for those with a condition that posed no danger to the public such as diabetes or epilepsy. Judges were given flexible powers by the Criminal Procedure (Insanity and Unfitness to Plead) Act 1991 as amended (see below) are:

- Absolute discharge: person goes free without any restrictions.
- Supervision order: supervision by a social worker or probation officer, and additionally the person must "submit" to treatment as an outpatient (this requires a Section 12 psychiatrist, but applies to medical conditions as well as mental disorders); however, the court has no powers to enforce compliance.
- Hospital order (with or without a restriction order): a hospital order under section 37 of the Mental Health Act 1983 allows the admission and detention of the patient in an appropriate hospital, with release when the clinicians believe the patient is suitable for discharge but no power of recall; a restriction order means that the patient cannot be released without the permission of the Justice Secretary and can be recalled to hospital at any time thereafter.

Originally there was an option for a guardianship order, but that was abolished by Section 24 of the Domestic Violence, Crime and Victims Act 2004. There is still a mandatory hospital order with restriction order if the special verdict is returned in a murder case, but otherwise the trial judge has discretion over whether to impose a hospital order or use the other disposal options. It is important to note that the

[112] MACKAY, R.D. & KEARNS, G (1994) The continued underuse of unfitness to plead and the insanity defence. *Criminal Law Review*, (Aug), pp. 576-79.

provisions of the Domestic Violence, Crime and Victims Act 2004 also mandate that restriction orders and hospital orders imposed under the 1991 Act comply with the Mental Health Act 1983. There *must*, therefore, be a mental disorder requiring specialist treatment. It is not certain whether sleepwalking constitutes such a mental disorder, but considering that it is a 'disease of mind' and that it does respond to specialist treatment it *could* be held to be so. Sleepwalking responds to psychological therapies and hypnotic drugs. A Home Office circular asserts that "physical disorders" are limited to supervision orders or absolute discharge.[113] Mackay and Mitchell argue

> 'Might this apply equally to findings of NGRI in respect of sleepwalking even where the charge is murder? This, however, is premised on accepting that such a condition is to be regarded in law as "a disease of the mind" within the M'Naghten Rules which is by no means clear cut.'[114]

However, the likelihood is that it would not be considered a mental disorder.

5.11 Mental Condition Defences in Other Common Law Jurisdictions

5.11.1 USA

The disposal under a plea of insanity in the USA is very much more punitive and less therapeutic than the UK. Especially post-Hinckley (although in fact the process of reform pre-dates his trial), many States dramatically limited or "abolished" the insanity

[113] Home Office circular 24 / 2005 The Domestic Violence, Crime and Victims Act 2004: provisions for unfitness to plead and insanity. Note that complex partial seziures are considered a mental disorder requiring specialist treatment.
[114] MACKAY, R & MITCHELL, B. (2006) Sleepwalking, Automatism and Insanity. Criminal Law Review, (Oct), pp. 901-5, at p.902.

defence.[115] In one challenge to the abolition of the insanity defence, the US Supreme Court denied certiorari, effectively ruling that it was not unconstitutional.[116] It should be noted however that all States have some provision for evidence about lack of capacity due to mental health issues to be admitted, even if this is purely on the grounds of denying the relevant *mens rea.* In this author's opinion a bar on the admission of mental health evidence for arguing lack of culpability more broadly than simple lack of *mens rea* ought to be deemed unconstitutional, being contrary to due process. Morse takes that view, but considers it unlikely that the US Supreme Court would strike down state insanity abolition measures as unconstitutional.[117]

5.11.2 Canada

Canada has since 1992 had the verdict of not criminally responsible due to mental disorder (NCRMD) under section 672.34 of the Canadian Criminal Code. This gives three options for disposal - an absolute discharge, a conditional discharge, and detention in custody in a hospital. One of the most interesting innovations of the enabling Act was that detention should be capped at the maximum tariff for the offence in question, unless there was proof that the interest of public safety demanded otherwise. This would make the plea a more attractive proposition compared to indefinite hospitalization, although this measure would arguably make little difference in the UK because of the existing flexible powers of disposal. This was the most controversial part of the Act; it was not proclaimed and eventually repealed on the advice of the 14th report of the Standing Committee on Justice and Human Rights,

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[115] MACKAY, R.D. (1988) *Post-Hinckley insanity in the U.S.A. Criminal Law Review*, (Feb), pp. 88-96.
[116] STIMPSON, S.C. (1994) State v. Cowan: The Consequences of Montana's Abolition of the Insanity Defense. *Mont. L. Rev.*, 55, pp. 503-24.
[117] MORSE, S.J. (1985) Excusing the crazy: the insanity defense reconsidered. *South California Law Review*, 58, pp. 777-838

2002. This was largely due to concerns about the ability of the civil commitment system to protect the public. In *Winko v British Columbia (Forensic Psychiatric Institute)*[118] the Canadian Supreme Court found that it was required to be shown that the individual was a significant risk to the public, but a recent Bill which has received its second reading (C-54, 'Not Criminally Responsible Reform Act') proposes more emphasis on public safety. The current situation is that those who plead NCRMD are detained longer on average than if they had been sentenced to prison.[119]

5.12 Summary

Mental condition defences have evolved under two main influences: 1) emerging scientific knowledge about the brain and mind; and 2) changing disposal options. The separate automatism defence arguably arose largely because of the inflexibility of the insanity defence at that time. Since then the options for disposal have made the case for a separate automatism defence less compelling. The law remains confusing for both the legal profession and juries, and may explain some of the apparently perverse acquittals. The evolution of mental condition defences needs to continue to ensure appropriate management of medical conditions whilst preventing inappropriate acquittal of potentially dangerous individuals.

[118] [1999] 2 SCR 625
[119] CROCKER, A.G., NICHOLLS, T.N., SETO, M., CÔTÉ, G., CHARETTE, Y. and CAULET, M. (2013 in preparation). *The National Trajectory Project of Individuals found Not Criminally Responsible on Account of Mental Disorder in Canada: Part 2 – Process and outcomes*.

Chapter 6: Criminal Law Theory and Moral Philosophy

The issues surrounding the sleepwalking defence and automatism require some consideration of the wider issues surrounding medico-legal automatism. In particular, the legal and moral principles behind the exemption from criminal responsibility for acts committed during parasomnias and similar conditions need to be determined, and whether or not there are coherent and consistent principles underpinning the law in this area.

6.1 Theoretical Issues in Automatism

6.1.1 Involuntariness versus unconsciousness

A large amount of the confusion surrounding the defence of automatism arises from the confusion between involuntariness and unconsciousness. As we have seen, involuntariness is a denial of the *actus reus*, and is applicable to any crime including those of strict liability (see below at **6.1.3**). Unconsciousness is a denial of the *mens rea*.[1] A lack of *mens rea* is easier to establish in most circumstances that go to trial than a lack of the *actus reus,* especially if the bar is set at the high standard of a total loss of voluntary control. Doghramji, Bertoglia and Watson assert that

> 'In cases where a violent act is committed during sleepwalking, it is often the *actus reus* requirement that first comes under fire, as the presence of an *actus reus*

[1] YEO, S. (2001) Putting Voluntariness Back Into Automatism'. Victoria U. Wellington L. Rev., 32, pp. 387-406.

element implies that the defendant's action were voluntary.'[2]

This is certainly not the way English cases would be argued, and it is possible the authors are confusing voluntary (and therefore intentional) action with possessing the necessary intent (c.f. the case of the bus driver confusing the accelerator and brake pedals[3]), see further below at **6.2.3**). The negation of the *mens rea* is often the basis of the defence, rather than being merely theoretical. If this is established, there is **no** need to demonstrate that the defendant did not act voluntarily. Not all common law jurisdictions are settled on automatism being a denial of the *actus reus* however, so their argument may hold true for other jurisdictions.[4]

Lord Denning acknowledges the two concepts that have been subsumed into automatism in his comment in *Bratty*:

> 'an act which is done by the muscles without any control by the mind such as a spasm, a reflex action or a convulsion; or an act done by a person who is not conscious of what he is doing such as an act done whilst suffering from concussion or whilst sleepwalking.'[5]

The former part of the definition refers to involuntariness, the latter to limited or impaired consciousness (see further at **6.2.3**). Whichever is being argued, if the cause of the condition is a disease of the mind and the defendant is found to be insane, then the special verdict is applicable. If however the defendant is not found to be insane, then the defence is either automatism (lack of *actus reus*) or lack of *mens rea*. However, if it

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[2] DOGHRAMJI, K., BERTOGLIA, S.M. and WATSON, C. (2013) Chapter 31: Forensic Aspects of the Parasomnias. In KOTHARE, S.V. and IVANENKO, A. (eds.). *Parasomnias: Clinical Characteristics and Treatment*. 1st Ed. New York: Springer, pp. 463-77.
[3] [Attorney-General's Reference (No. 4 of 2000] [2001] EWCA Crim 780
[4] LAW COMMISSION. (2013) *Criminal Liability: Reforming Insanity and Automatism*. London: Law Commission.
[5] [1963] AC 386 at p. 409.

is wrongly posited that a total lack of control is required to negative *mens rea,* this is a clear error of law.

It is assumed in law that the unconscious person cannot act voluntarily. Are there any grounds in neuroscience to dispute this? It is recognized that the person can perceive information without being consciously aware of it. The phenomenon of 'blindsight' (also known as 'cortical blindness') illustrates this potential. When the cortical visual centres have been damaged, the person will be unaware of seeing anything. However, if they are asked to point to where a certain object is, they can do so. This peculiar phenomenon only occurs secondarily to a brain injury, but recent research on the "sixth sense" suggests that we may identify differences without consciously being able to identify them.[6] These observations may have limited if any relevance to the area of criminal responsibility.

Similarly the ideomotor effect could potentially pose a problem. This explanation for the unconscious movement of the planchette when using the ouija board posits that the person is acting on unconscious desires, also known as the Carpenter effect.[7] Faraday, Chevreul, James and Hyman have demonstrated that many supposedly supernatural phenomena are due to this effect.[8] There is no evidence to suggest the ideomotor effect is relevant to parasomnia. In any case, the effect of unconscious desires on criminal

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[6] HOWE, P.D.L. and WEBB, M.E. (2014) Detecting Unidentified Changes. *PLoS ONE*, 9(1), pp. e84490.
[7] CARPENTER, W.B. (1852) On the influence of suggestion in modifying and directing muscular movement, independently of volition. *Proceedings of the Royal Institution of Great Britain*, (1), pp. 147-53.
[8] FARADAY, M. (1853) Experimental investigation of table turning. *Atheneum*, (July), pp. 801-03; CHEVRUEL, M.E. (1854) *De la Baguette Divinatoire et du Pendule Dit Explorateur (On the Divining Rod and the So-called Exploratory Pendulum)*. Paris: Maillet-Bachelier; JAMES, W. (1890) *Principles of Psychology*. New York, NY: Holt; HYMAN, R. (2003) August 26, 2003.-last update, *How People Are Fooled by Ideomotor Action*. Available: http://www.quackwatch.org/01QuackeryRelatedTopics/ideomotor.html.

responsibility is doubtful (see discussion below at **6.2.3**)

6.1.2 Involuntariness versus irresistible impulse

Yeo makes a useful contrast between involuntariness and unconsciousness, but his analysis includes disinhibition and irresistible impulse as forms of automatism.[9] This is not the current law in the UK, although disorders causing difficulties with impulse control may satisfy the partial defence of diminished responsibility. Many jurisdictions do have a volitional limb to their insanity defence, but not English law. The Law Commission's proposed tests for capacity suggest an expansion of the special verdict to include a volitional limb, namely the ability:

- to control his or her physical acts in relation to the relevant conduct or circumstances

It appears from Chapter 4 of the discussion document that this is not just referring to the difficulties of motor control that would occur from Tourette's syndrome or during an epileptic seizure or a hypoglycaemic episode. It also would cover the inability to refrain from an act, although the effects of a personality disorder would be excluded from the new defence. It might cover the situation of a defendant with hypersexuality from Kleine-Levin Syndrome[10] or dopamine agonist treatment, for example.

6.1.3 Automatism and strict liability

Non-insane automatism is a complete defence, applicable even to strict liability crimes. Whether or not insane automatism is a defence when there is no *mens rea* is debated (see **5.9.1**). Some commentators state that strict liability crimes require no fault on the

[9] YEO, S. (2001) Putting Voluntariness Back Into Automatism'. *Victoria U. Wellington L. Rev*., 32, pp. 387-406.

[10] A rare syndrome associated with episodes of hypersomnia, cognitive and mood disturbance, and frequently hypersexuality and hyperphagia.

part of the accused, but the requirement for voluntary action suggests otherwise. The position is surely clear – strict liability offences require no proof of *mens rea* but they do involve conduct and hence require commission of the relevant *actus reus.* Smart discusses a number of examples of the lack of criminal responsibility for failing to do the impossible, even where the offence is strict liability, e.g. failing to stop and report an accident where the driver was oblivious to the accident.[11] *Actus reus* includes some mental elements - there is no sharp distinction between *actus reus* and *mens rea*. As well as the requirement for voluntariness, there are other subjective elements typically included under *actus reus* e.g. some knowledge in instances of possession, and the above example of failing to report an accident. Furthermore, as discussed below in **6.4.3**, acting often involves references to beliefs. As Holmes put it

> 'Even a dog knows the difference between being kicked and being stumbled over.'[12]

Robinson argues about the *actus reus/mens rea* distinction that

> 'this most basic organizing distinction is not coherent. Rather than being useful to criminal law theory, it is harmful because it creates ambiguity in discourse and hides important doctrinal differences of which criminal law should take account. I suggest we abandon this distinction in favour of other conceptualizations.'[13]

Even in the problematic case of *Larsonneur*[14] there was arguably a required mental element. Larsonneur had been deported from the Irish Free State in the custody of the police back to England, where she was convicted for being found in the UK despite

[11] *Hampson v Powell* [1970] 1 All ER 929; SMART, A. (1987) 'Criminal responsibility for failing to do the impossible'. *Law Quarterly Review*, 103(Oct), pp. 532-63.
[12] HOLMES, O.W. (1881) *The Common Law*. Boston: Little, Brown and Company.
[13] ROBINSON, P.H. (1993) Should the Criminal Law Abandon the Actus Reus - Mens Rea Distinction? In SHUTE, S., GARDNER, J. and HORDER, J. (eds.). *Action and Value in Criminal Law*. Oxford: Clarendon Press, pp. 187-211.
[14] (1934) 24 Cr. App. R. 74

being refused leave to land. Most commentators argue that she should not have been convicted for a situation over which she had no control. However, Lanham argues that Larsonneur was at fault for going to the Irish Free State, from where it was inevitable she would be deported back to England. She set into motion the chain of events.[15] Of course there was not the usual close nexus between the *mens rea* and *actus reus,* but it can be argued that there was a fault element.

The same principle applies to crimes of omission - where the accused is unable to fulfil their duties through no fault of their own, they should not be held liable.[16] Thus parents and carers can be found guilty for injuries and illness due to wilful neglect (*R v Stone and Dobinson*),[17] but not for failing to provide the appropriate level of care despite their best efforts (*R v Sheppard*, *R v Hopkins*[18]).

6.2 Criminal Responsibility

6.2.1 Amnesia

The issue of amnesia, whilst problematic for the defendant, has been dealt with clearly by the court in *Podola.*[19] There it was held that amnesia alone was not a sufficient ground for unfitness to plead, because the defendant could still direct his defence, even if he had to be informed of his actions by his defence counsel. That decision was based largely on policy issues, because of the difficulties in determining whether amnesia is

[15] LANHAM, D. [1976] Larsonneur Revisited. *Criminal Law Review*, pp. 276-81.
[16] SMART, A. (1987) 'Criminal responsibility for failing to do the impossible'. *Law Quarterly Review*, 103(Oct), pp. 532-63.
[17] [1977] Q.B. 354
[18] [1981] A.C. 394; [2011] EWCA Crim 1513
[19] [1960] 1 Q.B. 325

genuine or not. There is also the issue that it is irrelevant to criminal culpability, if not criminal liability. An individual with dementia, for example, may not remember certain acts, but at the time clearly had moral ownership of them. Someone who has consumed large amounts of alcohol may similarly fail to remember his actions.

The issue with amnesia is not so much about culpability, but whether the defendant should be liable for criminal punishment. Amnesia causes problems for the communicative model of criminal punishment. It could be argued that someone with no memory for illegal acts cannot have their wrongdoing effectively communicated to them. Duff argues that amnesia renders the accused unfit to plead, as he is unable to answer for his actions.[20] Punishment of those who cannot recall their actions is permissible even under the communicative account of criminal justice, since they can be informed of their actions. For example, a defendant with sexsomnia accused of rape can be confronted with DNA evidence and will then able to take some ownership of his “act”. The person with dementia mentioned above would be a different matter - even if he were able to direct his own defence, if the communicative function of the law was impossible (although the two functions are unlikely to be independent) then arguably he should not be held criminally liable. It would be inhumane and morally wrong to punish someone who continued to be perplexed by his predicament.

6.2.2 Ownership and psychological continuity

As noted above, there have been parallels drawn between parasomnias and multiple personality disorder (MPD), which is also known as dissociative identity disorder (DID). In both conditions, there are issues about the ownership of the crime, as well as legal

[20] DUFF, R.A. (1986) *Trials and Punishments*. Cambridge: Cambridge University Press.

personality. In MPD/DID, there is a host personality, with one or more separate identities known as “alters” which control behaviour at different times. It is believed this condition may arise as a protective mechanism against past trauma. It must be noted at this point that the status of MPD/DID is contested, and considered by many forensic mental health professionals to be either part of borderline personality disorder or a product of therapy, especially those trying to “recover” memories (also linked with the iatrogenic condition “false memory syndrome”). Saks describes the three distinct approaches which have been taken in the United States towards defendants with putative MPD/DID:

> ‘The first view found in the courts is that a multiple is not guilty by reason of insanity (“NGRI”) if the alter that is in control at the time of the act meets the insanity test of the particular jurisdiction. Thus, experts are directed to look at the mental state of that alter. If the alter, for instance, were psychotic and did not know what she was doing, the multiple would be criminally insane. Or if the alter were a child who did not know what she was doing—which is not always the case since child alters are not actually children—the multiple would also be insane. Otherwise, the multiple would be guilty of the crime.
>
> The second view of courts is that a multiple is insane if any alter meets the insanity test. This view is less well grounded in the courts because the decisions that take this position also contain language suggestive of the first position. For example, in State v. Rodrigues, the court reviews the expert’s testimony about each of the three alters’ knowledge at some length.
>
> The third view of the courts is found in a Tenth Circuit case, United States v. Denny-

> Shaffer. This view suggests that a multiple is criminally insane if the host personality did not plan or participate in the offense. In essence, Denny-Shaffer takes the position that the "defendant" is the host personality. This view is quite plausible but, as I shall argue, does not go quite far enough.'

He goes on to propose a *fourth* test, that

> 'a person suffering from MPD should not be held responsible for a crime unless all of her alters knew about and acquiesced in the crime'.[21]

If it was held that the sleepwalker's actions were due to a repressed desire, it could be argued that this is very similar to a second, hidden personality, which only acts during a parasomnia. On any of the tests mentioned by Saks, the sleepwalker would not be held liable. The English courts have not heard any arguments that MPD/DID might exempt the defendant from criminal responsibility other than by satisfying the *McNaughtan Rules* in the usual way. The court agreed with the expert witness in one such case that

> 'A depersonalised intent is nevertheless an intent.'[22]

However, Williams considered that dissociation *could* support an acquittal, but that the evidence should be tested by "skilled and deeply sceptical cross-examination".[23] The difference between dissociative states and fugue amnesia must be emphasized here, as there is some confusion and conflation in the literature. Simple amnesia for the reasons above does not have the same connotation of lack of ownership, but some authors use the term fugue for dissociative states where depersonalization occurs. An example of the latter from Australia is the case of *Radford*, where the defendant stated

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[21] SAKS, M. and KOEHLER, J. (2008) The Individualization Fallacy in Forensic Science. *Vanderbilt Law Review*, 61, pp. 199-220.
[22] RIX, K.J.B. (2011) *Expert Psychiatric Evidence*. London: RCPsych Publications, p.95.
[23] WILLIAMS, G. (1983) *Textbook of Criminal Law*. 2nd Ed. Stevens.

he felt like an observer, as if his *"whole body was just a head about two feet above the shoulder – the right shoulder of the soldier".* This account is somewhat reminiscent of 'out of body' experiences.[24] Other dissociative experiences are less dramatic e.g. *Burgess*[25] who had fragmentary amnesia for the attack on his friend (see **5.8**).

The issue of lack of psychological continuity is not a new one – it is common in folk psychology to speak of someone 'not being himself' or that certain behaviour is 'not like him', to mean that the person's behaviour is uncharacteristic of him. When someone's behaviour is dramatically transformed by a brain tumour or a medical treatment, often there is an intuitive reaction to excuse their actions as not indicative of intrinsically bad moral character. For example, there has been a case reported of a man who became suddenly interested in child pornography. A brain tumour was diagnosed, and this behaviour ceased when the tumour was resected. When the behaviour recurred, brain scans showed that the tumour had recurred also.[26] People with brain tumours often have questions about identity and ownership of their acts - when the late Labour politician Mo Mowlam learned that she may have had her brain tumour for many years, she asked "[So] good old Mo, larger than life Mo... it could all be because of the tumour? [But] which part's the real me?"[27]

It has been argued that even if the court does not accept that there is objective psychological discontinuity, the subjective psychological discontinuity experienced by the defendant entails that the communicative function of the criminal law is impaired

[24] (1985) 20 A Crim R 388
[25] [1991] 2 WLR 1206
[26] BURNS, J.M. and SWERDLOW, R.H. (2003) Right Orbitofrontal Tumor With Pedophilia Symptom and Constructional Apraxia Sign. *Archives of Neurology*, 60, pp. 437-440.
[27] COOKE, R. (2010) Sunday 17th Jan, 2010-last update, *Revealed: the real Mo Mowlam.* Available: http://www.guardian.co.uk/culture/2010/jan/17/real-mo-mowlam-channel-4.

(they do not have “ownership” of their acts) and so the person with DID should not be held criminally liable.[28]

Do these issues really apply to the sleepwalker? The very limited studies of the brain during parasomnia suggest that (at least for some) the executive functions are disabled, and limbic system-driven behaviour becomes unrestrained. This could be likened to the fictional Dr Jekyll/Mr Hyde dichotomy.[29] A proportion of people suffering sexsomnia exhibit different sexual behaviour during episodes compared to their waking selves - they may be rougher, gentler, or even assume a different sexual orientation. The partner of one man acquitted of rape on the grounds of sexsomnia described his behaviour:

> ‘It’s like he’s hypnotised and someone’s got the remote control on. He’s disgusted with himself. He just can’t help it.’[30]

Whether or not hypnosis/post-hypnotic suggestion could amount to legal automatism is a moot question. I could find no British judgment where this issue has arisen, but some US jurisdictions recognize the possibility. As noted above, Moore included post-hypnotic acts within the class of actions without agency. If the caricature of the hypnotised individual as someone whose will had been completely subsumed was true, this would undoubtedly qualify as automatism (although there would be considerable evidential difficulty and policy concerns about accepting such a defence). There are two main schools of thought about hypnosis - ‘state’ and ‘non-state’. The state school believe that

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[28] Discussion with Filippo Santoni de Sio

[29] As described in Robert Louis Stevenson’s famous novel, allegedly based on the double life of Deacon Brodie.

[30] BENTLEY, P. (2013) 'Sexsomniac', 40, is cleared of raping a 21-year-old at Butlins because he had 'no control over his actions while asleep'. *Daily Mail* (May 6th) News.

hypnosis involves a special state of altered consciousness.[31] The 'non-state' school of hypnotists believe that the hypnotised person is simply suggestible. There is little support from either school for the notion that a hypnotised individual has no control over their actions at all.[32]

6.2.3 Intention and parasomnia

The difficulty for laypeople (and of course juries) with the idea of the automaton is that very often there seems to be an agent; that is, there is an apparent author of the acts. As Moore puts it

> 'Cases of sleepwalking, post-hypnotic acts, and similar acts are often sufficiently complicated that they appear to be intelligently directed actions. In such cases, one is loathe not to attribute these acts to some agency, but if not to X [the defendant], then to whom?'[33]

Bird, Newson and Dembny observe that the person committing the illegal act, whether whilst sleepwalking or in some other state, is rarely the stereotypical shuffling automaton:

> 'Complete lack of consciousness and control rarely accompanies a potentially criminal act; hence, difficult judgments need to be made about the degree of loss of consciousness and attention at the specific time.'[34]

In this respect the work of Schopp is most helpful. In his monograph, he analyzes those

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[31] WHALLEY, M. (2014) 2014-last update, *States of consciousness: The state - nonstate debate in hypnosis*. Available: http://www.hypnosisandsuggestion.org/states-of-consciousness.html.
[32] WAGSTAFF, G. (2008) Hypnosis and the Law: Examining the Stereotypes. *Criminal Justice and Behavior*, 35(10), pp. 1277-94.
[33] MOORE, M.S. (1979) Responsibility and the unconscious. *S Cal L Rev*, 53, pp. 1563-1678.
[34] BIRD, J., NEWSON, M. and DEMBNY, K. (2009) Epilepsy and automatism. In: YOUNG,S., KOPELMAN,M. and GUDJONSSON, G. (eds.). *Forensic Neuropsychology in Practice*. 1st Ed. Oxford: Oxford University Press, pp. 165-91.

capacities which distinguish automatism from moral agency. For Schopp sleepwalking is automatism because although the sleepwalker has some vague awareness, he does not will his actions. The executive functions of the brain are paralysed and he cannot be truly described as a moral agent.[35] Children and animals can make purposive actions directed towards goals, but we do not attribute criminal responsibility to them (neither would we categorize them as automatons).

Also we can draw on cognitive neuroscience, which describes actions as arising from either from the higher centres (responsible for executive functions) or elsewhere (limbic system, motor cortex, epilepsy in the frontal or temporal lobes). Thus actions during complex partial seizures may appear to be purposive, although they are stereotyped. A personal experience of the author involved being almost bowled over by a patient in a hospital corridor - the patient was having a temporal lobe epileptic seizure.

In English law it is now settled that automatism is a denial of the *actus reus* rather than the *mens rea* (this is not true for all common law jurisdictions). For crimes where a particular intent is required, this distinction makes little practical difference in court. Intention has several distinct meanings, which are drawn out by Anscombe. She describes “intention-in-acting”, “acting intentionally” and “intention for the future”.[36] “Intention-in-acting” may describe the *mens rea,* the reason for an action (although many crimes require only recklessness, knowledge or negligence). In crimes of strict liability, all that is required is “acting intentionally” (or voluntary action). This is illustrated

[35] SCHOPP, R. (1991) *Automatism, Insanity and the Psychology of Criminal Responsibility*. Cambridge: Cambridge University Press.
[36] ANSCOMBE, G.E.M. (1957) *Intention*. Oxford: Blackwell.

by the case of *Attorney-General's Reference (No. 4 of 2000)*.[37] Here a bus driver who was unfamiliar with the controls of the particular bus he was driving pressed the accelerator pedal instead of the brake pedal. Tragically the bus shot forward and travelled across a pedestrian island where it struck a number of pedestrians, two of whom died from their injuries. He did not do this intentionally; however, his action in pressing that particular pedal was intentional and deliberate, and therefore not an automatism. His actions were accidental, but not involuntary. His intention in pressing that pedal was irrelevant, because the aim of the law is to protect the public by ensuring that drivers take all necessary precautions. Clearly there is not the same level of recklessness and disregard for safety as a driver speeding around a blind corner on the wrong side of the road, but nonetheless there was a failure of the necessary care and attention. To take another example, in the film *Lethal Weapon 3* Murtagh is practising a roundhouse kick at Riggs's urging and kicks over the water cooler. Although he didn't intend to kick the water cooler over, nonetheless his kick was *intentional* and so he was responsible (but probably less so than his partner).

Another very similar distinction is between *de re* and *de dicto*, which can be broadly considered as distinguishing general intent from specific intent. Moore explains thus

> 'Sometimes the question of intentionality arises, not with respect to the consequences of our actions … but with respect to circumstances. Suppose I shoot and kill Bill, as I intended; if Bill is a police officer, did I intend to kill a police officer? Does the answer change if I knew Bill was a police officer? Or must I be motivated by that fact, as I would be if I were in a cop-killing contest, for example? Ordinary

[37] [2001] EWCA Crim 780

> language here is also indeterminate, even with respect to noun/verb usages of 'intend. In one sense (often called the 'de re' sense) of intend, if Bill is a cop and I intended to kill him, I intended to kill a cop; in another sense (often called the 'de dicto' sense), even believing that Bill is a cop is not enough - I have to represent the state of affairs I intend to bring about as the killing of a cop.[]
>
> Most crimes having some form of intentions as mens rea are general intent crimes, such as rape, arson, and murder; specific intent crimes tend to be inchoate crimes (where the evil the law ultimately seeks to prevent need not have occurred).'[38]

General and specific intent is being used here in a slightly different sense to that employed in English criminal law, where murder is considered a crime of specific intent. The list of basic and specific intent crimes is based more on policy than principle - although one distinction is between crimes with a *mens rea* satisfied by proof of negligence and recklessness (basic intent) and crimes with a minimum *mens rea* of knowledge or intent. Lord Diplock in *Caldwell* quoted with approval Lord Elwyn-Jones LC in *Majewski* who stated that

> 'self-induced intoxication is no defence to a crime in which recklessness is enough to constitute the necessary *mens rea*.'[39]

The Law Commission stated in 1995

> 'It is apparent … that there is no general agreement on the test which should be applied in order to distinguish offences of basic and of specific intent.'[40]

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[38] MOORE, M.S. (2013) Intention as a Marker of Criminal Culpability and Legal Punishability. In DUFF, R.A and GREEN, S.P. (eds.). *Philosophical Foundations of Criminal Law*. Oxford: OUP, pp. 179-205.
[39] DPP v Majewski [1977] A.C. 443
[40] LAW COMMISSION. (1995) *Legislating the Criminal Code: Intoxication and Criminal Liability*. Law Comm No 229. London: HMSO.

Coles and Jang argue that intoxication cannot affect a person's intent.[41] The main effect of alcoholic intoxication is disinhibition, which does not affect intent in the eyes of the law (although it can nonetheless prevent the formation of a specific intent). It could be argued that the same principles should apply to risk-taking such as a sexsomniac sharing a bed with a stranger, or a sleepwalker drinking alcohol when he knows it triggers his sleepwalking.

An English case that demonstrates the doctrine is *Heard (Lee),*[42] where the defendant whilst intoxicated had intentionally rubbed his penis against a police officer's leg. It was held that sexual assault was a crime of basic intent, and so it was only required that the defendant intentionally committed the *actus reus*. Voluntary intoxication was not a defence. This demonstrates that "basic intent" is the same as "general intent", and so the basis of the decision hinges on the *de re/de dicto* distinction. His only defence would have been if his touching had been completely accidental or involuntary. Hughes LJ stated

> 'Because the offence is committed only by intentional touching, we agree that the judge's direction that the touching must be deliberate was correct. To flail about, stumble or barge around in an unco-ordinated manner which results in an unintended touching, objectively sexual, is not this offence. If to do so when sober is not this offence, then nor is it this offence to do so when intoxicated. It is also possible that such an action would not be judged by the jury to be objectively sexual, on the basis that it was clearly accidental, but whether that is so or not, we are satisfied that in

[41] COLES, E.M. and JANG, D. (1996) A Psychological Perspective on the Legal Concepts of "Volition" and "Intent". *Journal of Law and Medicine*, 4(August), pp. 60-71.
[42] [2007] EWCA Crim 125.

such a case this offence is not committed. The intoxication, in such a situation, has not impacted on intention. Intention is simply not in question.' (para 23)

However, the sense that his touching was intentional is slightly different from that in *Attorney-General's Reference (No. 4 of 2000).* It could be argued that this is because the minimum *mens rea* for sexual assault is recklessness, whereas the minimum *mens rea* of causing death by dangerous driving is negligence.

Wittgenstein defines actions as characterized by the absence of surprise (about the action, not the consequences). Thus Wittgenstein would agree that the bus driver's depression of the accelerator was an action, even though the consequences were unwanted. This definition works well for examples like 'Alien Hand Phenomenon', 'Utilization Behaviour' and 'Environmental Dependency Syndrome' where actions occur without conscious desires but in response to environmental cues. Certainly many of the actions during sleepwalking are reactions to the environment (although in this case the person has impaired consciousness). The earliest jurists when pronouncing on the lack of responsibility for acts committed during sleep added the proviso that the sleeper must not be shown to have planned these acts, e.g. by placing a weapon to hand prior to falling asleep. I have not come across any cases where this was an issue, and if there was any preparation it would raise questions about whether the episode was a genuine automatism or not. This would follow the precedent of *Gallagher*,[43] who had drunk whiskey for 'Dutch courage' before killing his wife. The neuroscientist Blakemore considers there is no difference between such actions and intentional actions

'All our actions are the product of the activity of our brains. It seems to me to make no

[43] *Attorney-General for Northern Ireland v Gallagher* [1963] A.C. 349

> sense (in scientific terms) to try and distinguish sharply between acts that result from conscious intention and those that are pure reflexes or that are caused by disease or damage or damage to the brain. We *feel* ourselves, usually, to be in control of our actions, but that feeling is in itself a product of the brain, whose machinery has been designed, on the basis of its functional utility, by natural selection.'[44]

He specifically rejects the folk psychology on which the law relies. However he acknowledges that the two spheres of descriptive science and normative attribution of responsibility have little in common.

Moore discusses the effects of unconscious mental states on responsibility. It has been posited in the past that sleepwalkers are acting on unconscious desires (see **2.5**).The interviewees generally concluded that sleepwalkers were not acting on unconscious desires, but even if they were, they should not be held criminally responsible (see **6.1.1** above). Reznek talks about "Quearthlings", who are able to instruct their sleeping selves to perform acts during sleepwalking by reciting the instructions over and over.[45]

Following the precedent of *Gallagher,* the Quearthling would be held criminally responsible. If the sleepwalker's rumination on an intention to cause harm resulted in that harm being acted out during sleepwalking, this would pose the question of whether or not they should be found criminally responsible.

There is an interesting contrast between the approaches to purportedly "repressed desires" and desires that the actor is consciously aware of, but which they suppress by an act of will or conscience (see below at **6.2.4** and the case of *Kingston*). In the case of

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[44] BLAKEMORE, C.J. (1998) *The Mind Machine*. London: BBC Books.
[45] REZNEK, L. (1997) *Evil or ill? Justifying the insanity defence.* Abingdon: Routledge at p. 97.

King v Cogdon, unreported but discussed by Morris and Eigen,[46] the defendant was considered by the various mental health experts to harbour 'subconscious emotional hostility'. Nonetheless, because the state arose out of sleep she was not held not responsible under the principle of '*In somno voluntas non erat libera'* [47]. However, if she had been judged to have been in a dissociative state (which is a reasonable possibility, given her history of neurosis), she might have been found culpable. Horder contrasts this repressed desire with the purportedly subconscious fetish that motivated the defendant in *Court*.[48] When asked about his reason for spanking a young girl, he responded "I don't know; buttock fetish". Giving expression to this desire was evidence of bad character.[49]

In the case of *Kingston,*[50] the accused had paedophilic tendencies and committed a sexual assault. He claimed he had been drugged without his knowledge. The victim of the offence was also drugged, and Kingston's co-defendant had videoed Kingston having sex with the boy for the purposes of blackmailing Kingston. The jury heard evidence about Kingston's collection of hardcore pornography, which was allowed because it established a propensity for homosexual acts. The *ratio* of Kingston is that he was still able to form the requisite *mens rea* for indecent assault. It is not explicitly stated how the video evidence showed that Kingston had formed the *mens rea* for indecent assault, although it is asserted in cross-examination that "You are obviously enjoying yourself". Are Kingston's actions distinguishable from those of a sexsomniac

[46] MORRIS, N (1951) Somnambulistic homicide: Ghosts, spiders, and North Koreans. *Res Judicatae*, 5, 29-33; EIGEN, J.P. (2003) *Unconscious Crime: Mental Absence and Criminal Responsibility in Victorian London*. Baltimore, MD: The Johns Hopkins University Press.
[47] Latin aphorism which translates as 'A sleeping person has no free will'.
[48] [1989] AC 28
[49] HORDER, J. (1993) Pleading involuntary lack of capacity. *Cambridge Law Journal*, 52, pp. 298-318.
[50] [1994] 3 WLR 519

except by the principle of *'In somno voluntas non erat libera'*? What exactly does it mean to "form the *mens rea*" in this case?

Kingston argued before the Court of Appeal

> 'A vital distinction exists between mens rea and intent. Intent is only mens. The use of the term intent in modern authorities rather than evil intent effectively leaves offences requiring general intent only as offences of strict liability save in cases where it is clear that the actus reus was not willed.
>
> A distinction exists between voluntary intoxication, which is culpable, and involuntary intoxication, which is excusable. Excusable intoxication may be of three degrees: (1) a relaxation of inhibitions so that acts are committed or permitted which would not be committed if the person's mind were unaffected … contrast *Reg. v. Davies* [1983] Crim.L.R. 741); (2) a dulling of the mind and its functions so that a person cannot tell right from wrong….; and (3) an effective paralysis of the higher mind, namely, automatism, or no capacity to form intent. All three states should excuse the actions of the person affected. In regard to state (3) there has always been a requirement for mens rea in all offences except those of strict liability. There has never been any doubt that an intoxicated man may lack the necessary specific intent, implicit in the act of becoming intoxicated attracting culpability: see *Reg. v. Majewski* [1977] A.C. 443.'[51]

This argument was continued before the House of Lords Appellate Committee

> 'Even if the trial judge were right in equating mens rea with intent, his direction is still unsatisfactory. The jury could still be asked: did the accused intend the alleged acts.

[51] [1994] Q.B. 81, 83.

> That is unsatisfactory for there are very few cases where a person does not intend his acts.
>
> If intent is used in place of mens rea there must be a need to distinguish between the higher mind (the seat of reason, conscience, operative fear of retribution) and the lower mind (the basic motor/instinctive control of the body): see Jerome Hall, *General Principles of Criminal Law*, 2nd ed. (1960), p. 468. The Court of Appeal rejected an analysis of intent in terms of the higher and lower mind in favour of maintaining a distinction between intent and mens rea.'[52]

Kingston's argument hinges on the lack of culpability for intoxication which caused his lapse in controlling his paedophilic urges, thus making his intentional action or *mens* distinct from the *mens rea*. As Lord Taylor put it,

> 'the purpose of the criminal law is to inhibit by proscription and by penal sanction antisocial acts which individuals may otherwise commit. Its unspoken premise is that people may have tendencies and impulses to do those things which are considered sufficiently objectionable to be forbidden. Having paedophiliac inclinations and desires is not proscribed; putting them into practice is. If the sole reason why the threshold between the two has been crossed is or may have been that the inhibition that the law requires has been removed by the clandestine act of a third party, the purposes of the criminal law are not served by nevertheless holding that the person performing the act is guilty of an offence. A man is not responsible for a condition produced "by stratagem or the fraud of another". If, therefore, drink or a drug, surreptitiously administered, causes a person to lose his self-control and for that

[52] [1994] 2 AC 355, 359.

> reason to form an intent which he would not otherwise have formed, it is consistent with the principle that the law should exculpate him, for the operative fault is not his. The law permits a finding that the intent formed was not a criminal intent or, in other words, that the involuntary intoxication negatives the mens rea.'[53]

The House of Lords ruled that the formation of *mens rea* was the deciding issue, and whether the intoxication was voluntary or not is irrelevant to this. The simple commission of a voluntary act was sufficient for liability. They quoted with approval the Court of Appeal in *Sheehan*

> 'the mere fact that the defendant's mind was affected by drink so that he acted in a way in which he would not have done had he been sober does not assist him at all, provided that the necessary intention was there. A drunken intent is nevertheless an intent.'[54]

This makes it clear that the lack of culpability for involuntary intention is irrelevant to the issue of intent. It was only necessary to prove that he intentionally committed the act (thus constituting the *actus reus*), because indecent assault where the act is unequivocally indecent is a crime of basic intent (where the act is equivocal as regards decency, it is an act of specific intent). As the defence argued,

> 'The use of the term intent in modern authorities rather than evil intent effectively leaves offences requiring general intent only as offences of strict liability save in cases where it is clear that the *actus reus* was not willed.' (Court of Appeal)

This appears to make crimes of general or basic intent effectively crimes of strict liability (with the probable exception of accidental actions, as per *Attorney-General's Reference*

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[53] See footnote 50, at p.89.
[54] [1975] 1 W.L.R. 73

(No 4 of 2000) - see above). The comments of Lord Simon in *Morgan* seem to support this

> ‘By "crimes of basic intent" I mean those crimes whose definition expresses (or, more often, implies) a *mens rea* which does not go beyond the *actus reus*’[55]

although his further explanation makes it clear that he is referring to the *de re/de dicto* distinction, where only crimes of ulterior (or specific) intent require an intention in acting, rather than simply intentionally acting. It also means there is little practical difference between voluntary and involuntary intoxication unless the involuntary intoxication is so profound as to result in automatism. This ruling emphasizes that voluntary intoxication is not a defence *per se* to crimes of specific intent, so the question is not whether or not the intoxicated person could form the necessary *mens rea*, but whether or not they did. Evidence of the effects of intoxication may support the argument that he did not. This ruling could be construed as meaning that the sexsomniac cannot argue lack of *mens rea* when he has committed an unequivocally indecent act; he must argue automatism. Schopp states

> ‘The problematic cases of automatism are those in which the defendant acted in such a manner as to indicate that he not only knew what he was doing he acted in that way for the purpose of performing the act constituting the objective elements of the offence.
>
> The defendant’s mental states at the time of the offence are usually inferred on the basis of evidence regarding his behavior and speech … Automatism cases sometimes involve acts done in a skilful, coordinated manner, apparently for the

[55] *DPP v Morgan* [1976] A.C. 182 at p. 216

> purpose of achieving some specific end…Other defendants have not only performed the act constituting the offense in an apparently purposeful manner; they have engaged in preliminary behavior apparently intended to arrange circumstances in such a manner as to facilitate the offence. For example, one defendant called the victim over to the window, ostensibly to see an animal swimming in the water below, then struck the victim with a mallet and threw him from the window.[refers to case of Charlson]
>
> These events simply do not provide evidence from which to infer the defendant did not know what they were doing…these actors apparently selected a projected act-tree as their action-plan precisely because it was expected to produce an act-tree including the behavior constituting the offense. Unless this appearance is seriously misleading, these defendants knew what they were doing, and they performed their offenses purposely. Thus, neither a failure-of-proof defence regarding the culpability element nor the "nature and quality" disjunct of the *M'Naghten* test would apply.'[56]

Actions during parasomnias that are satisfying the appetite for either food or sexual satisfaction can be seen as fulfilling a desire and therefore intentional. Indeed, Schopp and Moore would consider the sleep eater or sexsomniac to be acting intentionally, but not voluntarily. Alternatively, it can be argued that despite appearances the sexsomniac is not intentionally acting and so he can argue lack of *mens rea*. Sleep experts would no doubt argue there is a compelling case that in the case of parasomnias, appearances *are* seriously misleading. Again this is by recourse to the principle of 'In somno voluntas non erat libera'.

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[56] Schopp (1991), see footnote 34 at p.135-6.

It is also difficult to reconcile this decision with cases like *R v T,*[57] who by the same criteria had clearly formed the *mens rea* for robbery. Here the defendant had been saying 'I'm ill, I'm ill' during the course of a robbery. She had been raped a few days prior to this incident, and was diagnosed with post-traumatic stress disorder. The distinction between *Kingston* and another case of involuntary intoxication, *Hardie* (see below), appears to rest on the effect of diazepam on judgment of risk in *Hardie* where the requisite minimum *mens rea* was objective recklessness.

6.2.4 Disinhibition

The issue of whether the connection between intention and *mens rea* was affected by disinhibition was the deciding factor in the case of *Kingston*. Kingston's argument was that he would not have acted on his paedophilic urges if he had not been drugged, and in support of this contention he had not offended prior to this. The legal arguments were heavily dominated by issues of policy, with fears that an acquittal would "open the floodgates" of defendants claiming to have been involuntarily drugged. The *ratio* however was that despite the involuntary intoxication he was still able to form the requisite *mens rea* and on the basis of the video evidence did so. The decision by the House of Lords Appellate Committee is controversial, and many consider that the case was wrongly decided. It has the appearance of punishing bad character (see below re justification of act requirement).

Contrast this case with *Hardie* where the trial judge held that "voluntary self-administration of the drug was irrelevant as a defence since its effect could not negative *mens rea*", but the appeal court quashed his conviction stating that

[57] [1990] Criminal Law Review 256

> ‘under section 1(2) of the Act of 1971 a defendant's state of mind had to be considered only when he did the relevant act and the requirements of the subsection were established if the defendant when doing that act created an obvious risk that property would be destroyed and life endangered and gave no thought to the possibility of either risk; that, in considering his state of mind, the self-administration of a sedative or soporific drug, even in excess, did not automatically raise a conclusive presumption that its effects could not negative mens rea in the way that self-induced intoxication by alcohol or dangerous drugs could; that the trial judge had misdirected the jury that the effects of such a drug leading to a defendant's incapacity were irrelevant; and that, accordingly, the conviction had to be quashed since the jury should have been directed that if they concluded that by taking the drug a defendant could not appreciate the risks to property and persons from his actions, they should consider whether the taking of the drug was itself reckless.’[58]

However, the Appeal Court held in *McGhee* that a combination of temazepam and alcohol taken for the relief of tinnitus and causing disinhibition could not amount to automatism - Hughes LJ stated emphatically that

> ‘Disinhibition is exactly not automatism.’[59]

The fact that involuntary intoxication makes a choice harder is irrelevant - as Fitzjames Stephen put it

> ‘If the impulse was resistible, the fact that it proceeded from disease is no excuse at all."[60]

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[58] [1985] 1 W.L.R. 64 at p.64.
[59] *R v McGhee* [2013] EWCA Crim 223
[60] FITZJAMES STEPHEN, J. (1883) *A History of the Criminal Law of England*. MacMillan & Co.

The trial judge directed the jury in *Hardie* that "an intoxicated intent was still an intent". It is not clear why diazepam could negative *mens rea* but temazepam (another benzodiazepine which has an identical effect) could not. It has been suggested that *Hardie* was decided *per incuriam,* as the effect of diazepam was misunderstood.[61] Certainly the decision to distinguish diazepam from "dangerous drugs" was opaque. Crosby suggests that Kingston could be excused based on character theory. Although it could be argued that it was his character to be attracted to young boys and so was culpable, it could also be argued that he showed good character in normally resisting in such urges – thus his offending was 'out of character'.[62] Involuntary intoxication was mooted as an excuse in Hale's *Pleas of the Crown*, who classified "induced witlessness" as an excuse when induced by a negligent physician or "the contrivance of his enemies". Sullivan's 'destabilisation' defence[63] would apply where

> 'D is blamelessly destabilised by exceptional circumstances to such an extent that he acts in a way that he would not otherwise have done.'[64]

This would only be applicable in cases of 'good character', that is the absence of relevant convictions. Horder suggests an alternative solution to the problem of involuntary intoxication might be the extension of the diminished responsibility plea.[65] This is an area where the Law Commission's proposed test for capacity would bring some welcome clarity. They suggest that the criminally responsible defendant should

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[61] SOMERS, W.A. & WELLER, M. (1991) 'Differences in the medical and legal viewpoint illustrated by R v Hardie'. *Medicine, Science and the Law*, 31(2), pp. 152-6.
[62] CROSBY, C. (2010) Culpability, Kingston and the Law Commission. *Journal of Criminal Law*, 74(5), pp. 434-471.
[63] SULLIVAN, G.R. (1996) Making Excuses. In SIMESTER, A.P. and SMITH, A.T.H. (eds.) .*Harm & Culpability*. Oxford: Clarendon Press, pp. 131-5
[64] Crosby (2010), see footnote 61 at p. 451.
[65] Horder (1993), see footnote 48.

have the ability to:

- rationally to form a judgment about the relevant conduct or circumstances;
- to understand the wrongfulness of what he or she is charged with having done;

or

- to control his or her physical acts in relation to the relevant conduct or circumstances.[66]

Arguably those who are sufficiently disinhibited will be unable to rationally form a judgment about the relevant conduct or circumstance - they are no longer effective practical reasoners. Similarly the parasomniac may be able to perform complex motor tasks, but they have no access to the executive functions required to be criminally responsible as per the Law Commission's test.

6.3 Cognitive Neuroscience and Criminal Responsibility

6.3.1 Neurolaw

There is an increasing interest in the application of neuroscience to the law, dubbed "neurolaw". This has been variously defined as:

> "An emerging field of interdisciplinary study that explores the effects of discoveries in neuroscience on legal rules and standards";[67]
>
> "a relatively new and highly-interdisciplinary field that brings together researchers from the social sciences, mind and brain sciences, law and philosophy, as well as

[66] The Law Commission (2013), see footnote 3 at Ch4.127.
[67] This neat and concise formulation which is widely quoted can be found on Wikipedia and other sources, but I was unable to find the original source.

public policy and law professionals to examine the potential for neuroscientific discoveries and techniques to address a range of pressing legal and social problems";[68]

and described in further detail as comprising

"(a) techniques for the objective investigation of subjective states such as pain, memory, and truth-telling;

(b) evidentiary issues for admitting neuroscience facts and approaches into a court proceeding;

(c) free will, responsibility, moral judgment, and punishment;

(d) juvenile offenders; (e) addiction; (f) mental health;

(g) bias; (h) emotion; and (i) the neuroeconomics of decision making and cooperation".[69]

Although neurolaw is most often concerned with the application of neuroscience to the assessment of defendants, it also includes the study of jurors and judges. There are a number of scholars devoted to the topic and there are regular conferences on the topic organized by the MacArthur Research Foundation Research Network on Law and Neuroscience[70] , the European Association for Neuroscience and Law and others. Appendix I lists a number of neurolaw resources.

The human brain comprises three levels of functionality according to the triune brain model of McLean. There is the reptilian complex or reptile brain - this is responsible for

[68] VINCENT, N., HALL, W. and KENNETT, J. (2011) *Report on "Neurolaw in Australia*" workshop. Available: https://cms.assa.edu.au/.pdf/reports/ASSA_WorkshopReport_85.pdf.
[69] GOODENOUGH, O.R. & TUCKER, M. (2010) Law and Cognitive Neuroscience. *Annual Review of Law and Social Sciences* 2010. 6th Ed. Annual Reviews, pp. 61-92.
[70]The author received a bursary to attend one of their events.

aggression, territoriality and sexuality. These behaviours tend to be quite stereotyped. There is the limbic system - this becomes prominent in mammals and is responsible for drives, emotions, memory and social behaviour. There are also functions of the limbic system related to appetites, such as eating and sex. Finally there is the neocortex - this becomes prominent in primates, and is responsible for executive functions (planning, logical thought, decision-making). There are problems with this model, but it does usefully illustrate the modular nature of the brain. However, all the systems interact and interconnect.

One of the chief features of sleepwalking appears to be that the frontal lobe (neocortex) is not active, but the limbic system is. The frontal lobe is very important in conforming behaviour to social and moral standards, as demonstrated by the famous case of Phineas Gage. This 19th century US railroad worker was tamping down dynamite during blasting work for a railway tunnel, when due to his omission of the sand plug, the dynamite detonated prematurely and drove the tamping iron through his skull. The iron entered his left eye socket and exited through the top of his skull, passing through the frontal lobe. There is a lot of mythology surrounding Gage, and many of the wilder accounts contradict the first-hand witnesses of Gage's behaviour.[71] Nonetheless, it is accepted that lesions of the frontal lobe can lead to dramatic personality and behavioural change (see above at **6.2.2**). Although there are different patterns of activation and deactivation of parts of brain during sleepwalking episodes, it is generally considered that sleepwalking is a single clinical entity. If this is the case, then the

[71] KEAN, S., 2014-last update, Phineas Gage. Available: <http://www.slate.com/articles/health_and_science/science/2014/05/phineas_gage_neuroscience_case_true_story_of_famous_frontal_lobe_patient.html> accessed 19 Sept 2014.

studies of brain function suggest that sleepwalking has a similar effect to Gage's injuries, albeit temporarily.[72] The field of neurolaw has the potential to inform the criminal justice system of the functional deficits associated with parasomnias and other medical conditions causing incapacity, and so enable a consistent approach to assessing criminal responsibility.

6.3.2 Classifications of Automatism

Psychologists have a wider definition of automatism than either lawyers or medics. Coles classified automatism into five main types:

Automatic behaviour: Behaviour where the conscious mind does not go with what is being done

1) Absence of volition without conscious awareness for example, autonomic and central nervous system activity which would include:

a) physiological processes

b) neurological reflexes

2) Absence of volition with clear conscious awareness

a) neurological reflexes

3) Volitional behaviour with constricted conscious awareness

a) irrational behaviour while highly emotional

4) Volitional behaviour with diminished conscious awareness

a) inadequate responses to partially perceived stimuli

b) habits and well learned skills

5) Volitional behaviour with distorted conscious awareness

a) responses to confused perception of reality

b) responses to the content of dreams

c) responses to hallucinations

[72] BASSETTI, C., VELLA, S., DONATI, F., WIELEPP, P. and WEDER, B. (2000) Research Letter: SPECT during sleepwalking. *Lancet*, 356(Aug 5th), pp. 484-85; TERZAGHI, M., SARTORI, I., TASSI, L., DIDATO, G., RUSTIONI, V., LORUSSO, G., MANNI, R. and NOBILI, L. (2009) Evidence of Dissociated Arousal States During NREM Parasomnia from an Intracerebral Neurophysiological Study. *Sleep*, 32(3), pp. 409-412.

From ‘Scientific Support for the Legal Concept of Automatism’ with kind permission of Michael Coles.[73]

Type 1 and 2 automatisms are unlikely to cause any difficulty for the courts, as these actions would be easily recognized as involuntary. Type 3 behaviour is not generally considered legal automatism (but might come under insane automatism due to an hysterical dissociative state [”psychological blow automatism”] or the partial defence of provocation/ loss of control). Types 4 and 5 are the most likely to involve complex behaviour AND be caused by conditions that would be recognized as automatism or insanity. Type 4a behaviour could come from a sudden awakening from sleep, or ‘confusional arousal’. Type 4b is classical sleepwalking behaviour. Type 5a and 5c behaviours are generally due to psychoses (drug-induced or otherwise), although parasomniacs also respond to confused perceptions of reality. Type 5b is the classic automatism due to sleep terror, RBD or even sleepwalking.

The importance of this classification is the understanding that different levels of volition and consciousness underpin states that may be associated with diminution or lack of criminal responsibility. Thus it may be inappropriate to rely on one simple definition of automatism such as total loss of control.

6.3.3 Voluntariness

The law is replete with discussions of the will and voluntary action. Yeo states

> ‘an accurate and comprehensive definition of involuntariness has thus far eluded both the courts and law reform bodies that have considered the issue’.[74]

There has been more success in defining involuntariness than voluntariness however.

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[73] COLES, E. (2000) 'Scientific Support for the Legal Concept of Automatism’. *Psychiatry, Psychology and Law*, 7(1), pp. 33-50.

[74] YEO, S. (2001) Putting Voluntariness Back Into Automatism’. *Victoria U. Wellington L. Rev*., 32, pp. 387-406.

Additionally, there are actions that are non-voluntary (see *Ryan* above), but nonetheless may be blameworthy. It is noteworthy that the Law Commission's proposals for a new mental condition defence (which would cover many conditions considered as legal automatism) omit any mention of voluntariness *per se*. As Windeyer J and others note, the doctrine of the will is problematic not least because of the difficulty of defining what it is. Ryle sees the concept of volition as

> 'just an inevitable extension of the myth of the ghost in the machine'.[75]

Relying on ascriptive language to define voluntary actions can cause confusion for non-lawyers - one expert witness recounts the judge saying of the defendant "he wasn't driving", and retorted "well he was behind the wheel!" Presumably the judge meant that the accused was not acting voluntarily, so was not driving in the sense that the consequences of the vehicle's speed and direction could not be attributed to the accused. Hart classifies four types of responsibility – causal, role, liability and capacity.[76] The hypoglycaemic driver who crashes into a pedestrian has causal responsibility for their injury or death, but may or may not have role-, liability-, or capacity-responsibility depending on his actions. In one sense, he is responsible for the crash by being in the car, but in another sense he may not be responsible if his incapacity was blameless.

Another issue that is inextricably linked with voluntariness is practical reasoning. The actor's beliefs about the likely effects of a particular muscular contraction or even complex action impact on whether or not those effects were intended. The Austinian concept of intention has these two essentials, a willed muscular movement and

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[75] RYLE, G. (1970) *The Concept of Mind*. Penguin.
[76] HART, H.L.A. (1968) *Punishment and Responsibility*. Oxford: Clarendon Press.

foresight of the consequences. This entails that erroneous beliefs will not always excuse on the lack of grounds of intent, as seen in the case of *Attorney-General's Reference (No. 4 of 2000)* (see above at **6.2.3**). There are competing explanations for what causes actions and therefore it follows that there are different definitions of an action. When a person is not truly acting i.e. he is an automaton, he is neither morally nor legally responsible (except where there is prior fault).

6.4 Doctrinal Issues

6.4.1 Justification for the act requirement

The traditional division of the elements of a crime in common law between *actus reus* and *mens rea* draws on Aristotle's *Rhetoric* and is later supported by Descartes. The requirement for a guilty act serves the function of ensuring that people are not punished simply for their wrongful thoughts and desires, popularly described as "thought-crime" (from the novel '1984'). Similarly acts that are more than merely preparatory are required to make out criminal attempts, so as to distinguish those who are seriously attempting a criminal act from those who are not so committed to such action. Robinson considers that the *actus reus* requirement includes four distinct doctrines:

- the act requirement;
- substitutes for an act: omission to perform a legal duty or possession of contraband;
- the voluntariness requirement;
- objective elements of offensive definitions: conduct, circumstance and result.

He comments on the 'thick' concept of *actus reus* that:

> 'The act requirement and the voluntariness requirement, frequently treated as one *actus reus* requirement, are related but distinct doctrines. Several writers assure that the two are treated as one by defining an 'act' as a 'willed movement'.[77]

One example of this is Holmes, who stated that an action

> 'is a willed muscular contraction, nothing more'.[78]

A better alternative to *actus reus* is arguably the "external element" (or "conduct element"), which would be synonymous with the illegal act. This would mean that the aspect of willing or voluntariness would fall under the "fault element" (see further discussion below at **6.5.3**).

6.4.2 Connection between *mens rea* and *actus reus*

The traditional analysis is that *mens rea* and *actus reus* have to coincide in time to make out the offence. As a basic proposition this holds good in very many cases. An exception to this is when the person is so intoxicated that they cannot form the *mens rea* for a crime of specific intent; nonetheless their intoxication forms the basis of the *mens rea* for a crime of basic intent. Another exception is *Gallagher,* where the *mens rea* was formed before the *actus reus*.[79] In the case of driving offences when the issue is the *actus reus*, driving is seen as a *continuing* act. Even when the accused is no longer "driving" (see comment in **6.3.3**), the previous period of dangerous driving for example has a sufficiently proximal causal connection with the fatal accident that

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[77] ROBINSON, P.H. (1993) Should the Criminal Law Abandon the Actus Reus - Mens Rea Distinction? In SHUTE, S., GARDNER, J. and HORDER, J. (eds.). *Action and Value in Criminal Law*. Oxford: Clarendon Press, pp. 187-211.
[78] HOLMES, O.W. (1881) *The Common Law*. Boston: Little, Brown and Company.
[79] *Attorney-General for Northern Ireland v Gallagher* [1963] A.C. 349

results. By contrast, in the cases of *Thabo Meli v The Queen* and *MPC v Fagan*[80], the criminal acts were viewed *as a whole* to maintain the connection between *mens rea* and *actus reus*. In *Thabo Meli,* the act that killed the victim was the disposal of the "body" over a cliff. The intent to kill did not coincide with the act of killing *per se*. In *Fagan,* a man was charged with assault after stopping his car on a policeman's foot by accident and then refusing to move it. The maintenance of the car's position was part of a continuing act.

This analysis is difficult to apply in all cases. The issue of prior fault is often used to deny the defence of automatism to diabetics suffering a hypoglycaemic episode whilst driving. Here the requisite *mens rea* is continuing to drive when warning symptoms occur, and the *actus reus* is the continuing act of driving. In the case of someone driving with knowledge of a dangerous condition such as uncontrolled epilepsy or hypoglycaemic unawareness, the *mens rea* is recklessness in getting behind the wheel and the *actus reus* is again the continuing act of driving. Where the accused has self-induced incapacity in other situations, this analysis breaks down. A diabetic who assaults someone whilst hypoglycaemic or a sleepwalker who commits a crime may have the requisite *mens rea* if their incapacity is self-induced, but what is the *actus reus*? There is no continuing act. The defence of automatism is ruled out by prior fault, but the offence still needs to be made out. This is not to argue that there is no criminal responsibility in these cases, simply that they do not fit the current model of legal analysis. This author agrees with Arenson's assertion that it may be better to argue

[80] [1969] 1 QB 439; [1954] 1 WLR 228

these cases on the principle of legal causation.[81]

6.4.3 Schopp and Hart on automatism

The work of legal philosophers Hart and Schopp is instructive on the legal concept of automatism. Hart in *Punishment and Responsibility*[82] lays out his positivist justifications for punishment. Crucially he sees the punishment of people who cannot be deterred as generally unjustified. When the person cannot avoid breaking the law, punishment cannot be justified under positivist jurisprudence. Hart's justification for mental condition defences rests on this lack of capacity to be deterred. The "policeman at the elbow test" arguably fails for the religiously or politically motivated fanatic, but it might be argued they have the capacity to be deterred. A practical reasoner can assess the law and his own circumstances, and come to a rational decision whether or not to break the law. He considers it the way to maximise freedom - for Hart, the law has no necessary moral content and so individuals may rationally decide to break the law. The threat of punishment is a relevant factor to deter law-breaking. For those who are not practical reasoners, the threat of punishment will not deter them, and so Hart reasons that there is no justification for punishing them (there is the general effect of deterrence on others, but again Hart considers this unjustifiable where the person is not a practical reasoner). Schopp deconstructs the automatism defence to try to define exactly what it is about automatism which excuses the individual.[83] As per discussions above, the person arguing automatism typically is not unconsciousness, nor are they acting entirely involuntarily in the neurological sense. Further, given the current understanding that the

[81] ARENSON, K.J. (2013) Thabo Meli Revisited: The Pernicious Effects of Result-driven Decisions. *Journal of Criminal Law*, 77, pp. 41-55.
[82] Hart (1968), see footnote 76.
[83] Schopp (1991), see footnote 34

brain is modular, we should not be looking at global assessments of consciousness. Formulations like ‘effective loss of control’, whilst more appropriate than the absolute and inflexible standard of ‘total loss of control’, are rather difficult to define and apply in practice. Schopp turns to Goldman’s action theory approach to classify acts (for the purpose of the criminal law) as rather more than Austin’s ‘willed body movement’ or Holmes’s ‘willed muscular contraction’ (which would restrict legal automatisms to the narrow realm of “spasms, convulsions, and reflex acts”, which Mackay rejects.[84] Goldman distinguishes act-types from act-tokens.[85] An act-type may be a willed muscular contraction, or series of them. An act-token is an example of an act-type by a particular actor at a particular type. Act-tokens may be basic, or part of an action plan or act-tree which links act-tokens by level-generations. The different levels are linked by the intentions and beliefs of the actor. Thus, the act-tokens of pointing a gun at someone and pulling the trigger may be either a tragic accident or murder, depending on the intentions and beliefs of the actor. In the case of *Lamb*, the accused was playing with a gun, again believing the firing pin would fall on an empty chamber.[86] In this case, it could be said that Lamb *did not* fire the gun, because when he pulled the trigger he neither intended to fire the gun nor believed he would fire the gun. Similarly Ryan argued that he did not intend to shoot the garage attendant. However he intentionally held a loaded gun in the knowledge that this created the danger of shooting the garage attendant. The Goldman action theory accommodates the unintended consequences of actions, reflecting the generally accepted division of *mens rea* into intent, knowledge,

[84] MACKAY, R. (1995) *Mental Condition Defences in the Criminal Law*. Oxford: Clarendon Press.
[85] GOLDMAN, A. (1970) *A Theory of Human Action*. Princeton: Princeton University Press.
[86] [1967] 2 Q.B. 981

recklessness, and negligence (as per the US Model Penal Code).

These distinctions are those encapsulated by the requirement for many crimes of the requisite *mens rea.* Where the crime is not a crime of strict liability, it is not the illegal act by itself that is punished - it is the illegal act committed for the designated, blameworthy reasons. Can these same principles be applied to crimes of strict liability? It is certainly difficult to consider the action plan relevant to certain motoring offences, where the issue is the loss of control - although it could be argued that the intentional creation of a risk can be considered part of the action-plan. Similarly, although harsh, it is possible to see the judicial reasoning behind holding the bus driver responsible in *Attorney-General's Reference (No. 4 of 2000)*.[87] However, the driver's action plan was to stop the bus, and he had no intention of creating any risk, unlike the stereotypical boy racer who deliberately takes a corner at excessive speed.

Strict liability laws are often related to either the difficulties in proving *mens rea* to the requisite standard (eg drug and firearm possession offences), or the overriding public safety or public health concerns (e.g. environmental offences, selling of unfit food). There are concerns about prosecutions for failure to "do the impossible".(Smart (1987)) Where the offence attracts custodial sentences as opposed to fines for the company, the argument for strict liability is weaker.

Many legal philosophers and jurists have made similar comments about the qualities of a moral agent in law. Morse states

> 'For the law, then, a person is a practical reasoner. The legal view is not that all people always reason and behave consistently rationally according to some

[87] [2001] EWCA Crim 780

> preordained, normative notion of rationality. It is simply that people are creatures who are capable of acting for and consistently with their reasons of action and who are generally capable of minimal rationality according to mostly conventional, socially constructed standards of rationality.'[88]

Hart in his essay 'Negligence, *Mens Rea,* and Criminal Responsibility' similarly considered that it was only right to hold someone criminally responsible for negligence if the following questions could be answered affirmatively:

i. Did the accused fail to take those precautions which any reasonable person with normal capacities would in the circumstances have taken?

ii. Could the accused, given his mental and physical capacities, have taken those precautions?[89]

However, this is not the law as it stands. It seems wrong that someone should not be held criminally responsible for failing to consider the risks inherent in driving a particular way - however, if for some reason they were unable to appreciate or properly consider the risks because of hypoglycaemia or some similar condition, it *is* reasonable to excuse them if this condition was not self-inflicted. The emphasis above on the capability for rationality addresses the problematic lacuna of those who fail to use their practical reasoning and/or omissions. The essential ingredient for criminal responsibility with certain crimes is the capacity for practical reasoning. On these grounds we can distinguish the negligent or reckless driver from the driver with diabetes who suffers a hypoglycaemic episode. This to an extent involves merging the character theory of

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[88] MORSE, S.J. (2004) New neuroscience, old problems. In: B. GARLAND (ed) *Neuroscience and the law: brain, mind, and scales of justice*. New York: Dana Press, pp. 157-98 at p. 164.
[89] Hart (1968), see footnote 76.

excuse with the choice theory of excuse, as Crosby points out.[90]

In summary, Hart, Moore, Morse, Schopp, Levy (see **5.7**), and the Law Commission see the requirements for a voluntary act as hinging on the actor as a practical reasoner. This avoids the possibly insoluble dilemma of defining what voluntary action is, and how we can assess or define the will.

6.5 Theory Versus Practice

6.5.1 Denial of *mens rea* with a 'disease of mind'

As discussed above, in most trials it is sufficient to establish a lack of *mens rea*. Professor Martin Wasik related to me a High Court judge's ruling on a moot held at Keele University on the issue of manslaughter caused by a violent reaction during a confusional arousal. The judge commented that these cases were resolved on the basis of a lack of *mens rea* rather than trying to negotiate the 'quagmire' of automatism. It is undeniable that the conditions that cause automatism will enable the accused to argue lack of *mens rea.* This would be true in many cases where there is a disease of the mind. Nonetheless, it is problematic that these individuals could receive a plain acquittal if they satisfy the criteria for legal insanity, because as Jones put it

> 'The courts strive to keep the defence of insanity, with its distinctive burden of proof, separate from questions of *mens rea* and voluntariness…what underpins this approach is a concern with social protection. Potentially dangerous individuals could be unconditionally acquitted if it were possible to use evidence suggestive of insanity

[90] Crosby (2010), see footnote 61.

as the foundation for an argument of lack of *mens rea* or voluntariness falling short of insanity.'[91]

Lord Hutton concurs with this opinion in *Antoine* when he comments on the case of *Attorney-General's Reference (No3 of 1998)*[92]

stating that

'a man who had committed very violent acts at a time when he was insane and did not realise that his acts were wrong was set at liberty.'[93]

Jones further states

'courts do not permit evidence suggestive of insanity to be used in considering an argument of lack of *mens rea* independently of the insanity defence. There would otherwise also exist "the possibility of using a bad case of insanity to make a good case of reasonable doubt".' (page 488)

The data on the sleepwalking defence suggest that this is what is happening – bad cases of insanity are making good cases of reasonable doubt. The main caution for the defence counsel arguing either lack of *mens rea* or lack of *actus reus* due to a mental condition is the ability of the judge to direct the jury to consider the special verdict, whether non-insane automatism is argued or simply lack of *mens rea,* where he believes the McNaughtan Rules are satisfied (*R v Thomas*[94]).

Similarly, when the defence is arguing diminished responsibility, the judge or the prosecution may raise the issue of insanity (s6 of the Criminal Procedure (Insanity) Act 1964, in which case the prosecution would have the burden of proving insanity as per

[91] JONES, T. (1995) Insanity, automatism, and the burden of proof on the accused. Law Quarterly Review, 111, pp. 475-516, at p. 504.
[92] [2000] QB 401
[93] [2001] 1 AC 340, p. 371.
[94] [1995] Crim LR 314

Bastian).[95]

In the recent case of *Seun Oye v The Crown*[96] it was confirmed that where a delusion due to a disease of the mind caused a defendant to have a subjective but erroneous belief that he was being attacked to which he responded with excessive force, he was not entitled to a plain acquittal. The appeal court commented that

> 'An insane person cannot set the standards of reasonableness as to the degree of force used by reference to his own insanity. In truth it makes as little sense to talk of the reasonable lunatic as it did, in the context of cases on provocation, to talk of the reasonable glue-sniffer.'

They followed the case of *Canns*[97] where a patient with paranoid schizophrenia had killed a nurse under the delusion the nurse had attacked him. His belief in the necessity for self-defence (and the degree of violence) may have been sincerely held, but it was mistaken - and the reason for the mistake was his mental disorder. It is unclear from these two cases whether or not a genuinely held belief in self-defence due to a delusion would lead to a plain acquittal or not. Can the *McNaughtan Rules* be applied to a subjective belief in the need for self-defence?

Slobogin argues that

> 'mental disorder should be relevant to criminal culpability only if it supports an excusing condition that, under the subjective approach to criminal liability increasingly accepted today, would be available to a person who is not mentally ill'.[98]

He is explicitly rejecting a status defence of insanity, arguing that an alternative

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[95] [1958] 1 WLR 413
[96] [2013] EWCA Crim 172
[97] [2005] EWCA Crim 2264
[98] SLOBOGIN, C. (2006) *Minding Justice: Laws that Deprive People with Mental Disability of Life and Lib*. Harvard University Press.

framework can accommodate all the justifications for excusing the mentally ill without a specific separate defence. The main practical difficulty in applying such a defence are that the lay jury will not be able to apply their own theories of mind to an accused whose mind may be functioning in an entirely different way. Thus for this version of the insanity defence to work, it would require testimony by forensic psychiatrists and it would therefore probably be little different from the current insanity defence in practice.

In the states of the USA where the insanity defence has been abolished but defendants can argue lack of *mens rea* due to their psychiatric condition, there is concern. There is some academic debate about the nature, classification and justifications for the insanity defence. It has been argued that it is an excuse, a status defence or a *sui generis*.[99] The Law Commission debates the merits of these arguments in the recent discussion paper.[100]

There are counter-examples against the position that mental conditions should not allow the defendant to plead lack of *mens rea*. An extreme example is given by Prowse, JA who states

> 'If a defence of insanity failed, evidence of brain injury that affected the accused's eyesight would be relevant on the issue of whether the accused had the requisite intent or believed that he was shooting a moose.'[101]

In *Clarke* in 1972[102] it was accepted that the absent-mindedness caused by depression caused to her to walk off without paying, thereby denying the *mens rea* for theft. Is it possible to discern a legal principle on which to distinguish *Clarke* from *Canns*, rather

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[99] Schopp (1991), see footnote 34.
[100] The Law Commission (2013) see footnote 3.
[101] *R v Wright* (1979) 48 CCC(2d) 334
[102] (1972) 56 Cr. App. R. 225

than simple policy considerations? Does it make a difference whether the requisite mens rea is objective or subjective in nature? In *Stephenson,* a tramp suffering with schizophrenia set light to a straw stack to keep himself warm; the fire grew out of control causing considerable damage to property. If Stephenson's schizophrenia affected his insight into the risk from the fire he set, should he have received a plain acquittal or the special verdict?). The court stated

> 'the jury had not been left to decide whether the appellant's schizophrenia might have prevented the idea of danger entering his mind at all, and the conviction was unsafe and would be quashed.'[103]

This implies that he should have received a plain acquittal, with no mention of the special verdict at all (this case was decided pre-Caldwell, so the test was subjective recklessness).

The accepted rationale for distinguishing the cases is the simple fact that the mental disorder did not satisfy the *McNaughtan Rules* but merely affected their assessment of the facts. *Clarke* wasn't arguing insanity, and the appeal court stated the evidence

> 'fell very far short of showing either that she suffered from a defect of reason or that the consequences of that defect in reason, if any, were that she was unable to know the nature and quality of the act she was doing. The *M'Naghten Rules* relate to accused persons who by reason of a disease of the mind are deprived of the power of reasoning. They do not apply and never have applied to a momentary failure by someone to concentrate.'[104]

However, this leaves us with the problem of how judges decide not to leave the insanity

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[103] *R v Stephenson* [1979] QB 695
[104] See footnote 102 at p.228

defence to the jury, when the condition involved would clearly satisfy the *McNaughtan Rules.* The case of *Attorney-General's Reference (No. 3 of 1998)*[105] states that once insanity has been established, the Crown only has to prove the *actus reus*. Lack of *mens rea* will not result in an acquittal. So this suggests that if insanity is established, lack of *mens rea* is not available as a separate defence. If the accused's mental state does not satisfy the *McNaughtan Rules*, then they are entitled to an acquittal on the grounds of lack of *mens rea* (like *Clarke*).

In the case of *Thomas,* the appellant's conviction was quashed because

> 'the jury may well have supposed that the appellant would only have been incapable of forming the necessary specific intentions if she had been legally insane…In our judgment, that first matter was a material irregularity which justifies the quashing of the appellant's conviction.'[106]

So as the law stands a defendant who doesn't satisfy the *McNaughtan Rules* can argue lack of *mens rea* on the basis of a mental disorder (or at least supported by evidence of a mental disorder), and there is no way to impose treatment, supervision or monitoring.

The Law Commission also takes this view in their discussion document:

> '***1: That if a person is non-culpable because of mental disorder, then that should be the true ground for the verdict, not the presence or absence of mens rea***
>
> We consider that the analysis which depends purely on whether the elements of an offence (the actus reus and mens rea) are satisfied can lead to unwelcome results, as described below, and also that it fails to reflect what a mental disorder defence is

[105] [2000] QB 401
[106] [1995] Crim LR 314

> about. Our analysis of the foundations of an insanity defence led us to conclude that it is essentially a denial of criminal responsibility due to a person's lack of capacity. That effectively amounts to a plea: "I, the defendant, deny responsibility for what it is I have done. I do so on the basis of my medical condition at the time, irrespective of whether I could be said to have had any particular mens rea at the time". If the accused's medical condition explains why he or she either did or did not have the relevant mens rea for the offence, then the defence should apply. Similarly, if his or her medical condition was such that he or she did not have the capacity to avoid performing the proscribed conduct, then it does not matter whether the offence required any particular mens rea or not.'[107]

Their conclusion is that

> 'there should be a defence which allows for a special verdict where the case is not proved against the accused because of his or her mental disorder as well as where it is proved because of the mental disorder.'[108]

The expanded test for capacity would apply to more defendants pleading a lack of *mens rea* due to a medical condition (whether a mental disorder or not), and so a greater number of potentially dangerous people would be monitored and treated. This would have cost implications. There might also be implications for stigmatization of more people who pose only a minor risk. Further, the Law Commission's proposals do not seem to prevent bypassing of social control mechanisms.

6.5.2 De facto categorization on the basis of continuing dangerousness

It seems to be implicit in some of the cases where lack of *mens rea* alone as the basis

[107] Law Commission (2013), see footnote 3 at Ch 2.18.
[108] Law Commission (2013), see footnote 3 at Ch 2.34.

of the defence that a judgment has been made about lack of continuing danger to the public. May Clarke was no danger, but Stephenson potentially was. There are cases where it seems likely that the *McNaughtan Rules* would be satisfied, and there seems to be no compulsion to try to prove insanity where the defendant is arguing a lack of *mens rea* due to a mental disorder. This appears to come under prosecutorial discretion. Roch LJ in *Thomas* quoted Watkins LJ in *R v Dickie*

> 'We have come to the conclusion that we are unable to say there are no circumstances in which a judge may of his own volition raise an issue of insanity and leave it to a jury, provided that if he chooses to do so there is relevant evidence which goes to all the factors involved in the M'Naghten test. We envisage, however, that circumstances in which a judge will do that will be exceptional and very rare.'[109]

Roch LJ adds

> 'There may be cases, for example, cases of homicide, where an accused has raised a defence of, say, diminished responsibility where a judge would be entitled, of his own volition to raise the issue of insanity with the jury. However, it would have to be a rare and exceptional case. This was not such a case in our judgment.'

This pragmatic approach was made more explicit in the case of Brian Thomas (see **3.4.2**). The two experts instructed by prosecution and defence agreed that Mr Thomas was suffering from a sleep disorder. They also agreed that Mr Thomas required further psychiatric treatment, more for his own wellbeing than public safety (he was suicidal following the incident), and so the insanity verdict was appropriate[110]. The prosecution

[109] *R v Dickie* (1984) 79 Cr App R 213 at p. 218.
[110] This is dubious - if admission was necessary for his own safety, then civil commitment would have been appropriate rather than the special verdict.

therefore did not pursue a guilty verdict, but required a special verdict for any necessary social control measures. The opinion of a psychiatrist approved under Section 12(2) of the Mental Health Act 1983 was required; this was given by Dr Jacob, who stated there would be no benefit from making a hospital order. The prosecution offered no further evidence, and the trial judge then instructed the jury to acquit. This decision was pragmatic and probably fair, but arguably legally incorrect - especially given the flexibility of disposal which would permit outpatient supervision or even an absolute discharge.

As one interviewee made clear, the court did not apply the law in the case of Thomas. Since his parasomnia was an internal cause, any acquittal should have been by reason of insanity. The lack of consistency of the courts is a recurring theme in this author's examination of parasomnia trials. The matter of whether or not Thomas could even have received a hospital order is a legal question - are sleep disorders a mental disorder under s.1 of the Mental Health Act 1983? If not, then a hospital order would not be permitted under the provisions of the Domestic Violence, Crime and Victims Act 2004. This is a separate issue from the question of legal insanity.

6.5.3 Denial of *actus reus* versus denial of *mens rea*: a critique

As discussed above, the current doctrinal basis for the defence of automatism in England and Wales is settled as a denial of *actus reus* on the grounds of the lack of a voluntary act. The illegal act alone does not constitute the *actus reus*, and hence automatism is a defence to even strict liability crimes. Another, and this author would argue better, way to categorize the effect of automatism is to consider that even strict liability crimes have an *implicit* mental element, such that the person without the ability

to avoid committing them, due to lack of control over their limbs for example, has a defence. Hawthorne in his analysis of strict liability crimes argues that the requirement of *mens rea* can and should be presumed even when the statute is silent about the necessary *mens rea,* and by this device it is possible to accommodate a minimal fault *mens rea* for many strict liability crimes.[111] This approach was advocated by the House of Lords in *Sweet v Parsley,* although the case is not always applied.[112] The current cases of automatism could then be categorized as purely a denial of *mens rea* and the *actus reus* would simply be the illegal act. The distinction between denial of actus and mens rea arguably results in a great deal of confusion in the criminal courts, which Yeo argues is down to the confusion between involuntariness and unconsciousness.[113] This is discussed in detail above (see above at **6.1.1.**). Both these causes of incapacity would be subsumed into automatism.

Both Hart and Williams suggested that as a bare minimum for criminal liability, the individual should have been able to avoid the act or omission in question.

Williams suggests the relevant question is:

> 'Whether the offender could have acted otherwise if he had willed?'[114]

The Hart formulation is more expansive (see above at **6.4.3**), arguably covering a subjective test for negligence where mental capacity is impaired.

McSherry categorizes criminal offences as comprising the following elements:

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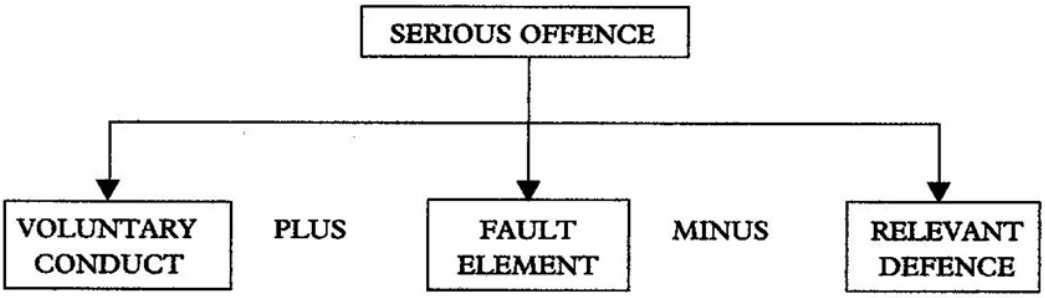
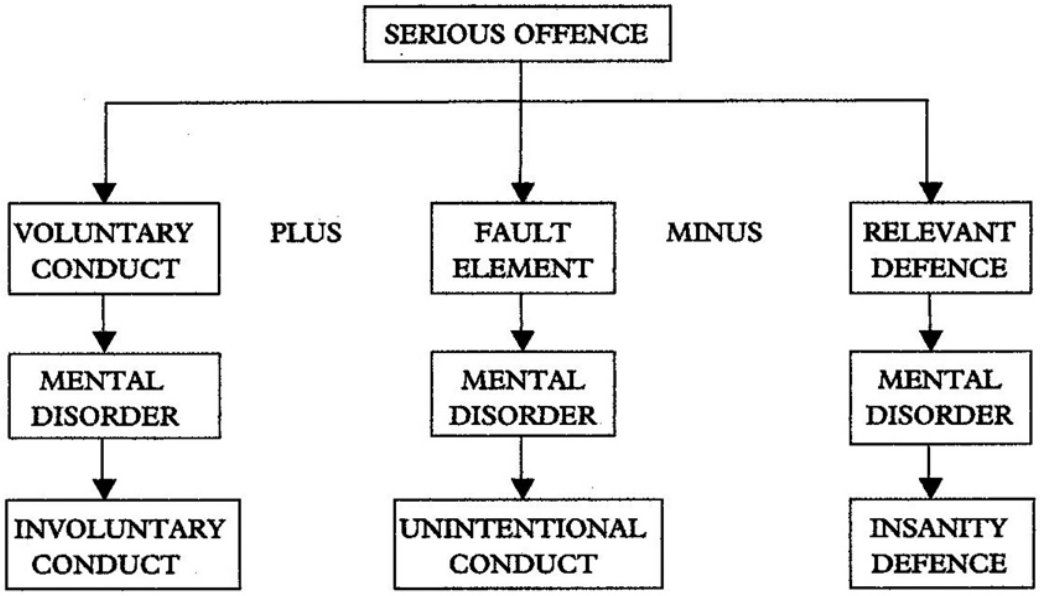
[111] HAWTHORNE, R. (2011) Strict criminal liability: a principled approach. *Cambridge Student Law Review*, 6, pp. 33-50.
[112] [1970] AC 132
[113] Yeo (2001), see footnote 74.
[114] WILLIAMS, G. (1983) *Textbook of Criminal Law*. 2nd Ed. Stevens.



This reflects the recognition that not all defences involve a negation of either *actus reus* or *mens rea.* She further categorizes the possible mental disorder defences thus:



(Above diagrams from pp 582 & 583 'Voluntariness, Intention, and the Defence of Mental Disorder: Toward a Rational Approach' by B McSherry, with kind permission)

McSherry's involuntary conduct and unintentional conduct correspond with Yeo's involuntariness and unconsciousness. In this schema, internal or external cause is irrelevant. Insanity is a status excuse, necessary only when the *actus reus* and *mens rea* requirements are met.[115]

[115] MCSHERRY, B. (2003) 'Voluntariness, Intention and the Defence of Mental Disorder'. *Behavioral Science and the Law*, 21, pp. 581-99.

6.5.4 Policy Issues About False Defences

Although it is undisputed that a genuine sleepwalker should be able in law to mount a defence based on that condition, the criminal justice system also has to consider the policy issues of the possibility of false defences. This is the justification for the reversal of the burden of proof for the insanity defence, where there is great difficulty for the prosecution to obtain the required proof to the criminal standard.[116](Ashworth 2006, Jones 1995) Hart sums the problem thus:

> 'Any increase in the number of conditions required to establish criminal liability increases the opportunity for deceiving courts or juries by the pretence that some condition is not satisfied. When the condition is a psychological factor the chances of such pretence succeeding are considerable. Quite apart from the provision made for mental disease, the cases **where an accused person pleads that he killed in his sleep** [emphasis mine] or accidentally or in some temporary abnormal state of unconsciousness show that deception is certainly feasible. From the Utilitarian point of view this may lead to two sorts of 'losses'. The belief that such deception is feasible may embolden a person who would not otherwise risk punishment to take their chance of deceiving a jury in this way. Secondly, a criminal who actually succeeds in this deception will be left at large, though belonging to the class which the law is concerned to incapacitate.'[117]

Thus the application of *Woolmington*[118] becomes problematic when it requires the prosecution to prove beyond reasonable doubt that the accused was not acting

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[116] ASHWORTH, A. (2006) Four threats to the presumption of innocence. International Journal of Evidence & Proof, 10(4), pp. 241-78; Jones (1995), see footnote 89.
[117] Hart (1968), see footnote 76, at Ch I, p.19.
[118] [1935] A.C. 462

voluntarily.

6.5.5 Nearly all the expert witnesses agreed that accused persons indulging in behaviour known to trigger their parasomnia should be held criminally responsible. Some felt that the defendant should be held criminally responsible only where the behaviour triggered parasomnia associated with the harmful behaviour displayed e.g. sexsomnia. For example, Walker states in an interview for the Daily Mail

> '[re parasomnias] it's highly unlikely that somebody would get up, get dressed, find a knife and set out to kill, just as it is unlikely that a man would get out of his own bed and into somebody else's to commit rape…I have to say I think some people have caught on to this as an alibi' … Professor Walker stresses that anyone using sexsomnia as a defence must be carefully scrutinised.' There are certain things I think are required for this condition to be genuine,' he says. 'I've never seen anyone with sexsomnia and nothing else: usually they have got a history of night terrors or sleep walking or other activity like that, and often from childhood. Often there is a family history as well.' Although, I suppose, theoretically, someone could sleepwalk into someone's room, get into bed with them and have sex with them, I've never seen a case with that many logical processes. I would think that would be vanishingly rare.'[119]

There is concern among lawyers and professionals about the ubiquity of psychological and psychiatric testimony in the courtroom, and this is particularly problematic in light of Morse's psycho-legal error, which is where the person believes that "causation,

[119] HALE, B. (2012) Are men getting away with rape by pretending they were asleep? Rising number of attackers are trying extraordinary defence that they had 'sexsomnia'. *Daily Mail* (Dec 22nd) News.

especially abnormal causation, is *per se* an excusing condition".[120] There was particular concern about the evidence offered where defendants were advancing the defence of automatism in relation to alleged sexsomnia, partly because of the almost universal consumption of large amounts of alcohol by the defendant.

6.6 Summary

The Latin aphorism '*In somno voluntas non erat libera'* (A sleeping person has no free will) sums up the legal approach to criminal responsibility and parasomnia. Although it is quite clear that folk psychology holds that the sleepwalker is not responsible for his actions, it is useful to deconstruct the basis of the sleepwalking defence and legal automatism more generally. This enables us to treat similar conditions such as hypoglycaemia consistently with sleepwalking. It also enables us to justify excusing people suffering parasomnias, even if it were shown that they are not in the strict sense "asleep" during these episodes.

[120] MORSE, S.J. (2005-2006) Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note. *Ohio St. J. Crim. L*., 3, pp. 397-412

Chapter 7: Expert Evidence

Expert evidence is the main concern of this thesis. There are general issues with scientific expert evidence, and some specific issues about expert evidence on the parasomnia defence. This chapter is concerned primarily with the legal rules on expert evidence, but also deals with some general principles of the sociology of scientific knowledge. Expert evidence is central to the defences of automatism and insanity, as these issues are nearly always outside the jury's expertise[1].

7.1 Duties of an Expert Witness

An expert witness's primary duty is to the court, as per Part 33.2 of the Criminal Procedure Rules: Expert's duty to the court:

(1) An expert must help the court to achieve the overriding objective by giving objective, unbiased opinion on matters within his expertise.

2) This duty overrides any obligation to the person from whom he receives instructions or by whom he is paid.

3) This duty includes an obligation to inform all parties and the court if the expert's opinion changes from that contained in a report served as evidence or given in a statement.[2]

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[1] *R v Smith (Stanley)* [1979] 1 WLR 1445*;* an exception is the effect of sneezing (*Woolley* [1998] CLY 914); medical evidence always required for insanity as per the Criminal Procedure (Insanity and Unfitness to Plead) Act 1991.

[2] Criminal Procedure Rules 2013 (SI 2013 No 1554).

Rix describes in greater detail the duties of a psychiatrist acting as an expert witness (most of which is applicable to forensic sleep experts). He states

> ‘A psychiatrist who acts as an expert witness is:
>
> - a *citizen*
> - a *doctor*
> - *a psychiatrist*
> - *an expert witness*[3]

There are tensions between these different roles. As a citizen and expert witness, there is a duty to assist the administration of justice. The doctor may be unused to a consultation where it has to be explained to the person being examined that there is no confidentiality, and where the focus is not the examinee’s best interests. He may also feel a duty to protect the interests of the defendant as a doctor – some of the interviewees seemed to identify with the plight of the defendant. The expert witness should have no commitment to either the defendant or complainant.

Rix also describes the drawbacks of being too ready to change a professional opinion without good reason:

> ‘If you acquire a reputation among barristers as a ‘hired gun’ you may have some short term gains but when the barristers are sitting as recorders or have been elevated to the bench you should be not surprised if your opinions carry little weight with them.’

[3] RIX, K.J.B. (2011) *Expert Psychiatric Evidence*. London: RCPsych Publications.

The best efforts of an expert to avoid conscious bias may not eliminate the issue of partiality - a recent study showed that expert opinions were biased toward to the side that had instructed them.[4] The expert witness's freedom to express an opinion that helps the court, rather than their client, was until 2011 protected by immunity from civil action. However, in *Jones v Kaney*[5] this immunity was partially revoked, at least for experts instructed by the party.

The ruling is hard to square with the maxim that the expert's duty is to the court. The majority argued that that the expert's duties to the court and to his client were not incompatible, Lord Dyson asserting

> 'There is no conflict between the duty owed by an expert to his client and his overriding duty to the court. His duty to the client is to perform his function as an expert with the reasonable skill and care of an expert drawn from the relevant discipline. This includes a duty to perform the overriding duty to assist the court. Thus the discharge of the duty to the court cannot be a breach of duty to the client. If an expert gives an independent and unbiased opinion which is within the range of reasonable expert opinions he will have discharged his duty both to the court and his client.'[6]

Baroness Hale dissented, arguing

> 'it is impossible to say what effect the removal of immunity will have, either on the care with which the experts give their evidence, or upon their willingness to do so. It

[4] MURRIE, D.C., BOCCACCINI, M.T., GUARNERA, L.A. and RUFINO, K.A. (2013) Are Forensic Experts Biased by the Side That Retained Them? *Psychological Science*, 24(10), pp. 1889-97.
[5] [2011] UKSC 13
[6] See footnote 5 at para 99.

> is certainly possible that it will reduce any tendency to act as a “hired gun” and that would be a very good thing; but it is also possible that it will increase the pressure on an expert to stick to her previous opinion for fear of being sued if she retracts or modifies it. It is possible that it will have no effect at all upon the willingness of experts to give evidence; it is also possible that, in certain fields at least, it will reduce their willingness to do so, or even to become involved in the particular field of practice at all.’[7]

This decision may make experts more reticent about changing their opinion, and so make joint meetings a pointless exercise. The other effect of *Kaney v Jones* is an apparent greater willingness to permit parties to instruct a fresh expert, as happened in *Stallwood v David.* This should only apply in very limited circumstances according to Teare J. who states

> ‘where a court is asked for permission to adduce expert evidence from a third expert in circumstances where the applicant is dissatisfied with the opinion of his own expert following the experts' discussion it should only do so where there is good reason to suppose that the applicant's first expert has agreed with the expert instructed by the other side or has modified his opinion for reasons which cannot properly or fairly support his revised opinion, such as those mentioned in the note in the White Book to which I have referred. It is likely that it will be a rare case in which such good reason can be shown. Where good reason is shown the court will have to consider whether, having regard to all the circumstances of the case and the overriding objective to deal with cases justly, it can properly be said that further expert evidence is “reasonably

[7] See footnote 5 at para 18.

required to resolve the proceedings".'[8]

McDuff J in *Singh v O'Shea* disagreed with this restrictive approach, stating

'As a matter of principle the court has a wide discretion and a judge case managing a case uses that wide discretion to ensure that expert evidence shall be restricted to that which is reasonably required to resolve the proceedings. The judge was exercising that discretion in the court below when he made his decision.'[9]

Whether this same approach would be taken in criminal trials is uncertain.

7.2 Admissibility

The English courts have been traditionally quite liberal about the inclusion of expert evidence. The requirements as laid out in the Australian case of *Bonython* (cited with approval in English cases[10]) are:

- "whether the subject matter of the opinion is such that a person without instruction or experience in the area of knowledge or human experience would be able to form a sound judgment on the matter without the assistance of a witness possessing special knowledge or experience in the area"
- "whether the subject matter of the opinion forms part of a body of knowledge or experience which is sufficiently organized or recognized to be accepted as a reliable body of knowledge or experience, a special acquaintance with which by

[8] [2006] EWHC 2600 (QB) at para 21.
[9] [2009] EWHC 1251 (QB) at para 9.
[10] HOOPER, A. and ORMEROD, D. (eds.). (2013) *Blackstone's Criminal Practice 2014*. Oxford: OUP; ROBERTS, A. (2008) 'Drawing on expertise: legal decision-making and the reception of expert evidence'. *Criminal Law Review*, 6, pp. 443-62.

the witness would render his opinion of assistance to the court"

- "whether the witness has acquired by study or experience sufficient knowledge of the subject to render his opinion of value in resolving the issues before the court"[11]

The breadth of this definition has been criticized. On the other hand, it has the effect of excluding expert testimony in matters deemed to be the realm of the jury, like provocation (*R v Turner*) which are considered to come under "common knowledge" or the veracity of a witness (unless the witness is abnormal).[12] As seen below, it can include the identification of the defendant where special technology is required. The effect of *Turner* is that experts can testify in general about the effects of a sexual assault (for example, post-traumatic stress disorder) in order to counter possible jury biases based on 'rape myths', but they cannot attest to the veracity of the particular complainant as this would be considered 'oath-helping'[13]. In effect, they can provide "group character testimony".

7.2.1 Reliability criteria and the gatekeeper function

The test in English law for admissibility accords with the long-standing *Frye* test adopted in the USA, which requires that the findings or technique "be sufficiently established to have gained general acceptance in the particular field in which it belongs".[14] However the USA requirements have evolved, with a trio of cases transforming the criteria for

[11] *The Queen v. Bonython* (1984) 38 SASR 45
[12] *R v Turner* [1975] 2 WLR 56; [1975] QB 834; this might exclude the application of fMRI and EEG "lie detection" techniques.
[13] Redmayne considers the comparison of evidence in *Turner* to 'oath-helping' or compurgation unconvincing (REDMAYNE, R. (2001) *Expert Evidence and Criminal Justice*. Oxford: OUP, at p.167).
[14] *R v Strudwick and Merry* (1994) 99 Cr App R 326; *R v Gilfoyle* [2001] 2 Cr. App. R. 5; HOOPER, A. and ORMEROD, D. (eds.). (2013) *Blackstone's Criminal Practice 2014*. Oxford: OUP.

admissibility of scientific and technical evidence - *Daubert v Merrell-Dow Pharmaceutical, Inc*, *General Electric Co. v Joiner*, and *Kumho Tires Co. v Carmichael.*[15] These cases led to the amendment of Rule 702 of the Federal Rules of Evidence. This states that:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Rule 702 focuses on the methodology rather than the conclusion of the expert. It has been assumed by some commentators to be a stricter test than *Frye*, but in this author's opinion it is not, as the general acceptance requirement is abolished. FRE 403 could in theory be more helpful in excluding unreliable evidence:

> 'Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.'

This conclusion is shared by Brown and Murphy where they state

[15] *Daubert v Merrell Dow Pharmaceuticals, Inc* (1993) 113 S. Ct 2786; *General Electric Co. v Joiner* (1997) 522 US 136; *Kumho Tire Co., Ltd v Carmichael* (1999) 119 US 1167

> ‘we argue that Rule 403, rather than the Daubert (or similar) rules governing scientific evidence, provides both (a) the necessary individualized assessment of claims and (b) room to allow the technology, as well as the public understanding of the technology, to improve and adapt, rather than being defined by Daubert (or similar) rulings that may be categorically and too broadly applied.’[16]

However, Edmond *et al* note

> ‘Techniques deemed admissible under Rule 702 might, in theory, run afoul of Rule 403. Courts reluctant to tangle with complex reliability debates might go directly to Rule 403 to make a determination on the admissibility of evidence … Because many jurisdictions maintain an explicit reliability standard, once expert opinion evidence is deemed admissible, and therefore implicitly reliable, there is limited scope for subsequently finding that the evidence will create unfair prejudice. *Admissibility standards (such as Rule 702), in effect, almost always trump exclusionary discretions (such as Rule 403)*.’(italics mine)[17]

The Law Commission’s preference is for an enhanced gatekeeper modelled on Rule 702.[18] Expert opinion could be excluded if it was not sufficiently reliable, based on the following considerations:

> (a) the opinion is soundly based, and
>
> (b) the strength of the opinion is warranted having regard to the grounds on which it is based.

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[16] BROWN, T. and MURPHY, E. (2010) Through a scanner darkly: Functional neuroimaging as evidence of a criminal defendant's past mental states. *Stanford Law Review*, 62(April), pp. 1119-1208.
[17] EDMOND, G., COLE, S., CUNLIFFE, E. and ROBERTS, A. (2013) Admissibility compared: the reception of incriminating expert evidence (i.e., forensic science) in four adversarial jurisdictions. *University of Denver Criminal Law Review*, 3(1), pp. 31-109.
[18] LAW COMMISSION. (2011) *Expert Evidence in Criminal Proceedings in England and Wales*. No. 325. London: The Stationery Office.

Reasons for excluding an opinion for being insufficiently reliable would include:

(a) the opinion is based on a hypothesis which has not been subjected to sufficient scrutiny (including, where appropriate, experimental or other testing), or which has failed to stand up to scrutiny;

(b) the opinion is based on an unjustifiable assumption;

(c) the opinion is based on flawed data;

(d) the opinion relies on an examination, technique, method or process which was not properly carried out or applied, or was not appropriate for use in the particular case;

(e) the opinion relies on an inference or conclusion which has not been properly reached.

The relevant facts for deciding these questions are detailed further by the Law Commission:

(a) The extent and quality of the data on which the opinion is based, and the validity of the methods by which they were obtained.

(b) If the opinion relies on an inference from any findings, whether the opinion properly explains how safe or unsafe the inference is (whether by reference to statistical significance or in other appropriate terms).

(c) If the opinion relies on the results of the use of any method (for instance, a test, measurement or survey), whether the opinion takes proper account of matters, such as the degree of precision or margin of uncertainty, affecting the accuracy or reliability of those results.

(d) The extent to which any material upon which the opinion is based has been reviewed by others with relevant expertise (for instance, in peer-reviewed publications), and the views of those others on that material.

(e) The extent to which the opinion is based on material falling outside the expert's own field of expertise.

(f) The completeness of the information which was available to the expert, and whether the expert took account of all relevant information in arriving at the opinion (including information as to the context of any facts to which the opinion relates).

(g) Whether there is a range of expert opinion on the matter in question; and, if there is, where in the range the opinion lies and whether the expert's preference for the opinion proffered has been properly explained.

(h) Whether the expert's methods followed established practice in the field and, if they did not, whether the reason for the divergence has been properly explained.

Most importantly in the application of this test, if there is any doubt about whether expert testimony is opinion or fact, it should be considered to be opinion. Whether or not this would make a substantial difference to the quality of biomedical expert evidence is debatable, although it would certainly seem capable of excluding the APT. The correct application of these criteria requires a level of scientific literacy which is arguably often lacking in the judiciary. There is a large role for expert opinion for two major reasons, both epistemological: firstly that medical knowledge may be limited in a particular field; and secondly that certain assessments are judgments, which can be based on current knowledge but never ascertained with any precision. Whether or not an episode was

parasomnia is a matter of opinion for both these reasons.

7.2.2 Difficulties with biomedical evidence

The range of actions possible during a parasomnia episode is reasonably well described, but it may be either incomplete or over-inclusive. Medicine does present particular difficulties in this regard as much of the scientific research is observational. LeFort, the French surgeon who classified three types of mid-face fractures, only used his club on the facial skeletons of cadavers[19] – clearly it would be unethical to inflict injuries on living human subjects. These same difficulties do not apply to the physical sciences. Generally "natural experiments" have to be relied on to determine the causation or likely effect of injuries or other lesions, like the unfortunate accident of Phineas Gage. Gage was an American railroad worker who had a tamping iron enter below his eye socket and exit through the top of his skull. He miraculously survived but his behaviour dramatically changed (there is some debate about the degree of impairment he suffered).[20] These natural experiments only take us so far however, and the actual lesion is difficult to define precisely (whereas experimental lesions in animal experiments for example can be precisely delineated). The retrospective assessment of a parasomnic episode is intrinsically subjective, as the accused's brain state cannot be determined in the absence of electroencephalographic monitoring.

Cartwright's hypothesis that a sleepwalker can be "primed" is an example of a theory which, if shown to be correct, would dramatically widen the spectrum of behaviours possible during somnambulism. The strongest assertion that an expert can validly

[19] PATTERSON, R. (1991) The Le Fort fractures: René Le Fort and his work in anatomical pathology. *Can J Surg,* 34(2), 183-4.

[20] DAMASIO, H., GRABOWSKI, T., FRANK, R., GALABURDA, A.M. and DAMASIO, A.R. (1994) The Return of Phineas Gage: Clues About the Brain from The Skull of a Famous Patient. *Science*, 265(5162), pp. 1102-05.

advance about a parasomnia episode is that it is consistent with a particular parasomnia. They can also comment on the other circumstantial factors that will support automatism, such as a lack of motive and behaviour contrary to the accused's character. These statements neither would nor should be excluded by a Daubert-type test.

7.2.3 Application to expert evidence on forensic sleep disorders

Both the quality of the observational data supporting an association between alcohol and sleepwalking, and the interpretation of polysomnographic data during an alcohol provocation test (APT), may well be brought into question. The support in the literature for the APT is not robust, with insufficient data from polysomnography on the effect of alcohol in sleepwalkers.

Pressman believes that a *Daubert*-type test would exclude testimony about the effect of alcohol on sleepwalking, stating

> 'the hypothesis of alcohol-induced sleep-walking has no valid evidence-based scientific support and should be considered "junk science." [21]

Whilst it might exclude the use of the APT, it probably would not exclude expert witnesses giving their opinion on alcohol and sleepwalking based on their professional experience. Again it can be argued that it should not - if we accept sleepwalkers' accounts of what triggers their sleepwalking, we must accept sleepwalkers' accounts of the effect of alcohol. Such testimony is absolutely appropriate, and does not fall into the *ipse dixit*[22] fallacy. Wynne comments that in the legal sphere, deconstruction of expert

[21] PRESSMAN, M.R. (2011) Preface: Common Misconceptions About Sleepwalking and Other Parasomnias. *Sleep Medicine Clinics*, 6(4), pp. xiii-xvii.
[22] This translates as 'he himself said it'.

opinion can end in deconstruction of the basis of a field of knowledge.[23] Thus if some experts deconstruct the attribution of sleepwalking episodes to alcohol consumption, they also deconstruct the entire basis for categorizing parasomnic episodes.

7.3 Issues in the expert witness community

The literature on alcohol and sleepwalking illustrates another fallacy. Where expert witnesses extensively cite self-authored review articles, they replace the *ipse dixit* fallacy with the *ipse scribit*[24] fallacy. If peer review of the academic literature was influenced by a group of experts with a particular opinion, this would further complicate the application of the literature in expert testimony. There is evidence that this is the case with the issue of alcohol and sleepwalking - this author has had reports of this, and also personal experience when submitting a co-authored paper for peer review. Not only is it difficult to publish articles linking alcohol and sleepwalking, it is even difficult to get a major sleep journal to accept letters and short notes about the debate. This makes it even more difficult to mobilize the scientific community to obtain robust data to refute or support the hypothesis.

The latest version of the diagnostic criteria for sleep disorders, the ICSD-3, again demonstrates the dominance of one body of opinion. It is now stated that

> ‘Disorders of arousal should not be diagnosed in the presence of alcoholic intoxication. The behavior of the alcohol-intoxicated individual may superficially

[23] WYNNE, B (1989) Establishing the rules of law. In SMITH, R. and WYNNE, B. (eds), (1989) *Expert Evidence: Interpreting Science in the Law*. London: Routledge.
[24] This translates as 'he himself wrote it'.

> resemble that of the sleepwalker. However, the sleepwalker is typically severely cognitively impaired, but with only limited motor impairment. The alcohol-intoxicated individual's level of cognitive functioning may be reduced, but not absent, whereas motor behavior is often severely impaired.'[25]

There are some eminent forensic sleep experts who dissent from this assertion, for example Cartwright[26]. The ICSD-3 should be treated as an expression of the opinion of the authors, rather than scientific fact. However, such documents can be extremely influential, and might lead to the exclusion of all alcohol-induced parasomnias.

7.4 Junk science

The concept of "junk science" suggests that it is easy to differentiate between "good" and "bad" science. It has, however, proven remarkably difficult for the courts to distinguish between the two. As Mercer states

> 'The difficulty in actually defining simple legal rules for demarcating real science from junk science, and plausibly dismissing numerous scientific controversies and popular concerns with new science and technology as merely 'junk science'-led paranoia, has been difficult to convert into sustainable policies. Implementing simple demarcation criteria between science and non-science have proved more difficult in practice than advocates have anticipated.'[27]

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[25] AMERICAN ACADEMY OF SLEEP MEDICINE. (2014) *International Classification of Sleep Disorders*. 3rd Ed. American Academy of Sleep Medicine.
[26] Personal communication.
[27] MERCER, D. (2002) The Intersection of Sociology of Scientific Knowledge (SSK) and Law: Some Themes and Policy Reflections. *Law Text Culture*, 6, pp. 137-58.

The Law Commission's proposals contain a number of references to peer review and established practice, proving the point. Moreover it could be suggested that the most important distinction is how the science is used. Science can be valuable and proven, but nonetheless have greater prejudicial than probative value in the courtroom. Currently this can be excluded on a discretionary basis.[28] Also evidence can be excluded under Section 78 of the Police and Criminal Evidence Act 1984

> 'In any proceedings the court may refuse to allow evidence on which the prosecution proposes to rely to be given if it appears to the court that, having regard to all the circumstances, including the circumstances in which the evidence was obtained, the admission of the evidence would have such an adverse effect on the fairness of the proceedings that the court ought not to admit it.'

Both these measures *only* apply to prosecution evidence.[29] In *Robb* it was noted that

> 'if the Crown are permitted to call an expert witness of some but tenuous qualifications the burden of proof may imperceptibly shift and a burden be cast on the defendant'.[30]

These doctrines mean that the defence can rely on significantly weaker expert evidence, which is an issue observed with the parasomnia defence. The Appeal Court showed great faith in ability of cross-examination to refute dubious scientific evidence when it added that

> 'the appellant had ample opportunity to meet and rebut Dr Baldwin's evidence, if he could.'

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[28] *R v Sang* [1980] AC 402
[29] *Lobban v The Queen* [1995] 1 W.L.R. 877
[30] *R v Robb (Robert McCheyne)* (1991) 93 Cr App R 161

In *Luttrell*, the court commented that

> ‘evidence might be so lacking in “prima facie reliability” that it has no probative force or its probative force is too slight to influence a decision: *R. v Clarke* [1995] 2 Cr.App.R. 425 , 432.’[31]

In the case of *Clarke (Robert Lee)*, an expert in facial mapping gave evidence as to whether the defendant was the man on the video images captured by security cameras, as there were no eye witnesses to the bank robbery. The judge ruled that this evidence was admissible and

> ‘[t]he matter was left to the jury on the basis that it was for them to assess that expert evidence and to decide whether the technique was reliable and whether it reliably demonstrated that the appellant was the man on the photographs taken in the bank.’[32]

This puts great responsibility on the lay persons in the jury. This is arguably a matter for the field of science and technology studies rather than just the courts and scientists to resolve. Any judgment of the probative value of evidence versus its prejudicial value cannot ignore societal influences. For example, the feminist argument against the ‘sexsomnia defence’[33] is partially based on the perception that science which exonerates the accused is more likely to be believed within a “rape culture”, regardless of its intrinsic scientific worth.

R v Turner is an example of the exclusion of psychiatric evidence in relation to the

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[31] *R v Luttrell and Others* [2004] 2 Cr App R 31
[32] *R v Clarke (Robert Lee)* [1995] 2 Cr App R 425
[33] XU, M. (2009) Sexsomnia: A Valid Defence to Sexual Assault? *J. Gender Race & Just.,* 12, pp. 687-712;_TWISTY (Dec 15th 2005), Raper's Delight [Homepage of I Blame The Patriarchy], [Online]. Available: http://blog.iblamethepatriarchy.com/2005/12/01/rapers-delight/.

partial defence of provocation.[34] However there is rather more to *Turner* than just this aspect of 'common knowledge'.[35] The decision in *Turner* was also based on the low probative value of the psychiatric testimony, accompanied by the danger of the jury being misled about the objective standard for provocation. The use of expert evidence could add nothing to the jury's deliberations, which are guided by their knowledge of the 'reasonable man'. On the other hand, cases like *Emery* demonstrate circumstances where the jury may require the help of psychologists or psychiatrists to understand the vulnerability of an individual to duress.[36] Mitchell, Mackay and Brookbanks argue it is unjust that individuals that have certain conditions are held to the same standards as the general population, arguing

> 'The term "undesirable characteristics" is rather ambiguous and refers to two fundamentally different groups of individuals. First, there are those who share the same basic values as ordinary citizens but they suffer from a mental abnormality or personality trait. Dressler's argument is that such cases breach what he calls the "oxymoron principle", that the jury should not, for example, be asked to consider how the "reasonable paranoid" would have reacted. But this problem only arises because of the misguided use of the reasonable or ordinary person test. The second major group of persons with "undesirable characteristics" do not share the same basic social values as the vast majority of ordinary citizens. The American Model Penal Code describes such characteristics as reflecting "idiosyncratic moral values". Dressler cited by way of an example an assassin who believes it is right to kill

[34] [1975] 2 WLR 56
[35] REDMAYNE, R. (2001) Expert Evidence and Criminal Justice. Oxford: OUP.
[36] *R v Emery* (1993) 14 Cr App R (S) 394

> political leaders. Horder spoke of a racist who believes “it is the gravest of insults for a coloured person to speak to a white man unless spoken to first”. Unless such characteristics reflect a condition which brings the individual within a recognised category of legal excuse--some form of mental abnormality is perhaps the most obvious, but some individuals in this group will almost certainly have no excuse of this or any other sort which the law currently recognises--they should be excluded because they would effectively contradict the criminal law's attempt to maintain social values.’[37]

Redmayne stresses that

> ‘evidence which falls victim to the balancing process is nearly always, as in *Turner,* of minimal probative value, and that often the dangers of admitting it would be significant.’[38]

These criteria apply in this author’s opinion to the APT. The weak claims that can be made for the APT can be contrasted with the dangers of admitting it in evidence. It is common knowledge that parasomnias are rare, but alcoholic intoxication and blackouts are relatively common; further, they are foreseeable consequences of alcohol consumption. The admission of the APT carries with it the arguably incorrect inference that it can tell the jury something about the episode in question.

Psychological and psychiatric testimony should include consideration of the possibility of malingering, exaggeration or functional overlay, and the steps taken to detect it, both in the clinical assessment and in any tests performed. This should reduce the prejudicial

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[37] MITCHELL, B.J., MACKAY, R.D. and BROOKBANKS, W.J. (2008) Pleading for provoked killers: in defence of Morgan Smith. *Law Quarterly Review*, 124(Oct), pp. 675-705.
[38] See footnote 35, at p.148.

value of such testimony. The expert's opinion about the character or guilt of the accused is irrelevant to the jury, and the courts are keen to exclude testimony that is based on these assessments which subvert the purpose of the jury. There is some evidence that expert witness testimony is in some instances influenced by these "gut reactions".[39]This is impossible to eliminate entirely, but its encroachment into testimony is be resisted as

> 'a form of charlatanism that could mislead the court into according too much weight to the evidence.'[40]

Despite all these safeguards, a review by Edmond *et al* found that the test for admissibility makes little difference to what evidence is accepted in court.[41] They quote Moriarty and Saks who state

> 'The single most important observation about judicial [gate-keeping] of forensic science is that most judges under most circumstances admit most forensic science. There is almost no expert testimony so threadbare that it will not be admitted if it comes to a criminal proceeding under the banner of forensic science. . . . The applicable legal test offers little assurance. The maverick who is a field unto him- or herself has repeatedly been readily admitted under *Frye*, and the complete absence of foundational research has not prevented such admission in *Daubert* Jurisdictions.'[42]

They compared the US, England and Wales, Australia and Canada, all common law jurisdictions. They noted the lack of evidence for reliability for many forms of forensic

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[39] Personal communication.
[40] ROBERTS, P. (1996) Will you stand up in court? On the admissibility of psychiatric and psychological evidence. *Journal of Forensic Psychiatry*, 7(1), pp. 63-78.
[41] Edmond (2013), see footnote 17.
[42] SAKS, M. and KOEHLER, J. (2008) The Individualization Fallacy in Forensic Science. *Vanderbilt Law Review*, 61, pp. 199-220.

science, most notably fingerprinting (cf the Scottish case of *McKie*[43] where a latent print from a crime scene was misattributed to a police officer). This points to a far more fundamental problem with how the courts deal with science, which admissibility rules can do little to address.

7.4.1 Case Study

There are a number of cases reported in the media that illustrate the weak medical evidence that has supported successful automatism and insanity defences. I was able to interview one lady who had been profoundly affected by the death of her brother, where the accused was found not guilty by reason of insanity. She approved the publication of this case study. SW was killed in a head-on collision by a driver who had veered onto the other side of the road. He was charged with causing death by careless driving, but was found not guilty by reason of insanity. The accused had exhaustive medical tests over a year, and one abnormality of questionable significance was found on an ambulatory electrocardiogram (ECG) - a three second run of non-sustained ventricular tachycardia[44]. This finding was not reproduced on other tests including a repeat ambulatory ECG. His heart was structurally normal on echocardiography[45]. This isolated finding, according to Dr Morley-Davies, cardiologist and cardiac electro-physiologist at the University Hospital of North Staffordshire, is of little significance, since three seconds of arrhythmia would not result in a loss of consciousness (and this episode did not appear to be associated with any symptoms). In his opinion, the overwhelming likelihood was that an arrhythmia was not the cause of the crash.

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[43] *McKie v Scottish Ministers* [2006] CSOH 54

[44] This is an abnormal heart rhythm (or arrhythmia) that can cause loss of consciousness or even cardiac arrest.

[45] A scan of the heart using ultrasound.

As this was a case of insane automatism, the burden of proof was on the defence to prove a cause of insanity on the balance of probabilities. It is difficult to understand why the defence succeeded, and reform of the law on automatism probably would not help in cases like this. The issue of admissibility of evidence is more relevant.

7.5 Accreditation

There are often only a small number of experts in a particular field. This makes validation problematic, as acknowledged by the House of Commons Science and Technology Committee who suggested the involvement of overseas experts in their report.[46] It also may mean that experts are more deferential towards each other's opinion, as the experts all know each other. This is not always the case, as public disagreements have shown - familiarity can just make the conflicts all the more heated. In the case of forensic sleep disorders, the divide appears to be largely trans-Atlantic. These differences of opinion have led to General Medical Council (GMC) involvement in some cases, although it is the courts that are the experts in deciding what the duties of expert witnesses are, and whether particular experts have fulfilled them or not. In this respect, it is perhaps regrettable that the decision of Judge Collins in the High Court in *Meadow*[47] was overturned. He ruled that the GMC should not invoke disciplinary proceedings unless a trial judge commented on the quality of expert evidence given. Trial judges have criticized medical expert witnesses on rare occasions, with Sedley LJ

[46] HOUSE OF COMMONS SCIENCE AND TECHNOLOGY COMMITTEE. (2004-2005) Forensic Science on Trial. London: The Stationery Office, at para 136.
[47] *Meadow v General Medical Council* [2006] EWHC 146 (Admin)

describing Dr Donegan's evidence as "junk science" in *Re B (A Child) (Immunisation: Parental Rights)*,[48] an appeal from the Court of Protection relating to MMR vaccination. However, judges would be loath to criticize an expert witness merely on the basis of contested science, because this might dramatically affect the range of opinions experts might volunteer.

The Court of Appeal in *Meadow* disagreed with Judge Collins, and ruled that the GMC was able to adjudicate where such issues impacted on fitness to practice.[49] It is unclear when, if ever, a doctor's expert witness work would impact on their fitness to practice. The fact that expert witnesses from overseas are not members of UK organizations and so not subject to UK professional regulation is a bone of contention with some who have been the subject of complaints. There are registers and organizations for expert witnesses but there are no mandatory requirements for registration or membership.

The presumption of innocence may justify the requirements for medical expert evidence for the prosecution being different from those for the defence. For example, theories about a criminal cause for certain childhood injuries supporting a prosecution for child abuse need to meet certain standards to satisfy the presumption of innocence. The defendant on the other hand may be entitled to use less solid evidence to raise reasonable doubt in the minds of the jury. Certainly fanciful and far-fetched theories should still not be admitted, but lack of a rigorous research base should not be the sole ground for excluding exculpatory evidence. Another significant difference is that not uncommonly in child abuse cases there may be dispute about whether or not there was a crime – the post-mortem findings may be non-specific where smothering is suspected,

[48] [2003] EWCA Civ 1148
[49] *Meadow v General Medical Council* [2006] EWCA Civ 1390

for example. In sleepwalking cases the illegal act is usually not disputed, and the issue is simply one of criminal responsibility.

There is no easy solution to the controversy over alcohol and sleepwalking. This author considered a range of solutions, and the following were rejected for the reasons given below: accreditation; an enhanced test for admissibility; and peer review. The viable solutions included: an enhanced gatekeeper committee; an external review; and formulation of guidelines by a professional body.

Accreditation was rejected for several reasons. It does not guarantee the validity of the opinion, merely the experience and qualifications of the expert witness. Accreditation may lead to less scrutiny of expert evidence, and so paradoxically exacerbate the problem. Accreditation may not address the persistence of attitudes and beliefs that are not grounded in objective scientific evidence. This is not to say that accreditation or registration is not a good idea, but it is only really a mechanism for excluding the unqualified rather than for ensuring the quality of evidence given. One participant who was not a sleep expert (he was a forensic psychiatrist) was involved in a case because the accused had not volunteered a history of sleepwalking to his solicitors. Nonetheless his expert evidence could not be faulted in this author's opinion. There are voluntary registers of expert witnesses in the UK e.g. the Law Society Expert Witness Register. The Netherlands have a statutory expert witness register, the Nederlands Register Gerechtelijk Deskundigen (NRGD) which translates as 'Netherlands Register of Court Experts'. Registration is not mandatory, but experts are assessed for suitability for admission. They have to reapply every four years and can be removed from the register

if they fail to meet the requirements laid down.[50] This would be an excellent model to follow. There was an abortive attempt to establish an independent registration council, the Council for Registration of Forensic Practitioners. This closed down in 2009 after financial and professional support was withdrawn.[51]

Linked to accreditation is the suggestion that only sleep physicians should be expert witnesses on forensic sleep disorders. Certainly sleep physicians would be better able to do a holistic assessment of the accused, but that is not sufficient reason to exclude the testimony of psychologists and other experts. In any case, it is for the courts to decide whose testimony would help the jury, and this author believes they would not accept this restriction.

The approaches that focus on the process and reliability of evidence have much to commend them. However, in certain areas where there has been little research, this may present an insurmountable barrier to any evidence being adduced at all. This is particularly so in medicine for the reasons stated above. Gilson describes the demonstration by a prosecution expert witness of the force required to cause the injuries seen in the Louise Woodward case[52] as “nothing less than a spectacle” (the defence rightly objected to the proposed use of a doll to demonstrate this).[53] The degree of force required to produce shaken baby syndrome is simply not known. Rule 702

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[50] Website at http://english.nrgd.nl/

[51] UK REGISTER OF EXPERT WITNESSES. (2009) April 2009-last update, *CRFP - RIP... this time it's official!* Available: http://www.jspubs.com/experts/ewire/itemtext.cfm?ewid=166.

[52] Louise Woodward was a British nanny convicted of manslaughter in the US for killing the baby she was looking after; BBC NEWS. (1997) Nov 10th 1997-last update, *Special Report: Timetable of Woodward case*. Available: http://news.bbc.co.uk/1/hi/special_report/louise_woodward_case/29232.stm.

[53] Personal communication; NEWBERGER, E. *Commonwealth v. Louise Woodward, direct examination of Dr. Eli Newberger*. Previously available at: http://www.elinewberger.com/articles/archive/shakenbaby/testimony.html. (Accessed June 2014, now unavailable)

might exclude any testimony about shaken baby syndrome given that no testimony would be “based on sufficient facts or data” or “the product of reliable principles and methods”. Some commentators might consider that this would be entirely appropriate. It is this author’s belief that enhanced admissibility rules should not be applied universally, and particularly in the very cases which the courts are concerned about. The exclusion of scientific evidence simply because of the existence of controversy would be to the detriment of the criminal justice system.

Peer assessment may ensure that the opinion is mainstream, but excluding opinions simply on this basis is intuitively wrong – the orthodox opinion is often proved to be wrong over time. The peer review process may be unduly influenced by politics and in a small area of expertise affected by the close relationships of all those involved. Like accreditation, it may do nothing to challenge assumptions that inform expert opinion that may be simply perpetuated in the process of professional training. Certain memes may persist long after they have been discredited. The current situation regarding alcohol and sleepwalking is a good example of the difficulties (see **2.7**, **4.2.5**, **5.6.2**).

7.6 Science and the Law

One interviewee commented that expert witnesses and lawyers “don’t see eye to eye”. One of the recurring themes of this thesis is the disjunction between the expert witnesses and the lawyers. McCord states

> ‘Recently, psychologists have lambasted the legal system as "indifferent or even hostile" to psychology in that lawyers guard the courts as their private preserve and

> "subconsciously resent the entry of experts." Psychologists view lawyers as "reactionary and closed minded." Not to be outdone, a representative jurist has countered with the assertion that "[a]t best a courtroom makes an awkward psychiatrist's couch.'"[54]

The apparently relentless intrusion of mental health professionals into courtrooms was criticized by Cole and Veiel in 2001.[55] Their criticisms are often directed at all expert evidence, but one that is particularly confined to mental health and neuroscience related disciplines when applied to the law is improper causal attribution (see below for Morse's 'fundamental psycholegal error'). Gilson analyzes in his monograph the more general difficulties that law and science have. The court wants scientific expertise to assist the legal decision-making process, rather than the court having to adjudicate in a scientific dispute. An example of this is the appeal by Pressman for the courts to exclude the Alcohol Provocation Test from expert evidence.

Gilson comments about these difficulties that:

> 'Ironically in this predicament, law that operates only under legal/illegal codes is pressed for true/false conclusions, which constitutes a serious abuse of its processes. In terms of science, neither is it equipped for this, nor in law's terms should there be such expectation, given that the opinion of an expert specifically is meant to inform tribunals and inquiries so that they can arrive at reliable conclusions. In the event, law has adapted its normal procedures to enable it to test the reliability of experts rather than true/false contentions in science but is still without a universal

[54] MCCORD, D. (1987) Syndromes, Profiles and Other Mental Exotica: A New Approach to the Admissibility of Nontraditional Psychological Evidence in Criminal Cases. *Oregon Law Review*, 66(1), pp. 19-108.

[55] COLES, E.M. and VEIEL, H.O.F. (2001) Expert testimony and pseudoscience: How mental health professionals are taking over the courtroom. *International Journal of Law and Psychiatry*, 24, pp. 607-625.

guarantee of certainty.'[56]

However, there are many who disagree with this stark portrayal of a law-science chasm. The courts have no difficulties dealing with other types of ambivalent and unreliable evidence e.g. eye witness testimony, as *Turnbull*[57] demonstrates. The trial process is entirely about giving weight to contradictory pieces of evidences in order to come to a conclusion. As Wynne put it

'Science, like life in general, involves creating adequate conclusions from inadequate premises.'[58]

This indubitably applies to the criminal trial also.

As seen with FRE Rule 702 and other enhanced gatekeeper tests, the law concerns itself with the processes involved rather than the conclusions. It cannot adjudicate on what is true and false, nor even what is good and bad science. It is important not to fall into the trap of 'scientism'; that is to believe that only scientific methods can establish objective and meaningful knowledge and practices. Similarly it should be understood it is impossible to totally 'depoliticize' science to ensure reliable scientific opinion. Wynne and Smith describe the problems with using legal processes:

'Policy makers put forward the extreme formality of legal processes - what Tribe calls the law's 'rituals of precision' - as an antidote to the procedural imprecision and inconsistency invariably found whenever science is subjected to detailed scrutiny. This development follows from the widespread belief, which we question, that a lack

[56] GILSON, C.G. (2012) *The Law-Science Chasm: Bridging Law's Disaffection with Science as Evidence*. Quid Pro, LLC.
[57] [1977] 1 QB 224.
[58] Wynne (1989), see footnote 23.

of consistency in scientific knowledge must be due to a lack of procedural rigour.'[59]

In essence, they reject the basis for the application of the principles of evidence-based medicine to expert evidence. The effect of prior assumptions, beliefs and/or policy goals can be seen in the different interpretations of ambivalent evidence of child abuse. An example is the different interpretations of maternal actions on covert video surveillance of mothers suspected of child abuse (Munchhausen's syndrome by proxy aka factitious or induced illness).[60]

7.6.1 Also, the law wishes to prevent psychologists and psychiatrists straying into areas that are the province of the jury (and therefore of folk psychology). Expert evidence seen as bolstering a witness's credibility is excluded as per *Robinson.*[61] This might seem to exclude the use of such testimony to support counterintuitive phenomena, as Colman and Mackay note in the case of *Neeson*.[62] There has been resistance to the use of expert testimony to combat "rape myths",[63] which is a prime example of expert testimony which would serve policy ends well. However, since *Turner,* the courts have clarified that expert evidence is admissible where the condition "is complex and … is not known by the public at large" *(Emery)*.[64]

The parasomnia defence is an area where the folk psychology of the jury is drawn on to an extent - the sleepwalker cannot be held responsible because he is asleep. However,

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[59] SMITH, R. and WYNNE, B. (eds), (1989) *Expert Evidence: Interpreting Science in the Law*. London: Routledge.
[60] MORLEY, C. (1998) Concerns about using and interpreting covert video surveillance. *BMJ*, 316(7144)(May 23rd), pp. 1603-05.
[61] [1994] 3 All ER 346
[62] *R v Neeson,* Belfast Crown 1990 (unreported); COLMAN, A.M. and MACKAY, R.D. (1991) Excluding expert evidence: a tale of ordinary folk and common experience. *Criminal Law Review*, (Nov), pp. 800-10.
[63] ELLISON, L. (2005) Closing the credibility gap: the prosecutorial use of expert witness testimony in sexual assault cases. *International Journal of Evidence & Proof*, 9(4), pp. 239-68.
[64] *R v Emery* (1993) 14 Cr App R (S) 394

expert testimony *is* permitted to demonstrate that, counterintuitively, the parasomnic can be asleep whilst performing various complex tasks.

7.6.2 Some experts believe that the adversarial system is responsible for many of the issues (see Chapter 8) and propose the use of a single expert. Wynne points out the problems of this solution:

> 'critics of the adversary process argue that it introduces artificial polarization into scientific discourse, demeaning science in public by encouraging unseemly (and by implication, false) conflict. They argue that experts should be assigned to the court (as happens, for example, in France) not to competing parties, and that issues of technical fact can be resolved by expert consensus processes outside legal cross-examination. Defenders of the adversary system argue that this is elitist and unreliable: left to themselves scientists are insufficiently precise, and prone to unseen bias. They believe that the truth can therefore be revealed only by exposing through adversary cross-examination which side of an expert disagreement is introducing covert, extraneous bias (including values or opinions) or incompetence.'[65]

This author is of the view that the opinion of certain experts was demonstrably value-laden e.g. with regard to alcohol and sleepwalking, and so concurs that the adoption of a single expert would introduce these biases into the trial.

7.6.3 Particular issues with neuroscientific evidence and the law (neurolaw)

Neuroscientific evidence can pose particular issues for the law that other forms of expert evidence do not. The area of neurolaw has been defined as an

> 'emerging field of interdisciplinary study that explores the effects of discoveries in

[65] Wynne (1989), see footnote 23.

> neuroscience on legal rules and standards.[66]

There have been pleas for caution over the application of neuroscientific evidence in the courts, particularly by Morse. He describes the “fundamental psycholegal error”, which is

> ‘to believe that causation, especially abnormal causation, is per se an excusing condition.’ [67]

Many of these complexities do not currently apply in the case of forensic sleep disorders; it cannot be doubted that evidence about the defendant’s brain state is pivotal to deciding criminal responsibility. Nonetheless, it is important to be cognizant of the role of normativity even in this uncontroversial application of descriptive neuroscience. Our current legal thinking is dominated by the Latin aphorism *In somno voluntas non erat libera* (A sleeping person has no free will). If it were established that this principle did not apply in all cases to all parasomnias, then this issue would need to be revisited. If the basis of parasomnia constituting an excuse were based on brain functioning for example, then there are questions about the neuroscientific correlates of criminal responsibility. Schopp’s monograph discusses this in depth (see for more detail section **6.4.3**).

7.6.4 Resolution of scientific controversy

One possibility this author has considered is the formation of a scientific committee, overseen by a scientist outside the field and appointed by a judge or lawyer, on the lines of the National Science Panel used in the breast implants litigation to address

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[66]The original source of this definition could not be ascertained, but it is used in several articles on the subject.

[67] MORSE, S.J. (2005-2006) Brain Overclaim Syndrome and Criminal Responsibility: A Diagnostic Note. *Ohio St. J. Crim. L*., 3, pp. 397-412.

causation. Like the National Science Panel, its findings would be available to guide juries but would not be binding. However, the National Science Panel addressed an issue relevant to thousands of litigants with compensation of billions of dollars at stake. The issue of alcohol and sleepwalking is only relevant to perhaps a couple of dozen cases each year in the UK. A more modest and practical proposal is the creation of a gate-keeping panel of three specially trained judges to evaluate new theories and techniques before they could be used in expert evidence.[68] This would be an attractive approach for applying to the Alcohol Provocation Test and other new techniques prior to acceptance in court. Yet another solution is the establishment of "science courts". A White House Task Force in 1976 proposed

> 'adversary hearing[s] ... governed by a disinterested referee, in which expert proponents of the opposing scientific positions argue their cases before a panel of scientist/judges. The judges themselves will be established experts in areas adjacent to the dispute. They will not be drawn from researchers working in the area of dispute, nor will they include anyone with ... [a predisposing] bias.... After the evidence has been presented, questioned, and defended, the panel of judges will prepare a report ... noting points on which the advocates agree and reaching judgments on disputed statements of fact. They may also suggest specific research projects to clarify points that remain unsettled.'[69]

This format would approximate to a UK public inquiry or Royal Commission. Casper and Wellstone reported on the failure of science courts to live up to the ideal of

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[68] HARTSHORNE, J. and MIOLA, J. (2010) Expert evidence: difficulties and solutions in prosecutions for infant harm. *Legal Studies*, 30(2), pp. 279-300.

[69] TASK FORCE OF THE PRESIDENTIAL ADVISORY GROUP ON ANTICIPATED ADVANCES IN SCIENCE AND TECHNOLOGY. (1993) The Science Court Experiment: An Interim Report. *Risk*, 4, pp. 179 (Reprint from 193 *Science* 654 (1976)).

> ‘an objective, apolitical, value-free forum in which the authority of scientific experts could appropriately contribute to the resolution of public policy disputes’

in their description of its use to resolve a controversy over a high-voltage power line in Minnesota.[70] The science court can represent an abrogation of responsibility for policy-based decision-making to a technocratic institution. Scientists can address narrow science-based issues, but when as in Minnesota the questions the stakeholders have is a wider policy-based question, the solutions offered are often unsatisfactory. Thus a science court would be an unsuitable forum for deciding whether expert witnesses should testify about a link between alcohol and sleepwalking, as there are considerable policy issues involved. However, the narrow question of the validity of the APT might be an appropriate issue for a science court.

Alternatively, particular scientific institutions could form committees to consider the provision of expert evidence in their field and produce consensus statements on the validity of certain theories and techniques. The members of these committees would have to be very carefully selected to avoid internal politics dominating the process. This consensus statement could be used by the courts and the jury to help evaluate expert evidence. Although these methods of enquiry facilitate a more detailed examination of the science than the criminal trial permits, they are not immune to the problems of politics, personalities and vested interests. Again this comes down to the belief that

> ‘a lack of consistency in scientific knowledge must be due to a lack of procedural

[70] CASPER, B. and WELLSTONE, P. (1982) Science court on trial in Minnesota. In BARNES, B. and EDGE, D. (eds.). *Science in Context: Readings in the Sociology of Science*. Milton Keynes: Open University Press.

rigour.'[71]

The creation of an expert committee to formulate forensic sleep disorder assessment guidelines is something this author is pursuing with the main UK body, the British Sleep Society. The point about identifying specific research projects is particularly pertinent to alcohol and sleepwalking, but also other issues in forensic sleep medicine. Recognizing and accommodating entirely legitimate disagreements in expert evidence would be an important guiding principle of that committee. So would an acknowledgment of the valid policy issues that need to be taken into account.

7.7 Knowledge, truth and the jury

Mahowald asserts

'[You] can prove someone is a sleepwalker… But that is only Part 1 of a two-part question. The second question is whether he was sleepwalking on the night of the murder. Only God can answer that.'[72]

In the absence of divine inspiration, the jury has to provide an answer. The expert is there to help them come to the best answer possible. The decision of the jury should not necessarily be seen as a reflection of the expert evidence given. It seems that peer opinions of expert witnesses are shaped by the reporting of trials, which is unfortunate because of both the quality of trial reporting and the uncertain status of an acquittal. Although an acquittal is often an assertion of innocence, it is not necessarily so - the

[71] Smith (1989), see footnote 58.
[72] STRYKER, J. (1999) 1999-last update, *'Sleepstabbing:The strange science of sleep behavior and one verdict: Guilty!'* . Available: http://www.salon.com/1999/07/08/sleepwalking/.

criminal justice system is deliberately weighted in favour of the defendant and acquittal. The number of acquittals in sexsomnia trials where alcohol is involved may reflect societal problems (so-called “rape culture) rather than deficiencies in the expert evidence.

Ideally all actors should understand the social construction of scientific knowledge if the courts are to deal with scientific evidence properly. There are a number of factors that contribute to the acceptance of a scientific theory or paradigm as “true”. An area common to expert evidence in jury trials is the issue of alethic pluralism. The jury may view truth as corresponding to reality and completely objective; this can give rise via TV representations of forensic scientific evidence to unrealistic expectations of what evidence should be provided, the so-called ‘CSI effect’ which has been widely reported and commented on in both the mass media and the academic literature (see below). Garfinkel’s classic study of how jurors arrive at decisions concluded that jurors reach the decision first and rationalise it later.[73] This phenomenon is not unique to jurors. Constantinescu describes the hunch in judicial decision-making.[74] Moral decision-making involves reference to the emotional parts of the brain in the limbic system. The juror will find a dissonance between the rules of everyday decision-making and legal decision-making. The law calls on jurors to use their intuitions as peers of the accused, but the realm of parasomnias will be beyond the experience of the typical layperson. The defence will instruct an expert witness who will try to persuade the jurors that their intuition about what someone can do during sleepwalking is incorrect. The prosecution

[73] GARFINKEL, H. (1967) *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
[74] CONSTANTINESCU, D. (2012) 2012-last update, *Judicial Hunch as Short-Circuited Decision*. Available: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2000849.

will often instruct an expert witness who says something different. There are a number of different factors that will influence the juror's preference for one expert's view or another, other than the factual content - credentials and presentation style, for example. This author would argue the underlying philosophical position of the criminal justice system is social constructionism. Criminal justice is about labelling behaviour and actors as blameworthy, which is a socially constructed idea. This is the basis for the "objective test" of the "man on the Clapham omnibus" – it is in effect an intuition pump to draw on the jury's knowledge of society's construction of what is reasonable or honest. This is the underlying assumption in my normative analysis of the sleepwalking defence. This might not be true for other criminal justice systems based on natural law e.g. Islamic or Judaistic, but in particularly in a jurisdiction dominated by legal positivism this is correct. However the philosophical position that was taken on the issue of expert evidence and parasomnias was that of critical realism. It could be argued that in fact scientific knowledge is a social construction, being negotiated content. However, some go towards the positivist/realist position by relying on research evidence to positively support their expert evidence. Through this reliance on objective research evidence, the particular expert seeks to minimise any cognitive bias from the tensions between the clinician and expert witness roles. However, this position ignores the way that certain evidence is excluded or interpreted. This is illustrated well by the alcohol and sleepwalking controversy.

Expert witnesses need to explain the reasons for their conclusions, as stated in *Davie v. Edinburgh Corp (No. 2)*

'Their duty is to furnish the Judge or jury with the necessary scientific criteria for

> testing the accuracy of their conclusions, so as to enable the Judge or jury to form their own independent judgment by the application of these criteria to the facts proved in evidence. The scientific opinion evidence, if intelligible, convincing and tested, becomes a factor (and often an important factor) for consideration along with the whole other evidence in the case, but the decision is for the Judge or jury. In particular the bare *ipse dixit* of a scientist, however eminent, upon the issue in controversy, will normally carry little weight, for it cannot be tested by cross-examination nor independently appraised, and the parties have invoked the decision of a judicial tribunal and not an oracular pronouncement by an expert.'[75]

However the Court of Appeal in *Luttrell* didn't consider it necessary that

> 'the methods used are sufficiently explained to be tested in cross-examination and so to be verifiable or falsifiable.'[76]

Additionally it was stated that

> '[t]he fact that an expert may be wrong is no reason to deprive the jury of such assistance as may be gleaned from the evidence.'[77]

The case involved the admissibility of lip reading evidence. The court regarded its reliability as affecting not just admissibility of the evidence but also the weight that evidence should be given (which is an issue for the jury to decide). The Court of Appeal was satisfied that the lip reading evidence was sufficiently reliable to be admissible. The jury can be instructed about the weight that should be put on the evidence:

> 'Transcription by expert lip reading could provide intelligence and corroborative

[75] 1953 S.C. 34
[76] [2004] 2 Cr App R 31 at para 34.
[77] *Luttrell* [2004] see footnote 76 at para 17.

> evidence, but, because of her [Jessica Rees] inaccuracies, her evidence was unlikely to be capable of standing alone. There was potential for unreliability in such evidence.' (p530)

There is an assumption that the jury is able to deal effectively and logically with these weighting exercises. This assumption seems difficult to sustain in the light of the award of $1,000,000 to a woman who claimed that she had lost her psychic powers during a CT scan. Donald Elliott, general counsel of the Environmental Protection Agency in the case, is quoted as saying that the law

> 'extends equal dignity to the opinions of charlatans and Nobel Prize winners, with only a lay jury to distinguish between the two.'[78]

On the other hand, it has been suggested that the '*CSI* effect' leads to jurors familiar with *CSI* and similar TV shows being more likely to reject evidence that does not meet their raised expectations of the reliability of forensic science.[79] There is not good evidence for a straightforward relationship, and the '*CSI* effect' does not necessarily lead to a greater tendency to acquit.[80]

7.8 Summary

There are valid concerns about some of the expert evidence given to support or refute the sleepwalking defence, although there is clear need of empirical research in this area. The introduction of an enhanced admissibility test may not be the answer - instead

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[78] The trial judge "threw out the verdict", according to Huber; HUBER, P. (1991) *Junk Science in the Courtroom*. FORBES, (July 8th), p. 68.
[79] SCHWEITZER, N.J. and SAKS, M.J. (2007) The *CSI* effect: Popular fiction about forensic science affects the public's expectations about real forensic science. *Jurimetrics*, 47 (Spring), pp. 357-64.
[80] SHELTON, D.E., KIM, Y.S. and BARAK, G. (2007) A Study of Juror Expectations and Demands Concerning Scientific Evidence: Does the "CSI Effect" Exist? *Vanderbilt J. of Entertainment and Tech. Law*, 9(2), pp. 331-68.

a stricter application of the common law rules may achieve the desired policy goals. It is difficult to imagine the scrutiny of expert evidence improving without greater scientific literacy among the legal profession and judiciary regardless of the admissibility criteria used. There is also a need for more research on the most vexing questions, most notably alcohol and NREM parasomnias. The laxer requirements for defence evidence, combined with the prevalence of rape myths and the standard and burden of proof in non-insane automatism, pose a real concern in sexsomnia cases where weak medical evidence appears often to be sufficient to obtain acquittals for intoxicated defendants. Contrary to the feelings of some experts, the problem may not be due to the operation of the adversarial process distorting expert evidence but rather the lack of an effective adversarial process to examine the expert evidence.

Chapter 8: Empirical Research

8.1 Research Questions

The research questions focus on the provision of expert evidence about the possibility of parasomnia where this forms part of a criminal defence. It became apparent that there were complex interactions between the two fields of medicine and law, and the study was also designed to examine these issues. It was apparent that the opinions of non-specialists differed greatly from sleep experts (as demonstrated by Cosmo Hallstrom, see **0.2**), but a comparative study was rejected as this finding was relatively facile.

The project went through the Keele University ethical review process, and the project was improved as a result of that input. Medico-legal work is not part of the NHS workload, which meant that NHS ethical approval was not required so long as it was made clear that the interviews were to be about forensic sleep disorders and expert witness work, and no individual patient details were to be given. Signed consent was gained from all participants, with separate consent for the use of quotations. Most interviewees agreed to have their quotations attributed – where they have not, numbers have substituted for names.

8.2 Research Training

The author's research training requirements were determined by the qualitative nature of the research. The author attended Keele University modules on research design, socio-legal research methods, innovation in socio-legal research, and qualitative and quantitative data analysis (learning the use of NVivo 8 and SPSS software). The author also attended external courses on alethic pluralism (run by Northern Advanced Research Training Initiative), and questionnaire and survey design (both modules of Courses in Applied Social Sciences run by Southampton Statistical Sciences Research Institute), with the help of funding from the Research Institute for Social Sciences of Keele University.

8.3 Methodology

The subject matter has not been researched in any depth previously, and the pool of subjects was limited. For these reasons, a qualitative approach using semi-structured interviews was selected. This allowed exploration of a wider range of issues in a nuanced manner. The main method of analysis was grounded theory, but because of the author's immersion in the world of sleep medicine and examination of the culture of the forensic sleep community there was an ethnographic element as well. The combination of medical and legal issues required different philosophical assumptions. The diagnosis of the episode was approached from a critical realist perspective. The blameworthiness of the defendant was approached from a social constructionist perspective. The examination of the culture of the forensic sleep community required an ethnographic approach. The ethnographic element included attendance at and

participation in British Sleep Society events. This suggested that a mixed methodology was best, using a mixture of qualitative and quantitative methods. The author assumed the role of the *"bricoleur",* who assembles different tools and techniques according to the specifics of a complex situation (Denzin).[1] The most significant element missing from this research was access to expert testimony. The defendants did not consent to access of the expert witness reports, and attending trials or obtaining trial transcripts was not possible due to limitations of time and money. Neither was it possible to interview any defendants. This limits the conclusions that can be drawn.

The project was very definitely interdisciplinary. Interdisciplinarity is an interaction between two or more disciplines which

> 'may range from simple communication of ideas to the mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, data, and organization of research and education in a fairly large field…a common effort on a common problem with continuous intercommunication among the participants from the different disciplines.'[2]

These different levels of engagement were apparent during the discussions at the medico-legal seminar held at Keele. Whilst it is important to share the language and ideas of medical and legal professions, there are deeper levels that need to be explored to conduct truly interdisciplinary research and collaboration. These deeper levels included the complex interactions between the disciplines, with the legal issues affecting the provision of the expert evidence, and vice versa.

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[1] DENZIN, N.K. & LINCOLN, Y.S. (2008) *Strategies of Qualitative Inquiry*. 3rd Ed. Thousand Oaks: Sage.
[2] ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. (1972) *Interdisciplinarity: Problems of teaching and research in universities*. Paris: OECD.

8.4 Methods

Qualitative interviewing was considered the best method because of the nature of the research question and the small pool of research subjects. The interviews needed to be focused on the area of forensic sleep, and so a semi-structured interview was more appropriate than a narrative or free-form interview. The initial contacts were identified via the literature and the help of Dr Martin Allen, a consultant physician in respiratory and sleep medicine at the local NHS hospital in Stoke. These exploratory interviews helped to identify the important themes and compose an interview schedule for guidance. Thereafter I used the snowballing sampling technique, because of the intensive nature of my research and the limited pool of subjects in a small community. The questions changed gradually over the course of the interview as part of the iterative process of grounded theory. The pool of participants was expanded to include lawyers and judges – unfortunately British judges were the only group that could not be interviewed, due to the refusal of the Judicial Office to grant permission. A member of the public, affected by the automatism defence personally (she had attended the medico-legal seminar), was also interviewed. I did explore the possibility of interviewing accused persons, whether acquitted or convicted, but none gave the necessary permission. Due to the small number of experts in the UK, North American experts were also interviewed. The similarities in the legal systems made the inclusion of experts from these jurisdictions permissible. I contacted one South African expert witness, but he had had no forensic sleep cases and knew of no South African cases. For logistical

reasons, all of the North American sleep experts and some of the UK experts were interviewed via the telephone - the sound quality via Skype was too inconsistent. Most of the interviews were recorded and transcribed, but not all - in some cases there were technical problems which meant that note taking was required instead. Interviewees were informed that interviews would last between twenty minutes and an hour - some took slightly longer (at the behest of individual interviewees). The interviews were recorded on MiniDisc (first phase) and on a digital voice recorder (second phase), except where the recording set-up reduced the volume of the phone signal to an unacceptable level or for some follow-up interviews. In some cases there were technical issues with the MiniDisc recording so that some or all of the interview was lost. In those instances comprehensive and contemporaneous field notes were relied on, plus further interviews in three cases where clarification or amplification was required.

The method of analysis was grounded theory, because of the incorporation of many different sources and the mix of both qualitative and quantitative data. The assumptions of both critical realism and social constructivism are compatible with grounded theory, although the former is more compatible with the Straussian approach, and the latter with the Glaserian approach, to grounded theory. Because the focus was relatively narrow, thematic analysis might have been considered more appropriate. However, grounded theory allowed more room for theories to emerge from the data. The themes were not really predetermined but arose out of the initial research, which is consistent with grounded theory. The methods used were more in line with the less prescriptive Glaserian approach. Glaserian ground theory would be against recording interviews, but it was felt it was useful to be able to quote individuals where possible. There was a

development of the interviews with sensitization to emerging themes and theories through the process of simultaneous data collection and analysis. For example, it was anticipated that the influence of certain leaders in the field might be important, but this did not appear to be the case. On the other hand, it emerged that the specialty that the sleep expert had trained in was influential in his or her views on whether sleepwalking was an insane or non-insane automatism. NVivo qualitative data analysis software was used as an aid in the analysis. The nodes that were used for coding and the relationships between nodes are recorded in Appendix E.

As well as the material from the interviews and a small number of questionnaires, various documentary sources were included in the analysis. This is appropriate with the grounded theory method (all is data), and so material from many sources was used including the academic literature, conversations during conferences, and one cinema release (see **2.1.1**). There is also some material from press articles where pertinent, although the main analysis of press reports is in Chapter Four.

8.5 Results

The bulk of the empirical work was a series of qualitative interviews, mainly of expert witnesses but including non-forensic sleep experts and lawyers. I also had some shorter unstructured interviews with other subjects, for example a Canadian judge (who had been an attorney in an important sleepwalking case) and a Canadian forensic psychiatrist (involved in the same case). The results of those interviews are presented here; the other sources have contributed to the development of the theories presented

elsewhere in the thesis, although some of that material is also used in this chapter. The interviews were semi-structured – there was an interview schedule which is included in Appendix A but this was only loosely adhered to. The interviews were 'funnel-shaped'; this means that the interview started off on general issues and then focussed down on the more sensitive areas. There was great variability between the spontaneity of the subjects – some only gave short replies to the questions and did not volunteer much information outside the remit of the questions asked, whilst others were happy to discuss their opinions and experience at great length and a few required more than an hour. There was little if any redirection of the participants if they wished to discuss a particular issue. Some participants were interviewed more than once, when it was clear that this would be useful or further clarification was necessary upon reflection on the material. The schedule was not used for those who were not forensic parasomnia expert witnesses - as well as twenty-one forensic sleep experts, two barristers, two sleep scientists, one forensic psychiatrist and one sleep physician who did not do any expert witness work regarding the parasomnia defence, one Canadian judge, and a member of the public whose brother was killed in a car crash (see case study at **7.4.1**) were interviewed. Thirty-three research interviews were conducted, once repeat interviews were included. Correspondence was received from one British judge. A questionnaire was used in conjunction with the later interviews, which went through a few iterations (see Appendix A). It contained three vignettes, intended to be ambiguous, plus other questions using Likert-style scales. The vignettes were based on infamous but controversial cases of sleep-related homicide, but unfortunately they were still too recognizable to serve the intended function. This was partly due to the inability to

properly pilot the questionnaire, because the entire pool of subjects was small enough to begin with. This could be the subject of future research. Also the completion of the questionnaire was patchy. Although the questionnaire was not an unqualified success, it did save some time getting to the crux of certain issues and recording some of the more quantitative data like the number of cases an expert had been involved with. Most of the participants were National Health Service consultants with the time pressures one would expect. Nonetheless they were very happy to assist with the project – there were only a few refusals or people pulling out due to illness or bereavement. One expert did require some persuasion because he does not engage in expert witness work in the area – however his interview was very interesting and useful, partly because of his reasons for not getting involved. The participants were generally keen to learn about the results when the research was completed. The sample size was primarily limited by the pool of subjects, but saturation was achieved on many of the themes. Some participants divulged details during interviews they asked to be redacted from the transcript - for example comments about particular peers. This permitted greater frankness. It was explained to participants that due to the high level of detail in the interviews, re-identification was possible if the transcripts were examined. Even where permission for quotes was granted, not all quotes have been attributed because it is not this author's intention to vilify directly or indirectly any individuals. No quotes should be considered to be adopted by this author.

The particular limitations of this study were that it was not possible to speak to any defendants, whether convicted or acquitted, nor get direct access to expert evidence. Several solicitors representing defendants were contacted; however, all but one

defendant refused to participate or let their solicitors discuss this case. This was due to the great amount of publicity the cases generated, and the defendants understandably wanted to put the episodes behind them (whether convicted or acquitted). The exception was Jason Jeal, and that proved to be a very interesting case (see **4.3.2**). Due to time and financial constraints, it was not possible to get trial transcripts or attend any trials personally. This would have permitted an examination of how expert evidence is delivered, and this is the intended next phase of the ethnographic approach. In particular, it would be useful to hear exactly how evidence about alcohol and sleepwalking is presented to the jury. The following themes emerged from the grounded analysis of the data, illustrated by quotes from interview transcripts.

8.5.1 Reasons for doing or not doing expert witness work

Most of the participants were involved in medico-legal work, although some were not and others did very little. A few had done fifty or sixty cases; many had done just a handful of cases. Some of the reasons for not doing more or any medico-legal work included: dislike of the judicial process; medico-legal work took up too much time; newer consultants were still getting established in their role; and that the rewards were not proportionate to the time and effort involved. The consultants that were more reluctantly involved often mentioned that medico-legal work was part of the duty of a medical practitioner, both as a service to the accused (whether their patient or not), and to the court and wider society. Shneerson stated

> ‘my main job is a doctor, so my main job is normally one to one with a patient, but I regard my medico-legal work as a similar thing, you’re working on behalf of a person who’s either had an injury or is accused of something, so I’ve a duty to that person

> and to the justice system to make sure that justice is done, it's a society responsibility, so I feel that's what I'm there for, to help get the right answer'.

Others considered that it was the jury that had the responsibility

> 'the court is asking for my expert opinion and advice and it's not for me to decide one way or the other about the person's guilt, that's for the jury. Thankfully.'

One doctor (who did not do expert witness work) felt that it was a very heavy responsibility. Several experts were very selective in which cases they took. Walker commented

> I should think at least monthly I get asked whether I wish to take on a parasomnia case. Most of the time I don't take on the case.
>
> [Interviewer] *Is that because you have problems with the particular case, or is it simply workload?*
>
> It's largely a problem with workload, um and that ... parasomnia's quite a difficult subject, difficult defence – I've been asked from both sides and most of the time I say no – I've said yes on just a few occasions.

It was notable that some of the most prominent academics in forensic sleep medicine, do not get directly involved in medico-legal work. Their reason is the barracking, character assassination and other tactics in US courtrooms. However, the quality of expert evidence persuaded them they needed to be involved in some way

> 'initially we were not going to get involved at all. Because we said when we published our first papers on the forensics stuff issue that we were not going to get involved because the lawyers are not ever interested in the truth – they're only interested in winning – and we're just not going to get involved. And then so lawyers would call us,

> and we would send them copies of our articles, we would try to provide them with information, but we would not ever get involved. And then what became apparent is that the people that were getting involved frankly were people who shouldn't be getting involved because they had no credentials whatsoever, they were just medical whores, and the people that should be getting involved, namely people like us, who were doing the research, were not involved. So that's when we decided to go ahead and we had an obligation to get involved.' (Expert 29)

Pressman prefers to provide expert testimony in the UK because of the milieu in British courts:

> 'Of course in the UK, you work for the court, you can really take any case and be an independent expert and even if you're hired by the Crown you can come out with an opinion that's consistent with the defence. That's certainly not an American way to do things.'

8.5.2 Role of the expert witness

Another very consistent theme was that the expert witnesses were acutely aware of their responsibilities. It was striking how many times the expert witnesses would use the same words that they were "witnesses to the court". Walker commented

> 'the court is asking for my expert opinion and advice and it's not for me to decide one way or the other about the person's guilt, that's for the jury. Thankfully.'

Williams echoed this sentiment

> 'you can only be truthful, and you have to be truthful, to the court. It's not for the person or their accusers … over the past 3 or 4 years we're repeatedly advised our duty is to the court and that makes one … tread on a firmer scientific ground and use literature references.'

It is a mantra that all the experienced expert witnesses seemed familiar with, and so I had to disregard the restatement of it and go a little deeper to see whether the expert witnesses did more than simply pay lip service to this principle. However, there was one instance of a barrister getting an expert to essentially coach the prosecution:

> 'I was invited to a case conference in advance and I was a little bit naïve and wet behind the ears, I hadn't done a lot of medico-legal work at the time, and I was asked to advise on … where the holes were in the defence's evidence. And having given some advice in that respect, I realised I was no longer acting independently, I was in an advisory capacity to the prosecution which was compromising my role as an expert witness. I'd been told beforehand 'don't worry, I was not going to be asked to write a report', but the prosecution barrister … then went via phone to the defence and said 'oh we've spoken to a neurologist and you're doomed!' (laughs) So the defence then demanded they see the advice, they have a report from this neurologist, so then having given this advice I then had to somewhat backtrack in my report and make a much more balanced report, but I've never fallen into that trap again. I think I sailed quite close to the wind on that occasion.'

Firstly, I looked at whether all the expert witnesses appeared equally for both the prosecution and defence. It was apparent that this was not always the case. Pressman (who is a collaborator with Sleep Forensic Associates) appears almost exclusively for the prosecution (and indeed his name is on the Specialist Operations Centre database). The Sleep Centre group of experts[3] appear more often for the defence. All the experts avowed that their default position with anyone who claimed to have been in a

[3]At the time of interview Dr Irshaad Ebrahim, Dr Peter Fenwick, Dr Chris Idzikowski and Professor Adrian Williams

parasomnic episode was scepticism, until there was evidence to the contrary:

> ‘when I do the defence I’m always a little concerned that I’m being, I’m being used – to provide a defence when none other exists.’
>
> ‘As soon as you get a sleepwalking case, you say ‘ah, another malingerer!’ And I always go into my cases with that as the basic assumption - that the guy is in fact lying.’
>
> ‘[Problematic behaviour] is a small minority of cases of sleepwalking and parasomnias and to go from that to a very severe assault or murder or rape, I begin to have some degree of scepticism. I would if I saw those patients in a clinical scenario, if something very serious had happened, because usually the partner can wake the patient with time before anything majorly serious happens, so I think there is other psychopathology or maybe alcohol or drugs or that there is some degree of functional overlay going on. And the patient is trying to blame something on their sleepwalking, which may not be related.’

Some experts saw themselves as detached commentators contributing neutral science to a process which was out of their control. Others took more responsibility for the outcome of the legal process, and so took on the role of trying to shape the course of the proceedings and the results. Some experts expressed a strong belief in the innocence of particular defendants, and were involved with the campaigns for them to be exonerated or pardoned.

8.5.3 Differences by specialty/discipline of expert witness

Two issues I wished to address were whether or not the specialty the sleep expert was trained in had a significant effect on: 1) their opinions about the complexity of

behaviours exhibited during parasomnia (particularly sleepwalking, sleep terrors and sexsomnia); and 2) whether or not parasomnias should be generally treated as non-insane or insane automatisms. Sleep medicine is a multidisciplinary field, with experts drawn from the fields of psychology (experimental and clinical), psychiatry, neuropsychiatry, neurology and respiratory medicine. Inevitably each specialty has a slightly different perspective on parasomnias, especially sleepwalking. The tendency for sleep specialists to be specialists in respiratory medicine may be surprising to the layperson, but this is because sleep apnoea is the commonest sleep disorder seen in secondary care. There seemed to be a small effect of the specialty on their opinions, but given the small numbers from each specialty and the sampling method, statistical analysis of any differences was not warranted. In particular, the results were skewed by the members of the Sleep Centre group, who were outliers in many of their opinions, and the members of the American group, who often espoused the opposite view. Respiratory physicians tend to have a narrower view of the scope of the behaviour compatible with NREM parasomnias. They were also more likely to believe that parasomnia should be considered a non-insane automatism. By contrast, psychiatrists were more likely to have a wider view of the scope of behaviour, and believed that parasomnia should be considered an insane automatism. The differences are partly due to the greater experience of psychiatrists in assessing behaviour and responsibility, as Walker remarked

> ‘I think generally psychiatrists are much more aware of the slightly sort of murky area of the law than are neurologists, or respiratory physicians, we tend to deal with things that are much more straightforward, and things like the defence of automatism – ok,

it's something I meet in epilepsy but it's not something I meet an awful lot – whilst I think psychiatrists meet it quite a lot more. So I think they have a greater knowledge of that area of law, so I think that may make a difference.'

One psychiatrist went further

'The forensic psychiatrists are used to dealing with it, they look at the case in the round, they have wide experience of the sorts of people who come before the law; but the respiratory physiologists or physicians don't have that experience and so the result is that they actually don't work their cases up in the same sort of way. 'Cos again they're not psychiatrists and what they'll do, they'll look at the respiratory principles and then they'll say 'well, I've had 4,000 cases, my Lord, pass through my hospital and not one of them has shown any violence at all', and they're not trained in the subject in giving forensic evidence in court.'

One neurologist commented

'it depends on the person but on the whole I think neurologists (I would say that) are probably more skilled to distinguish sleepwalking from for example frontal lobe epilepsy from functional behaviour and I think psychiatrists would come a close second, and respiratory physicians would not be so good – as a group.'

He did however emphasize that there were particular respiratory physicians who were as knowledgeable about sleep medicine as any other sleep physician. Some medical expert witnesses expressed concerns over the ability of non-medically trained experts to exclude other causes of automatism e.g. non-sleep related conditions and the effects of drugs and alcohol:

'there's a really interesting question now and it's whether psychologists should be

> allowed to give evidence in sleepwalking cases. My view [is], I was opposite xxxxx xxxxx and um he ran into this problem. First of all he never examined the patient. Why? Because he can't!… he knows nothing about epilepsy, he knows nothing about other medical conditions, what he knows a little bit about is sleep. But he can't examine the patient. Now should in fact the court allow an expert who can't examine the patient to give expert evidence on that patient?'

On the other hand, one sleep scientist deplored the way juries would prefer the opinion of psychiatrists "because they're medics", which contributed to his reluctance to be an expert witness (although he emphasized that he deferred on clinical matters to clinicians). The feeling of many sleep experts is summed up by this quote

> 'sleep medicine is a natural interdisciplinary field, and interdisciplinary within medicine, but in practice the reality is that the most experienced clinicians who have got the broadest view and are interested in sleep more generally would probably do the best job and that isn't the province of one subgroup. And if you take it to the professional level as a whole, then you could have a totally hopeless situation – that psychiatrists would completely miss sleep apnoea, they've no idea what it is, the respiratory physician would know a little about sleep-breathing disorders but nothing else, and the average neurologist and psychologist would be in the same kind of position.'

8.5.4 Ethnography of the expert witness community

One of the rarer themes was criticism of other experts. This tended to come from (or about) the experts that occupied the two extremes of opinion (the Sleep Centre and

American groups). Words used to describe the opinions of other experts included “junk science” and “psychobabble”. Other experts were described in terms anywhere from the gentle description “a bit out there” to unrepeatable expletives. There were experts who felt that certain other experts should have been disbarred or struck off. There was some concern about the money that could be made from sleep studies (and also any mandatory follow up). I must emphasize these were the exceptions; most of the experts spoke about each other with mutual respect and an utterly professional attitude, even if they disagreed with a particular position intellectually. Shneerson stated

> “So I’m somewhere between the two, I can see both sides slightly, but I don’t quite like either side’s view as a whole picture”.

This approach summed up the attitude of the majority of those interviewed. The general opinion was that generally the standard of expert evidence was high, as this interviewee agrees:

> [Interviewer] *How confident are you in the quality of expert evidence given by sleep experts generally?*
>
> ‘I think it’s quite variable. I think the general standard is high, I think the problem with parasomnia is that if you look for good evidence, there’s very little good evidence for many of the things that are written or said. And so, because of that, there’s quite a latitude I think in what is said, and there are people who will say things or who have said things that I strongly disagree with. But that’s only because I can’t see that there’s good evidence in the literature to support it and I’ve not experienced patients in similar situations. ‘

There are some strong personalities in the field, and consequently there are conflicts

which have been played out in the literature, in the professional regulatory sphere,[4]and in all likelihood in court also. There was one particularly vituperative clash between two strong personalities, although the clash was ostensibly on scientific grounds. This has been played out via publications and letters to the editor. There was marked criticism of certain experts, who were variously described as “a crook”, a “disaster” and other epithets. Shneerson commented

‘you know there’s quite a lot of politics in this area, are you aware of all that?’

There is some evidence from journal articles and textbooks that the position of the two sides of the argument on alcohol have become increasingly polarized. All mentions of any link between alcohol and sleepwalking have been removed from more recent editions of *The Principles and Practice of Sleep Medicine*. In a 1992 article by Mahowald *et al* they state alcohol may trigger sleep terrors or sleepwalking in susceptible individuals.[5] In an article in 1998 Mahowald and Schenck accept the possibility of alcohol-induced sleepwalking as a defence to a first offence.[6] In later letters and articles their position has changed. This may be due to the lack of any scientific evidence forthcoming supporting a link[7].

8.5.5 Credentials and quality of expert witnesses

Expert 29 was particularly scathing about some of the US expert witnesses testifying on sleep disorder

‘you look at many of the trials, and many of them we were not involved with at all, and

[4] One expert complained to the GMC about the expert evidence of two expert witnesses.
[5] MAHOWALD, M.W., SCHENCK, C.H., ROSEN, G.M. and HURWITZ, T.D. (1992) The Role of Sleep Disorder Center in Evaluating Sleep Violence. *Archives of Neurology*, 49(June), pp. 604-7.
[6] SCHENCK, C.H. & MAHOWALD M.W. (1998) An Analysis of a Recent Criminal trial Involving Sexual Misconduct with a Child, Alcohol Abuse and a Successful Sleepwalking Defence: arguments supporting two proposed new forensic categories. *Medicine, Science and the Law*, 38(2), pp. 147-52.
[7] Personal communication from Dr Pressman.

you look at whose testifying and those people have absolutely no credentials whatsoever. It's like they grabbed somebody from housekeeping and put them on the witness stand, you know, I mean who are these people to present information to a court? They have no credentials whatsoever.'

Fenwick had similar doubts about some of the expert witnesses in the UK

'I've come across people who are either prosecution or if I'm acting for the prosecution the defence have called in, some of them haven't been trained in sleep at all, some of them are psychologists who really had very little understanding of sleep, looked as if they'd looked it up in the textbook before they came, so I think that the quality of evidence which is being given in some cases is actually very poor.'

Shneerson felt that credentials might not necessarily indicate a suitable expert

'in general the expert who's instructed by the lawyers has to produce a CV, and has to demonstrate expertise in the area that he's doing the report on. And that should definitely hold for these sorts of cases. Now the difficulty is that there's very few experts around for these parasomnia cases, and it's very hard for the lawyers to distinguish between a robust CV and one that's been put together to make it look robust. And as you were saying, you may have someone who's like a neuropsychiatrist who deals with disorders of alertness and abnormal behaviour might sound like he deals with a lot of parasomnias, but he never sees them. Or you might find a sleep person, who claims to have a lot of experience in sleep medicine but actually when it comes to it, hasn't really had much experience in parasomnias or certainly forensic ones. So the mechanism of looking at people's CVs is tricky, because you can cover things up on a CV and also there's very few to choose from.

> So maybe the usual methods don't work so well in this area. Now if you go and say 'well, we'll have some regulation, let's have a judge look over these people' or maybe some detailed tick box thing that the experts have to fill in, like how many patients have they actually seen in the last five years, or theatres, or some other questions, might be useful, but then this would be a bit of a precedent, and I think that would have to get through all the, I don't know how the solicitors work on these things, but there must be some guidelines as to how they do the experts, so this would have to go through the general system of how they do the experts, you can't just have an exception for sleep cases because you'll say 'well, there's other situations where there must be some, I won't say bogus experts but experts with greater or lesser expertise, putting themselves forward.'

8.5.6 Presentation Styles

My main research question was 'how do expert witnesses frame their evidence about sleepwalking and other parasomnias as a defence?' Expert witnesses are there to help the court, rather than replace the jury. This task is made easier by the demise of the ultimate issue rule. If the defendant was sleepwalking at the time of the illegal act, that nearly always entails lack of criminal responsibility - although the aspect of prior fault must not be neglected. Further the expert may highlight possible internal and external causes. He may also be asked about whether or not mandatory supervision is advisable.

A thorny question arises when the jury has two or more conflicting expert opinions - how does the jury decide between them? If both or all expert opinions agree, on what basis can the jury disagree with both? Some experts present a number of options to the jury

and detail why they believe one particular explanation is more likely. Theoretically, this is the best approach and leaves the jury with the greatest number of options. Practically, it may simply leave the jury confused and therefore likely to acquit because they cannot be sure what happened. Attwood explained to me

> 'Because the more complicated something gets, the more juries get confused – when they're told at the end of the day 'you must be sure', if you have a mass of expert evidence, then it confuses them [and] a confused jury acquits.'

One interviewee was rebuked on one occasion for being too vague. Of course over-simplification and overstatement also has its problems and can lead to expert evidence being dogmatic. One participant in particular framed his testimony as categorizing certain behaviours and factors as "typical of sleepwalking/parasomnia". This emphasized the epistemological difficulties in pronouncing a particular episode parasomnic, best illustrated by this quote from Mahowald

> '[You] can prove someone is a sleepwalker… But that is only Part 1 of a two-part question. The second question is whether he was sleepwalking on the night of the murder. Only God can answer that.'[8]

8.5.7 Judicial Process

One theme that emerged was the tendency of the criminal justice system (and the courts generally) to distort information. It was quite frustrating for some of the experts, as expert 29 relates

> 'what the legal profession wants is black and white answers like was this person

[8] STRYKER, J. (1999) 1999-last update, *'Sleepstabbing:The strange science of sleep behavior and one verdict: Guilty!'* . Available: http://www.salon.com/1999/07/08/sleepwalking/.

> awake or was this person asleep, or was this person conscious or was this person unconscious? Well the fact remains that both wake and sleep, and consciousness and unconsciousness, occur on a very broad spectrum. And you can have people who are half awake and half asleep, or you can have people who are half conscious. And the legal profession does not like to deal with that. They want "yes" or "no", and they don't want to hear about the fact that well, you can be half awake and half asleep.'
>
> 'I was requested to give my report by the prosecution, I wasn't invited to the trial, and they won the case – but my sense, and what I was trying to impart in my written evidence, was that one could not be certain. So I guess I was surprised when I learnt it went to conviction. When we came to discuss it between ourselves some years later, [P] and I, it wasn't hard for me … to direct the joint report in his direction. So that's slightly worrying in that aspect if you don't actually get to be there, and you simply do a report (and you don't get to do a joint report if there are conflicting reports) then somebody gets convicted where your own sense was that they weren't guilty but it's just that the word you used in your report wasn't clear enough. …The prosecutor wants to win no matter what the person's guilty or innocent, because it's brownie points. So they will simply use the report – they don't have the same obligation … to the court, an obligation to be fair.'

The drama of the courtroom, and the cut and thrust of cross-examination, can lead to experts making statements they would not make to their peers, experts commenting

> 'the barristers are in the driving seat and … can get one to say things that you might not have said if you'd given it a lot more thought'

> ‘People will say things like, they’ll be asked ‘could this be anything else?’ and they’ll say ‘no’, and you know that they would accept that it could have been. Or the other thing is that quite often the over-interpretation of investigations is something that comes across in some of the things that I’ve seen.’
>
> ‘it’s interesting how sometimes people will say things…when they’re giving expert witness testimony that I think they wouldn’t say if I were having a drink with them. And I think what happens is, they get into a situation where they feel that their expertise is being challenged and so they tend to say things in a slightly over-confident fashion.’
>
> ‘there was a point when I was under very, very vigorous questioning, and yes, at that point you’re pressured in a situation, you can under a state of anxiety and pressure make a statement [that is not accurate]’

An example of this is where the expert instructed by the prosecution claimed that there was absolutely no possibility of an episode representing sleepwalking. This was apparently an attempt to prevent the jury being swayed by vague claims by the expert instructed by the defence, which he believed amounted to junk science. This assertion differed from his conversation with the other expert (according to that expert). This approach is understandable given the public interest in ensuring that defendants are not exonerated on the basis of pseudo-science, but strays into the territory of advocacy. Other experts felt that the adversarial process usually succeeding in getting to the truth

> [Interviewer] *Do you find the adversarial nature of the criminal process and the way barristers ask questions, do you think that’s a way of getting at the truth or do you think it tends to distort the evidence and obscure the truth?*

I don't have a problem with it when it's done properly, because if you take two opposite views, it often clarifies the situation rather than being too cosy in the middle and actually it's not being explored properly. It only falls down if the judge doesn't run the case properly – so if he feels that there's unfair questions or something isn't properly represented or balanced, the judge who's running the case should intervene or explain or do something to make sure that the jury realise that...to get the balance back between the way the case, the questions that are being phrased. So no, I think it's quite a good way of exploring the problems, it opens up the issues, the jury can hear the answers and then see which one they choose or prefer.'

Butler commented on the legal process that led to Parks's acquittal

'My position really was that the defence expert underplayed what were features of his personality structure, arguably short of a diagnosis of personality disorder but he had significant difficulties with pathological gambling, and he had certain personality traits that had anti-social elements to it, and narcissistic elements. So he was not free of mental disorder, other than a sleep disorder. And further it was my position that the sleep disorder was a mental disorder, constituted in terms of the test at that time, which was "disease of the mind", and met the definition for … insane automatism as I understood the law at that time. And that's really where I came from. I found him … you know one could argue what was the strength and confidence in the opinion he was truly sleepwalking at the time? Well certainly a balance of probabilities, I was in that camp – beyond a reasonable doubt I wasn't. So then you got into the issue of the proof required to prove whichever automatism defence he wanted, and the Crown did not want any of that stuff coming out to have the jury believe there was credibility to

all of it. So they of course did not want my position set out, and without it they had no argument for insane automatism and thus some social control over this guy – it was all or none. And that's what they went with.'

Expert 29 commented

'It is discouraging in the courtroom, because people are just not interested in the truth; they're just interested in winning.'

Some experts enjoyed the experience of the courtroom:

'I enjoy doing medico-legal work is because it brings up issues that interest me as a neuropsychiatrist. Being in court is an issue of performance, and I, I was actually started out thinking about my career at school, law was one of the, law and medicine, one of the two, and I'm managing to integrate the legal and the medical side of things here.'

'a combination of enjoyment and extreme anxiety at some points but I seemed to make my points quite well, it was against quite a good QC on the other side, who had a few tricks up his sleeve, but er I found it a challenge. But no, it was, it was fun! But at times rather tense.'

Another expert was concerned about cases where expert witnesses had been selected because their opinion favoured the prosecution:

'Well I don't like that at all. That seems to me that they're not looking for justice, they're looking for somebody to get a conviction …That's job preservation and keeping their numbers up, all that sort of things, that's not what it's about, they should be charging the right person rather than necessarily somebody they think they can wrongly find guilty.'

Some expert witnesses felt there was generally no pressure to testify a particular way,

as the interview with Walker showed

> [Interviewer] *So it sounds like you didn't have too many concerns about the adversarial nature – you found it was more inquisitorial?*
>
> 'No, exactly – I think it was more about finding what actually went on. And my view is that it's not my role to tell people what went on, it's my role just to present about parasomnias and the criteria and whether people fulfil some or all of the criteria.'

However, he also remarked

> 'there have been cases where I felt… 'this is not in parasomnia, but in other areas where I felt that the way the questions were going had been to try and question me as an expert witness, and then that tends to just make me very…even quite defensive, and then I start to become more certain of things that I would think out of court I'd maybe be not so certain. So I think the adversarial process tends to push you.'

He added when asked he faced any dilemmas during the legal process

> 'No, not in the two that I've done, and in one case I was asked, where the defence asked for my opinion, and perhaps its why they didn't use me, but why I didn't think that it was a parasomnia, in fact I said it wasn't a parasomnia but again I don't feel that there's any particular dilemma in so far as they've asked for my opinion and they'd rather know my opinion than for me to try and twist my opinion.'

Nisbet responded in a similar vein:

> 'I think the big issue, that one can fall into a trap of, is the, is still despite the Wolff reforms, there is still an adversarial environment. And being instructed by one side, which you often are, you may be tempted to kind of um overplay your particular views rather than take a balanced view, and that would be **encouraged**, **of course** by the

side you're working for. Or **discouraged**, if you're saying something they don't want to hear! I think provided you remain honest to your views and you don't overstate them and you justify the view that you take, **I** don't find that it's a big problem for **me**.'

One expert witness went so far as to say that doctors and lawyers "don't see eye to eye". There were a few experts who felt that the appointment of an *amicus curiae* would be a better way for expert opinion to be presented. In some cases this preference may be based on a misunderstanding of the neutral status of the expert. On the other hand, this may be recognition of the conscious and subconscious biases at play.

8.5.8 Legal Expertise

Shneerson contrasted the knowledge and expertise of lawyers in sleepwalking trials with that of lawyers in other areas:

'I do quite a lot of spinal injuries and people can't breathe, I do respiratory work in these what we call catastrophic injuries, there the lawyers are nearly always very switched on, they've done a lot of cases before and they know all the questions, they know what the issues are. Or if I deal with asbestos cases, they're really switched on, because it's common and they know what to but here it's much more variable in the parasomnias than other parts of legal practice.'

He added

'Some of them are very well informed, almost too well informed – they almost like to prejudge the situation beforehand somehow – but others in my experience know it's a minefield'.

Fenwick related a particular trial where the legal counsel were unable to effectively cross-examine the expert witness

'there was a whole lot of technical evidence about brain scans, about his brain, where

> the damage was and all that … one of the prosecution psychiatrists said to me ‘God, this is like a viva where you don’t actually know the subject properly’ because she was not a neuropsychiatrist, she was just an ordinary psychiatrist and so she was out of her depth in fact. But [] the other person who was there heard the prosecuting barrister say, ‘and the trouble is he knows damn well I can’t ask him any questions on this’, and this makes your point just perfectly.’

Another expert offered qualified praise

> ‘barristers in my experience are pretty well informed … but yeah, they don’t always ask the most pertinent questions.’

Some other experts came across barristers who were very well prepared by prior research rather than experience.

> ‘Well you go expecting to be totally in charge because it’s your own area, but barristers can become very knowledgeable.’

> ‘One of the things I have noticed, which has been a good thing, I don’t know whether it’s just that I’ve met with better barristers in more recent times, is that they tend to have some knowledge of some of the literature. Maybe it’s getting easier access to the literature. So they then can say ‘what about this paper stated the following?’ or ‘you say this cannot happen, or this can happen during a parasomnia, but I have a paper which says here that says this’ or in fact for sexsomnia the number of publications is quite small, so you can read all the literature and the prosecuting barrister in the last case had read all the literature. And that was good. I think that made it a much more rigorous examination of that as a possibility.’

8.5.9 Juries

There was concern expressed by some experts about the ability of juries to understand

expert evidence:

> [Interviewer] *How confident are you that the jury does understand and apply your evidence?*
>
> 'Um, not very – but the cases I've been involved with, the judge takes quite some considerable effort to clarify points and obviously then the judge instructs the jury so I'd hope that between the two that they do.'

Others had more confidence in jurors.

> 'I haven't actually faced a jury to explain [sleepwalking], but I do face my patients and explain it to my patients on a daily basis. And they're a random selection of the population, not totally random, and I think they do understand when I explain this idea of … part of the brain being asleep and part being awake – so yes I think you can get the jury to understand the concept. But again the jury is going to have as much difficulty making the distinction in a particular episode whether a patient or an accused was sleepwalking or not at that particular moment. Probably more difficult than a neurologist, and a neurologist is going to have difficulty, or the sleep expert. But yes, you get them to understand the concept.'

One expert had experience of the sometimes capricious nature of juries:

> 'we thought we were going to win, but we lost in the end. As we were on the side of the prosecution and the jury decided to give er…the accused the benefit of the doubt in the end. But we thought we had an open and shut case.'

A barrister commented

> 'the more complicated something gets, the more juries get confused – when they're told at the end of the day 'you must be sure', if you have a mass of expert evidence,

then it confuses them [and] a confused jury acquits.'

8.5.10 Parasomnias and the law

I looked at the understanding of the law of the expert witnesses. Not surprisingly, they generally found the law in this area confusing. The vast majority incorrectly believed that automatism is a denial of *mens rea*, but given the evolution of the understanding of the defence this is not surprising. This confusion is reflected in the literature, with a number of articles talking about a denial of *mens rea*.[9] Many understood that there were two distinct types of automatism, distinguished on the basis of internal and external causes, although most did not know the burden and standard of proof. They almost universally found the distinction nonsensical. Most importantly, the expert witnesses largely failed to appreciate that insanity is a legal term of art, rather than medical terminology (see further on disposal below at **8.5.13**).

Some participants were concerned about their ignorance of the legal principles. Idzikowski reflected on his initial confidence or even arrogance as an expert witness, followed by a later realization that knowledge of the law was important. One expert commented

'this sane versus insane automatism again is something for the lawyers to sort out and what my position would be is to say, so for example in a patient who's sleepwalked and as a result of their sleepwalking had apparently attacked someone … and if I was convinced by my discussion with the patient then I would make the

[9] FENWICK, P. (1996) 'Sleep and Sexual Offending'. *Medicine, Science and the Law*, 36(2), pp. 122-134; DOGHRAMJI, K., BERTOGLIA, S.M. and WATSON, C. (2013) Chapter 31: Forensic Aspects of the Parasomnias. In KOTHARE, S.V. and IVANENKO, A. (eds.). *Parasomnias: Clinical Characteristics and Treatment.* 1st Ed. New York: Springer, pp. 463-77; EBRAHIM, I, and FENWICK, P.B. (2010) Forensic issues of sleep in psychiatric patients. In PANDI-PERUMAL, S.R. and KRAMER, M. (eds.). *Sleep and Mental Illness*. Cambridge: Cambridge University Press

> point that from a medical point of view I don't feel they had responsibility for their actions and therefore shouldn't be prosecuted either from a criminal perspective or locked away from a perspective of being insane. So I would sort of argue against this distinction and try and get away from it. Although of course the law would not, but at the end of the day that's the view I would put in court, I wouldn't try and get caught up with this 'are they sane/insane?' because I would say they're legal terms and I can't comment! We don't use the term sane or insane in medicine, so I would steer clear of getting caught up, like I am doing now! (laughs)'

Expert witness knowledge of the law could be problematic, as putative external triggers of parasomnia were apparently emphasized by some experts who wished to avoid the defendant receiving the special verdict.

8.5.11 Desperate defences and malingering

Some of the stories validated the opinion of Lawton that automatism is a

> 'quagmire…seldom entered nowadays save by those in desperate need of some kind of a defence.'[10]

Particularly with respect to the intoxicated, they will often have no other defence - the illegal act may not be in question at all. Cramer Bornemann stated that in the US 90% of allegations are bogus. The proportion of referrals from lawyers perceived as bona fide varied from 10% to 90% - this spread is no surprise given the small numbers seen by most experts per year. This was also an entirely subjective assessment. One stated that he dismissed most of the requests fairly easily:

> 'I would expect that the majority of the ones that I get sent, I look and I think 'this is

[10] *R v Quick* [1973] QB 910, 922.

very unlikely to be ', and I'm not usually particularly

interested in presenting evidence for those'.

When asked if he was ever referred bogus cases, Williams responded

'That does happen, and it has happened about half a dozen times [out of 30-40 cases] – again that's a guess.'

Espie related two particular examples

'I've got a case recently which I refused to see, because I felt this was a complete waste of everyone's time. There was no evidence from what I was provided with by the solicitor that this person had ever had any history of sleepwalking and another kind of fairly patently obvious facts that would account for why the person had no memory for the event um but the solicitor did persist in that for some time.'

'I can give you [another] example, somebody I saw who clearly was a sleepwalker from the history but I said to the solicitor you just check one thing for me before I go any further with this – was the individual asleep at the time? Had they gone to bed?

'Oh, no, no they were in the pub' he said, and this assault happened.'

Other experts reported manipulation:

'certainly I have had patients that it's no doubt at all they were trying to string me along and so I just point that out in my report that I found all these inconsistencies and someone in an automatism would not have behaved in that way.'

Shapiro reported one defendant whom he felt was not completely honest with him, and that the defence team had "put him up to" the defence. Walker commented in an interview for the Daily Mail about sexsomnia that

'I think some people have caught on to this as an alibi,'

cautioning that people raising the defence required careful scrutiny.[11] The press reports provided some examples of a bogus sleepwalking defence, particularly the cases of *Goldie* and *Freaney*. Goldie actually did not argue sexsomnia in court; he only mentioned this excuse in an email to a victim's husband. *Freaney* is a clear case of malingering, as when he was not supported in his parasomnia defence he later resorted to arguing that he killed his partner during a sex game done wrong. The latter case of *Hessel*[12]reveals a fairly ineffectual attempt to argue that he was sleepwalking:

> A man who denies rape yesterday told a jury at Oxford Crown Court he didn't know if his memory loss was down to alcohol or sleepwalking; During cross-examination, Miss Gaunt asked if his memory loss could be because he was drunk, rather than asleep. She asked "Is it possible that all of it could be related to alcohol?" Hessel answers "I think there can always be such a possibility."[13]

Subsequently the jury were told they could disregard the defence,[14] which presumably means that the evidential burden had not been satisfied. Nonetheless he was acquitted. Stephen Davies is another case where the defendant argued the defence of sexsomnia, but was acquitted on another ground.

There are other circumstances where there were secondary gains, and so attempts at manipulation (by either "patient" or bed partner) - resisting extradition, custody disputes, divorce proceedings or simply interpersonal difficulties. Some experts reported extreme pressure by lawyers to support their client's claims.

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[11] HALE, B. (2012) Are men getting away with rape by pretending they were asleep? Rising number of attackers are trying extraordinary defence that they had 'sexsomnia'. *Daily Mail* (Dec 22nd) News.
[12] Identified by Gethin Rees
[13] OXFORD MAIL. (2013) Rape defendant questioned over drink. *Oxford Mail* (Apr 13th).
[14] OXFORD MAIL. (2013) Judge directs jury in rape trial. *Oxford Mail* (Apr 16th) News.

8.5.12 Prior Fault

Several experts commented on the issue of prior fault, Shneerson remarking

> ‘there’s a question as we were saying earlier, did they put themselves in a situation when they might kill their partner by having too much to drink, not having enough sleep, all the things they knew would make them likely to behave in a dangerous way? So do they still have responsibility for being in a parasomnia? ‘Cos they knew, had prior knowledge and didn’t take responsible action to avoid putting themselves at high risk – and equally, will they do it again?’

Walker commented

> ‘I think most of the cases in which I’ve been involved, the actual act of violence or sex has been a single act. And I think this is another important issue, it’s like the alcohol issues… if people for example having frequent sexsomnia, and I do have patients who have frequent sexsomnia, I think if you were then to share a bed with somebody, knowing that you have frequent sexsomnia, then I think that’s indefensible, there must be an assumed risk.’

One expert emphasized that the cause of the episode shouldn’t be a trigger previously known to the defendant:

> ‘all of these cases, they have occurred as unique things – right. Fine, in the ****** case, there was one episode of him doing something and he had no clue what it was. Right, and that evidence of previous behaviour was deliberately quashed in the court.’

Another stated

> ‘I think it would be important that they’re advised that they should not become sleep-deprived and drink lots of alcohol and be in a situation in which they could commit a

crime.'

8.5.13 Verdict and Disposal

What all the doctors agreed on was that the internal/external dichotomy for distinguishing insanity and (sane) automatism made no sense medically. A few could see the policy considerations behind the doctrine, but agreed that it didn't address the desired goal of ensuring social control of only those likely to have a recurrence of their behaviour. Shneerson remarked on the legal distinction

> 'Well, I don't know – this comes out of the McNaughtan Rules, 1843 … you can see [] the thinking behind it… it was intended to separate those who might re-offend from those who wouldn't re-offend … [T]he insulin you produce normally, that's an internal cause, but if you're given insulin that's an external thing. It's artificial, I can see where it came from as I say trying to see whether after the head injury or wasp sting caused it, that's probably not going to happen again, but an internal predisposition to behaving this way, you're more likely to re-offend and so you should be out away, this is the thing. ... [However] in practice I don't think it's very helpful – it certainly doesn't really fit with medical thoughts, where there's usually a balanced multi-factorial approach, somebody has a predisposition and then there's a trigger factor or something which causes the thing to happen in that way on that evening. So it doesn't fit with the biology or modern medicine, but of course you've got to remember law isn't medicine, it's looking for decisions rather than nice blurred holistic approach, all the factors merging into each other and interacting in a complex system to produce an event at the end of the day – the law wants to know 'was this or that responsible?' So there may have to be a different framework for the law and for

> medicine, but at least the two in my opinion should be compatible – working on the same principles.'

Fenwick stated

> 'it is nonsensical BUT by taking it from the point of view of the lawyers it's actually really quite good – because what they're concerned about is the protection of the public … if ever I'm on a sleepwalking case which I think is a genuine sleepwalking case I do not make the recommendation to the court that I think he's OK to go back into the public, I make the recommendation that he must go to a medium secure unit, where in fact he can be, it can be seen whether or not a) he's a sleepwalker and b) whether in fact he is violent. And if I'm really concerned about it then I'll make sure that there's a Section 41 [restriction order] as well.'

He was quite critical of the acquittal of Brian Thomas

> 'Highly concerned – I think it's quite wrong. The judge did not apply the law – I mean he couldn't have applied the law.'

A related-theme was whether or not the sleep expert considered that sleepwalking and other parasomnias should be an insane or sane automatism. Many experts felt that the risk of recurrence was so low that the insanity verdict was not required, which shows the confusion about the status of insanity. Several sleep experts considered that whilst the special verdict was not appropriate, compulsory treatment and follow up was necessary (particularly the American experts). Pressman commented

> 'I don't think that a sleepwalker necessarily needs to be an inpatient, admitted, but I do think they need to follow the treatment protocol, in that sense that I would like to be sure that they are followed.'

However, when they were informed of the likelihood of an outpatient supervision order, roughly equal numbers were for and against sleepwalking being treated as an insane automatism. One expert felt that supervision was unnecessary because

> 'the sensible person who has done whatever they have done will presumably, assuming it's out of character, blame themselves and do the right thing to avoid recurrence. Of course it may not always work, but most of the time it'll have an impact.'

Butler commented on the case of Kenneth Parks[15] and the need for social control

> 'To me, my view was that he should have been found insane, and subject to social control, although the control would of course led to him being in the community fairly quickly.'

Subsequent events vindicated this view

> 'when…the marriage ended and [Parks] went to the States, a few years after that he contacted Marlis Edwardh and … the forensic psychologist, because he was off meds, and he'd begun to have sleepwalking behaviours which were of concern. Nothing violent, but because he was now back to sleepwalking and given this previous history, it caused him huge anxiety. And I remember talking with Marlis about how they diverted him into some contact with an American psychiatrist around medication issues. They never heard anything more about him until the last few years, and I don't know whether anyone you've talked to has filled you in – he came back to Canada, and he ran for the board of education a few years ago.'

This opinion was limited to the situation of Parks (and the Canadian approach is more

[15] (1992) 95 Dominion Law Reports 27

flexible than English criminal law). Some experts emphasized the extreme unlikeliness of a recurrence of violent behaviour. Walker commented

> ‘with most of the cases, in fact all the cases I’ve been involved with, this has been a one off episode. Often precipitated by certain circumstances – there’s usually sleep deprivation – and in that respect I don’t think they should be treated in the same way as say people with mental illness of whatever cause. So I don’t think that would be necessary, I don’t think it’s possible to do anything specific for them that’s necessarily going to change the sleepwalking or the propensity to have it. I think it would be important that they’re advised that they should not become sleep-deprived and drink lots of alcohol and be in a situation in which they could commit a crime.’

Cartwright was strongly opposed to the insanity verdict:

> ‘absolutely not - because they’re perfectly sane when you wake them up. You know, insanity doesn’t go away when you wake up in the morning. And so you know it’s an inappropriate diagnosis.’

Another issue with the insanity verdict for parasomnia is cost. Ebrahim commented

> ‘So the internal/external debate is a problem … the court can direct that actually Bilton he should have a tonsillectomy and he should have repeat sleep studies under Dr Ebrahim [but] in that case, who’s going to pay the bill for the medical expense? Which is what it will boil down to. And why they might not want to change the verdict, because at the moment, yes, we’ve got lots of asylums but suddenly you send someone to a chest physician and he gets an order for the court to treat the patient and he’s got to look at this and he’s going to be very confused.’

Walker felt that generally these were isolated events

> ‘with most of the cases, in fact all the cases I’ve been involved with, this has been a one off episode. Often precipitated by certain circumstances – there’s usually sleep deprivation – and in that respect I don’t think they should be treated in the same way as say people with mental illness of whatever cause.’

Schenck considers that the sleepwalkers who commit serious crimes are victims of a “perfect storm” of contributing factors. He did concede the possibility that these sleepwalkers are different in some way. This was an idea raised by Reed, who stated

> ‘the offence has still been committed and most people who sleepwalk don’t commit offences so it’s not like it’s an inevitable consequence of it. There’s something about that individual that means that they have a propensity to commit serious offences for whatever reason.’

Nisbet expressed a similar opinion

> ‘there’s possibly something different about those ones that do eventually get to court and are accused of severe crimes.’

Espie felt that there may be something different in the coping styles of violent sleepwalkers

> ‘I think one of the areas of research that is much needed is actually this if you like psychological profiling of these individuals – I don’t mean psychological in terms of criminal profiling but in terms of ‘how they tick’ … my operational practice and clinical practice suggests to me that a lot of people with these disorders are in the face of it appear to be very competent, people who are dealing with things well, the kind of person that someone else might go to for advice indeed, the kind of person who fixes things, who sorts things, um…..but in terms of their own emotional focus, they often

> don't seem to recognize very well when they're stressed themselves.'

Some experts mentioned the problems of the insanity label, for example Fenwick:

> 'YEAH! [with emphasis] It's a real problem, in exactly the same way it was with Sullivan it is for sleepwalkers. And the answer to it is exactly the same that the appeal court gave in Sullivan, and that is that it's not up to the courts to change the name - if the name should be changed then Parliament could do it. It has done before and it could do again. So yes – I think it's awful to label a sleepwalker as insane.'

One expert brought up the problem of the failure to apply the insanity defence

> 'it is interesting how more recently the courts seem to have not chosen any of the previously established options, they've been quite reluctant to go down the insanity route even though as far as one would see that's the legal precedent. But people seem to have chosen to find people not guilty without a clear rationale and not using an established defence, which is interesting. And kind of side-stepping the issue, I think, and I can see why they do it, but it doesn't make the law any easier to understand, I suppose, because it seems to be establishing yet another option which isn't clear.'

He added

> 'I don't think that current legislation suits either in many respects, because to find them insane…actually the finding of not guilty by reason of insanity is not necessarily the wrong one. It has some advantages, not least because the disposal options available to the court actually fit reasonably well especially with all the very recent changes. And I do feel it's more a reluctance of the courts to say that somebody's insane that's led to it stopping, not that's necessarily an inappropriate means of dealing with it.

I think it certainly would be wrong, thinking about it, if these people were to be found not guilty. Rather like patients I deal with, who either get insanity or more usually convictions for manslaughter, for example, whatever you may think the act has still taken place, the offence has still been committed … I think simply by finding somebody not guilty, rather encourages them not to take full responsibility for it perhaps. And also it's not good for society because society generally would see as though somebody had got away with something. And finding them not guilty by reason of insanity has advantages as you know, because the court is empowered … to impose a supervision order which is meant to be a treatment framework and that might well be appropriate. You could imagine something involving regular supervision, perhaps attendance to see a sleep specialist, that kind of thing, would be very helpful in compelling the individual to seek some kind of help or take account of the fact that this has happened, and they are in theory potentially a high risk person. I remember, the Fraser case is interesting because he was basically just told he had to sleep on his own in a separate room and that was about it and the case report of the day … even then comments that psychiatric experts of the time considered that was rather lenient and not very satisfactory from a risk management point of view, even back then. I think just finding somebody not guilty and letting them carry on may well not be good enough, because it doesn't necessarily serve the public – ok, maybe it's unlikely this individual will commit another offence but by no means impossible.

Certainly the case I saw, looking back on it I don't know what more one could have

done, but he presumably continues to be at risk of committing offences, maybe not like that or maybe slightly different, but certainly behaving in a strange manner whilst sleepwalking.'

Nisbet agreed about the issue of public protection:

'I think anybody who's committed something very serious has - I'm speaking as a layman - has to be monitored to some extent. If they're claiming … reduced culpability due to some medical condition, particularly if that medical condition can't be completely eradicated or treated, which is the case with sleepwalking … there is something to be said for the concept of insanity in the sense that the patients has moments of insanity, as a result of their medical condition where they could be a danger to others. Or the "public". So yes, I think that having absolved them of their culpability, stopped them from necessarily going to prison, I'm not saying they should be committed to a psychiatric hospital for the rest of their life, but there should be some monitoring. Particularly if there's been frequent episodes of sleep violence for example … you can't just say 'oh well they're not guilty and that's the end of that'. So does the law have a role in that – well I suppose it has to.'

There were concerns expressed about the stigma of the insanity label, with the suggestions of a specific verdict for sleepwalking or automatism:

'there could be even perhaps a new "not guilty by reason of automatism" sort of thing could be created perhaps, as a means of dealing with all these issues in a more straightforward manner and hopefully getting away from all these arguments about whether it's insane or non-insane'

8.5.14 Assessment of the putative parasomnic episode

Several of the expert witnesses, especially the more experienced ones, stated they had refused cases based on the initial information from the lawyer. In some cases this was on the ground the “state” had not arisen out of sleep, in others because the medical history or the actions during the episode were incompatible with parasomnia. Once these obvious cases were excluded, generally the defendants required holistic assessment, with no one factor alone being determinative. Although one expert witness did not rule out the possibility of a parasomnia presenting for the first time with potentially criminal behaviour, it seemed to be an essential prerequisite.

There were a few examples from the participants of defendants with a good history of parasomnia who nonetheless did not have a parasomnia episode on the night in question. This was usually in relation to sexual offences with atypical histories for parasomnia, with defendants who sought out their victim. All the experts emphasized that a corroborated history of parasomnia was essential:

> ‘I would generally not accept somebody’s description of having parasomnias unless there was some witness evidence of it, either from parents when they were children or from present partners. I think it’s very dangerous just to take somebody’s word for it without that.’

All the experts agreed that it is impossible to know for sure if a particular episode was parasomnia or not. This is not a surprising problem, nor is it uncommon in the area of criminal justice. The jury are not required to have 100% certainty of guilty, just to be sure beyond a reasonable doubt. Expert 29 stated

> ‘there’s always a two-part question – the first part of the question is “is it conceivable

that this behaviour could possibly have been related to sleepwalking, therefore without conscious awareness and without responsibility?" And the answer's generally "Yes" – I mean people can do extraordinary things in their sleep. The second part of the question is "Is this what happened at that point in time?" And that is where the problem lies, because there is no way in determining retrospectively what was going on at the time of the incident, the crime the person committed.'

Shneerson's views were on very similar lines

'Some people tend to deal more with the substantial evidence like if somebody was a sleepwalker in the past, more or less, documented by other people, then this would have predisposed them, therefore you can assume that any activity at night would have been sleepwalking therefore out of their control therefore they're innocent. Well I don't go along with that at all, I think it's what happened on the night that matters, and the background history about sleepwalking is supportive and increases or reduces the probability of what happened that night. Basically I'm always looking much more for what actually happened and what was the response, the reaction afterwards.'

Many agreed that an expert witness could be fooled:

'How easy, how easy would it be to fool me? (indrawing of breath) Well one has to decide what one goes on here. In terms of the description of the history, the eye witness accounts…I think it would be quite easy, I think it's quite difficult to distinguish effectively … if your accused person is genned up on this sort of thing, has read about sleepwalking and the information now is very much in the public arena, then if they're intelligent, I think they could easily fool a medical expert. Myself

included.'

Walker felt that successful simulation was unlikely unless the crime has been pre-meditated; otherwise, the behaviour observed was unlikely to be consistent with parasomnia:

'I think if you were going to plan for it to be a parasomnia, what you'd have to do was plan for it to be a parasomnia before you carried out the act. I think what usually happens is, people carry out the act, and then use the parasomnia as a defence thereafter. So I think if you had spent some time planning the parasomnia beforehand you could probably do a much better job.'

Reed doubted in the case he was involved in that the sexual assault was premeditated:

'Had it been a planned thing it would had to have been very well planned because it was just a split second where this opportunity arose so it didn't seem particularly plausible and of course he was at great risk of being caught which is exactly what happened.'

Shneerson commented that

'it depends how gullible the expert witness is. Or maybe they're looking for signs to support their view - some experts only work for one side or the other, and they're always looking for evidence that somebody did have a parasomnia or didn't have a parasomnia, they're looking for only one side of the case. So those sort of people are easily fooled – but actually it's part of the skill of being an expert witness is to ask questions where the person who is fabricating the evidence trips themselves up, because they've been through the documentary evidence, you have a clue as to what people are doing , you can ask people what did they see or what did they see or what

was so and so doing, and unless they're really great minds with very good memories, you can usually tell if somebody's evidence is inconsistent and likely to be fabricated, he's trying to fool you.'

Pressman described his approach in the Falater case, which focussed on the assessment of conscious awareness:

'in the Falater case, I went at this very different than Dr Cartwright. I mean there was a lot of evidence about what he did and did not do that night – there was the next door neighbour witnessed the moving around. And so I actually had sixty pieces of evidence that I thought showed higher cognitive function: there was planning; there was social interaction; there was memory; there was the formation of memory during the episode, the apparent episode; there was concealment of evidence. I understand Dr Cartwright has her own view of these things, and she mainly, her testimony mainly had to do with the presence of factors that are known to prime or trigger sleepwalking – sleep deprivation, stress, I don't know, she went off on a, she had an interesting idea about caffeine consumption. However these are all indirect factors.

And so, I always look at what did the individual do? The guys who actually murdered their wives have actually potentially murdered the only real witness to whether they were sleepwalking or not. And there certainly are cases where the victim comes in and testifies for the defence – you know, because they were acting in a way that was inconsistent with being awake or being drunk or being anything else. And those are very valuable defence witnesses.'

Ebrahim disavows this approach

'the problem with Mark Pressman's testimony is that he puts himself at the scene of

the crime at the time of the event by saying this – that is a flaw. You cannot, because you were not there, you cannot say that this person was conscious. You can hypothesize about what was there, you can say one possibility is that he was conscious but the other possibility is…the other thing about the Mark Pressman testimony is he's not a neuropsychologist, he's not a neuropsychiatrist, he has no expertise in memory disorders, he's got no expertise in dealing with people with various different levels of consciousness, other than sleep. He hasn't worked with people with brain injury. And that is something you need, so if you're a neuropsychiatrist you can comment on it, and a neuropsychiatrist will say 'I was not there at the time of the crime, I was not standing next to Jules Lowe to do a mental state examination of him in real time during the, so I can't say whether he was conscious or not'.

There were different approaches about the interpretation of the facts of the case. As above, Pressman based his expert evidence on his interpretation of the actions of Falater. Others felt that this was more a job for the jury.

[Interviewer] *did you find in any of your cases there was certain actions that could be interpreted in different ways?*

'Yes. Again the most recent one I can think about, exactly – if you interpreted the actions of the person to what had occurred, it could have been interpreted as a parasomnia or it could have been interpreted as just obfuscation. And again I don't feel it's my duty to distinguish these but merely point out that these are the possibilities – so again the questioning from the prosecution in that case asked me if there would be an alternative interpretation to which I said 'there would be, there

could be, but it's not for me to decide that'.

There were different views about the relative importance of the academic literature and clinical experience. Pressman commented

'I'm an evidence-based expert. I mean we are now in the evidence-based era, of evidence-based medicine, and I believe that this is slowly extending to evidence-based scientific evidence … in the United States at the Federal level, I believe in about half the states we have the Supreme Court decision of Daubert … this basically is very specific about how you determine what is solid and reliable scientific evidence.'

Walker felt that the expert was there to given an opinion, particularly as the interpretation of the research is not straightforward:

'I think the first thing to say is that the evidence that's presented in research, not all of it's equal. So there's research and research. Quite often people present research findings but I think the papers are often questionable and the conclusions they reach are questionable. So the fact that there is evidence, that doesn't necessarily mean that's correct or right or that there's no controversy surrounding that. Furthermore I think, you know, if people just wanted a presentation of what was in the literature, then it would be possible to get somebody just to do a literature review and present that. What I think the court is after is your expert opinion. So it's not only the literature, it's also your clinical experience and your opinion of what is in the literature, whether it's worthwhile or not worthwhile.'

There were different opinions about the utility of sleep studies. Pressman commented

'I don't do sleep studies in my forensic cases … they can't tell you what happened six

> months ago. You cannot recreate the circumstances that were present on the night of the criminal action – it's impossible. And most of these people who are having sleep studies have spent six months to two years in prison – waiting for their trial, for their sleep studies, and obviously that would have a dramatic effect on whatever you found on the sleep study. There's a big difference between saying 'right now, this individual has some of the characteristics or some of the findings that we attribute to sleepwalkers' and saying that 'two years ago they were in a sleepwalking state when they committed a violent or sexual act' – it's not the same thing.'

Expert 29 had a similar opinion

> 'sleep studies are of absolutely no value whatsoever after the fact - period … sleep studies end up as in the Falater case just being a smokescreen. It just confuses everybody. And you get people arguing over things that are totally irrelevant, and the jury, how can they be expected to sort through all of this testimony about sleep studies, when in fact the sleep studies should not be allowed in the courtroom because they're irrelevant.'

8.5.15 Complexity and duration of sleepwalking and parasomnic episodes

There was debate over the level of complexity and duration consistent with sleepwalking episodes in particular. Williams commented

> 'I come from the position that sleepwalkers can do remarkable things. And the reason for that is I have the advantage of not being only forensic medicine, this clinic we have we see ten thousand patients a year and in amongst them are people who are not in an adversarial state, they're there because they've consistently or repeatedly have attacked their partners. So I know it happens, so therefore I start with that

> knowledge; and similarly sleep-driving, some people say that's too complex but I've had people tell me and not in a court. So I start believing it can happen and therefore if all the circumstances look right in that list, which is in the forensic sleep medicine textbook, then I think it's possible.'

By contrast, Horne believes that there are two distinct phenomena in the forensic sphere: 'true' sleepwalking, where the person was a robot, navigating by memory and uncommunicative; and a dissociative state (he used the term "fugue") where more complex behaviour is possible and even rudimentary conversations. The person has no memory for these dissociative episodes - whether or not they would have the requisite *mens rea* is a more difficult question to answer. Amnesia is no indication of the ability to form the necessary *mens rea* at the time in question. The Parks case was given as an example of such a dissociative state, with driving considered incompatible with true sleepwalking by this expert. Some other experts considered that the longer episodes resulted from sleepwalking merging into a dissociative state.

Nisbet also had concerns about some of the more complex behaviour

> 'there's possibly something different about those ones that do eventually get to court and are accused of severe crimes because I do begin to become a little bit sceptical because we do see patients sometimes grabbing their wife by the throat or shaking them or jumping on top of them or sometimes hitting them. That is a small minority of cases of sleepwalking and parasomnias and to go from that to a very severe assault or murder or rape, I begin to have some degree of scepticism. I would if I saw those patients in a clinical scenario, if something very serious had happened, because usually the partner can wake the patient with time before anything majorly serious

happens, so I think there is other psychopathology or maybe alcohol or drugs or that there is some degree of functional overlay going on. And the patient is trying to blame something on their sleepwalking, which may not be related.'

Riha came to a similar conclusion

'if you see enough parasomnias, if you see enough people with these problems, then you come to realise that there's different phenotypes of them, you know there's just the simple people, people who simply just get up and have a night terror or who do a bit of a sleepwalking but not particularly, no complex behaviours, and what does come through importantly, and these people often respond very well to medications, and there are the ones who have either personality disorders or who have ongoing considerable stress or some kind of psychological or psychiatric problems who don't respond for instance to simple medication and where the behaviour is probably confounding their degree of distress from other causes. Often they don't have the insight to recognize that either. And these are a much more difficult group of people to deal with.'

The Parks case truly divides the expert witness community, and for this reason should not be held up as an archetypal forensic sleepwalking episode. Brian Butler, who was involved with the case, commented

'I think the vast majority of the profession who had nothing to do with the case will say "whoa, those boys were either quacks or really got taken for a ride!"'

Nonetheless he was quite convinced from his contact with Parks that he was genuine. He commented on the eye witness accounts of

'The kids who … hid in the closet while this act was unfolding and what they say

about the primitive guttural noises that were going on as he went up and down the stairs in this state, again quite persuasive of some primitive function, brain functioning state in my view'

He did comment that

'it probably makes more sense in terms of the complexity of driving a car and handling all of that that you're looking at something other than sort of "normal" sleepwalking.'

Expert 19 found the presence of sensory dissociation (Parks was oblivious to the severed flexor tendons in his arm) persuasive evidence for sleepwalking. Cartwright was struck by Parks's failure to recognize the faces of his father- and mother-in-law:

Expert 29 emphasized the difficulties in his comments about the Falater case

'Mark Pressman … said it was too long for sleepwalking … my response to that is "who knows what is too long for sleepwalking?" You know, is thirty minutes too long but twenty-nine minutes OK? We don't know that, and that's one reason that we decided … to go down this route to collect information to see how we could characterise these sleepwalking episodes'.

Walker agrees with this:

'there is a vacuum in terms of good evidence – most of it is anecdotal reports, um case series, questionnaires to people with parasomnias, questionnaires to people generally, and the evidence, good hard evidence about what occurs in parasomnias, is quite difficult to come by. And so you end up with controversy about precipitating factors, people disagree, how long a parasomnia can go on for, you even have disagreements about what people can and cannot do during parasomnia.'

There were features that all the expert witnesses agreed on, for example where there was evidence of higher functions:

> ‘in general, if there’s any purposeful actions, typically they have secondary gain like trying to conceal the crime or evidence about who did it, I would strongly suspect that the person was awake.’

8.5.16 Ontology of sleepwalking and sexsomnia

The finding that experts disagreed in some instances about whether or not a particular episode represented sleepwalking, even when the facts were generally agreed, was not surprising. Perhaps more surprising was the fact that the experts could not agree on what exactly constituted sleepwalking. One particular sleep expert, who does not get involved with sleepwalking cases, believes that many of the more complicated episodes of longer duration are not sleepwalking, but something else – perhaps a sleep-related dissociative state. A similar suggestion was made by other experts that the longer episodes started off as sleepwalking and segued into a dissociative state. Whether or not this makes a difference depends partly on whether or not the expert believed that a dissociative state/fugue should be treated differently in law from sleepwalking. One participant commented on the distinction

> ‘I think that’s difficult to say, and I suppose also boils down to what terminology you use, and I guess if you think that there are a number of different parasomnias, and … you can have a number of different symptoms off it. I say, it depends on what you like to call it. I’m not sure how big a difference it makes what you call it actually.’

Espie agreed that the distinction between “sleepwalking” and “dissociative” episodes was not necessarily productive:

> ‘the majority of these sleepwalking events are self-contained, and self-limiting … for many people the events are actually quite brief – sometimes they can be quite prolonged … some people think ‘well, if it’s getting beyond just a few minutes, then this is like dissociative’ or if it involves going out the house, walking long distances or something like that, then it’s more like a dissociative episode. I think the truth of the matter is if you like is these are dissociative episodes in themselves, the whole thing is dissociative – but because we regard those as separate [] in law we try and make hard and fast differentiations, between one thing and another – we do a bit of the same with psychiatric disorders, or sleep disorders, and say ‘well, you know, that’s a separate disorder from that [but] I would tend to from clinical experience say that the same sort of cognitive emotional factors that can make people vulnerable to sleepwalking can also make people vulnerable to dissociation.’

There is some evidence that sleep facilitates the transition between alters in dissociative identity disorder (DID). One expert reported a patient who exhibited complex nocturnal behaviour where he would be left-handed, but was right-handed during wakefulness. This is suggestive of DID. During sexsomnic episodes the person’s sexual behaviour is often different, and this may include their sexual orientation.

8.5.17 Intention

As previously discussed (see **2.5**, **6.2.3**), the Freudian view of sleepwalking as an expression of repressed desires has fallen from favour for a variety of reasons. However, some experts considered that conscious thoughts affected sleep behaviour via different mechanisms:

> ‘Yeah – I don’t think there’s…..blame and…I don’t think people are in control of what

> they're doing. However, it's certainly my experience that people will often carry out, in parasomnias, acts that they would perhaps want to do if they were awake. So I have had people for example who are dieting, sleep-eating.[] it's obviously a subconscious desire to eat, and when they're in a sleepwalking state, they don't have control over that.[] I think there's different degrees of motivation during acts … I think that there is lighter and deeper sleepwalking and certainly children I think tend to be much deeper so they tend to have less awareness of what they've done, have less recall, they don't usually describe dream mentation, whilst adults will … not infrequently describe dream mentation, and so it may be a slightly different phenomenon.'

Fenwick was of a similar opinion

> 'Do I think that um people can do motivated things during sleepwalking? Well I mean the evidence is very strong that they can and they do. I mean, think of the people who uh go and raid the fridge in the middle of the night. There's a piece of motivated sleepwalking. So the answer is 'yes, you can', but it – one of the things that I think is important is it has to in fact be out of character for the individual. A fat lady raiding the fridge is one thing, but a guy who isn't violent, has never been violent, has no violent fantasies etc etc picking up a knife and sticking it into somebody else is different.'

It is quite plausible that the association gained credence from examples of sleep-related dissociative disorder. One interviewee pointed out

> 'violent behaviour is almost never ever been reported more than once in the same individual, where it's felt to be truly sleepwalking. So clearly these behaviours that occur, if they are sleepwalking, are not a sleep-related or state-dependent release of a waking personality characteristic, because otherwise these would be recurrent, and

> they are virtually never recurrent.'

The presence of a motive makes the defence much less tenable, but the absence of a motive is ambiguous - as one expert stated

> 'do people do crazy things for rational reasons that none of the rest of us understand? Of course they do'.

Experts often commented on the character of a defendant or any possible motive (or lack thereof):

> 'Cos there was no evidence of any previous sexual interest in this woman at all, he'd known her all his life, he'd grown up with his friend, she'd always been around. She said there's never been any problem with him, he said he had no sexual interest in her of any description, it was the last thing he could imagine himself doing. You've only got his word, but there's nothing in the witness statements from her to suggest that this was the case.'

Pressman remarked

> 'You're not required to have a motive, but if you've got someone … like in the Thomas case … it was a loving relationship; there was nothing anyone could report that would indicate his wish to kill her. Or for that matter even any problems between them.'

Nisbet highlighted the epistemological difficulties where there is a plausible motive

> 'if someone is a sleepwalker and a genuine sleepwalker and genuinely has automatisms but having discovered that their partner has been sleeping with their best friend and then in the night murders them, the question is 'are they using their sleepwalking as an excuse?' Were they really fully awake and trying to get away with

a defence of sleepwalking? And that's a value judgment, and I think there are ways by which you can help make a judgment on those things, by taking a very careful history. Although there's always going to be uncertainty in that situation.'

8.5.18 Alcohol and sleepwalking

Alcohol and sleepwalking is the most contested issue in forensic sleep disorders. Some participants were quite forthright in their opinions, expert 29 commenting

'what's going on in England with ******* and ******* is just outrageous with their alcohol defence that they use, they get involved with cases where people are so fucking drunk that there's no way that in my opinion you could even seriously consider sleepwalking. And they're saying that this incredible amount of alcohol triggered sleepwalking – well I mean that is just I think total bogus.'

The American experts I spoke felt that alcohol consumption to the point of intoxication precluded the sleepwalking/sexsomnia defence. Pressman remarked

'as far as I'm concerned people who were, you know drank excessively and recklessly, basically don't have a defence because of course voluntary intoxication is not a defence – I'm not sure in the UK but in the United States in most locations it's either not a defence at all or it's certainly not a complete defence. So basically these people have no defence'.

This echoes the sentiment in the article by Pressman *et al* where they state

'Claims of alcohol-induced parasomnias presented solely to circumvent the laws of voluntary intoxication should be understood for what they are and rejected.'[16]

[16] PRESSMAN, M., MAHOWALD, M.W., SCHENCK, C.H., and CRAMER BORNEMANN M. (2007) Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations. *Journal of Sleep Research*, 16, pp. 198-212.

The reaction of Reading (also a sceptic about the effect of alcohol) was that this position is Puritanical -

> ‘as soon as alcohol is mentioned, they blame it all on alcohol.’

Ebrahim was of a similar opinion

> ‘This is the evangelical route of where sleep medicine is going. It’s now evangelism. The president of the British Sleep Society also thinks this. Go and speak to Paul Reading and ask his opinion.’

Another sleep expert felt that neither position was correct

> ‘[the Sleep Clinic group’s] theory is that alcohol is a very common factor and they play down the intoxication, the change in behaviour due to intoxication, whereas the Americans play that up and deny the alcohol has an effect on parasomnia. So my view is yes, alcohol does trigger the parasomnia in some people, about 20% but that varies, but I don’t really trust the alcohol provocation test, I think that when you get someone that’s drunk a lot, that often happens in these situations that we’re talking about, about ten pints or more, quite a few units they’ve had, twenty, twenty-five units, there you’ve got to make some sort of judgment … was the behaviour more in keeping with somebody who was drunk, or somebody who was in a parasomnia state? [] I would go more on the individual circumstances – but obviously the more somebody has drunk, the more likely they are to be intoxicated and to be disinhibited and behave in a way which is related to the alcohol. Whereas if it’s someone with a moderate alcohol consumption with other trigger factors such as extreme tiredness or stress, then it may well have been a factor causing a parasomnia. So I’m somewhere between the two, I can see both sides slightly, but I don’t quite like either side’s view

as a whole picture.'

Many experts commented that a small proportion of their patients reported an association of their parasomnia with alcohol consumption. The sceptics about alcohol emphasize the lack of reliable scientific evidence that alcohol triggers sleepwalking. Pressman commented

> 'there IS NO scientific evidence to support the defence that someone who goes out and gets roaring drunk and then commits a heinous crime, violent or rape or whatnot, was sleepwalking or having sleepsex. There's no relationship in the science between alcohol and sleepwalking. It's just something that's left over from …. the time before modern sleepwalking medicine when people really couldn't tell the difference between sleepwalking and someone who was just severely intoxicated. I mean now we can, we know that they're completely different states, they may look superficially similar to some people but they're not similar. And actually there's never been a single published study in which somebody gave alcohol to a clinically diagnosed sleepwalker to see what happened.'[17]

Shneerson points out the epistemological difficulties:

> '[the sceptics] emphasize to a great degree the absence of evidence, but that doesn't mean to say that the situation isn't true, it just means the evidence hasn't been collected.'

Reading pointed out that there are confounding factors that are more likely contributors; late nights, a full bladder, and stress (which is often the trigger for increased alcohol

[17] This is not strictly true, as Hartmann administered alcohol during a PSG (HARTMANN, E. (1983) Two Case Reports: Night Terrors With Sleepwalking - A Potentially Lethal Disorder. *Journal of Nervous and Mental Disease*, 171(8), pp. 503-5).

consumption).

Shneerson commented that

> ‘It is an important issue - you see a lot of these events do involve some degree of alcohol consumption in fact. So it is something where some clarification of the situation, of the issues anyway, which could be referred to so the barrister could ask questions against this guideline, an explanation of the effects of alcohol on people’s behaviour, would help.’

Walker summed up the current state of knowledge about alcohol and sleepwalking neatly

> ‘there’s controversy surrounding the effects of alcohol on parasomnia. And plenty of people describe their parasomnias being more elaborate or worsened by alcohol, and plenty of my patients do, but then when you start to look at the hard evidence that alcohol necessarily does do that, I think it’s a vexed question. And I think the best way of presenting that is to present, as I have done, present it as a question that still remains unresolved.’

Pressman argues that the cause of nocturnal behaviour after alcohol consumption is not known, so to attribute it to parasomnia is presumptuous.

There was concern about the alcohol provocation test among the experts that didn’t use it, even if they agreed that alcohol seemed to be a trigger for some patients. Shneerson remarked

> ‘They’ve also developed an alcohol provocation test, which has been the subject of a lot of discussion, but the criticism of this is that there’s no normal values – so if they get a positive or negative result, what does it mean? And also doing the alcohol

> provocation test 6 months later, in different circumstances, may or may not translate to the circumstances of the night, where the person might be more sleep-deprived or stressed … my personal view is that the test hasn't been validated sufficiently … it wouldn't be used in clinical practice, because there's no normal values, there's no ways or protocols of making it relevant to producing information you want … I don't really trust the alcohol provocation test, I think that when you get someone that's drunk a lot, that often happens in these situations that we're talking about, about ten pints or more, quite a few units they've had, twenty, twenty-five units, there you've got to make some sort of judgment.'

Often the victim in sexsomnia cases had been drinking too. In some cases, the victims were plied with drink by their assailants

> 'what the defendant did, really under the eyes of his trusting wife, was nip out and nip upstairs, and he was plying this girl with drink and he got her, because she was not used to drinking much, he got her really drunk, so much so that she was sick. And he got her up, cleaned her up and took her into the bathroom and everything … he'd gone to bed with his wife, had clearly got up, leaving the bed with the wife in, and it was a comfortable house, a number of bedrooms, and he'd clearly selected this bedroom … he'd had sex with the other girl. His partner was keen to say "oh, yes, he sleepwalks", all the rest of it – what I was saying was "look, he was doing a lot of things behind your back". "What do you mean?" "Well, he was plying the girl with drink." "No." "Would you have approved of the fact that not only did he ply her with drink, but he got her so drunk she was sick?" "No."'

This account is totally inconsistent with parasomnia and legal automatism.

8.5.19 Policy issues and victim concerns

Policy issues were acknowledged by some experts. One noted the judge in the Thompson case commented about “opening the floodgates”, if alcohol-induced parasomnia could be the basis of a plain acquittal. However, it seems the floodgates have already been leaking. Comments about victims (generally the illegal act was not in question so this term is more appropriate than complainant) included:

> ‘I prefer to be sure … that I’m not doing something that might cause problems … for either side.’

Idzikowski felt that a general partial defence of diminished responsibility would address the issue of the victim’s experience. Judge Milmo considers that diminished responsibility would be an option for somnambulistic homicide.[18]

Many participants were concerned about defendants who had drunk large amounts of alcohol arguing the parasomnia defence, which occurred most often with sexual offences. This was a particular issue because a few experts provided the expert evidence in support of parasomnia in many of the cases. However, there were several occasions when other experts outside that group instructed by the defence agreed with their conclusions. Some of the participants considered this practice to be either unethical or unscientific or both.

8.5.20 Controversies

I have studiously avoided taking sides in the dispute between certain sleep experts and not just out of a desire to preserve academic integrity – I genuinely believe both sides have valid points. Also both sides have tended to distort the position of the other at

[18] Personal communication

times. One expert stated that the criteria of some experts (especially with regards to alcohol-induced states) could be satisfied by any defendant. This seemed an exaggeration, although this is not a statement I could definitely refute due to the limitations of my methodology. Certainly none of the experts would support the defence where there was not a good history of parasomnia. There was some polarization on certain issues, but generally there was a spread of opinion. This reflected the general uncertainty in this field.

8.5.21 Criminal Responsibility

I also explored whether or not expert witnesses felt that establishing the diagnosis of parasomnia resolved the issue of whether or not the accused was an automaton. There was a general consensus that the question of legal responsibility largely hinged on the question of whether or not there was a parasomnic episode, although Cramer Bornemann and Mahowald have stated

> 'In the developing field of sleep forensics, a medical expert will have to do more than just evaluate for a possible sleep disorder because, ultimately, the defendant's state of consciousness will prove pivotal.'[19]

Further Schenck commented on the possibility of 'islands of lucidity', and the variability of sleepwalking episodes. Expert 19 agreed that sleepwalking episodes are heterogeneous, and so the expert witness needs to assess capacity on an individual basis. Nisbet voiced a similar opinion:

> 'sleepwalking is a continuum – all non-REM parasomnias are a continuum from deep

[19] CRAMER BORNEMANN, M.A. and MAHOWALD, M.W. (2010) Chapter 63 Sleep Forensics. In KRYGER, M., ROTH, T. and DEMENT, W.C. (eds.). *Principles and Practice of Sleep Medicine*. 5th Ed. Philadelphia: Saunders, pp. 725-733.

> sleep through to wakefulness. And that even during any individual sleepwalking episode, at the beginning of the sleepwalking episode the patient is more asleep and less culpable than towards the end when they're more awake and more culpable … It's not a simple 'you're either sleepwalking or you're not' – because sleepwalking, as I say to patients there's a state of partial wakefulness and partial sleep, and depending on where you are on that continuum will depend on your culpability – that really doesn't fit in with 'are they sane or insane?'

As mentioned in Chapter Three, Mckenzie and Matthaeus qualified the sleepwalker's excuse with the rider that he should not have enmity towards the victim. Also the usual criteria require behaviour without motive and out of character. The interviewees were asked whether or not the sleepwalker (or parasomniac) acts out unconscious, subconscious or conscious desires in their sleep. Most thought that this was not the case, although they could not rule it out. Some pointed it out that due to the nature of parasomnia, that even if this was the case the accused should not be held criminally responsible.

8.6 Analysis of results

The experts agreed on most issues. They all agreed on the general clinical features and the approach to the clinical assessment of the patient. They understood the responsibilities of the expert witness. The main areas of disagreement were alcohol and sleepwalking, the utility of sleep studies, and the complexity and duration of parasomnic episodes. Some experts tended to work for one particular side. Whilst this does not

mean that the experts involved tailor their opinions to the requirements of the instructing counsel (otherwise they would be equally used by defence and prosecution), it does suggest that their perspective on sleepwalking cases as a whole *might* be known and affect which side hires them. The opinion of the experts about whether or not sleepwalking should be treated as a sane or insane automatism depended on the flexibility they believed the courts had. There was a common perception that a hospital order was the automatic result of the special verdict, and this belief tended to result in rejection of the insanity label for parasomnia. The American literature reflects their courts' approach to the insanity defence, as this quote from Schenck and Mahowald illustrates:

> 'We believe it would be very inappropriate to consider somnambulism (or any parasomnia) with continuing danger as an insane automatism requiring indefinite psychiatric hospitalization. Instead, a parasomnia with continuing danger should be regarded as a non-insane automatism requiring non-psychiatric partial hospitalization for the express purpose of monitoring overnight sleep until the parasomnia can be reliably controlled with treatment.'

There were other considerations, including the problems of the label of insanity *per se* (due to stigma or inappropriateness). Apart from this and the role of alcohol, there was relatively little appreciation of policy issues.

Chapter 9: Discussion

9.1 Expert Evidence

9.1.1 Approach of the experts

All of the expert witnesses I interviewed were well aware that their duty was to the court, rather than the party instructing them. None of them could be accurately described as "hired guns". All of them described turning down work as an expert witness instructed by the defence where the account of parasomnia was not credible. However, it was apparent that certain experts' approaches might innately favour the prosecution or defence. Indeed Nottingham detectives attributed a successful prosecution to obtaining the right expert. Smith comments that

> '[m]any expert are open to the suggestion that working regularly for one side … may foster 'prosecution mindedness' or defence mindedness'.[1]

For example, an expert who had a restrictive definition of behaviour compatible with parasomnia would be more helpful for the prosecution. Empirical study has shown that the source of an expert witness's instructions will influence the court report consciously or subconsciously.[2]

There have been a number of cases in recent years that have eroded the immunity of

[1] SMITH, R. (1989) Forensic pathology, scientific expertise, and the criminal law. In SMITH, R. and WYNNE, B. (eds.). *Expert Evidence: Interpreting Science in the Law*. London: Routledge, pp. 56-92.
[2] MURRIE, D.C., BOCCACCINI, M.T., GUARNERA, L.A. and RUFINO, K.A. (2013) Are Forensic Experts Biased by the Side That Retained Them? *Psychological Science*, 24(10), pp. 1889-97.

expert witnesses – *Meadow v General Medical Council*, *Kaney v Jones.*[3] As Thorpe LJ remarked in *Meadow v General Medical Council* concerning medical expert witnesses

> 'The majority will be employed under NHS consultant contracts. By contrast to the other justice systems this is a market in which demand exceeds supply. It is thus very sensitive to increasing or newly emerging disincentives. This factor is compounded by a paucity of incentives.' (para 27)

This author would say there is a good possibility that fewer sleep experts will do medico-legal work if further inroads are made into expert witness immunity. There is already a perception that medico-legal work takes up a disproportionate amount of time compared to the rewards. Combine this with the proposed reductions in fees, and it will become increasingly more difficult for a sleepwalker to find an appropriate expert to instruct. The potential liability issue identified for experts changing the thrust of their evidence in joint statements might result in such discussions becoming pointless exercises.

The controversy about alcohol and sleepwalking revolves largely around what kind of medical evidence is acceptable to support expert testimony. Even the most vocal critic of the use of the Alcohol Provocation Test (APT), Pressman, is happy for expert witnesses to adduce their clinical experience as to the effects of alcohol on sleepwalking. The vast majority of British forensic sleep experts believe that alcohol triggers sleepwalking in a minority of patients. Pressman takes issue with the claims made about APT results, arguing it is unvalidated and a test that is impossible to fail. This dichotomy resembles the approach of the Law Commission, who proposed that

[3] [2006] EWCA Civ 1390; [2011] UKSC 13

> ‘the trial judge should have a number of guidelines to help him or her determine whether or not the test was satisfied, with one set of guidelines for scientific (or purportedly scientific) evidence, and another set of guidelines for experience-based, non-scientific expertise. We suggested that guidelines of this sort could be incorporated into legislation.’[4]

Contrary to my initial impressions from the literature, all the forensic sleep experts I have spoken to appeared to be quite sceptical about claims of sleepwalking by defendants as a whole, due to the large number of referrals that are speculative (between 75 and 90%).

There is a potential problem where expert witnesses place too much emphasis on evidence-based medicine and academic rigour, as this has the effect of potentially denying the defendant the benefit of the doubt that the criminal justice system rightly enshrines as part of the presumption of innocence. The lack of definitive research should not deny the accused the defence of sleepwalking. However, this does not mean that junk science should be tolerated. The prosecution has certain duties to exclude evidence which do not extend to the defence – as the Law Commission notes

> ‘It should also be noted that any manifestly unreliable evidence tendered by the prosecution can at present be excluded at common law or by the application of s 78(1) of the Police and Criminal Evidence Act 1984.’[5]

Additionally in non-insane automatism there is an evidential burden on the defence, but the burden of proof is on the prosecution. By contrast, in insane automatism the onus is

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[4] LAW COMMISSION. (2009) *The Admissibility of Expert Evidence in Criminal Proceedings in England and Wales*. 190. The Law Commission.
[5] See footnote 4.

on the defence team to prove insanity on the balance of probabilities. The concatenation of these doctrines allows relatively weak medical evidence to be adduced and successfully support the defence of non-insane automatism.

9.1.2 Admissibility

The issue of admissibility of expert evidence has recently been examined by the Law Commission. They were concerned about the contribution of flawed expert evidence to miscarriages of justice. The Law Commission in *Expert Evidence in Criminal Proceedings in England and Wales*[6] quoted several organizations' concerns about the provision of expert evidence and the need for reform. The General Medical Council stated

> 'it is because juries and other lay tribunals tend to afford a special status to [scientific medical] evidence that a robust assessment of its admissibility prior to trial is critical.[7] (para 1.1.6)

The Criminal Bar Association noted that

> 'rightly or wrongly, [expert evidence] is often 'trusted' like no other category of evidence'. (para 1.18)

The persuasiveness of medical tests for juries varies - studies suggest, perhaps surprisingly, that juries were not particularly swayed by neuroimaging.[8] Nonetheless, caution is advised as admitting tests infers that they have probative value.

Given the impact of unreliable expert evidence, the Law Commission have proposed the

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[6] LAW COMMISSION. (2011) *Expert Evidence in Criminal Proceedings in England and Wales*. No. 325. London: The Stationery Office.

[7] One interviewee noted this phenomenon for juries to defer to medical expert witnesses over scientists.

[8] SCHWEITZER, N.J., MURPHY, E.R., ROSKIES, A.L., SINNOTT-ARMSTRONG, W. and GAUDET, L.M. (2011) NEUROIMAGES AS EVIDENCE IN A MENS REA DEFENSE: No Impact. *Psychology, Public Policy, and Law*, 17(3), pp. 357-93; SCHWEITZER, N.J. and SAKS, M.J. (2012) Neuroimage Evidence and the Insanity Defense. *Behavioral Sciences and the Law*, 29(4), pp. 592-607.

adoption of a statutory enhanced admissibility test for expert evidence on the lines of Rule 702 in the Federal Rules of Evidence (see Chapter 7.2). Their proposed test is

(1) The opinion evidence of an expert witness is admissible only if the court is satisfied that it is sufficiently reliable to be admitted.

(2) The opinion evidence of an expert witness is sufficiently reliable to be admitted if:–

(a) the evidence is predicated on sound principles, techniques and assumptions;

(b) those principles, techniques and assumptions have been properly applied to the facts of the case; and

(c) the evidence is supported by [that is, logically in keeping with] those principles, techniques and assumptions as applied to the facts of the case.

These tests have been considered by judges before, for example by the Court of Appeal in *Luttrell*[9] (see **7.5**). Even though absolute accuracy and reliability are not required, expert evidence requires the use of techniques or knowledge that are accepted by the scientific community to be the basis for *sufficiently* accurate and reliable opinions.[10] Not everyone would agree that the fundamental problem is the expert witnesses involved. Some would say that it is the lawyers' fault[11] because the advocates are not testing the evidence sufficiently rigorously. Judge Andrew Gilbart QC, Honorary Recorder of Manchester, commented on

[9] [2004] 2 Cr App R 31
[10] *R v Gilfoyle* [2001] 2 Cr App R 5
[11] Comments of Mr Graham Cooke on the Sally Clark case at the BAFS Conference 'Science and Justice: The Criminal Court'', Saturday 22 Sept 2012.

> ‘how ill equipped advocates are to challenge [poor quality scientific evidence] when they have no experts of their own to advise them’. ([see above] at 1.19)

The practicality of improving the scientific literacy of judges and advocates is uncertain. The current common law for admissibility of expert evidence is summarized in the Australian case of *Bonython,* where three requirements are related:

(1) “whether the subject matter of the opinion is such that a person without instruction or experience in the area of knowledge or human experience would be able to form a sound judgment on the matter without the assistance of a witness possessing special knowledge or experience in the area”;

(2) “whether the subject matter of the opinion forms part of a body of knowledge or experience which is sufficiently organized or recognized to be accepted as a reliable body of knowledge or experience, a special acquaintance with which by the witness would render his opinion of assistance to the court”; and

(3) “whether the witness has acquired by study or experience sufficient knowledge of the subject to render his opinion of value in resolving the issues before the court”[12]

Mark Pressman is a strong advocate for the use of evidence-based medicine (EBM) principles in expert testimony on forensic sleep disorders. It has been stated that including “anecdotal” or “opinion-based” evidence about possible triggers for sleepwalking is contrary to the principles of EBM, particularly a positive association between sleepwalking and alcohol. EBM certainly allows such evidence, although it categorizes it as level 5, possibly 4 at best (CEBM Levels of Evidence - see Appendix R for further details). The principles of EBM cannot necessarily be transferred to expert

[12] *The Queen v. Bonython* (1984) 38 SASR 45

testimony, as it is for the courts to decide what evidence is admissible. The recent publication of a case-control study brings the evidence for a link between alcohol and sleepwalking up to Level 3, whereas the evidence against a link remains at Level 5 (working from first principles and physiology). It is also relevant that there are considerable ethical obstacles to research, given the potential safety issues for researchers. Mark Pressman believes that the substance of Rule 702, Federal Rules of Evidence, should be adopted here in the UK, as per the Law Commission recommendations.[13]

There are two main problems with this approach: firstly, the evidence base for diagnosis of forensic sleep disorders (and sleep disorders generally) is not good. The field of forensic sleep medicine is still highly opinion-based, because of the dearth of reliable research. One study found that none of the case studies included the minimal set of medico-legal key features (defined as (1) legal issues (charge, defence, verdict); (2) defendant and victim characteristics (sex, age, relationship); (3) circumstantial factors (timing of the event, proximity, psychophysical condition of the defendant at the time of the event); and (4) forensic evaluation (clinical sleep assessment, polysomnography (PSG) findings, other medical evaluations)).[14] A further criticism that has been levelled at Pressman's own expert evidence is that he relies too much on his own publications - instead of the *ipse dixit*[15] fallacy, he arguably commits the *ipse scribit* fallacy[16]. It is a contention of some forensic sleep experts that it is difficult for their own papers about alcohol and sleepwalking to be published, due to peer reviewers excluding evidence

[13] See footnote 6.
[14] INGRAVALLO, F., POLI, F., VIGNATELLI, L., PIZZA, F. and PLAZZI, G. (2013) Sleep forensic case reports. *Sleep medicine*, 14(Supplement 1), pp. e233.
[15] He himself said it
[16] He himself wrote it.

linking alcohol and sleepwalking.[17] Secondly it potentially has the effect of overturning the presumption of innocence and burden of proof.

The “Sleep Clinic” group of expert witnesses[18] has the biggest share of the forensic sleep work in the UK. The members work for either the prosecution or defence, although they appear more often for the defence. Their approach has been refined through years of experience. Their practice is to present the different possible scenarios to the jury, with the probability of each and the supporting reasons, so that the jury can make its own mind up. Mark Pressman, an American expert witness, is instructed frequently by the Crown Prosecution Service (CPS). He has not appeared for the defence in any British trials. He is known for his robust rebuttals of the sleepwalking defence, especially when the defendant has consumed a large amount of alcohol. His approach is more sceptical than most of the UK forensic sleep community, particularly where alcohol is concerned, and thus he is highly critical of the approach of Fenwick and Ebrahim. There are a number of contradictory statements on the selection of prosecution expert witnesses. The Daily Mail stated that

> ‘Nottinghamshire Police … spent months seeking expert advice about Thompson's sleepwalking defence. The National Policing Improvement Agency eventually put lead investigator DC Paula Winfield in touch with Dr Pressman at the Lankenau Institute for Medical Research in Pennsylvania.’[19]

Graham Buchanan for the Crown Prosecution Service (CPS) stated

> ‘Prosecutors have worked long and hard to make this happen, including securing

[17] I have had experience of this difficulty personally when co-author of a review article.
[18] Peter Fenwick, Irshaad Ebrahim, Chris Idzikowski and Adrian Williams of the London and Edinburgh Sleep Clinics at the time of my research.
[19] DOLAN, A. (2012) Jail for rapist who said he was sleepwalking. *Daily Mail* (Mar 30th).

> evidence from the scene from the Portuguese authorities and identifying and assessing necessary medical experts to show that a defence of sleepwalking was not valid in this case.'[20]

This reference to the extensive search for a suitable expert witness implies that his selection was crucial to this success. However, the CPS stated that the selection of Pressman was down to lack of availability of other experts. There are only a small number of forensic sleep experts in the UK, and at this time two of the most experienced forensic sleep experts were still under investigation by the GMC (see above). I had a second hand account from an expert witness that the CPS does have a list of forensic sleep expert witnesses, but this was officially denied:

> 'The CPS does not hold a register of experts. As an independent prosecution service it would be inappropriate to appear to endorse any expert by entering them on an internal list.'[21]

It is this author's belief that there probably is a mechanism in the CPS for selecting appropriate expert witnesses, even if there is not an official list. In any case, the NPIA database must be for the purpose of assisting prosecutions as the above quote demonstrates, and DC Paula Winfield alluded to the importance of securing the right expert. She stated

> "Sleepwalking as a criminal defence had never been successfully challenged in a sexual offence case before. But we could not let that discourage us from doing all we could to achieve justice for a young woman who has been through such a

[20] FURNESS, H. (2012) Rapist jailed after "sleepwalking" claim rejected in legal first; A man has been jailed for raping a 17-year-old girl after his claim to have been sleepwalking was rejected by international experts in a landmark case. *Telegraph* (Mar 30th) News.
[21] Response from Karen Squibb-Williams, Strategic Policy Directorate, CPS dated 19th February 2010 (see Appendix J).

traumatising ordeal."[22]

The assumption from the start appeared to be that the defence was bogus. There is a perception, partly fuelled by media accounts, that this is the latest defence on the block. The selection of expert witnesses for the prosecution from a database for which the criteria are not known, and indeed could not be divulged (when the Specialist Operations Centre became part of the Serious and Organised Crime Agency rather than the National Police Improvements Agency), seem contrary to the principles of open justice. There is no apparent operational justification for not disclosing the criteria for placing expert witnesses on the SOC database. If experts are being chosen on the basis of their likely opinion (which the comments of DC Winfield and Graham Buchanan for the CPS suggest may be the case), this is arguably contrary to the prosecutorial duty of fairness. One argument is that this approach guarantees rigorous testing of the evidence; however, this is not the customary practice of the court.

It is doubtful that there is a solution that can mould the messy business of expert evidence into the reliable "black box" that the legal system might be more comfortable with. As Gilson put it

> 'law has a high expectation of science and scientists in this regard owing to the objectivity, rigour and precision extolled in its methods. It is disappointed when its evidence is doubtful, experts disagree or prove unreliable.'[23]

A lawyer sent me his opinion online on expert evidence re automatism

> 'So here is my in-depth analysis of automatism, which I offer free, gratis and for

[22] HENESY, B (2012) US expert shreds sleepwalking defence of teen holiday rapist; A Notts man claimed he was sleepwalking when he raped a teenage girl, as Bryan Henesey reports. *Nottingham Evening Post* (Mar 30th), p.4.

[23] GILSON, C.G. (2012) *The Law-Science Chasm: Bridging Law's Disaffection with Science as Evidence*. Quid Pro, LLC.

> nothing. Every so often some dozy twat of a driver falls asleep at the wheel and crashes into another vehicle, perhaps causing a death or two. When prosecuted, he will then try his hardest to argue that he didn't fall asleep at the wheel, no, perish the thought, he was suffering from narcolepsy or a rare attention deficit disorder or an unexplained quasi-epileptic attack. And after all, nobody can possibly see what was going on in his mind at the time and there are many rare neurological disorders of an intermittent nature. He may then find a gullible neurologist willing, for a fee, to prepare a convincing report that will enable the jury to acquit because there is a reasonable doubt.'[24]

The case study I relate in **7.4.1** of SW would lend a certain amount of support to this cynical and pejorative view.

In this author's opinion, the ideal way to proceed is to ensure that lawyers and judges are better educated in the principles and philosophy of science. This will ensure robust testing of the evidence. Alternatively, the counsel for both sides should be permitted to have coaching by a suitable expert to help them with the testing of evidence in specific complex areas. This might be done by a neutral expert appointed by the court, but this would have cost implications. Another approach that has been adopted in Australia is "hot-tubbing", where the expert witnesses for both sides give evidence concurrently. It is used more in civil cases than criminal trials before juries. British expert witnesses did not consider the practice would be beneficial and might lead to "more heat than light". The *amicus curia was* proposed by several experts. This approach is not without its problems, as discussed at **7.4.** One expert had encountered the use of a single sleep

[24]Personal communication from user with nym ""The Todal" on uk.legal newsgroup on usernet

expert at trial.

The subject of forensic sleep disorders is undoubtedly complex and highly specialized. The expert witness is generally:

> ‘expected simply to educate the jury, to pass on the relevant aspects of their knowledge and expertise so that the jury itself can properly assess the evidence to which it relates.’

Juries can and do disagree with expert witnesses - there are occasions where the psychiatrists instructed by both prosecution and defence have agreed on that the defendant is insane, but nonetheless the jury have convicted. There will usually be expert witnesses appearing for both sides, and if they disagree then the issue becomes which evidence to accept and which opinion to believe, rather than whether to accept scientific evidence or believe scientific opinion at all. The Law Commission recognizes the problems with complex evidence where it may be

> ‘quite impracticable to provide the jury with sufficient expertise of its own to avoid the possibility of deference.’[25]

If juries are unable to evaluate the quality of the expert evidence given, then a ‘gate-keeper’ role is very important. The number of referrals per year to forensic sleep experts seems to indicate an increasing awareness of the sleepwalking defence. However, it is still rarely argued, and it would be very difficult if not impossible to find specialist lawyers for parasomnia cases. Thus the advocates may not be in a position to help the jury very much.

The courts have commented on many occasions about the strong influence expert

[25] See footnote 4.

evidence has on jurors. The Law Commission Consultation contains several quotes about the "aura of infallibility"[26], whilst recognizing that the empirical evidence is lacking. Given this lack of such evidence, it may seem a little surprising that the Law Commission recommends 'special rules' for expert evidence – typically evidential rules dictate only the admissibility of expert evidence, with the lay jury left to judge how much weight to be given.

Forensic sleep medicine certainly *is* a complex area, so although the practice of the Sleep Clinic group is well-intentioned, it may not achieve the desired result. The jury may end up confused by too much information, and as one barrister asserted to me "a confused jury acquits". Since the demise of the 'ultimate issue rule' in the UK, the expert witness *can* give his opinion on the likelihood that the episode represented a parasomnia, giving his reasons.[27]The more purposeful the behaviour, the more persuasive the expert may have to be – so in cases of sexsomnia it is often more difficult to convince the jury that the defendant was effectively asleep.

9.1.3 Provision of expert evidence

In the area of parasomnia, expert witnesses are often guided by their clinical experience. Although there were concerns expressed over non-medically trained experts missing important potential contributors to an episode, this author found no

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[26] See footnote 4: *"United States v Addison 498 F 2d 741 (1974) 744 ("scientific proof may in some instances assume a posture of mystic infallibility in the eyes of a jury of laymen") and Mohan [1994] 2 SCR 9, 21 ("Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, [expert] evidence is apt to be accepted by the jury as being virtually infallible and as having more weight than it deserves"). See also: JW Strong, "Language and Logic in Expert Testimony" (1992) 71 Oregon Law Review 349, 367, n 81 ("There is virtual unanimity among courts and commentators that evidence perceived by jurors to be 'scientific' in nature will have particularly persuasive effect"); and CT Hutchinson and DS Ashby, "Redefining the Bases for Admissibility of Expert Scientific Testimony" (1994) 15 Cardozo Law Review 1875, 1879, n 23 (American judicial and academic comments in the same vein)"* at footnote 9, page 16.

[27] There is some dispute over whether this is the case in criminal trials (REDMAYNE, R. (2001) *Expert Evidence and Criminal Justice*. Oxford: OUP).

evidence of this being a live issue at trial. The most important issue is experience of patients with parasomnias outside the forensic setting, who will tell them about their behaviour during sleep in circumstances where there is no reason for them to fabricate details (it should be noted that not all nocturnal behaviour in a parasomniac will necessarily be due to parasomnia). The more extreme accounts are often written up in the academic literature, but there are not exhaustive lists of the behaviours that are consistent with sleepwalking or other parasomnias. The forensic sleep experts with a wider experience of sleep patients tended to have broader criteria for what is possible during a parasomnic episode. Working backwards from the legal definition of automatism does not necessarily help for two reasons: firstly, the special status that sleepwalking is given in the law as an example of automatism; secondly, the difficulties already covered in **5.7** in defining voluntary action. There are specific concerns about the increasing involvement of mental health professionals in the criminal justice system. One issue which applies to many areas of expert opinion is the internal politics of the field. There are considerable tensions between certain parties, and I mention this because this dynamic probably has an effect on the provision of expert evidence. The conflict led to a complaint to the GMC, which took about three years to resolve and led to the two experts involved not taking on any medico-legal work during that time[28]. I had a vivid illustration of the strength of feeling when I happened to include people from both sides in the same emailing – I received a terse email asking me to never put the two parties on the same email lists ever again. Similar situations have occurred in the areas of child abuse expert evidence, both on Munchhausen's Syndrome by Proxy (or

[28] Personal communication from parties involved.

factitious or induced illness as it more properly known) and shaken baby syndrome, where complaints to the GMC has been made by one side or another of a dispute. Judgments made about other expert witnesses often rely on newspaper reports and trial verdicts. Newspaper reports as discussed in Chapter 4 are a poor source of details about putative parasomnic episodes, and jury verdicts are not provided with the details of why the jury reached that verdict. It would be difficult to find out the specifics of expert testimony without either transcripts of the trials (which would not reveal all the details) or permission of the accused (which is rarely forthcoming in the author's experience during this study). In this author's opinion, a large scale study of transcripts is necessary to make any definitive judgments about the quality of expert evidence. Several participants emphasized about particular trials that they would not have believed the story if they had not interviewed the accused themselves.

Although it is for the lawyers to know and explain the law, I believe knowledge of the law is in practice important for expert witnesses to frame their testimony appropriately. A forensic psychiatrist would not dream of testifying about a defendant's capacity without reference to the *McNaughtan Rules*. This author's impression is that knowledge of the law did influence the expert witness's attitudes e.g. towards non-insane and insane automatism, which might well be expected to affect their expert testimony.

9.2 Assessment of the episode

The experts generally agreed in most areas. In the areas where they disagreed, the scientific evidence was not sufficiently robust to state whether one opinion was right or

not. There was great reliance on corroborating factors, because accurate assessment of the forensic episode was often impossible. Generally parasomnic episodes were seen as automatically constituting automatism, which was based on two considerations - biomedical understanding of parasomnia, and the folk psychology of sleepwalking. This raises the possibility that as our understanding of the nature of parasomnia evolves, the folk psychological view of sleepwalking could be proven wrong. Currently sleepwalking without legal automatism is a “black swan”. If the person is not in a state of automatism, then they aren’t having a parasomnic episode - just like it was considered that a black swan-like bird could not be a swan. Swans are always white, and sleepwalkers are always automatons.

9.2.1 Alcohol and sleepwalking: the scientific issues

The most bitterly contested area in forensic sleep is probably the role of alcohol in sleepwalking. Many of the criminal cases reported in the press (over 40%) have involved alcohol (see **4.2**, Appendix F). There was a fairly acrimonious exchange in *Medicine, Science and the Law* over a paper reporting the case of *Lowe*.[29] Lowe killed his father after consuming a considerable amount of alcohol (blood alcohol at the time of the offence was estimated to be 215mg/dl). This was the most contentious aspect of the case, with Mark Pressman (a clinical psychologist from the USA) considering that the amount of alcohol involved made the defence of sleepwalking “untenable”. Pressman criticized the APT used as unvalidated. He also points out the atypical features of the case – prolonged assault, seeking out his victim and attempts to conceal

[29] EBRAHIM, I.O. and FENWICK, P. (2008) Sleep-related automatism and the law. *Medicine, Science and the Law*, 48(2), pp. 124-136.

his crime by mopping up blood.[30] Pressman is a leading advocate for evidence-based medicine with reference to forensic sleep expert testimony. Evidence-based medicine[31] is not a requirement of the criminal courts, and the application of its principles is particularly problematic in the case of forensic sleep disorders, because there is a dearth of good quality research (see further discussion in Chapters 2 and 7). He dismisses the observation data supporting an association as weak, since it is not proven that any episodes after alcohol consumption are parasomnic. This same caveat applies to most data about parasomnia episodes. For example, the known sleepwalkers who drive automobiles were not being monitored during episodes.

Characterization of the actions of the putative sleepwalker according to the current incomplete understanding arguably contradicts *Daubert*[32] and evidence-based principles. In addition, it appears that the position of some of the critics is not that alcohol cannot trigger sleepwalking *per se,* but rather that it cannot be proven to trigger violent sleepwalking and that it should not support the defence of sleepwalking:

> 'In our opinion, claims of alcohol-induced sleepwalking violence or sleep sex lack any reliable scientific basis.'[33]

Note the precise language used - that there is no experimental evidence that alcohol causes sleepwalking violence or sleep sex. As noted previously, the position of

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[30] PRESSMAN, M.R., MAHOWALD, M.H., SCHENCK, C.H., CRAMER BORNEMANN, M.A., MONTPLAISIR, J.Y., ZADRA, A., PILON, M., GRUNSTEIN, R., BUCHANAN, P.R. and TACHIBANA, N. (2009) Sleep-related automatism and the law (letter to the editor). *Medicine, Science and the Law*, 49(2), pp. 139-43.

[31] Evidence-based medicine or EBM categorizes the evidence available to support medical practice. It should be noted that it does not exclude the role of expert opinion in formulating practice guidelines.

[32] *Daubert v Merrell Dow Pharmaceuticals, Inc* (1993) 113 S. Ct 2786

[33] PRESSMAN, M.R., MAHOWALD, M.W., SCHENCK, C.H., CRAMER BORNEMANN, M.A., BANERJEE, D., BUCHANAN, P. and ZADRA, A. (2013) Alcohol, sleepwalking and violence: lack of reliable scientific evidence. *Brain*, 136(2), pp. e229.

Pressman and Sleep Forensic Associates have changed over time (see **8.5.4**). Expert 29 stated to me

> 'we feel very strongly that alcohol really precludes the use of sleepwalking as a defence – which is not to say that it might not actually be, but you just can't tell. If there's that much alcohol involved, if you just look statistically at the violence, alcohol causes a lot more violence than sleepwalking does. And so I think that alcohol just should preclude the consideration of sleepwalking as a defence.'

Pressman states

> 'the hypothesis of alcohol-induced sleep-walking has no valid evidence-based scientific support and should be considered "junk science. In cases of severe alcohol intoxication, no other explanation for behaviors is required. In most jurisdictions voluntary intoxication is not a complete defense for criminal behavior and in many it provides no justification whatsoever. A suggestion - or legal defense in which alcohol intoxication is reported to cause sleepwalking - often appears to be a way of trying to sidestep the fact that the alcohol intoxication was voluntary and sometime reckless.'[34]

He finishes by quoting a review article by himself and Mahowald and Schenck

> 'Claims of alcohol-induced parasomnias presented solely to circumvent the laws of voluntary intoxication should be understood for what they are and rejected.'[35]

Certainly if it is impossible to distinguish alcohol intoxication from sleepwalking, this position is understandable. This emphasizes the potential importance of the APT, if it can truly distinguish between the two conditions.

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[34] PRESSMAN, M.R. (2011) Preface: Common Misconceptions About Sleepwalking and Other Parasomnias. *Sleep Medicine Clinics*, 6(4), pp. xiii-xvii.

[35] PRESSMAN, M., MAHOWALD, M.W., SCHENCK, C.H., and CRAMER BORNEMANN M. (2007) Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations. *Journal of Sleep Research*, 16, pp. 198-212.

The users of the APT argue that their position has been misrepresented. They respond that they are not purporting to be able to recreate the conditions nor the events of the evening. A positive APT simply means that the accused had the *potential* to have a particular reaction to alcohol. It does not prove that he had that reaction on the night in question. It helps to distinguish the acknowledged minority where alcohol exacerbates sleepwalking from the majority where it does not. Exploring the specifics of how the results of the APT are presented to the court was not within the remit of my thesis. What is even more controversial than alcohol as a trigger for sleepwalking is the possible effect of alcohol on the quality of sleepwalking episodes. Again the Sleep Centre Group experts are the dissenters[36] - they believe that alcohol can make sleepwalking episodes more complex. They too do not believe that alcohol should be an excuse where the accused knows that it triggers sleepwalking and harmful behaviour.

The experts who support the link between alcohol and sleepwalking also complain that it is very difficult to get articles discussing the role of alcohol in forensic sleepwalking episodes to be accepted by the major journals. This author encountered this difficulty when submitting a co-authored review article - the section about any possible link between alcohol and sleepwalking had to be removed before it would be accepted for publication.

The position that alcohol consumption should preclude the sleepwalking defence is based more in dogma than scientific fact, and encroaches into the jury's remit. There are two distinct issues here. Whether or not alcohol triggers sleepwalking is a descriptive question. Whether or not alcohol-triggered putative sleepwalking episodes

[36]Except Adrian Williams

should be an excuse in criminal law is a normative question. The former is an issue for medical science to answer. The latter is a question for the law to answer.

9.2.2 Alcohol and sleepwalking: the legal question

There is widespread concern about the acquittal of individuals who are intoxicated on the basis of flimsy medical evidence in some cases. The exact reasons for this are not known, but may include a combination of these factors:

- the confusing law on automatism;
- the standard and burden of proof for non-insane automatism and lack of *mens rea* defences;
- the nature of some of the expert evidence on the probability of alcohol causing sleepwalking
- problems with the directions to the jury
- lack of application of the strict law on alcohol and culpability
- reluctance to apply the special verdict
- reluctance to convict intoxicated defendants for serious crimes

There is probably no need for legislation to solve most of these problems. *Burgess* provides the precedent for sleepwalking being considered an insane automatism[37]. Since sleepwalking is an insane automatism, once the defendant has been found to be a sleepwalker, any examination of the cause of the particular episode is irrelevant to the legal question. Fault is irrelevant to insanity, whereas prior fault is an important bar to the defence of automatism.

There is an issue that the intoxicated individual is considered to have the *mens rea* for

[37] [1991] 2 WLR 1206

crimes of basic intent merely by the fact of voluntarily becoming intoxicated. There is mismatch between the fault element and the label (and also the punishment), and the Butler Committee suggested an alternative of ‘dangerous intoxication’ to remedy this.[38] The Law Commission in 1995 recommended there be no defence

> ‘where the automatism is caused partly by voluntary intoxication and partly by some other factor.’[39]

This doctrine would remove the difficulties for the jury in determining criminal responsibility where both alcohol and another trigger for sleepwalking are operating in a particular case.

9.2.3 Prior Fault

As discussed above, the issue of alcohol and sleepwalking is at least an issue of prior fault in most cases. Some experts believed that the requisite prior fault was sleepwalking triggered by alcohol. Others believed that that only sleepwalking associated with harmful behaviour triggered by alcohol satisfied the fault element. It may be that either answer is correct, depending on the fault element for the offence. There were other instances where prior fault was an issue, but it was either not raised or did not persuade the jury. Brian Thomas had omitted his medication for the weekend, as he felt it made him impotent (Riha reported the same issue with one of her patients). Machin, despite his longstanding history of sexsomnia, fell asleep next to a girl so drunk she could not stand. Nonetheless the jury acquitted him. [40] There is a need to ensure

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[38] BUTLER COMMITTEE. (1975) Report of the committee on mentally abnormal offenders. Home Office Department of Health and Social Security, Cmnd, 6244.
[39] LAW COMMISSION. (1995) *Legislating the Criminal Code: Intoxication and Criminal Liability*. Law Comm No 229. London: HMSO.
[40] BENTLEY, P. (2013) 'Sexsomniac', 40, is cleared of raping a 21-year-old at Butlins because he had 'no control over his actions while asleep'. *Daily Mail* (May 6th) News.

that parasomniacs with problematic sleep behaviour are aware of the dangers that they may pose to others (although most parasomniacs pose a very low risk) and themselves.

9.3 Scientific Controversies

It can be seen above that there are a few scientific controversies in the area of parasomnias and criminal responsibility, and that this has resulted in open conflict between expert witnesses. The resolution of these controversies, like many other scientific controversies, may not lie simply with future scientific research – rather there are political, ethical and social issues at stake. The ethical barriers may prevent research to demonstrate whether or not alcohol can precipitate sleepwalking, the effects of alcohol on the PSG, and to validate (or invalidate) the APT. The autopoietic model of the relationship between law and psychiatry would predict that the results of such research would make little difference. If there is a strong relationship between alcohol and sleepwalking, then resultant harmful behaviour during sleepwalking will be seen as a predictable result of voluntary intoxication.

If the best research designs are not possible on ethical grounds (and it must be remembered that the APT is already being administered to defendants, in circumstances where there must be exactly the same safety issues), then there are other studies which would be possible. An observational study of known sleepwalkers who drink with the use of Zeo unattended sleep monitors to confirm sleep stage would be possible and should confirm whether particular episodes of sleep behaviour are due to drunkenness or sleepwalking. Zeo sleep monitors are marketed directly to

consumers, but their accuracy in staging sleep has been validated[41] and various sleep departments in the UK use them, especially when a full sleep study is not warranted.

9.3.1 The application of science in the court-room

Although scientific disciplines seek to obtain “ultimate truth” about “reality” through the scientific method, nonetheless scientific knowledge is a social construction with various influences on the production and acceptance of scientific knowledge. Although their ontology is realist, there are epistemological difficulties in knowing the true nature of reality. Thus the provisional scientific knowledge we have is shaped by individual interpretation, as theories are under-determined. The literature on alcohol and sleepwalking illustrates this social construction vividly. The process of knowledge production and dissemination is subject to considerations other than the pure science. Peer review in small specialized areas can be subject to the influence of a few powerful academics. The philosophy of science describes different models for how scientific beliefs come to be both accepted and changed.

One area where the emphasis of the expert was crucial was the cause of the sleepwalking episode. Some experts focus on possible external triggers, which would point the jury towards a plain acquittal. These external triggers include the proximity of the victim in cases of sexsomnia. This definition of an external cause is arguably contrary to the policy issues behind the external cause doctrine, which depends on an unusual event occurring to an individual without a particular vulnerability. If we take the Canadian case of *Rabey,*[42] it is clear that ordinary events were not considered causes

[41] SHAMBROOM, J.R., FABREGAS, S.E. and JOHNSTONE, J. (2012) Validation of an automated wireless system to monitor sleep in healthy adults. *Journal of Sleep Research*, 21, pp. 221-30.
[42] (1981) 79 Dominion Law Reports 435

of non-insane automatism. This author would argue that parasomnias triggered by normal events like touching should not be considered non-insane automatisms.

9.3.2 Difficulties in interpreting the Alcohol Provocation Test

The use of the APT is a major bone of contention in UK forensic sleep practice. It is only used by one group of experts. The controversy over its use resulted in a General Medical Council investigation instigated by another expert witness. It has been criticized as unvalidated, as there has not been an investigation of the effects of alcohol on video-PSG of control subjects. This means that its probative value is unknown. However, its critics also concede that it's highly unlikely that ethical approval would ever be granted for such a study. Those critics also argue that there is a strong public policy reason for rejecting the parasomnia defence when alcohol intoxication is present. Pressman *et al* state

> 'A conservative estimate would be that alcohol alone is five million times more likely than sleepwalking or confusional arousals to be the cause of violent behavior.'[43]

This is a pertinent observation, but it would be fallacious to apply these statistics to the individual case; purely on the grounds of statistical likelihood, the sleepwalker might have no defence at all, given the apparent rarity of forensic sleepwalking episodes. The issue with alcohol and the sleepwalking defence is a decision for the jury, the court and the legislature to resolve. The role of the expert witness is to describe and apply the science, and not to address normative questions. However, the decision of Sleep Forensic Associates not to provide expert evidence about parasomnias in support of

[43] See footnote 35.

intoxicated individuals is principled and hard to criticize.

9.3.3 The means of resolving scientific controversy

It is apparent that the court is not the venue for resolving scientific controversy, even if judges are empowered and trained to take on the enhanced gatekeeper role as per the Law Commission's recommendation. Neither are the professional bodies well-equipped for such a task. However, scientific controversy is not an insoluble problem for the courts, and in the short term at least the legal process has to accommodate the uncertainties in the science. The major problems are the admissibility of weak medical evidence on behalf of the defence, and the burden and standard of proof required for the automatism defence.

9.4 Public and Parliamentary Debate on Automatism and Sleepwalking

9.4.1 Public Debate

The defence of automatism is rarely raised, so reporters are often unfamiliar with the relevant law, the concept or even the correct spelling of automatism in some cases. In Chapter 4 the media coverage of trials where the accused has relied on parasomnia in his defence has been described and analyzed. The sleepwalking defence has attracted increasing media attention, partly because it is becoming more common as defendants and lawyers are more aware of the possibility. There is also some wider debate about the automatism defence, with one example being the acquittal of Arnold Burton for

causing death by dangerous driving being reported in the press[44] and debated in online fora[45]. The case study at **7.4.1** illustrates the very real difficulties that victims and relatives have with the automatism defence.

9.4.2 Parliamentary debate

Harry Cohen, former MP for Leyton and Wanstead, proposed a Private Member's Bill to ban the sleepwalking defence, or non-insane automatism full stop, in cases of rape. It passed unopposed through its first reading, but lack of parliamentary time prevented its further passage. He had visited Australia where there has been similar public concern over the sexsomnia defence. His dismissal of sexsomnia full stop seems based on the opinion of Dr Cosmo Hallstrom whom he quotes in his speech in the Commons. Dr Hallstrom is not a specialist in either forensic psychiatry or sleep medicine (see **0.2**). His comments reflect the general reaction of many lay people to the sleepwalking defence - they believe that it is incredible and a product of an over-liberal justice system. The Ministry of Justice responded that in automatism

> 'There must be clear evidence to substantiate the claim that the conduct was involuntary and unintentional.'[46]

It appears from other comments that the change he intended might have been to ensure that sleepwalkers could only be acquitted by way of the special verdict, rather than denying them any defence at all.[47]

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[44] DAILY MAIL (2007) Death driver walks free due to 'automatism' condition. *Daily Mail* (Feb 21st).
[45] SAFE SPEED FORUMS. (2007) Death driver walks free due to 'automatism'. [online] Available at: http://www.safespeed.org.uk/forum/viewtopic.php?f=5&t=12519. Accessed: Aug 9th 2014.
[46] KOSTER, O. (2008) 'How could the man who 'raped' me be cleared because he was sleepwalking'. *Daily Mail* (Nov 15th).
[47] BBC NEWS. (2008) 15th Oct 2008-last update, *End sleepwalk rape defence - MP*. Available: http://news.bbc.co.uk/1/hi/uk_politics/7671963.stm.

9.5 Criminal Law Theory

9.5.1 Definition of automatism as 'total loss of control'

This definition is quite problematic. It has been described as "harsh", "very harsh" and "unduly harsh" by legal commentators. As Mackay notes

> '[A]s the Law Commission remarked, the governing principle should be that a person is not guilty of an offence if, without relevant fault on his part, he cannot choose to act otherwise than as he does'. Such an approach, as the Law Commission openly recognises, would ensure that the defendant such as the one in *Broome v Perkins* would not be convicted merely because, despite his hypoglycaemic state, he was able to 'drive' erratically for some five miles. Clearly his condition had not deprived him of all control of the motor vehicle which is why the Divisional Court refused to regard the case as one of automatism. However, if this was the true basis of automatism, then the defence would be restricted to spasms, convulsions, and reflex acts which is clearly not the case.'[48]

One way to try to partially reconcile the case law is to argue that the strict definition of "total loss of control" only applies to driving cases[49] – however, as Herring states, there is nothing in the decision in *Attorney-General's Reference (No 2 of 1992)*[50] that restricts it to such cases.[51] Further, in *Coley* it is stated that a total loss of control is required for automatism; in the case of Coley this was due to an external cause, namely cannabis.

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[48] MACKAY, R. (1995) *Mental Condition Defences in the Criminal Law*. Oxford: Clarendon Press, p
[49] SIMESTER, A. & SULLIVAN, G.R. (2003) *Criminal Law Theory and Doctrine*. Oxford: Hart; WILSON, W. (2003) *Criminal Law*. 2nd Ed. Harlow: Longman.
[50] [1994] QB 91
[51] HERRING, J. (2010) *Criminal Law: Text, Cases and Materials*. 4th Ed. Oxford: OUP.

This definition has been shaped by decisions like *Isitt*[52] and *Attorney-General's Reference (No 2 of 1992)* that would arguably be better decided on the basis of the lack of an external cause. The replacement of 'effective lack of control' would be a satisfactory solution. The Law Commission's proposed new mental condition defence would not eliminate this problem as total loss of the relevant capacities is required.[53]

9.5.2 Directions to the Jury

The factors that influence judges in directing the jury to consider insanity or not need to be studied. Does the fact that there were no recorded special verdicts in parasomnia cases after Lowe up until 2013 reflect the directions given to the jury? There are two issues with the directions given by the judge to the jury. The first is that the combination of directions for insane and non-insane automatism becomes quite complicated for both the jury and judge. There is no specimen direction in the Crown Court Bench Book for cases where the findings of both insanity and sane automatism are open to the jury. The direction given by HHJ Henriques in Lowe (see Appendix C) was incorrect - insane automatism comes under the *McNaughtan Rules*, and so this would not require that "his state of mind was such that his ability to exercise voluntary control was totally destroyed". It would only require that he was affected by sleepwalking so "as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong".[54] A total loss of control would be more difficult for the defence to prove. HHJ Henriques is not the only judge to make this mistake as

[52] (1978) 67 Cr App R 44
[53] LAW COMMISSION. (2013) Criminal Liability: Reforming Insanity and Automatism. A Discussion Paper. London: Law Commission, p.93.
[54] (1843) 10 Cl & F 200 at 210

demonstrated by the Court of Appeal in *Roach*[55] – it did not comment on the same incorrect direction by the trial judge, that insane automatism requires a total loss of control. There is a comment in the Law Commission discussion document about both insane and non-insane automatism being defined as a total loss of control.[56] The New Zealand case of *Cottle* is cited; however, the comments of Gresson, P., do not diverge from the English understanding of automatism:

> 'automatism [is] a condition resulting in the doing of an act without conscious volition', that might occur due
>
> (a) to a healthy mind as in somnambulism
>
> (b) to a mind temporarily affected by a drug, an intoxicant or a blow
>
> (c) to a mind where there is present an abnormal condition capable of designated a mental disease in which case the *McNaghten* rules would apply.

It was pointed out by Leigh that

> 'the *McNaghten* rules were originally formulated in answer to a question dealing with insane delusions, and indicated that in his view they were never intended to apply to a case in which an act was done without conscious volition. In His Lordship's view, the *McNaghten* formula is addressed only to a warping of the cognitive faculties and presupposes that the doer was conscious of his actions. Gresson, P., viewed with apprehension any attempt to extend the rules in application to cases of lack of volition.'[57]

However, the Law Commission elsewhere confirms that as per *Sullivan* and *Burgess*,

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[55] [2001] EWCA Crim 2698
[56] LAW COMMISSION. (2013) Criminal Liability: Reforming Insanity and Automatism. A Discussion Paper. London: Law Commission, p.99.
[57] LEIGH, L., 1962. Automatism and Insanity. *Criminal Law Quarterly,* **5**, pp. 160, 166.

insane automatism is defined by the *M'Naghten Rules*. At Para 5.19 it states:

> 'if the defendant claims that his or her loss of control was due to a condition which constitutes an "internal" malfunctioning of the body amounting to "a disease of the mind", as very widely construed, that constitutes a plea of insane automatism within the *M'Naghten Rules*.'

Similarly at Para 5.30 where it states:

> 'One problem with this narrow approach remains, which is that the level of loss of control for sane automatism is quite different from that for insanity. This is a consequence of the different kind of capacity that is at issue. For insanity, the relevant loss of capacity must be either that the defendant did not know the nature and quality of his or her act, or that if he or she did, he or she did not know that it was wrong. Clearly, there will be cases in which a defendant continues to exercise some degree of control over his or her movements while lacking these capacities. He or she will nevertheless be entitled to rely on a defence of insanity. With that same lack of capacity he or she would not be entitled to rely on a plea of sane automatism. The courts would no doubt justify that distinction on the basis of the different verdicts that result.'

The trial judge in *Burgess* stated

> 'the medical evidence adduced concerning automatism amounted to evidence of insanity within the *M'Naghten Rules* and was not merely evidence of non-insane automatism.'

Similarly, in *Sullivan* it was stated that epilepsy was an internal cause and therefore an insane automatism:

> ‘a disorder which so impaired the appellant's mental faculties of reason, memory and understanding, that at the time of the commission of the act he did not know what he was doing or, if he did know, that he did not know that it was wrong, was a " disease of the mind " causing a " defect of reason " within the *M'Naghten Rules,* whether the aetiology of the impairment was organic or functional and whether it was permanent or transient and intermittent; and that, accordingly, despite a reluctance to attach the label of insanity to a sufferer from psychomotor epilepsy, the proper verdict on the evidence was the special verdict of not guilty by reason of insanity’.(p 156)

The confusion caused by the usage ‘insane automatism’ is apparent, and hence this author’s preference for simply using ‘automatism’ and ‘insanity’, rather than ‘non-insane automatism’ and ‘insane automatism’.

The second is the issue of why the precedent of *Burgess* is not followed and juries restricted (in cases where the illegal act is not in dispute) from returning a plain acquittal. Since 2011 there have been some special verdicts returned in parasomnia cases, and it would be interesting to find out why this is the case. In the case of Brian Thomas, the issue of the special verdict was left down to the opinion of the forensic psychiatrist, authorized under Section 12 of the Mental Health Act 1983, who deemed that hospitalization was inappropriate. The prosecution offered no further evidence and the jury was then directed to acquit. In the case of Zack Thompson, the judge ruled that if the defendant was relying on sleepwalking, then a plain acquittal was not possible. This led to the defendant pleading guilty. This author was not able to explore this further without access to judges.

In particular, this author wonders if juries are given instructions about the criteria for

judging whether an automatism has an internal or external cause. On the basis of *Rabey* and policy concerns, this author believes that external events that are commonplace should not be the basis of sane automatism, as they reveal an abnormal propensity to react to normal stimuli. The proximity of another person as a trigger for sexsomnia should not be regarded as an external factor. For policy reasons, alcohol-induced sleepwalking should arguably either not be the basis for an automatism defence or should be strictly an insane automatism.

9.6 Policy issues

9.6.1 Proposals for reform: review of previous proposals from the Butler Committee and the Law Commission

The Butler Committee proposed that non-insane automatism be restricted to

> 'transient states not related to other forms of mental disorder and arising solely as a consequence of a) the administration, maladministration or non-administration of alcohol, drugs or other substances or b) physical injury'.[58]

This definition covers among other conditions iatrogenic hypoglycaemia and *delirium tremens.* They also proposed the defence of 'not guilty on evidence of mental disorder'. The Law Commission rejected the expansion of the definition proposed by the Butler Committee, which would have included cases like *Clarke*[59]. They were concerned that this

> 'this might be to subject too many acquitted persons to a possibly stigmatising and

[58] See footnote 38.
[59] (1972) 56 Cr. App. R. 225

distressing verdict and to inappropriate control through the courts' disposal power'. [60]

Interestingly, this type of expansion is what the Law Commission now proposes (see below). Further the Butler Committee recommended flexibility of disposal, which was implemented by the Criminal Procedure (Insanity and Unfitness to Plead) Act 1991.

The Law Commission's Draft Criminal Code proposed that 'mental disorder' should include

> 'a state of automatism (not resulting only from intoxication) which is a feature of a disorder, whether organic or functional and whether continuing or recurring, that may cause a similar state on another occasion' (Clause 34).

Clause 33(1) states that a person will not be convicted:

> 'if he acts in a state of automatism, that is, his act:-
>
> (i) is a reflex, spasm, or convulsion; or
>
> (ii) occurs while he is in a condition (whether of sleep, unconsciousness, impaired consciousness or otherwise) depriving him of effective control of the act.'[61]

So both bodies proposed that incapacity due to a condition likely to recur come under a new mental condition defence to ensure social control. Additionally both would ensure that the diabetic driver would have recourse to a mental condition defence (albeit via different means). The most recent Law Commission proposals which are in the same vein are discussed below in detail.

9.6.2 Policy Issues

Many of the concerns raised in public and parliamentary debate are based on

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[60] LAW COMMISSION (1989).Criminal Law: A Criminal Code for England and Wales. Report and Draft Criminal Code Bill. Law Comm No 177. London: HMSO, at Para 11.27.
[61] See footnote 58.

reasonable policy grounds. As Hart states,

> ‘Any increase in the number of conditions required to establish criminal liability increases the opportunity for deceiving courts of juries by the pretence that some condition is not satisfied.’[62]

The press reports often pick up on the issue of the amount of alcohol consumed before the episode in question. Virtually all the forensic sexsomnia cases this study identified involved alcoholic intoxication.

Other criticisms are less well founded, of course. The complainant (or other eye-witness) often states that the accused did not appear to be asleep. This may or may not be significant. Many people have not witnessed sleepwalking, and do not know the spectrum of behaviours possible. Also the person in a NREM parasomnia is not sleeping as such, they are in a state somewhere between NREM sleep and wakefulness. By contrast, during an episode of RBD, the person remains asleep.

9.6.3 Disposal

Most psychiatrists feel that the insanity defence is not appropriate for sleepwalkers because they do not feel they have a role in the management of sleepwalkers and that a hospital order would have no other benefit. It is questionable whether or not a sleepwalker could be disposed of via a hospital or a restriction order. It would be for the courts to decide whether or not sleepwalking was a ‘mental disorder’, but the opinion of psychiatrists would no doubt be influential.

By contrast most non-psychiatrists were opposed to the special verdict because they consider it is only for those with psychiatric disorders, and they tended to be unfamiliar

[62] HART, H.L.A. (1968) *Punishment and Responsibility*. Oxford: Clarendon Press.

with the option for outpatient supervision. Medico-legal training is the key to overcoming this, as this attitude probably affects the testimony given. The US experts were firmly opposed to the insanity verdict, because of the more punitive and inflexible approach towards the person acquitted on grounds of insanity in the USA. The UK does not have the same inflexibility of disposal (see Chapter 3), so their arguments do not apply to the sleepwalker on trial in the UK.

The tension between the role of a clinician towards patients and the role of an expert witness to the court is something the courts have been alive to since the emergence of 'alienists' in the 19th century. Where the expert witness feels that the accused genuinely has no recollection for the events and that they are out of character, there may well be a desire to help the individual. In some cases this may result in an incremental extension of the range of sleepwalking behaviour to cover all the accused's actions, which may well be plausible given the gamut of behaviour demonstrated outside the forensic setting. However, whilst possible the actions may be very improbable.

Some of the expert witnesses felt sympathy for those who had no memory of the criminal act in question, and were in a Kafka-esque situation. These individuals did not deny their actions and sought an explanation which in the circumstances was more likely to be alcohol-related than parasomnic. As one interviewee pointed out, when the average person gets drunk, they don't believe they will commit a major crime, and the level of culpability may be low. Since these defendants have no alternative defence, they argue that they were sleepwalking. It is arguably wrong to state that these individuals are "trying it on" where parasomnia cannot be ruled out.

9.6.4 Proposals for Reform

The law on automatism is both confused and confusing. As discussed above, the current definition of automatism as a total loss of control is inconsistent with many of the cases that have been decided. One approach to reconcile these contradictions is to divide cases classified as automatism into "true" automatism, or involuntariness, (a denial of the *actus reus)* and unconsciousness (a denial of *mens rea).* This confusion is partly down to the evolving understanding of automatism in the common law. The early articles about automatism use phrases like 'conscious volition'[63] that demonstrate no separation between consciousness and voluntariness and often refer to a denial of *mens rea*. In *Quick,*the prosecution counsel comment that

> 'When *mens rea* is required, somnambulance would be automatism, and the Crown would have to prove *mens rea*.'[64]

Viscount Kilmuir LC commented in the earlier case of *Bratty* that

> 'if, after considering evidence properly left to them by the judge, the jury are left in real doubt whether or not the accused acted in a state of automatism, it seems to me that on principle they should acquit because the necessary *mens rea* - if indeed the *actus reus* - has not been proved beyond reasonable doubt.'[65]

This suggests that the denial of the *actus reus* was considered. However, in the case of *Sullivan,* it was commented that

> 'The unusual feature of the present case is that the whole of the *actus reus* occurred within a period of unconsciousness'. [66]

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[63] LEIGH, L. (1962) Automatism and Insanity. *Criminal Law Quarterly*, 5, pp. 160-74.
[64] [1973] QB 910, p.913.
[65] *Bratty v Attorney-General for Northern Ireland* [1963] AC 386, p. 407.
[66] [1984] AC 156, p.166.

This implies that automatism was still not seen as a denial of the *actus reus*. Smart in 1987 states that

> 'The difficulty is that voluntariness of conduct is not invariably accepted as part of the *actus reus* but is sometimes thought to relate to *mens rea*.'

She adds

> 'Another view enquires whether the doctrine of voluntary conduct is itself accepted.'[67]

One of the issues which unexpectedly arose was the definition of sleepwalking. The limits of sleepwalking behaviour have not been defined – which is an epistemological rather than ontological issue. Partly because of the legal baggage associated with the term 'sleepwalking' and partly because of the current state of sleep science, in the forensic arena certain episodes are included under the umbrella of 'sleepwalking'' which are debatable. It is uncontested (and not unique to forensic sleep episodes) that the ultimate truth of what happened on the night in question is often impossible to ascertain with any certainty. A further difficulty is that there are several different definitions of automatism, both in the case law and in the scientific literature.

9.6.5 Law Commission Proposal on Automatism and Insanity

The Law Commission examined the law on insanity and automatism as part of the tenth programme of consultations. A scoping paper was published in July 2012 after it became apparent that the issues required further definition with legal practitioners. A discussion paper was published in 23rd July 2013[68]. They acknowledge the same difficulties as my interview data demonstrate:

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[67] SMART, A. (1987) 'Criminal responsibility for failing to do the impossible'. *Law Quarterly Review*, 103(Oct), pp. 532-63.
[68] LAW COMMISSION. (2013), see footnote 53.

- the law lags behind psychiatric understanding, and this partly explains why, in practice, the defence is underused and medical professionals do not apply the correct legal test;
- the label of “insane” is outdated as a description of those with mental illness, and simply wrong as regards those who have learning disabilities or learning difficulties, or those with epilepsy;
- the case law on insane and non-insane automatism is incoherent and produces results that run counter to common-sense.

The Law Commission proposes a new test for capacity. The accused must be able:

- rationally to form a judgment about the relevant conduct or circumstances;
- to understand the wrongfulness of what he or she is charged with having done; *or*
- to control his or her physical acts in relation to the relevant conduct or circumstances.

Further, once the evidential burden had been satisfied, the burden of proof would be on the prosecution to prove that the accused had the requisite capacities beyond reasonable doubt,. The new special verdict for the defendant acquitted on the basis of the proposed statutory defence would be ‘not criminally responsible by reason of recognized medical condition’. Thus both psychiatric and medical conditions will be assessed by the same functional test. The defence of automatism would be retained, but for very limited circumstances; the “spasms, convulsions, and reflex acts” mentioned by Mackay (see **5.7**) when not caused by a chronic condition as per *Pull* (who had multiple sclerosis),[69] and other rare occurrences like a head injury or a swarm of bees

[69] GUARDIAN. (1998) News in brief: Disabled driver cleared. *Guardian* (March 21st).

attacking.[70]

There is an argument that more modest reform would be more likely to become law. As was suggested in the Law Commission's Draft Criminal Code, simply changing the definition of automatism from "total loss of control" to "effective loss of control" would eliminate some of the problematic decisions with diabetic drivers. This could be achieved through the common law. Instructions to the judiciary about the greater use of the special verdict in cases of parasomnia would mean that weak medical evidence would be less likely to secure an acquittal. The main difficulty with the special verdict is the term "insanity", which would require statutory change. There are valid objections to the expansion of the remit of the special verdict. One objection is increased cost - the risk of recurrence of harmful behaviour is extremely low, so supervision and treatment is not cost-effective from a harm prevention perspective. Another objection concerns the potential for state abuse of powers for social control, which echoes the concerns of the Law Commission above. A final objection relates to the impact of the special verdict; despite being nominally an acquittal, being not found not guilty by reason of insanity has the same effect as a conviction as regards the Sex Offenders' Register and it is discoverable on an enhanced criminal records check.

[70] Obiter dicta by Humphreys J in *Kay v Butterworth* (1945) 61 Times Law Reports 452.

Chapter 10: Conclusions

Review of Themes of Thesis

10.1 Difficulty of Diagnosing Sleepwalking

Sleepwalking and sexsomnia are diagnosed primarily on the clinical history. Many of the other parasomnias have diagnostic features on video-PSG. Although the sleepwalker may have some fragmented memory of his activities or come to full wakefulness away from where he fell asleep, he will not have a full recollection of his activities. The detailed sleep history will be from other people - bed partners, family, friends and housemates/flatmates. This also provides valuable corroboration for the defendant's condition. It is rare for full sleepwalking episodes to occur during sleep studies - there are non-specific markers whose significance is questionable. The other parasomnias tend to have particular features during sleep studies, e.g. lack of atonia with RBD.

It is common that the importance of nocturnal episodes is only appreciated once the index forensic episode occurs. As mentioned in **1.11**, sleepwalking is probably much underreported and only a small proportion of sleepwalkers present to doctors. It is not considered necessary for most sleepwalkers to seek medical attention (and the NHS could not cope with the numbers of patients). It is recommended where the behaviour is problematic. Although there are risk factors for violent sleepwalking, there is no "personality type".

10.2 Difficulty of Determining Parasomnic Episode

As previously noted, the defendant who claims a parasomnic episode has two hurdles: firstly, he has to prove that he suffers from a parasomnia; and secondly, that he was

suffering from a parasomnia at the time of the illegal act. It was emphasized many times to me that it is impossible to determine for sure what happened on the night (usually) in question, but this is not an unique nor even uncommon issue in criminal law (usually because of lack of evidence). However in the case of parasomnias, even when there are reliable eye-witness accounts of the behaviour, it can be impossible to state definitively whether or not the episode was parasomnia or not. This author found marked disagreement between eminent colleagues about the most contentious cases. The difficult situation for the parasomniac is often his actions are not in question - but he will rarely be able to contradict the prosecution's version of events. This is even more problematic in cases of homicide where the only witness is dead. So he is in the situation described by Moore:

> 'Cases of sleepwalking, post-hypnotic acts, and similar acts are often sufficiently complicated that they appear to be intelligently directed actions. In such cases, one is loathe not to attribute these acts to some agency, but if not to X [the defendant], then to whom?'[1]

The victim will often express frank disbelief that the accused could have "been asleep". This is unsurprising given that even experienced clinicians cannot say with any certainty in borderline cases whether or not the episode in question was sleepwalking or not.

10.3 Difficulty with Alcohol and Sleepwalking

There are two distinct questions relating to alcohol and sleepwalking. The first question is: 'can alcohol precipitate sleepwalking?' If this is answered in the positive, the second question is: 'is alcohol-induced sleepwalking a valid legal excuse?' Despite the lack of

[1] MOORE, M.S. (1979) Responsibility and the unconscious. *S Cal L Rev*, 53, pp. 1563-1678.

definitive scientific evidence to prove or disprove a link between alcohol and sleepwalking/sexsomnia, there is a general consensus that:

- The more the accused has to drink, the less likely sleepwalking/sexsomnia and the more likely intoxication is the explanation for any behaviour
- There are considerable policy issues to allowing the defence of alcohol-induced sleepwalking/sexsomnia
- The law already excludes self-induced conditions from forming the basis of an excuse
- The burden and standard of proof in non-insane automatism or lack of mens rea defence is problematic
- The lack of social control where non-insane automatism or lack of mens rea is argued is concerning

The Alcohol Provocation Test (APT) cannot be said to have any probative value in ascertaining whether an episode was triggered by alcohol.

10.4 Difficulties with Public Perception

The media coverage of sleepwalking trials is often superficial and sensationalist. Although justified concerns about the role of alcohol are often raised, often there is little balance in the inclusion or exclusion of relevant medical details. The emphasis on the victim's narrative may reinforce the incredibility of the defence. Additionally there are examples of gross misreporting. This has made the sexsomnia defence so unacceptable that one defendant forcefully denied arguing it.

10.5 Difficulties with Expert Evidence

The quality of expert evidence could not be reliably judged in this study, as detailed

assessments of putative parasomniacs were not generally available to me. The judgments of expert witnesses on their peers was more often based on secondary sources, rather than seeing or hearing their expert evidence. The newspaper reporting is not a reliable basis for assessing an expert witness, although it is valid to look at the spread of an expert witness's cases. There were some comments about experts making assertions in court that they would not make to a peer, which does support the need for further research of expert evidence (see conclusion 1 below). The major issue was the APT which, despite being unvalidated and not generally accepted, was being admitted as evidence.

There was largely a consensus about the principles of assessment of forensic sleep disorders. Any efforts to produce guidelines need to avoid being influenced by internal professional politics, whilst bearing in mind genuine policy issues. Failure to recognize policy issues results in a flawed technocratic process that ignores the needs of the courts.

10.6 Difficulties with the Law

The difficulties with the law have been apparent for some time. If the law on sleepwalking is settled, it is certainly not being applied. Alcohol-induced sleepwalking often persuades the jury to acquit. Untried scientific techniques are being admitted in evidence. Prior fault appears to be frequently ignored. *Burgess* is not being applied as the case of Brian Thomas illustrates. Since sleepwalking does constitute legal insanity, the defence should not be permitted to argue lack of *mens rea* without the jury considering the special verdict. External triggers are being confused with an external cause.

The Butler Report and the Law Commission Draft Criminal Code included recommendations for reform in this area. The current consultation has been conducted meticulously, and the recommendations have been bold and imaginative. The commission has drawn on the work of Hart, Schopp and Bratman in recognizing the importance of practical reasoning to criminal responsibility. Most importantly, the legal position with regards to medical conditions would be clarified and appropriate measures for social control guaranteed if the Law Commission's proposals became law.

10.7 Conclusions

1. The core of forensic sleep expert witnesses work to a high standard.

The experts I interviewed were generally the core of the expert witnesses, so this author cannot make general comments about all expert witnesses in the field (however, even the expert witnesses I interviewed who had just appeared in one case were of a similar standard). Without exception they were very thoughtful about their expert witness work, and were acutely aware of their responsibilities to the court. The majority held a position somewhere in the middle on the contentious issues. There were people with positions to either extreme, and they tended to work together – however I found no evidence of "group think". In both cases there was, in my opinion, a reasonable basis to their positions. However, the bulk of the medico-legal work appears to go to experts holding one of the two extreme positions. It is important to note that extreme is being used in the descriptive rather than normative sense – it is not in the interest of the courts or justice to exclude expert testimony simply because it does not conform to the

consensus position. There are no easy solutions to resolving conflicts over controversies like the role of alcohol and sleepwalking.

One major issue is that the fact that the expert witness instructed by the defence counsel is often denied access to the main witness to the actions of the defendant, the victim. Without eyewitness accounts, it is impossible to give a proper assessment of whether or not the accused was in a parasomniac state. Witness statements gathered by the police will not be directed to the important issues as an interview by a sleep expert would be.

The main caveat is that I was not able to get access to confidential medico-legal reports nor court transcripts, so I could not examine the quality of the evidence given directly. There is no reason to suspect that their responses at interview were disingenuous, but it would be useful to examine the specifics of how they present their evidence to the jury. This is particularly true when testifying about controversial issues like alcohol and sleepwalking.

2. The expert evidence largely revolves around expert opinion.

Sleep science is still a relatively young field, and it is remarkable how much about sleepwalking and other parasomnias are as yet unknown – even the phenomenology of sleepwalking is still under-researched. This is why it is important that the forensic sleep expert witness should generally be a clinician who sees a large number of patients with parasomnias. The tests rarely provide concrete evidence for a clinical diagnosis of sleepwalking in particular – they only support the clinician's findings and rule out other causes or contributing factors e.g. sleep apnoea.

The main problem relates to the issue of alcohol and sleepwalking. The APT is

unvalidated and so its use in criminal trials is problematic. If its ability to sway juries exceeds its probative value, then it should not be allowed in expert testimony. Given that its probative value is unknown, then it should be excluded.

It is right to consider the policy issues of alcohol and sleepwalking, as in most cases where sleepwalking is raised the defendants would have no other defence. They do not contest the illegal act, for which they have no memory, and voluntary intoxication is no excuse. The defence does not succeed that often, but nonetheless it may well damage public confidence in the criminal justice system. The fact that alcohol is an ‘external factor’ and so may increase the likelihood of a plain acquittal under the current law only exacerbates the problem.

There are other issues relating to the complexity and duration of episodes that would be consistent with parasomnia, and whether or not there could be “islands of lucidity”. These complex episodes are certainly not typical of the average sleepwalker, but this does not mean that sleepwalking should be automatically ruled out. Pressman points out that the accumulation of unlikely events makes the defence increasingly tenuous. In those circumstances, the standard of proof becomes very much a live issue.

Even where it can be proven that the accused suffers from a parasomnia, the key issue is whether or not the illegal act in question was committed during an episode. This will always be a matter of opinion. The expert can state whether or not the behaviour is consistent with parasomnia, on the basis of the facts that are known or assumed.

3. All expert witnesses acknowledge their duties to the court.

All the expert witnesses I interviewed were acutely aware of their duty to the court rather than a particular party. I heard the mantra many times, and it has been impressed on

them many times no doubt. For that reason it was necessary to go beyond simple avowals. Certainly there was nobody who was a “gun for a hire”, ready to take whatever position counsel required of them (although this accusation was made of others by some experts). However, when certain experts are known to take particular views that will favour defendants or the Crown, it then becomes a matter of the parties selecting the correct expert witness. This seems to be the case with the trial of Zack Thompson at Nottingham Crown Court, where the spokesperson for the police announced that their success in securing a conviction was down to finding the right expert. If an expert consistently appears for one side or another, this *may* be an indication that their testimony is not impartial. An alternative perspective would be that each side should choose the expert that will test the evidence most effectively. However, that does lead to the “hired gun” model.

The suggestion from the Minnesota group and others that a single expert be appointed would require a major shift from the current adversarial system. It would also create problems of its own, with fewer opportunities to effectively challenge scientific evidence (see **7.4**). This proposition should be seen in light of the US system, where it appears that character assassination trumps a proper assessment of the scientific evidence being given. UK-based experts do not have the same level of concern about the adversarial system. This suggestion is unlikely to be adopted, and also unlikely to resolve the issues with expert evidence.

4. The GMC is not the appropriate venue for deciding the professional standards for expert witnesses.

In this author’s opinion, the GMC is not equipped to address whether or not a doctor is

performing his duties as an expert witness properly. It also seems ill-suited to issue sanctions, given that a doctor's expert witness work generally does not reflect on his clinical competence (unless it is a case of inadequate clinical assessment related to expert witness work). This author would argue that the decision of the High Court in *GMC v Meadow*[2] is correct; that unless a judge refers an expert witness, professional bodies should not intervene in issues relating to expert evidence. Sadly the Appeal Court overturned this decision.

5. Regulation of expert witnesses is practically non-existent.

The courts' approach to expert evidence was described by the Law Commission as 'laissez-faire'. The Law Commission clearly considers that recent miscarriages such as *Clark* and *Cannings* were due to this attitude[3]. It also mentions other cases where expert evidence was found to be flawed, notably *Dallagher* (ear print evidence) and *Harris and others*[4].

Most of the expert witnesses belong to professional bodies – however, regulation of their expert witness work *per se* has no specific body and an expert witness is not required to belong to any professional body. For there to be any consistency, this should change and all expert witnesses should belong to a UK professional body – preferably one specific to the field in which they claim to be experts. This need not be a statutory body as such, but certainly one which carries out sufficient scrutiny of the members' qualifications. The current system is unable to exclude even the unqualified

[2] *Meadow v General Medical Council* [2006] EWHC 146 (Admin)
[3] [2003] EWCA Crim 1020; [2004] EWCA Crim 1
[4] [2002] EWCA Crim 1903; [2005], EWCA Crim 1980

posing as experts.[5] The Netherlands scheme, although a voluntary register, enables assessment of expert witnesses and revalidation.

This should not be a mechanism for excluding experts from overseas, whose input may be essential in a small field of expertise. An appropriate professional body could also help the courts by deciding on protocols for investigating forensic sleep disorders, criteria for the public funding of sleep studies, and guidelines for the necessary data to satisfy the evidential burden in cases of sane automatism. Expert witnesses may belong to the medical Royal Colleges, the Royal Society of Medicine, the British Psychological Society and the British Sleep Society, among others. The latter three are not involved in the regulation of expert witnesses, although the British Psychological Society does produce guidelines and run courses for expert witnesses.

It is for the courts to determine the standards to which expert witnesses must adhere and them alone. However, this puts the onus on the criminal justice system to have scientifically literate judges and lawyers. Sleepwalking cases are rare, and it is unlikely a lawyer will be involved in more than one case in his lifetime, so I believe that coaching of counsel would improve the standard of representation and the testing of the scientific evidence. This could be done either by a single joint expert, the experts instructed by a particular side, or a third, court-appointed, expert.

It would be expected that the courts would defer to the professional bodies on matters of scientific validity, with certain caveats. It would be important to ensure that regulation by professional bodies did not degenerate into a peer review that simply enforced a consensus position, becoming an exercise in internal politics rather than science. In a

[5] LAW COMMISSION. (2009) *The Admissibility of Expert Evidence in Criminal Proceedings in England and Wales*. 190. The Law Commission.

small field, where all the experts know each other and have a vested interest in accrediting and supporting each other, input from overseas may be essential.[6]

6. The disposal of defendants and medical opinions about sleepwalking has an effect on expert testimony.

The beliefs, correct and incorrect, of expert witnesses about the options for disposal had an effect on their feelings about the appropriateness of the insanity verdict. There was an awareness of the stigma related to the label of insanity. There was some evidence that expert evidence was affected by these considerations, with some experts emphasizing certain triggers for parasomnias as external factors. The number of special verdicts returned suggests this may have affected jury verdicts.

Another alternative for those who are in a sleep-related state, but appear to have some level of consciousness and therefore responsibility e.g. sleep-related dissociation, is the suggestion of a third way of a diminished or partial responsibility plea for all offences (not just homicide). This could be seen as an unsatisfactory fudge, given that a sleepwalker is generally seen as unequivocally not criminally responsible, a malingerer as very definitely criminally responsible, and someone in a dissociative state as probably legally insane. Given the options for disposal available to judges in England & Wales under the special verdict, this reform may be irrelevant in England & Wales.

7. Sleepwalking is seen as a classic automatism yet it is treated differently from every other cause of automatism.

For historical and linguistic reasons, the status of sleepwalking as an automatism has always been protected, even when the case law has excluded other states which

[6] HOUSE OF COMMONS SCIENCE AND TECHNOLOGY COMMITTEE. (2004-2005) *Forensic Science on Trial*. London: The Stationery Office, at para 136.

resemble sleepwalking from the ambit of legal automatism. In essence, sleepwalking is a status defence, with the Latin maxim *'in somno voluntas non erat libera'* (a sleeping person has no free will) summing up the folk psychological view. This is especially problematic given the difficulties in differentiating sleepwalking from other causes of nocturnal or sleep-related behaviour e.g. sleep-related dissociation or a fugue state. There are potential public safety issues due to Burgess being elided. Although the risk of recurrence of sleep-related violence is minimal, outpatient supervision seems advisable to ensure compliance with treatment.

8. The law on automatism and insanity is confusing and confused and causes many of the problems related to the sleepwalking defence.

In the case of psychiatric disorders, there are a set of cogent and accepted rules for the legal concept of insanity to guide the expert testimony of psychiatrists. This is not the case for medical disorders which cause sane automatism. Additionally the expert witnesses on parasomnia will generally not be as familiar with the courts as forensic psychiatrists. There was often confusion about what automatism is - many forensic sleep experts believe that it is a denial of the *mens rea*, rather than the *actus reus*. This misconception was also repeated in the literature (see **9.6.4** for further discussion). The law is confusing for lawyers and the judiciary too. There is no specimen direction in the Crown Court Bench Book for directing the jury in cases where the findings of both insanity and sane automatism are open to the jury, and there are examples from major trials of incorrect directions being given (see Appendix C). The effect of these faulty directions is not known (and jury research is effectively forbidden under section 8 of the Contempt of Court Act 1981), but it is reasonable to surmise that the laypersons of the

jury would find the law confusing.

9. The definition of automatism as total loss of control is problematic and inconsistently applied

The two concepts of involuntariness and unconsciousness are conflated by the courts. Additionally, simple lack of *mens rea* appears to be commonly argued in practice. The solution to the difficulties would be two reforms (both incorporated in the Law Commission's proposals):

- Incorporating both "internal" and "external" causes of lack of incapacity into a new mental condition defence, with the remit of automatism being much narrower
- Mandating that defences based on a lack of *mens rea* due to a mental condition must rely on the new mental condition defence

10. Reform of the law would enable greater consistency and *might* improve public confidence.

Despite the precedents of *Quick*, *Sullivan* and *Burgess*,[7] defendants pleading the sleepwalking defence when exonerated nearly always receive a plain acquittal rather than the special verdict. If all cases of automatism (bar possibly the "classic" examples of a clear external cause like a swarm of bees attacking) were subsumed into the special verdict, the flexibility of disposal options under the Criminal Procedure (Insanity and Unfitness to Plead) Act 1991 (as amended by Section 24 of the Domestic Violence, Crime and Victims Act, 2004) mean that there should not be inappropriate detention of those suffering with a parasomnia. Also the different burden and standard of proof with

[7] [1973] QB 910; [1983] 3 WLR 123; [1991] 2 WLR 1206

the insanity defence would mean that the defendant could not rely on simply raising a reasonable doubt. There has been academic debate about this historical exception to the presumption of innocence, but it is in the instance of sleepwalking justified on policy grounds. However, it may be that the defence is lack of *mens rea* rather than non-insane automatism. Again, this is an issue for judges to address, who have the power to order that the issue of insanity must be considered whether non-insane automatism or lack of *mens rea* is being argued.

Given the public attitude to the insanity defence, restricting juries to this mode of acquittal may not affect public confidence. It would ensure that there was some monitoring of individuals who may pose an increased risk to the public (although there is no good evidence to suggest that they do). Again, the change in the burden and standard of proof may or may not improve public confidence, but it would certainly ensure that there is a firmer basis to acquittals.

Another more controversial possibility for reform would be the criminal responsibility of the voluntarily intoxicated. It has been suggested in the past that there be specific statutory offences covering those committing illegal acts whilst intoxicated, rather than simply relying on the distinction between crimes of basic intent and specific intent. This would match the punishment more closely to the level of culpability; that is, punishing the conduct rather than the result.

The Law Commission's proposals are wide-ranging and ambitious, but this is necessary to bring the law into line with modern scientific thinking and provide for appropriate labelling and disposal. The proposed new mental condition defence would cover all cases where parasomnia is the basis of the defence to ensure social control. That is this

author's preferred solution, although he recognizes there is a good argument for deciding on a case by case basis, e.g. on an assessment of continuing danger, whether a plain acquittal or the special verdict is appropriate, on the grounds of cost and stigmatisation. Alternative possibilities if the necessary legislation is not forthcoming would include: changes through case law, particularly re-defining automatism as "effective loss of control"; excluding alcohol-induced parasomnia as an excuse; and consistent direction to juries to consider parasomnias as insane automatisms.

10.8 Recommendations

This author's recommendations are:

- formation or recognition of a body that will hold a register of expert witnesses and formulate forensic sleep disorder assessment guidelines (the current multi-disciplinary body, the British Sleep Society, could not take on the latter function without at least some initial funding);
- a statutory register of expert witnesses, or at least a requirement for membership of a professional body in the UK (this would be self-funding);
- extension of the special verdict to cover all medical conditions;
- introduction of a test for criminal responsibility that is related to capacity, rather than diagnosis or the current definition of 'total loss of control- at the very least, substituting 'effective loss of control';
- changing the name of the special verdict to reduce stigmatization;

- re-examining the legal issues about alcohol and sleepwalking; and
- further research into the effects of alcohol on sleepwalking.

Many of these recommendations coincide with the Law Commission's proposals.

10.9 Directions for future research

The particular difficulties faced when addressing the sleepwalking defence require continuing commitment to research. There is ongoing research particularly by the Montreal group (led by Jacques Montplaisir) into improving the diagnostic utility of the video-PSG for sleepwalking. Forensic sleep research has otherwise been relatively static in recent years, with Mark Pressman decrying the paucity of original research.[8] Case reports are the most frequent type of publication, but they only tend to expand the possibilities of sleepwalking behaviour. What is needed is more research to study the sleep behaviour of typical sleepwalkers. Ohayon's telephone studies are an excellent example of such research, but have the inherent limitations of the method.[9] There should be more prospective research to follow up sleepwalkers and determine what kinds of problematic behaviour occur and how frequently. Research to directly examine any link between alcohol and sleepwalking would be extremely valuable for the courts, given the frequency that defendants are intoxicated, but the ethical barriers are considerable. Further study of the pathophysiology of parasomnias is needed; studies of

[8] PRESSMAN, M.R. (2009) Sleepwalking deja vu. *Sleep*, 32(12), pp. 1542-1543.
[9] OHAYON, M., CAULET, M. and PRIEST, R. (1997) Violent Behavior During Sleep*. Journal of Clinical Psychiatry*, 58, pp. 369-76; OHAYON, M.M., and SCHENCK, C.H. (2010) Violent behavior during sleep: prevalence, comorbidity and consequences. *Sleep Medicine*, 11(9), pp. 941-946.

N=1 cannot be generalized to the entire population of those suffering sleepwalking or sleep terrors. In particular confirmation of different phenotypes of sleepwalking would potentially help the courts with risk assessment.

The probative value of particular evidence needs to be evaluated, so that the value of expert testimony can be more objectively assessed. This means that dubious techniques could be excluded, and testimony would be based less on opinion and expert “prestige”.

My future plans include:

- further analysis of press reports of parasomnia trials
- studying trial transcripts and attending trials to study the provision of expert evidence directly
- studying trial transcripts to examine the directions given to juries
- review of trial transcripts by expert witness panel
- qualitative semi-structured interviews of sleepwalkers and bed partners
- sleep diary study of sleep behaviour and precipitating factors
- postal survey of sleep behaviour
- website for sleepwalkers
- formulation of guidelines for forensic sleep experts
- studies on alcohol and sleepwalking

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Glossary

I have divided the glossary in medical and legal sections for ease of use. Some words are in both sections.

Legal

Actus reus

- Literally ‘guilty [or blameworthy] act’, the *actus reus* is the conduct element of the crime. The *actus reus* depends on the offence. The *actus reus* requires that the act be voluntary, although with some crimes the voluntary act may not be simultaneous with the harm. An example is where the person drives whilst being aware of a condition like epilepsy which during the course of the journey causes him to lose control. Here the voluntary act is starting the journey, even the involuntary actions which caused the crash occurred later. Legally, driving is seen as a continuing act.

Automatism

Legal automatism has been defined in similar terms in several different cases. All the definitions mean either involuntary or unconscious behaviour. It has variously been defined as:

- ‘total destruction of voluntary control’(Lord Taylor CJ in *Attorney-General’s Reference (No2 of 1992)*
- “acting involuntarily in the sense that his actions are independent of his will, and therefore not subject to any conscious control” (Tompkins J in *R v Campbell*)
- “an act which is done by the muscles without any control by the mind such as a spasm, a reflex action or a convulsion; or an act done by a person who is not

conscious of what he is doing such as an act done whilst suffering from concussion or whilst sleepwalking" (Lord Denning in *Bratty v. Attorney General for Northern Ireland*);

- "the mind does not go with what is being done" (Viscount Kilmuir L.C. in *Bratty v. Attorney General for Northern Ireland*);
- "all the deliberative functions of the mind must be absent" (North P. in *R v Burr*)

The US Model Penal Code excludes from criminal liability:

A reflex, convulsion, movements during unconsciousness or sleep, conduct during hypnosis or due to hypnotic suggestion, and any movement that otherwise is not the product of the effort or determination of the actor, either conscious or habitual.

Burden of proof

- The burden of proof in criminal trials is on the prosecution – they have to prove the accused's guilt. The defence has the burden of proof with the insanity defence. The prosecution has the burden of proof with the sane automatism defence (once the evidential burden has been satisfied).

Evidential burden

- In sane automatism, the defence must present sufficient evidence for the defence to put before the jury. Generally medical evidence is required.

Illegal act

- The illegal act is generally the *actus reus* e.g. homicide, although a further requirement relevant to crimes of strict liability is that the act be voluntary. An act does not constitute a crime without the necessary mental element and voluntariness.

Mens rea

- Literally ‘guilty [or blameworthy] mind’, the *mens rea* is the mental element of the crime. *Mens rea* may be categorised as intention (or purpose), knowledge, recklessness and negligence (US Model Penal Code Section 2.02). A crime of strict liability requires no *mens rea*, just an *actus reus.*

Obiter dictum/dicta (plural)

- Literally a ‘saying by the way’. It is an observation on a legal question arising out of a case, but not one that applies to the actual decision. It is persuasive, but is not binding, for other judges.

Objective standard

- The standard of the reasonable man, or the “man on the Clapham omnibus”. An example of an objective standard is dangerous driving, which is assessed by the standards of the reasonable man, not the standards of the defendant. Compare subjective standard.

Ratio or ***ratio decidendi***

- The reason for the legal decision in a case. Compare *obiter dicta*.

Section 12 psychiatrist

- A psychiatrist approved under Section 12 of the Mental Health Act 1983, whose opinion is necessary for a Hospital Order to be made.

Special Verdict

- The statutory special verdict must be returned by a jury (so trial by indictment in a crown court). The jury returns a verdict of not guilty by reason of insanity, and the accused is acquitted but subject to the disposal powers of the Criminal Procedure

(Insanity and Unfitness to Plead) Act 1991 (as modified by the Domestic Violence, Crime and Victims Act 1984). The verdict is ‘not guilty by reason of insanity’.

Strict Liability Offence

- Strict liability offences only require an *actus reus,* not a *mens rea*. This makes automatism one of the few defences available, since automatism is a denial of *actus reus.* Many driving offences are strict liability, on the ground that their main purpose is to protect the public.

Subjective standard

- A subjective standard relies on the individual perspective or assessment. An example of a subjective standard in law is recklessness. The defendant is assessed on the risks as he saw them. Some legal tests are a mixture of objective and subjective standards. The test for the level of force required in self-defence is objective, but the assessment of the risk posed to the defendant is subjective.

Medical

AASM

- American Academy of Sleep Medicine (http://www.aasmnet.org/). Its website states: "*Headquartered in Darien, IL, the American Academy of Sleep Medicine (AASM) is the only professional society dedicated exclusively to the medical subspecialty of sleep medicine. As the leading voice in the field of sleep medicine, the AASM sets standards and promotes excellence in health care, education and research. Established in 1975 as the Association of Sleep Disorders Centers, 10,000 physicians, researchers and health care professionals and 1,500 sleep centers are currently members of the American Academy of Sleep Medicine. Members specialize in studying, diagnosing and treating disorders of sleep and daytime alertness such as insomnia, narcolepsy and obstructive sleep apnea.*"[739]

Alien hand phenomenon aka the alien hand syndrome, the alien-limb syndrome and the alien-limb phenomenon

- There is a number of alien hand phenomena associated with different neuropathologies. It can affect upper or lower limbs, with complex reflex movements or dyspraxias (**Alters**
- These are alternative personalities to the host personality in dissociative identity disorder (aka multiple personality disorder).

Automatism

Medical automatisms are:

- Stereotyped non-purposeful behaviour occurring during psychomotor seizures.

Body Mass Index (BMI)

[739] http://www.aasmnet.org/aboutaasm.aspx (accessed Oct 8th 2012)

- A measurement which is used as a proxy for body fat measurement, it is calculated by the weight in kilogrammes divided by the height in metres squared. The normal range is 18.5 – 25. A high BMI or collar size (17 or over) is associated with obstructive sleep apnoea/hypopnoea syndrome, because obesity increases the tendency of the airway to obstruct.

Continuous positive airways pressure (CPAP)

- A treatment used for obstructive sleep apnoea/hypopnoea syndrome (OSAHS). A snug-fitting mask provides constant pressure to prevent collapse of the upper airway due to relaxed muscles and the pressure of the soft tissues of the neck. The mask may go over the mouth and nose or the nose only. It is very effective for the treatment of OSAHS, but the main problem is toleration of the treatment. Compliance with treatment can be monitored, and is required for HGV drivers, for example.

Electrocardiogram (ECG)

- The electrocardiogram or ECG (EKG in USA) is a recording of the electrical activity of the heart.

Electroencephalogram (EEG)

- The electroencephalogram or EEG is a recording of the electrical activity of the brain. Different electrode combinations look at different parts of the brain.

Environmental dependency syndrome

- The individual affected by environmental dependency syndrome relies on cues from his environment to adjust his behaviour or to accomplish certain tasks.

Evidence-based medicine

- Evidence-based medicine has been defined as “the judicious use of the best current available scientific research in making decisions about the care of patients”. It involves four steps:
  - formulate a clear clinical question from a patient's problem
  - search the literature for relevant clinical articles
  - evaluate (critically appraise) the evidence for its validity and usefulness
  - implement useful findings in clinical practice

- One characteristic is reference to meta-analyses and databases of systemic reviews such as the Cochrane Collaboration. Attention is paid not just to the published evidence but also the quality of that evidence. The different grades of evidence are detailed in Appendix R.

General Medical Council (GMC)

- The General Medical Council is the professional regulatory body for the medical profession in the UK. Until 2012 the GMC provided panels and ran disciplinary proceedings, but this is now the purview of the **Medical Practitioners Tribunal Service** (see below) since June 2012.

Kleine-Levin Syndrome

- A syndrome of excessive sleepiness and cognitive and mood changes. It is often associated with increased appetite and libido. It is cyclical, with patients usually completely normal between episodes. It is sometimes referred to as “Sleeping Beauty” syndrome.

Malingering

- This is the deliberate simulation of a condition for a secondary gain e.g. monetary

gain or escaping criminal punishment.

Medical Practitioners Tribunal Service (MPTS)

- The MPTS was launched in June 2012. According to their website:

  "The establishment of the MPTS is part of GMC's wider programme of reform of medical adjudication. It was set up to: provide better separation between the GMC's complaints and investigation functions and adjudication, and to take over responsibility for the day to day management of hearings, panellists and their decisions.

  The MPTS is funded by the GMC but we are accountable directly to Parliament, to which we will report on an annual basis. We will report to the Council of the GMC twice a year." (Available at http://www.mpts-uk.org/about/1603.asp; accessed 15th Aug 2014)

Obstructive sleep apnoea/hypopnoea syndrome (OSAHS); related terms obstructive sleep apnoea/hypopnoea (OSAH), obstructive sleep apnoea (OSA), obstructive sleep apnoea syndrome (OSAS)

- Obstructive sleep apnoea/hypopnoea syndrome (also known as obstructive sleep apnoea syndrome) is a syndrome of reduced or absent breathing during sleep causing excessive daytime sleepiness. It is characterised by collapse of the upper airway (throat) during inspiration. Various substances will exacerbate this by relaxing the muscles e.g. alcohol and sedatives.

Parasomnia

- 'unpleasant or undesirable behavioral or experiential phenomena that occur predominantly or exclusively during the sleep period'
- 'a group of sleep disorders broadly defined as undesirable physical or experiential

events that occur within entry into sleep, within sleep, or during arousals from sleep' (AASM)

Parasomniac

- A sufferer from parasomnia

PSG or **polysomnography**

- Polysomnography – a procedure used for the diagnosis of sleep disorders which involves monitoring of brain activity, breathing, heart rate, movement of legs, eyes and chest. The exact number of electrodes varies between units, particularly the number of electroencephalogram leads. Often simultaneous video recording takes place.

Rapid eye movement (REM) sleep

- A form of sleep characterised by paralysis of most of the muscles, except the eye muscles and the muscles of respiration. This is when complex dream mentation occurs.

Sleep-disordered breathing

This is an umbrella term covering:

- OSAHS (see above)
- Central or mixed apnoea
- Upper airway resistance syndrome (UARS)
- Snoring

Upper airway resistance syndrome (UARS)

- Patients with UARS present with increased respiratory effort and airflow limitation during sleep associated with an increase in the upper airway resistance. Patients

usually complain of daytime sleepiness, fatigue, snoring, and difficulty to maintain sleep. However, they do not satisfy the criteria for OSAHS. Their arousals on EEG are related to an increasingly negative oesophageal pressure during inspiration demonstrating an increased resistance in the upper airway.

Utilisation behaviour

- Utilisation behaviour is similar to environmental dependency syndrome, except that it is the use of a particular tool or object, which is triggered by its presence within sight of the sufferer. If, for example, the person sees a toothbrush, he will involuntarily start to brush his teeth.

Video-polysomnography (video-PSG)

- The combination of video recording of the patient with polysomnography. Used in diagnosing sleep disorders by monitoring the patient, usually during a night's sleep. Sometimes the patient is deliberately sleep-deprived to improve the diagnostic accuracy. Arousals during sleep, by a sudden loud sound for example, will also help the diagnosis of disorders of arousal. The procedure takes about an hour to set up, because of the application of a number of sensors and testing of them. Different units may have slightly different protocols, particularly the number of EEG electrodes used. Analysis is time-consuming, and some units use computerised analysis. This is not considered sufficiently reliable for forensic use.

Zeo

- Zeo sleep monitors are devices marketed primarily to consumers for assessing their sleep patterns. However, their accuracy of assessing NREM sleep stage

has been validated, and they are being used in sleep medicine when a full polysomnogram is not necessary.

Appendices

A) Research Materials (information sheet, consent form, interview schedule and questionnaire for forensic sleep experts)

B) Sample Interview

C) Direction to the Jury in *Lowe*

D) Material from Mark Pressman re Falater

E) Nodes Used in NVivo

F) Press Reports Database

G) List of UK Sleep Centres

H) Sleep Research Time Line

I) Neurolaw Web Resources

J) CPS Response re Expert Witness Register

K) Sample Epochs and Hypnogram

L) Basic Neuroscience

M) Hansard 15th Oct 2008

N) Rape (Defences) Bill

O) Early Day Motion 463

P) Savarin's Account of the Monk in "Physiologie du Gout" (from Paradox Lost)

Q) My Comments on reform of the Law on Insanity and Automatism

R) Levels of Evidence in Evidence-Based Medicine

S) Publications Arising From My Research

T) Seminal Sleepwalking Cases

A) Research Materials

Information sheet for participants:

Semi-structured interview of sleep experts about the framing of expert evidence to parasomnias in criminal trials

This research involves the administration of a qualitative questionnaire incorporating vignettes and subsequently the administration of a qualitative semi-structured interview, using the results of the questionnaire as a focus for discussion, to forensic sleep experts from various base specialties to discuss their expert evidence to support or refute parasomnias where this is the basis for a mental condition defence. This study is for a PhD project and it is being administered by Dr John Rumbold, a PhD candidate with the School of Law, Keele University. The subjects are those who have been an expert witness or prepared a report for at least one prosecution where sleepwalking was alleged and was the basis of a defence, other experts on parasomnias, and lawyers who have been involved in sleepwalking trials.

You will have been contacted beforehand for permission to be interviewed and the questionnaire sent to you for completion and return before the interview. Where a telephone interview has been arranged, I would ask you to return the enclosed consent forms by post, as this is an ethics committee requirement. The interview typically takes 30 minutes (but if you can spare up to an hour this would be useful in case it takes longer) and will be exploring how expert evidence is given. The interviews will be recorded and the interviewer will be taking short notes to aid administration. There may be follow-up questions (by follow-up interview in person or by telephone, or via email) in some instances if the interviewee is amenable, where there are particular issues that need clarifying or expanding on.

The interviews will not require any facts about the defendants which aren't in the public domain, only your opinions and previously aired facts. If you have any concerns after the interview that you may have divulged confidential information, this can be erased from the transcript which will be sent to you after the interview. You will be asked to sign two copies of a consent form, one for you to keep and one for our records. The data will be used for a PhD thesis on the provision of expert evidence in criminal trials where a parasomnia is alleged. In addition if we intend to use an anonymised quote from your interview in a publication, it will only be with your further express and specific permission.

Biographical details, and details of trials, will be removed from transcripts where possible to preserve anonymity – however the aggregation of data can result in re-identification so absolute anonymity cannot be guaranteed with qualitative interviews. The recordings and the transcripts will be kept securely for at least 5 years – the recordings in a locked cabinet and the transcripts in password-secured memory. The data may be kept long-term for future research.

My PhD supervisors are Professors Martin Wasik (School of Law: m.wasik@law.keele.ac.uk) and Clive Hawkins (School of Medicine, Neurology: c.p.hawkins@pmed.keele.ac.uk). **Please feel to raise any issues at any time, including after the conclusion of the interview.**

What if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researcher who will do their best to answer your questions. ***You should contact*** **Dr John Rumbold *on* j.rumbold@ilpj.keele.ac.uk**
If you remain unhappy about the research and/or wish to raise a complaint about any aspect of the way that you have been approached or treated during the course of the study please write to Nicola Leighton who is the University's contact for complaints regarding research at the following address:-

Nicola Leighton
Research Governance Officer
Research & Enterprise Services
Dorothy Hodgkin Building
Keele University
ST5 5BG
E-mail: n.leighton@uso.keele.ac.uk
Tel: 01782 733306
Investigator:
Dr John Rumbold, MB, ChB, GDL (Keele)
PhD Candidate
Research Institute of Social Sciences, Claus Moser Building
Keele University, Keele ST5 5BG

Consent form:

CONSENT FORM

Title of Project: Semi-structured Interview of Forensic Sleep Experts
Name of Principal Investigator: Dr John Rumbold

		Please tick box
1	I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	□
2	I understand that my participation is voluntary and that I am free to withdraw at any time.	□
3	I agree to take part in this study.	□
4	I understand that data collected about me during this study will be anonymised before it is submitted for publication.	□
5	I agree to the interview being audio recorded and transcribed.	□
6	I agree to allow the data collected to be used for future research projects.	□
7	I agree to be contacted about possible participation in future research projects.	□

_____	_____	_____
Name of participant	Date	Signature

_____	_____	_____
Researcher	Date	Signature

1 copy for interviewee, 1 copy for researcher

CONSENT FORM (for use of quotes)

Title of Project: Semi-structured Interview of Forensic Sleep Experts
Name of Principal Investigator: Dr John Rumbold

		Please tick box
1	I agree for any quotes to be used	□
2	I don't want any quotes to be used	□
3	I want to see any proposed quotes before making a decision	□

_____	_____	_____
Name of participant	Date	Signature

_____	_____	_____
Researcher	Date	Signature

1 copy for interviewee, 1 copy for researcher

Interview Schedule
Possible questions that will be asked:

How many times have you given expert evidence about parasomnias or written reports for criminal proceedings? (where there is more than one episode, ask for responses relating to last case)
How did you find the experience?
Did you have any concerns about how your evidence was received? (if the case went to trial)

Does the nature of the criminal trial present any problems or dilemmas for you?
Did you find it easy to fit your medical knowledge of parasomnias and assessment of the accused to the demands of the criminal trial?
What did you think of the evidence given by the expert witness for the other side? (if read/heard) Were there any issues producing an agreed report?

Was the illegal act in question (as opposed to the crime)? If so, what was your assessment of whether or not the accused committed the illegal act in question?
What was your assessment of his mental state and which mental condition defence (if any) he/she could legitimately present? Will you present expert evidence if you are not certain that the accused was in a parasomniac state? Do you think that possible but not probable sleepwalking should be the basis for an acquittal? (Ask for reasons for their answer)
What was your assessment of whether or not the accused committed the crime in question? If you're confident that the accused was sleepwalking at the time of the illegal act, are you confident that they are not criminally responsible? Do you believe that a sleepwalker is always blameless for his actions?

What is your opinion of the division between insane and non-insane automatism? Do you have any opinion about the different directions and burdens of proof?
Do you believe that sleepwalkers who commit illegal acts should be treated as sane or insane by the courts? (Ask for the reasons for their answer)
Do you find the label of insanity problematic? Do you think that sleepwalkers who have committed illegal acts need to be confined, for either the safety or the confidence of the public?

How confident are you in your evidence? Do you share that confidence in the wider sleepwalking expert witness community? Is the quality of expert testimony consistent? What criteria do you think forensic sleep expert witnesses should meet? Do you think it makes any difference if the expert witness is a respiratory physician, forensic psychiatrist, clinical psychologist or neurologist by training?

How easy would it be for someone to fool an expert witness about a sleepwalking defence?
How confident are you in the jury's ability to understand and apply your evidence during the trial? What elements of expert testimony (if any) most influence juries?
Do you think that the forensic sleepwalking expert community in the UK is polarised at all? Do you think there is any polarisation across the Atlantic? Do you feel there are any issues about experts from other jurisdictions providing expert testimony?

Research Questionnaire (reformatted to fit portrait)

This qualitative questionnaire aims to find out the attitudes, perceptions and beliefs of forensic sleep experts by recording Likert-type scale responses on vignettes based on reported case histories.

These responses will inform the subsequent questions in the semi-structured qualitative interviews, whether in person or by telephone. Where a telephone interview has been arranged, I would ask you to return the enclosed consent forms by post, as this is an ethics committee requirement.

The questionnaire should take about 10 - 20 minutes to complete.

Professional experience:

What is your specialty by training? Please tick appropriate answer.

- Respiratory physician……
- Psychiatrist…..
- Neuropsychiatrist…..
- Forensic psychiatrist…..
- Forensic neuropsychiatrist…..
- Neurologist…..
- Psychologist…..
- Other (please specify): …….

How many cases of forensic sleepwalking have you been involved with (whether preparing reports for criminal proceedings or giving expert evidence at trial)?.....

How often do you get enquiries from solicitors about forensic sleep assessments?

…….per week/month/year (delete as appropriate)

In what proportion of the enquiries you receive is sleepwalking is a genuine possibility?.....%

How many patients with parasomnias do you see in your clinical (non-forensic) practice per year, roughly?.....

Hypothetical Scenarios (based on reported cases)

Vignette No. 1

A man drove 10 miles through at least one set of traffic lights and then assaulted his parents-in-law with a knife he found in the house, killing them both. He did not remember anything about the episode, but went to the police station saying “I think I’ve killed somebody”. He had a strong history of sleepwalking, and had been under considerable personal stress. The night of the episode he had been drinking, consuming 4 cans of beer. He was normally a gentle person and had a good relationship with his in-laws. He had been due to visit them the next day to ask for a loan to cover his considerable gambling debts.

Please tick the appropriate boxes for the likelihood in your opinion:

	Not at all likely - beyond reasonable doubt that it wasn't the case	Possible but unlikely - would provide reasonable doubt that it wasn't the case	Reasonably likely, but not on the balance of probabilities	Likely on balance of probabilities	Very likely
That this situation represents a sleepwalking episode?					
That this is sleepwalking if the accused had drunk 12 cans of beer instead of just 4?					
That this is sleepwalking if the accused had a poor relationship with his in-laws and had argued with them on the night of the episode?					
Another cause such as a dissociative episode or an alcoholic black-out is more likely than sleepwalking.					
The accused is potentially dangerous to the public.					
The accused has no responsibility for his actions at all.					

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Vignette No. 2

The accused went to the house of his father and subjected him to a prolonged assault, for which he had no memory. The injuries resulted in death. There were poorly organised attempts at mopping up blood. The accused had drunk a considerable amount.

The accused had a history of alcohol abuse and violence related to alcohol. He also had a history of night time wandering after alcohol, which had not been violent in the past. Video-polysomnography supports the diagnosis of sleepwalking.

Please tick the appropriate boxes for the likelihood in your opinion:

	Not at all likely - beyond reasonable doubt that it wasn't the case	Possible but unlikely - would provide reasonable doubt that it wasn't the case	Reasonably likely, but not on the balance of probabilities	Likely on balance of probabilities	Very likely
That this situation represents a sleepwalking episode?					
That the complexity of his actions rules out sleepwalking as a cause?					
Another cause such as a dissociative episode or an alcoholic black-out is more likely than sleepwalking.					
The accused is potentially dangerous to the public					
The accused has no responsibility for his actions at all.					

General questions about the sleepwalking defence

Please tick the appropriate box expressing your degree of agreement with the following statements as per this **7 point** Likert scale:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Automatism is a denial of *mens rea* (guilty mind or fault element).							
Sleepwalking should be treated as a sane automatism and thus acquitted, as sleepwalkers do not pose any danger to the public.							
Legal automatism is defined as a total destruction of voluntary control.							

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Whether or not the acts of the accused are purposeful is irrelevant to determining whether or not he was sleepwalking							
Expert witness testimony about sleepwalking *must* only be based on scientific evidence							
The normal character of the defendant is never relevant to the acts committed whilst sleepwalking							
Complex tasks rule out sleepwalking.							
Public safety and confidence demands that there must be follow-up and monitoring of people acquitted of crimes on the basis of sleepwalking.							
The sleepwalker *ought* to have the burden of proving that he was sleepwalking at the time of the act.							
The acts of the accused must have no plausible motive, to be excused as genuine sleepwalking.							

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Most claims of sleepwalking in the criminal setting are bogus.							
The unconscious motivations of a sleepwalker are irrelevant to determining whether or not they were sleepwalking at the time of the act.							
Substantial alcohol consumption makes the defence of sleepwalking impossible to prove reliably.							
Sleepwalking is a defence of unconsciousness rather than involuntariness							
Sleepwalking should be treated as an insane automatism and therefore sleepwalkers not acquitted but found not guilty by reason of insanity.							

Multiple response options:

Please put the letter pertaining to the correct answer by each question (each answer may be used more than one or not at all).

A: Providing sufficient evidence for the issue of automatism to be put to a jury (evidential burden)

B: Providing medical expert evidence for a cause of automatism

C: The burden of disproving the defence is on the prosecution

D: The burden of proving automatism is on the defence

E: The defence must prove the defence on balance of probabilities

F: The prosecution must disprove the defence beyond reasonable doubt

G: The defence must prove the defence beyond reasonable doubt

1. Before the defence of sane automatism can be put to the jury, this is always required of the defence:……

2. Before the defence of sane automatism can be put to the jury, this is nearly always required of the defence:……..

3. In the defence of sane automatism, the burden of proof is where?.....

4. In the defence of insane automatism, the burden of proof is where?.....

5. In the defence of insane automatism, what is the standard of proof?.....

6. In the defence of sane automatism, what is the standard of proof?.....

Ethics Review Panel Approval Letter

4 February 2011

Dr John Rumbold
c/o RI – LPJ
Claus Moser Building
Keele University

Dear John

Re: 'Qualitative interviews of forensic sleep experts to examine the framing of evidence supporting mental condition defences'

Thank you for submitting your revised project for review.

I am pleased to inform you that your project has been approved by the Ethics Review Panel.

Amendments to your project after a favourable ethical opinion has been given or if the fieldwork goes beyond the date stated in your application (February 2013) you must notify the Ethical Review Panel via Michele Dawson.

If you have any queries, please do not hesitate to contact Michele Dawson in writing to m.dawson@uso.keele.ac.uk

Yours sincerely

Dr Nicky Edelstyn
Chair – Ethics Review Panel.

cc RI Manager

B) Sample interview

Transcript No 8

Sleep physician with base specialty neurology in a DGH with a large catchment area (the sleep unit has 5/6 beds).

(sound check)

Have you made assessments [for the courts] of parasomnias?

I haven't done a medical report on anyone with a parasomnia.

But you have about other sleep disorders?

I have, yes. I've done one case of a patient who fell asleep at the wheel of a car - well that was my view, the other neurologist took a slightly different perspective and thought she'd had a solitary epileptic seizure – and that case went to court. We had a bit of fun with QCs and so on and so forth in the Brighton County Court and I've done one or two other cases – most of the cases I do are general neurology cases but I've done one or two other sleep cases. I suspect with time I might get more, because I've been doing sleep medicine as a sub-speciality for about 3 years now.

You said to me earlier that you steer clear of sleepwalking cases – why's that?

I don't steer clear of them, I just keep my head down for all medico-legal stuff at the moment um…because it's very time-consuming and I'm very very busy clinically at the moment. I'm doing about 7 clinics a week, so I just haven't got the time to do it. I don't

steer clear of it for any other reason. I think if my clinical workload dropped down a bit more, I'd probably do a bit more medico-legal work.

There seems to be a problem sometimes of getting expert witnesses for that reason, I had a diabetologist who just didn't want to do it because of the amount of time it takes – what do you think would be the solution to that? If there is one.

Well I don't think there is – I think, you know, the more expert one is, it implies you're seeing a lot of patients, so you're not going to have so much time to do it. What does sometimes happen is that people get a taste for doing it, and having been a busy clinician they then make a switch and become a very busy medico-legal physician or what have you. Yes, I haven't made that switch at the moment, not sure I will, but if an interesting case of sleepwalking was offered me, I wouldn't turn it down (smiles). Because I think, I don't think there can be many people in the country who've seen more cases of sleepwalking than I have. I reckon I've seen getting on for 200 since I've started this clinic, because that's my particular interest. There'll be a few, I mean I'm sure Irshaad Ebrahim has seen **a lot**,

Adrian [Williams of St Thomas' Hospital] as well

Adrian Williams, of **course** Adrian's seen a lot but of the mid-generation I don't think there's many, there aren't many neurologists into sleep medicine, and sleepwalking as an area within sleep medicine, it's not been a big area until recently.

I think in America, neurologists are much the main specialty…

Yeah, yeah.

*Because certainly Mark Mahowald is probably **the** guy and he doesn't get involved in expert witness work at all, as a matter of principle.*

Yes. Interesting. What particular principle's that?

Um…he thinks it's 'prostituting the science'.

Right…

I haven't spoken to him, although I will be as he's agreed to an interview

Does he think the same about private medicine?

*Probably **not,** being American, I don't know…*

So when you gave evidence about this sleep case, there was obviously this disagreement….how did you find the overall experience of that? What was your impression?

Impression of what?

Oh, of the whole sort of process? The criminal process – appearing at the trial and having to give evidence.

Well it's not the first time I've given expert evidence at a trial – I've probably done 5 or 6 cases, where I've had to appear. Um…..a combination of enjoyment and extreme anxiety at some points but I seemed to make my points quite well, it was against quite a good QC on the other side, who had a few tricks up his sleeve, but er I found it a challenge. But no, it was, it was fun! But at times rather tense.

And um, do you think that your evidence was received well?

Oh it was received well. And we thought we were going to win, but we lost in the end. As we were on the side of the prosecution and the jury decided to give er…the accused the benefit of the doubt in the end. But we thought we had an open and shut case. [non-applicable conversation]

Did you find any dilemmas when you were an expert witness about the whole process? Your role in the…

I think the big issue, that one can fall into a trap of, is the, is still despite the Wolff reforms, there is still an adversarial environment. And being instructed by one side, which you often are, you may be tempted to kind of um overplay your particular views rather than take a balanced view, and that would be **encouraged**, **of course** by the side you're working for. Or **discouraged**, if you're saying something they don't want to hear! I think provided you remain honest to your views and you don't overstate them and you justify the view that you take, **I** don't find that it's a big problem for **me**.

Do you think the barristers keep you on the straight and narrow, do you think they're good at testing the honesty and that of your opinion?

NO! (quite emphatically) (laughs) I think barristers do quite the opposite! Barristers try, as do solicitors on the side they're working for, they will try and get you to support their particular prosecution or defence, and I have experienced sort of more insidious tactics in that respect, used by the prosecution in fact, on one particular occasion. I probably shouldn't mention the name of a very famous barrister, who invited me to chambers, but let's just say I was invited to a case conference in advance and I was a little bit naïve

and wet behind the ears, I hadn't done a lot of medico-legal work at the time, and I was asked to advise on how the prosecution should deal with the um er….in fact I was asked over the phone initially, and then I was asked to a case conference which I willingly went to, and I was really asked my advice on where the holes were in the defence's evidence. And having given some advice in that respect, I realised I was no longer acting independently, I was in an advisory capacity to the prosecution which was compromising my role as an expert witness. I'd been told beforehand 'don't worry, I was not going to be asked to write a report', but the prosecution barrister having got this evidence from me, or this advice from me, then went via phone to the defence and said 'oh we've spoken to a neurologist and you're doomed!' (laughs) So the defence then **demanded** they see the advice, they have a report from this neurologist, so then having given this advice I then had to somewhat backtrack in my report and make a much more balanced report, but I've never fallen into that trap again. I think I sailed quite close to the wind on that occasion.

That's quite disingenuous of the barrister

Oh **very** disingenuous, but that is their game…and I realised I'd been tricked. Quite cleverly, and **used** effectively but I think the whole idea of the, you know, you write honestly, you **don't** give advice on how the prosecution or the defence should carry er frame their case or attack the other side because that is not your role, that is actually the role of the prosecution team, to decide how to do that, and your advice, your being a doctor, you have to set limits to what you can comment on and what is within your expertise as a doctor and given your best opinion on those matters, and if you stick to that – and you may have a strong view, and that's fine, as long as you support it and it's

an honest view – and so that's been the principle and the way I've done medico-legal cases.

Do you think there's any problem with the thing of automatism, do you know about the difference between sane and insane automatism?

Hmmm, hmmm.

If the condition is judged to be sane automatism, then it's on the prosecution to disprove that. Do you think there's a problem there, because the defence only have to put a little doubt in the jury's mind?

Ummmm….yes. Just tell me, just elucidate that further and I'll comment on it.

Well, when it judged to be sane automatism, which should really only be when it's an external cause,

Yes, yes.

…although it's a bit up in the air at times, then the defence have to present some evidence that there was some sort of automatism, to satisfy the evidential burden that the jury should have this put to them, and then the prosecution have to disprove that, they have to prove that the person was acting voluntarily. Therefore the defence only have to raise a reasonable doubt. When it's an insane automatism, it's an internal cause, it's the MacNaughtan Rules and the defence have to prove that the defendant lost their capacity, their voluntariness, on the balance of probabilities. So the onus is on them, and they also have to satisfy a higher standard of proof.

Yes…um…I mean, I know what you're talking about. I've not actually been in that situation, so um…it's difficult for me to comment on that, from experience anyway…um…I'd have to give it some thought.

In your opinion, do you think that um sleepwalkers should be treated as sane, and therefore just to be acquitted and go free, or treated as insane, and then be liable to some form of control – not sanctions, they're not guilty by reason of insanity, but they could be supervised?

Yeah…um….obviously this sane versus insane automatism is artificial, isn't it? This is the problem, trying to force people into one or other category. Um, I think there should be a change in the law, to make it a bit more of a flexible situation, so that rather than forcing the teams, the prosecution and defence, to take these two opposing positions….um…the thing is I, whether it prevents justice being done, I'm not sure. I think….this sane versus insane automatism again is something for the lawyers to sort out and what my position would be is to say, so for example in a patient who's sleepwalked and as a result of their sleepwalking had apparently attacked someone, maybe attacked even their partner, or assaulted or sexually assaulted their partner, if I am reasonable convinced in my own mind that the patient was indeed in a confusional state because they were, their brain was effectively in a confusional arousal, in other words their brain was partially awake and partially asleep, which is what happens in a slow wave non-REM parasomnia, and if I was convinced by my discussion with the patient then I would make the point that from a medical point of view I don't feel they had responsibility for their actions and therefore shouldn't be prosecuted either from a criminal perspective or locked away from a perspective of being insane. So I would sort

of argue against this distinction and try and get away from it. Although of course the law would not, but at the end of the day that's the view I would put in court, I wouldn't try and get caught up with this 'are they sane/insane?' because I would say they're legal terms and I can't comment! We don't use the term sane or insane in medicine, so I would steer clear of getting caught up, like I am doing now! (laughs)

That's fair enough.

So I just try and present things honestly… and the problem is of course that in medicine we would see patients with a disorder who then exaggerate their disorder. And we see it in epilepsy and we see it in anything from back pain to seizures to sleep disorders. Now, if someone is a sleepwalker and a genuine sleepwalker and genuinely has automatisms but having discovered that their partner has been sleeping with their best friend and then in the night murders them, the question is 'are they using their sleepwalking as an excuse?' Were they really fully awake and trying to get away with a defence of sleepwalking? And that's a value judgment, and I think there are ways by which you can help make a judgment on those things, by taking a very careful history. Although there's always going to be uncertainty in that situation.

Would you talk to family and friends and eyewitnesses as well as the patient?

Very much so. I think that's very much the….when you say eyewitnesses, if there were eyewitnesses you'd very much want to take that into account when preparing a medical report. In terms of getting the background history of the parasomnia of course you're going to take the history from the relatives. In fact you're not going to be able to if the relatives are the one who's been murdered, or attacked, you're going to have to rely on

medical evidence from the notes and so forth. But yes, very important to get circumstantial evidence – even when taking a history from patients here we insist that patients bring their partners with them, sleeping partners, so that we can get both sides of the coin. So it's important just from a medical point of view, not just from a medico-legal perspective.

Have you ever had sleeping partners make allegations about a person's behaviour in the night that you wonder if there's some other agenda? 'Cos I'm come across a case where the patient's sleeping partner kept saying he was doing things in the night, and there was a possibility of divorce and child custody and all that sort of thing, and there was never any, they could never substantiate her allegations. Have you ever come across that?

There is a syndrome, isn't there? What's it called?

Munchhausen's by proxy?

No. No, not Munchhausen's by proxy…..oh, it's got a name, um…it was based on a historical case of somebody who tried to prove that their partner was mad. And described all sorts of behaviour which never actually happened, and it was named after that case, I can't remember the name of the syndrome. Anyway…you need to look it up because it's quite important [I believe it is called "Gaslighting"]. Yes, it's rare. But I think I have seen, in sleep medicine I think I've seen one case where a patient with REM sleep behaviour disorder and memory problems whose wife, they were having…I wouldn't necessarily say she was angling for a divorce, she was so angry with him, she was exaggerating the condition and making it worse than it was and so one had to…it

took 2 or 3 times of seeing them before one could fully appreciate there was that going on. The dynamic.

Yes. I might talk to you more about that, because myself and Martin are hopefully going to be writing a paper about this case….

Right, this is Martin?

Allen.

Martin Allen, OK. Yep.

Do you think that it makes any difference whether the evidence about sleepwalking is being provided by a respiratory physician or a psychiatrist or a neurologist or a psychologist?

Yes…um….the trouble is there are some very good respiratory physicians who've made a study and you know really understand sleepwalking – John Shneerson, Adrian Williams being two prime examples. **But** the average sleep physician who runs an obstructive sleep apnoea clinic will not know very much about sleepwalking and can't really give an opinion. I would trust an opinion from John Shneerson as much as I would from Matthew Walker, the neurologist at Queen's Square, because he is quite clearly, he's studied it, he's had lots of patients and he's written a fair bit about **all** sleep disorders. So I think it depends on the person but on the whole I think neurologists (I would say that) are probably more skilled to distinguish sleepwalking from for example frontal lobe epilepsy from functional behaviour and I think psychiatrists would come a close second, and respiratory physicians would not be so good – as a group.

What about the ability of especially forensic psychiatrists to assess risk, the risk from the patient, do you think that is an important part of expert testimony about sleepwalking?

Risk – what to the partner?

Well, to the wider community.

Oh risk to the community. We're talking about sentencing now, presumably?

Um…and disposal.

Disposal as in how

Well whether or not they're acquitted or found not guilty by reason of insanity, and if they are (found not guilty by reason of insanity) there's various options – you can be supervised or have to go to a special hospital or even an absolute discharge. It depends.

So you're asking me do I think psychiatrists are good at making those judgments. Well I think they're the most skilled in those sorts of judgments, in their own work they have to make those sorts of judgments about schizophrenics in particular, and other **mad** patients. So I think they probably are the best at making those sorts of judgments. I…as a whole I have to say that sleepwalkers are **not** a dangerous population. And there's possibly something different about those ones that do eventually get to court and are accused of severe crimes because I do begin to become a little bit skeptical because we **do** see patients sometimes grabbing their wife by the throat or shaking them or jumping on top of them or sometimes hitting them. That is a small minority of cases of

sleepwalking and parasomnias and to go from that to a very severe assault or murder or rape, I begin to have some degree of scepticism. I would if I saw those patients in a clinical scenario, if something very serious had happened, because usually the partner can wake the patient with time before anything majorly serious happens, so I think there is other psychopathology **or** maybe alcohol or drugs **or** that there is **some** degree of functional overlay going on. And the patient is trying to blame something on their sleepwalking, which may not be related.

So, following on from that, would you say that it's not enough to say whether or not the person was sleepwalking then and if they're sleepwalking they're not guilty, that maybe there should be some element of, by whatever mechanism, follow up and monitoring of people who've been found guilty of these serious offences, corrections people that have performed these serious acts.

There's a number of questions embedded in that, so 'what should you do with them' is the last question, which I'll leave to the end. The next question is 'when you're assessing them, because they're sleepwalking does it mean that they're therefore ipso facto not guilty?' In relation to the first question, what I would say is that sleepwalking is a continuum – all non-REM parasomnias are a continuum from deep sleep through to wakefulness. And that even during any individual sleepwalking episode, at the beginning of the sleepwalking episode the patient is more asleep and less culpable than towards the end when they're more awake and more culpable.

It's not a simple dichotomy?

It's not a simple 'you're either sleepwalking or you're not' – because sleepwalking, as I say to patients there's a state of partial wakefulness and partial sleep, and depending on where you are on that continuum will depend on your culpability – that really doesn't fit in with 'are they sane or insane?'

In that sense, would you have a problem with the criminal justice system and its simplistic view that..

Yes. But it's not my problem.

Yeah.

There **is** a problem – **I** don't have that problem, **they** have that problem.

Sure. Well, ***hopefully*** *things will be changing as there is a current Law Commission consultation about reform of the law, so…I'm actually going to be speaking to the chap. So, what you're saying will possibly have changed things – we don't know. We don't know.*

We don't know.

Sorry, I'm digressing.

That's all right. Yes, the other question is how you should dispose of, what you should do….you know, I think anybody who's committed something very serious **has** - I'm speaking as a layman - has to be monitored to some extent. If they're claiming it's been done as a , they're claiming reduced culpability due to some medical condition, particularly if that medical condition can't be completely eradicated or treated, which is the case with sleepwalking. So that brings in the concept of there is something to be

said for the concept of insanity in the sense that the patients has **moments** of insanity, as a result of their medical condition where they could be a danger to others. Or the "public". So yes, I think that having absolved them of their culpability, stopped them from necessarily going to prison, I'm not saying they should be committed to a psychiatric hospital for the rest of their life, but there should be some monitoring. Particularly if there's been frequent episodes of sleep violence for example I think you can't um you can't just say 'oh well they're not guilty and that's the end of that'. So does the law have a role in that – well I suppose it has too.

Yes. Well now there's more flexibility of disposal I think it's easier to make the argument for saying that sleepwalkers are insane. Because before 1991 it was 'detained at Her Majesty's Pleasure' in a special hospital..

IF?

If you were found not guilty by reason of insanity, but they've got all the different options, so I think that makes the argument for insanity stronger.

So you don't have to be detained at Her Majesty's Pleasure? You could be subject to some kind of?...

Outpatient supervision, that kind of thing.

That's fair enough.

Except for when it's homicide, which is the exception. How easy do you think it would be for somebody to fool an expert witness about their sleepwalking, to malinger and claim

they were sleepwalking during the offence. Not that they were a sleepwalker per se but that they were sleepwalking during whatever they did.

Right. Are we asking this question on the basis that they have a known history of sleepwalking?

Yeah – they've got a known history of sleepwalking but they weren't sleepwalking at the time.

How easy, how easy would it be to fool me? (indrawing of breath) Well one has to decide what one goes on here. In terms of the description of the history, the eye witness accounts…I think it **would** be quite easy, I think it's quite difficult to distinguish effectively. I mean if you see a child, I don't know if you haven't got any children, but I have children and if they sleepwalk even as a sleep expert sometimes I have difficulty in determining looking at them whether they're awake or asleep. And it very much depends on then the history I get from them ie 'do you remember getting out of bed, darling?' And when I ask them 'why are you in our room?', if they then say 'well I don't know', then it's much more obvious they sleepwalked but it **can** appear, they have their eyes open…if someone is, generally they will behave in a different fashion – they'll either be confused and rummaging through things or running away from something, where you have this overlap between sleep terror and sleep walker, or they will be wandering in a confused state **but** sometimes if you just see them briefly and they just come up to the bed, at that point they have actually then woken up. So you're trying to work out did they sleep walk into the room? Or did they not? And it depends on the history that you get from them. So if your accused person is genned up on this sort of

thing, has read about sleepwalking and the information now is very much in the public arena, then if they're intelligent, I think they could easily fool a medical expert. Myself included.

If somebody doesn't have a history of sleepwalking, would you entertain the notion that they'd been sleepwalking during their crime? Or do you think that rules it out?

I think that pretty much rules it out.

Yeah. How confident are you that the jury understands the expert evidence that you give about sleep disorders? Digesting it and applying it.

Which particular sleep disorder – sleepwalking in particular?

Just sleep disorders full stop.

That's a big question. Let's focus it down on sleepwalking – I haven't actually faced a jury to explain it, but I do face my patients and explain it to my patients on a daily basis. And they're a random selection of the population, not totally random, and I think they do understand when I explain this idea of being, part of the brain being asleep and part being awake – so yes I think you can get the jury to understand the concept. But again the jury is going to have as much difficulty of making the distinction in a particular episode whether a patient or an accused was sleepwalking or not at that particular moment. Probably more difficult than a neurologist, and a neurologist is going to have difficulty, or the sleep expert. But yes, you get them to understand the concept. And hopefully you can get the solicitors to understand it and change the law as well.

There's certain sleep experts who come across from the USA to provide testimony, particularly for the Crown Prosecution Service – what do you think about that? Do you think it's a problem?

A problem in what sense? In that it costs a lot of money or that it's 'why should they be any different from the UK specialists?' or…

Does it serve justice well or do you think there's issue with having somebody from another country?

No, I think medicine's fairly international. And you know some of the, sleep medicine is, has been pioneered in America where they're more ahead of the game, there's many more sleep specialists per head of population, they've also got a bigger population, and there's a lot more research being done on sleep medicine, particularly sleepwalking in America and Canada, well Montreal Neurological Institute. So I don't have a problem with it…if the legal process is happy to pay for the sleep experts to come over. I think it probably **is** right, because I don't think, if I think about my colleagues, there's very few neurologists I know who have any interest or least a big experience of sleepwalking patients – you know I count them on the fingers of one hand. So I think it's probably appropriate that Americans are wheeled in.

Roz Cartwright's done a few papers, she's advised on the Parks case and the Falater case, and she believes that sleepwalkers at a certain stage on this, we were talking about this continuum, she very much agrees with that idea, that they can't recognize faces. So Parks when he was coming out of this state, he could see it was a woman but

he couldn't recognize it was his mother-in-law. Do you think that's a correct interpretation?

Um, I've not read that paper, um….when was that published?

I think it was 2000, or 2004.

OK, I haven't actually read that but I think that's an interesting idea. I think that I would definitely agree that there's some evidence to support that from just the clinical situations that the patients get themselves into, so they don't recognize their partner, they think, they misattribute their partner, they think it's somebody else. So I think there is an issue of facial recognition. I'm not so sure it's the case in all sleepwalking, or whether facial recognition is selectively involved, because I think there is generally a problem with integrating information and forming a full concept or accurate concept of reality. They are clearly in a confused state – they get lost…they often will think there's a door where there isn't one…so I don't think it's necessarily selective, it's probably a product of not being able to integrate information and there is some evidence, it's not brilliant evidence, but it's a very interesting piece of evidence, there was a paper published by I think Schenck or Mahowald's group or was it by Montplaisir's group? No, it was Bassetti!

The Lancet study?

The Lancet study SPECT study where they got a patient as you know sleepwalking and they'd given him HMPAO (I think), technetium-labelled HMPAO and it was the fronto-parietal cortex that is the integrating areas of the cortex was **not**, were not lighting up as much as the occipital regions, which is the basic primary visual area, and the primary

motor and sensory cortex, which seemed to be acting. It was a sort of integrative cortex, the association cortex, particularly the fronto-parietal lobe, which wasn't switched on – which I thought was very interesting. Facial recognition is thought to be anterior temporal, sorry posterior temporal probably in the right side, as in 'The man who mistook his wife for a hat' [a popular book about neurological disease by Oliver Sacks]….um, that is more towards the association areas of the temporal cortex, so I think that would generally fit with that. I think it's an interesting proposition and I think it rings true, with patients I've spoken to **don't** seem to recognize their partners in particular during an episode, although they will sometimes interact and speak to them as if they were somebody else, so…interesting. A failure of integration of reality I think, it's all part of that.

Yes. I don't think I've got any more questions but that's been really useful and helpful. I think I've got some interesting insights.

I'm sorry I was little slow on the insane and non-insane automatism, it's probably because I haven't faced, done a case yet. I'm sure I'd have to revise and think about those issues

Like you say, it's really a legal question

It **is** a legal question, but I dodged it. And I dodged it because a) it's a legal question and b) I haven't really given it really had to deal with that issue.

I thought what you had to say about it was really interesting.

[end of recorded interview]

Field notes: had a very instructive chat after stopping the formal interview.

We talked about the Thomas case. I related the details to AN, and he asserted very confidently that the episode as described definitely wasn't REM sleep behavior disorder (RBD) but probably a non-REM sleep disorder e.g. night terrors. This was because RBD although commonly violent is limited to simple actions and strangulation was inconsistent with RBD. What is seen as a dream may be a confused remembrance of reality in the slow emergence from non-REM sleep. In non-REM sleep disorders impressions and hallucinations e.g. hypnopompic hallucinations are commonly interpreted as dream mentation.

We also discussed the degree of criminal responsibility sleepwalkers. AN was of the opinion that diminished responsibility (rather than no responsibility) might be more appropriate, as the sleepwalking state segues into full wakefulness that is there is a gradient between sleepwalking and the waking state. For both this reason and the possibility that there is some qualitative difference between violent and non-violent sleepwalkers he favours the special verdict in light of the flexibility of disposal. He doesn't favour compulsory hospitalisation or the stigmatic label of insanity.

He considered that the longer episodes may be sleepwalking states that merge into a dissociative state. We discussed compartmentalisation in multiple personality disorders/PTSD and whether sleepwalkers are more prone to dissociative disorders.

C) Direction to the Jury in Lowe

(kind courtesy of Paul C. Reid, QC - transcribed by myself from his notes)

Ask yourself these questions:

1. Have the Prosecution proved so that you are sure that the Defendant caused the death of Edward Lowe [the Defence agree this element is proved]

2. Consider non-insane automatism [forcible awakening]

Have the prosecution proved so that you are sure that the Defendant's state of mind was not so affected by a forcible awakening that at the time of the killing his state of mind was such that his ability to exercise voluntary control was totally destroyed.

N.B a forcible awakening is an internal factor [a confusional arousal would be regarded as an external cause]

If 'yes' – the prosecution have excluded non-insane automatism. Consider question 3.

If 'no – consider question 4 (omitting question 3).

3. Consider insane automatism

Have the Defence established on the balance of probabilities that the Defendant's state of mind was so affected by an inbuilt tendency of the Defendant's to sleepwalk that at the time of the killing his state of mind was such that his ability to exercise voluntary control was totally destroyed.

N.B. The inbuilt tendency of the person to sleepwalk is an insane automatism.

If 'yes' – verdict not guilty by reason of insanity

If 'no – consider question 5 (omitting question 4).

4. The Prosecution having failed to exclude non-insane automatism – the Defendant is not guilty of murder but consider manslaughter.

Have the prosecution proved

(1) that the killing was the result of the Defendant's unlawful act

(2) that the unlawful act was one which all sober and reasonable people would inevitably realise must subject the victim to at least the risk of some harm resulting there from albeit not serious harm.

N.B. It is immaterial whether the Defendant himself knew that the act was unlawful and dangerous and it is immaterial whether or not the defendant intended harm.

If 'yes' – guilty of manslaughter

If 'no – not guilty

5. If the Prosecution have excluded non-insane automatism (question 2) and the Defence have failed to establish insane automatism (question 3) consider intent.

Have the prosecution proved so that you are sure that at the time of the killing he intended either to kill or to cause really serious injury.

If you think he was so drunk that he did not intend or may not have intended to kill or cause really serious injury then you must acquit him. But if you are sure that despite his drunkenness he intended either to kill or cause really serious injury then this part of the case is proved against him. A drunken intent is still an intent. What is more it is not a defence for the defendant to say that he would not have behaved in this way had he not been affected by drink.

If 'yes' – guilty of murder

If 'no' – not guilty but guilty of manslaughter

D) Material from Mark Pressman re *Falater*

List of Observed and Inferred Behaviors	***Cognitive Skills Required***
Start 9:15 PM??	
Defendant Statement	
Go upstairs to bed	
Change into pajamas	
1. Leave contact lenses in	Planning-needed them later??
2. Change from pajamas into undergarments?, Jeans, ASU t-shirt, socks, boots	Oriented to time, place
3. Descend stairs	
4. Retrieve knife	Oriented to place, planning, Memory
5. Locate mouthpiece and place in Mouth??	Oriented to place, planning,Memory
6. Locate and retrieve flashlight	Oriented to place and time (knew it was nighttime), planning, memory
7. Exit home	
8. Aim flashlight at pool pump	?
9. Stab wife 44 times	
10. Ignore cries of wife	unarousable vs. murderous intent
Absence of social interaction vs. ignores wife's cries	
11. Exit pool area and enter garage	planning, intent, oriented to place
12. Undress	
13. Locate keys to car	planning, intent, concealment
14. Unlock/open trunk of Volvo station	

Wagon	planning, intent, oriented to place
15. Locate Tupperware container, plastic	
Garbage bag? Already in place??	Advanced planning, intent, concealment
16. Place bloody jeans, ASU t-shirt	
Undergarments, socks, boots	
Knife, knife sheath, mouth piece	
In Tupperware container	Advanced planned, intent, concealment
17. Seal Tupperware container and	
Place in black plastic garbage bag	Planning, intent, concealment, double
sealed, not visible.	
18. Place garbage bag with Tupperware	
Container in spare tire wheel well of	
car.	Ready for disposal?? Planning
19. Close wheel well and trunk of car	Tidy?
20. Put on pajamas. Pajamas ready	
in garage? Or walked naked through	
house to bedroom to find pajamas??	Advanced preparation/planning, oriented to
place	
21. Exit garage	
22.Go upstairs to bedroom	
23. Turn on bedroom light	Oriented to time
24. Exit bedroom to bathroom	
25. Turn of light in bedroom	Oriented to time
26. Wash blood off	Self awareness, aware of appearance
27. Clean cut on finger of right hand	Aware of pain, cut
28. Locate band aids	Aware of need for treatment, Aware of

	proper treatment, memory where to find treatment
29. Remove band aid from wrapper	excellent fine motor coordination
30. Place properly on right hand	Good motor coordination, planning
31. Turn bedroom light off	Oriented to time, very thrifty
32. Turn bathroom light off	Oriented to time, very thrifty
33. Go down stairs	
34. Enter kitchen area	
35. Washing hands (wringing motion of Hands)	
36. Enter room next to Arcadia doors	
37.Opened Arcadia doors partially	
And gestured to barking dog to be	
Quiet – dog stopped barking	Social interaction. He didn't respond to wife's cries, but did respond to dog barking!
38. Exited Arcadia doors	
39. Walked over to body of wife	Memory, planning – neighbor saw her moving 5minutes after stabbing,
was she still alive??	
40. Stood over body for several mins.	Planning??
41. Looked over shoulder in direction	
Of neighbor	orienting to sound??, attention
42. Re-enters home via Arcadia doors	
43. Locates gloves	
44. Several minutes later exits garage door	
45. Pulls on gloves while walking	planning, good physical coordination
46. Walks towards wife's body	

47. Steps over body	
48. With back to pool, bends over, grabs Wrists of victim and drags body to Edge of pool without looking back	excellent planning, maintained mental image of distance to pool – did not fall in
49. Move to feet and grabs and with back to pool drags 6 ft. to pools edge without looking back	excellent planning, maintained mental image of distance to pool – did not fall in
50. Move behind body	
51. Place arms under body	Good planning
52. Flip body into pool	
53. Move to edge of pool where body is floating	
54. Repeatedly hold head of victim under water	Victim still alive. Finish job??
55. Leave body in pool	
56. Walk to and enter garage	
57. Open trunk of car with key	Complete concealment of incriminating evidence.
58. Open spare tire well	Complete concealment of incriminating evidence
59. Remove black garbage bag	“ “
60. Place wet gloves in garbage bag	“ “
61. Replace black garbage bag in spare tire well	“ “
62. Close spare tire well cover	
63. Close car trunk	
64. Leave garage	

65. Go upstairs

66. Come downstairs

Arrested by police.

E) Nodes Used in NVivo

Episode Characteristics
- Behaviour out of character and motiveless
- Causative factors
- Consciousness
- Corroboration
- Malingering

Expert Evidence
- Admissibility
- Anthropology
- Evidence-Based Medicine
- Expert Witness Credentials
- Reasons for doing or not doing expert witness work

Legal Issues
- Automatism dichotomy
- Definition of automatism
- Disposal
- Juror understanding
- Legal process
- Legal reform

Legal Responsibility
- Prior fault

Policy Issues
- Alcohol and sleepwalking
- Feminist and victimology issues
- Insanity label
- Social control

Sleep Studies
- Alcohol Provocation Test

F) Press Reports Database

Name	Age	Year	Date	Juris.	Court	Type	Offence	Forces	Expert Witness
Kieran O'Callaghan	24	1997	April	EW	Salisbury	Magist	Drink driving	Yes	
Dean Sokell	27	1998		EW	Exeter	Crown	Murder		
Graham Finegan	33	1998		Scot	Dundee	Sher.	Drink Driving		Colin Espie; I Oswald (appeal)
Allan Kellman	33	2000	Sep 1st	Scot	Dunfermline	Sher.	Indecent Assault	Ex	I Oswald
Iain Tarkenter	32	2000		EW	Newcastle	Crown	Indecent Assault		
Stephen Hearn	41	2003		EW	Warwick	Crown	Drink Driving		
Jonathon Collier	44	2004	Sept.	EW	Snaresbrook	Crown	Indecent Assault		
William Bough	48	2004	Oct	EW	W Allerdale & Keswick	Magist	Drink Driving	Ex	Elspeth Desert
Colin McSkimming	28	2004	Sep 1st	Scot	Stonehaven	Sher.	Drink Driving		
Matthew Sadler	33	2005	March	EW	Andover	Mag	Drink Driving		Irshaad Ebrahim
James Bilton	22	2005	Dec	EW	York	Crown	Rape		I Ebrahim
Jules Lowe	32	2005	March	EW	Manchester	Crown	Murder		I Ebrahim; P Fenwick
Michael Catling	28	2006	Feb.	EW	Winchester	Crown	Murder		
Christopher Davies	26	2006	Feb	EW	Burnley	Crown	Sexual Assault		
Virginia Bramwell	59	2006	Sept.	EW	Lincoln	Magist	Drink Driving		Referred for tests prior to pleading
Terry Hind	41	2006	June	Scot	Ayr	Sher.	Sexual Assault		
Kenneth Ecott	26	2007	Aug 6th	EW	Bournemouth	Crown	Rape	Yes	
David Pooley	34	2007	Jan 18th	EW	Aylesbury	Crown	Rape	Ex	P Reading; G Stores
Alan Ball	35	2008	22nd Dec	EW	Preston	Crown	Sexual assault <13		
Jason Jeal *	37	2008	Nov.	EW	Portsmouth	Crown	Rape		n/a
Paul James Morrin	43	2008	April	NI	Coleraine	Crown	Murder		
Jamie Trigger	20	2008	Dec	EW	Birmingham	Crown	Indecent Assault	Yes	J Reed (D)
Mark Phillips	44	2008		EW	Middlesbrough	Crown	Sexual Assault		A Williams (P); P Reading (D)
Jack Browne	42	2008	Oct.	EW	Exeter	Crown	Rape, Sexual Assault and Indecent Assault <13		
Nick Walker	21	2009	Oct.	EW	Snaresbrook	Crown	Rape		
Warren Kelly	28	2009	Mar.	EW	Newcastle	Crown	Sexual Assault		
Donna Sheppard-Saunders	33	2009	Jun.	EW	Lewes	Crown	Attempted Murder		
Edward Leung	46	2009	Nov.	EW	Maidstone	Crown	Sexual assault		
Brian Thomas	59	2009		EW	Swansea	Crown	Murder		C Idzik
Anthony Burridge	22	2009	Sept.	EW	Swindon	Crown	Rape		
Darren Greenwood	33	2010	Oct 29th	EW	Chelmsford	Crown	Sexual assault		M Walker
Shehram Saeed	35	2010	Nov 26th	EW	Leicester	Crown	Sexual assault		
James Thomas	22	2011	Jan 14th	Scot	Edinburgh	High Ct	Rape	Yes	C Espie
Michael Rumsey	56	2011	Jan 31st	EW	St Albans	Crown	Criminal damage		
John Docherty	56	2011	March	Scot	Glasgow	High Ct	Attempted Murder		C Espie
Sean Freaney	51	2011	March	EW	Oxford	Crown	Murder		M Pressman (P) but didn't have to appear
Donald Clegg	59	2011	March	EW	Bury	Mag	Drink Driving		
Matthew Lucas		2011	April	EW		Crown	Murder		
John Goldie	58	2011	June	Scot	Cupar	Sher.	Lewd, libidious and indecent practices		
Stephen Davies**	43	2011	July 6th	EW	Swansea	Crown	Rape		C Idzik
Bradley Clayton	31	2011	July	EW	Maidstone	Crown	Drink driving		C Idzik (D)

Parasomnia	Prior Hx	Fam Hx	PPT	EtOH	Verdict	Verd. 2	No Repts
SW	Y		Y - PTSD	Y	C	(admitted guilt) Absolute Discharge	3
n/s; ? CA			N	Y	C	Admitted carrying on hitting wife after waking up	4
SW	Y			Y	C	sleepwalking accepted (driving ban overturned on appeal)	
SW	Y		Y - Gulf War experience		A		1
SW or SxS			N	Y	A	Jury directed to acquit	
SW	Y			Y	A	Prosecution offered no evidence at trial	2
SxS	N	N	N	N	C	Admitted guilt	
SW	Y		Y - PTSD - Gulf War veteran	Y	A		1
NS				Y	C	Admitted guilt	
SW		Y	Y - stress of pub fire	Y	A		
SxS	Y	Y	Y - stress and sleep apnoea	Y	A		
SW/CA	Y			Y	NGRI		
SW			Y - sleeping tablets and anti-depressants	Y	C		
SW					A		1
SW				Y	C	Admitted guilt	
n/s				Y	A	Not Proven	1
SxS	Y			Y	A		
SxS	Y			Y	A		
SW	Y	Y		Y	A	Prosecution offered no evidence at trial	
n/a	Y			Y	A	on grounds of mistake as to consent	
SW	N		N	Y	C		
SxS	Y			Y	A	Prosecution offered no evidence at trial	
SW	Y		Y - jetlag	Y	A	Convicted at CFI, acquitted on appeal 2008	
SW/CA					C		
SxS	Y			Y	A		
SW	Y				A	Jury directed to acquit	
SW	Y		Y - Snoring of mother		A	Jury directed to acquit	
SW	Y in retrospect		Y - Stress	Y	A		
Night terror +/- sleepwalking	Y		Y - Disturbed by hooligans plus off medication		A	Jury directed to acquit	
SW	Y			Y	C		
SxS				Y	A		
SW - but changed plea to guilty				Y	C	Admitted guilt	1
SW	Y			Y	A	Not proven (majority verdict)	
SW/automatism			Y - Depression, medications		C		
SW	Y		Y - Stress/jealousy	N	C	Wife supported the sleepwalking defence	
SW - but changed defence to one of erotic asphyxiation					C		
SW	Y		Y - Stress of father's dementia	Y	C	Admitted guilt	
SW - but changed plea to guilty					C	Admitted guilt	1
SxS	N				C		
SxS (but act not due to SxS)	Y				A	subsequently has claimed that he was not arguing the defence of sexsomnia	
SW	Y			Y	C	claim of sleepwalking accepted	
				28	12		

G) Regional UK Sleep Centres

NORTH EAST

James Cook University Hospital - Middlesbrough

Newcastle General Hospital - Newcastle upon Tyne

NORTH WEST

Wythenshawe Hospital - Manchester

Blackpool Victoria Hospital – Blackpool

City General Hospital - Stoke-on-Trent

Sheffield Neurological Sleep Clinic, Royal Hallamshire Hospital – Sheffield

EAST MIDLANDS

Kings Mill Hospital - Sutton in Ashfield

Leicester General Hospital - Leicester

Bassetlaw Hospital - Worksop

Kettering General Hospital - Northampton

WEST MIDLANDS

Birmingham Heartlands Hospital - Birmingham

The Birmingham Sleep Clinic - Queen Elizabeth Hospital Birmingham

SOUTH EAST

Papworth Hospital - Cambridge

Conquest Hospital - East Sussex

Queen Victoria Hospital - East Grinstead

Lister Hospital - Stevenage

Epsom General Hospital - Epsom

John Radcliffe Hospital (West Wing and Oxford Children's Hospital) - Oxford

Hertford County Hospital - Hertfordshire

SOUTH WEST

Frenchay Hospital - Bristol

Royal Devon and Exeter Hospital - Exeter

Musgrove Park Hospital - Taunton

Plymouth Hospitals, Department of Respiratory Medicine - Plymouth

LONDON

St Thomas' Hospital - London

King's College Hospital - Denmark Hill

Imperial College Healthcare Sleep Centre - Charing Cross

The Evelina Children's Hospital - Lambeth

National Hospital for Neurology and Neurosurgery - Queen's Square

SCOTLAND

Royal Infirmary of Edinburgh - Edinburgh

Royal Hospital for Sick Children - Glasgow

WALES

Royal Gwent Hospital - Newport

H) Sleep Research Time Line (modified from American Sleep Medicine Foundation website)

1875 Caton records the brain electrical activity of animals in England.

1929 Berger discovers and reports the "electroencephalogram (EEG) of man" in Germany.

1937 Loomis documents the EEG patterns of what is now called non-rapid eye movement (NREM) sleep.

1953 Kleitman and Aserinsky at the University of Chicago describe the rapid eye movement (REM) stage of sleep and propose a correlation with dreaming.

1957 Dement and Kleitman describe the repeating stages of the human sleep cycle.

1968 Rechtschaffen and Kales publish a scoring manual that allows for the universal, objective comparison of human sleep stage data.

1974 Holland gives the name "polysomnography" to the overnight sleep study.

1986 Schenck, Mahowald and colleagues publish the first formal description of REM sleep behavior disorder (RBD).

2007 American Academy of Sleep Medicine reclassifies stages of non-REM sleep into 3 categories.

I) Neurolaw Resources on the Internet

MacArthur Foundation Research Network on Law and Neuroscience (Vanderbilt University): http://www.lawneuro.org/

The Initiative on Neuroscience and the Law (Baylor College of Medicine): http://neulaw.org/index.php

Moral Cognition, Neuroethics and Neurolaw Research Cluster of the Center for Agency, Values and Ethics (Macquarie University): http://cave.mq.edu.au/research_clusters/neuroethics/

Stanford Center for Law & the Biosciences: http://lawandbiosciences.wordpress.com

The Oxford Centre for Neuroethics: http://www.neuroethics.ox.ac.uk/

Australian Law and Neuroscience Project: http://www.neurolaw.com.au/

There are a number of blogs on the topic:

Neulaw Blog (Baylor): http://neulaw.org/blog

Neuroethics & Law Blog (Brooklyn Law School):

http://kolber.typepad.com/ethics_law_blog/

Law and Neuroscience Blog (Vanderbilt): http://lawneuro.org/blog/

Nicole Vincent (Macquarie University): http://nicolevincent.net

Law & Biosciences Blog (Stanford University):

http://blogs.law.stanford.edu/lawandbiosciences/

J) CPS Response re Expert Witness Register

Register of Expert Witnesses – Responding to Enquiries

The CPS does not hold a register of experts.

As an independent prosecution service it would be inappropriate to appear to endorse any expert by entering them on an internal list. We are not in a position to quality assure individuals or organisations who provide expert witness services to the CJS, other than in exercising our duty on a case by case basis. The assurance of quality standards has become particularly import in the field of forensic science as the provision of scientific products and services for the CJS has now been commercialised. In addition all police forces now operate under full procurement procedures and contracts with suppliers. CPS is therefore mindful of the obligations upon public organisations to tender for the provision of any commercial service, this would include the provision of expert evidence.

The National Police Improvement Agency (NPIA) can provide information

about experts in certain fields. In addition the Forensic Science Regulator is now responsible for setting applicable validation (for scientific processes) and accreditation (for individuals) quality management standards, although this will not be fully implemented until 2013.

Some of the principal commercial organisations in England and Wales representing the interests and services of a variety of expert witnesses can be found on the Internet and specialist libraries. Information on experts should be found perhaps via their professional representative / regulatory body, eg; dentists, forensic accountants, forensic psychologists and the like. Via the internet access is available to huge amount of information for those searching for experts who do not belong to any profession.

Further information about the use of expert witnesses in the CJS can be found on the CPS website in the publication “Guidance Booklet for Expert Witnesses”. When selecting an expert, It may also be useful to consider the requirements of Rule 33 of The Criminal Procedure Rules 2005 (as amended) to ensure you are able to explain exactly what will be required of them in giving their evidence.

If you have any further questions please contact

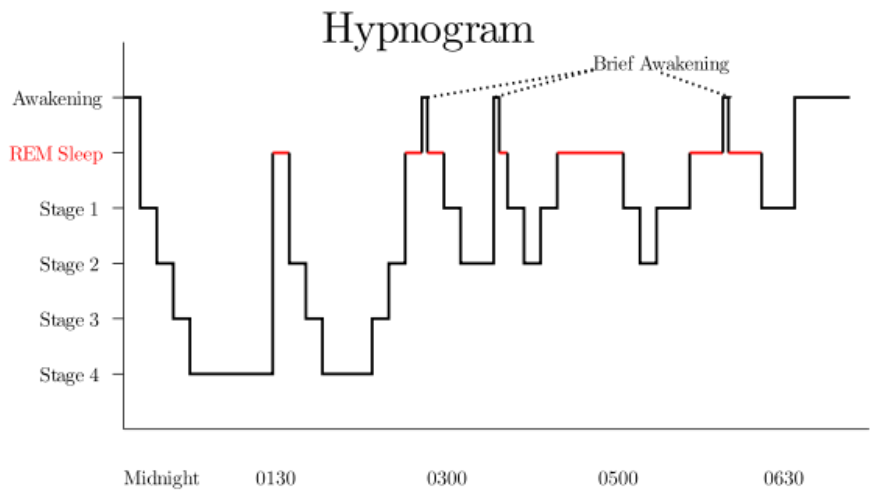
Karen.squibbwilliams@cps.gsi.gov.uk .

Karen Squibb-Williams
Strategic Policy Adviser
CPS Policy Directorate
Domestic Affairs Division
19February 2010

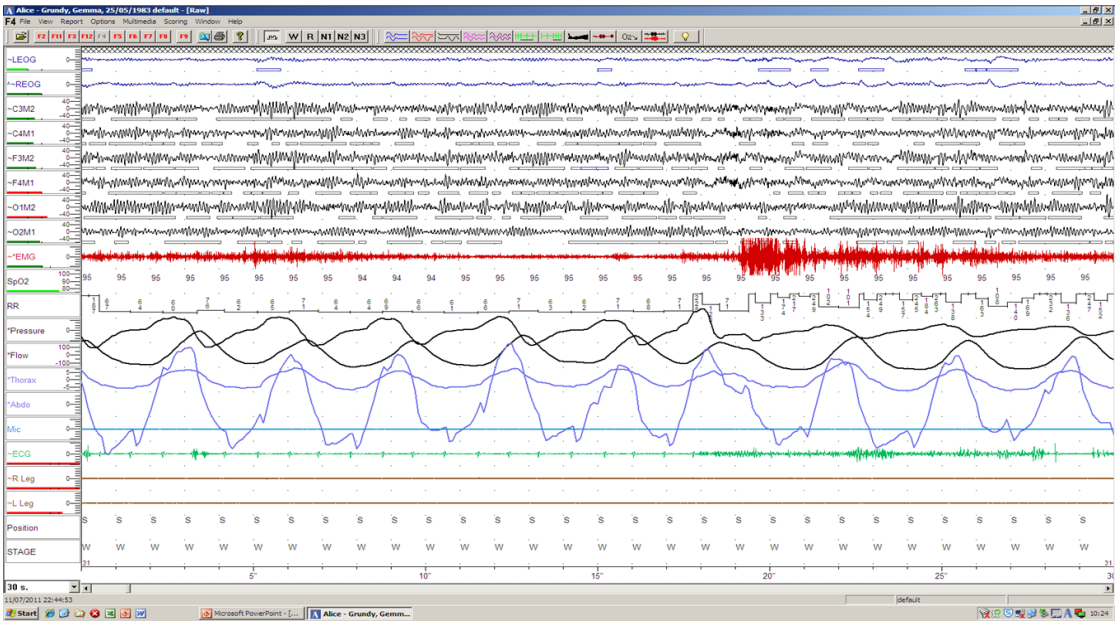
K) Sample Epochs and Hypnogram

These sample epochs show how the EEG patterns vary between the different stages of sleep. Different EEG leads will show the different features of particular sleep stages better than others e.g. delta waves and K spindles are seen better in frontal and central regions, and alpha waves are seen better in occipital regions.

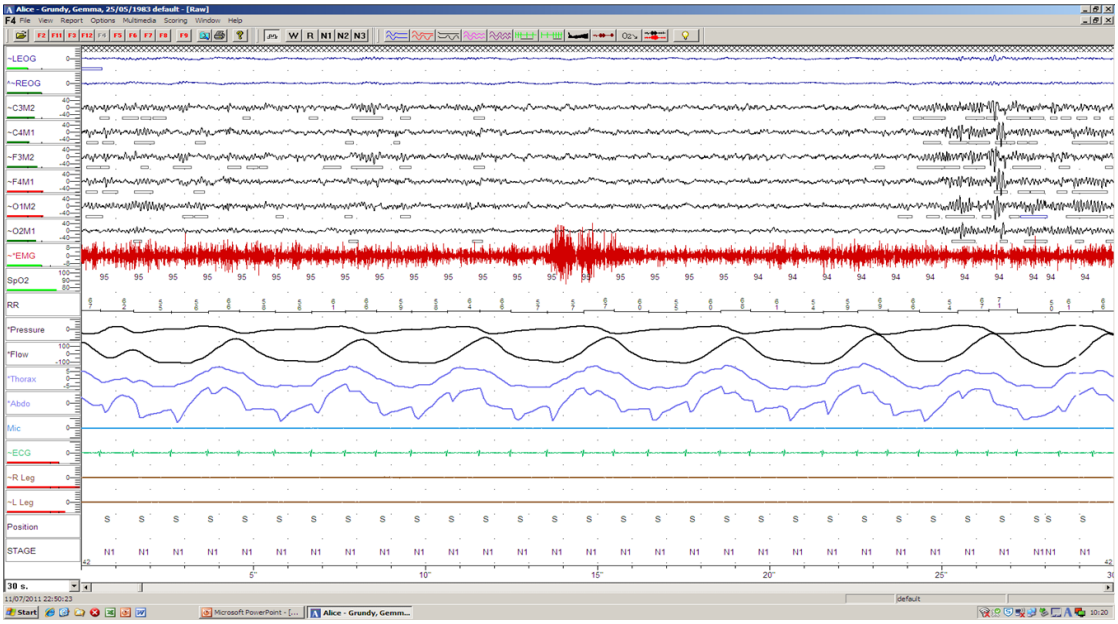
This hypnogram shows the progression through sleep stages (this hypnogram uses the R&K scale), which often reverts to a lighter stage of sleep as well as progressing to deeper stages of sleep.



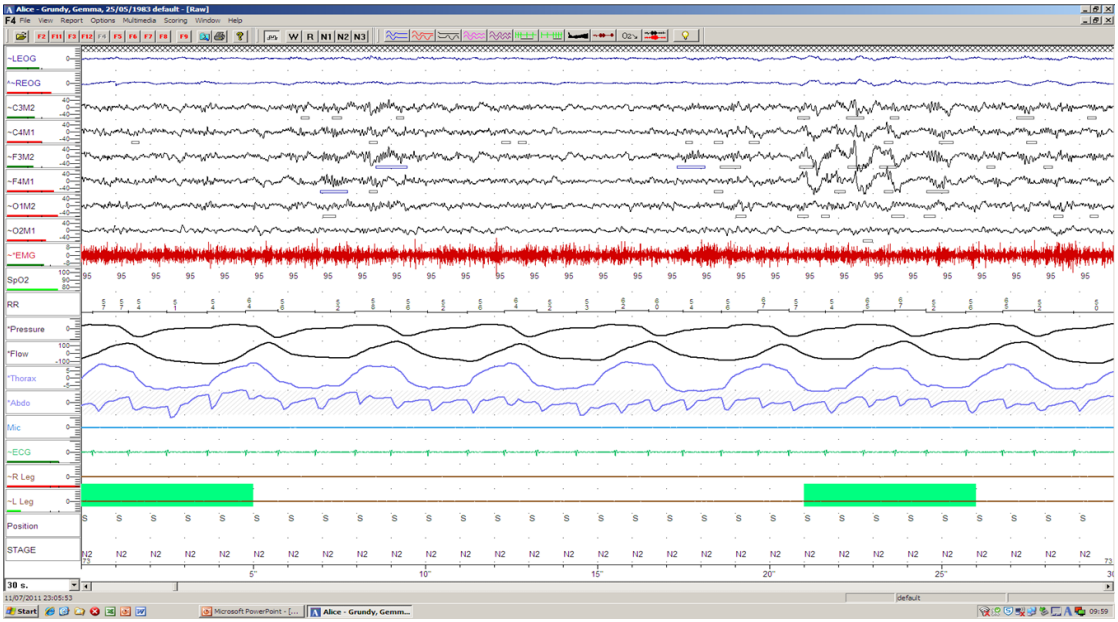
Sample epochs of sleep stages



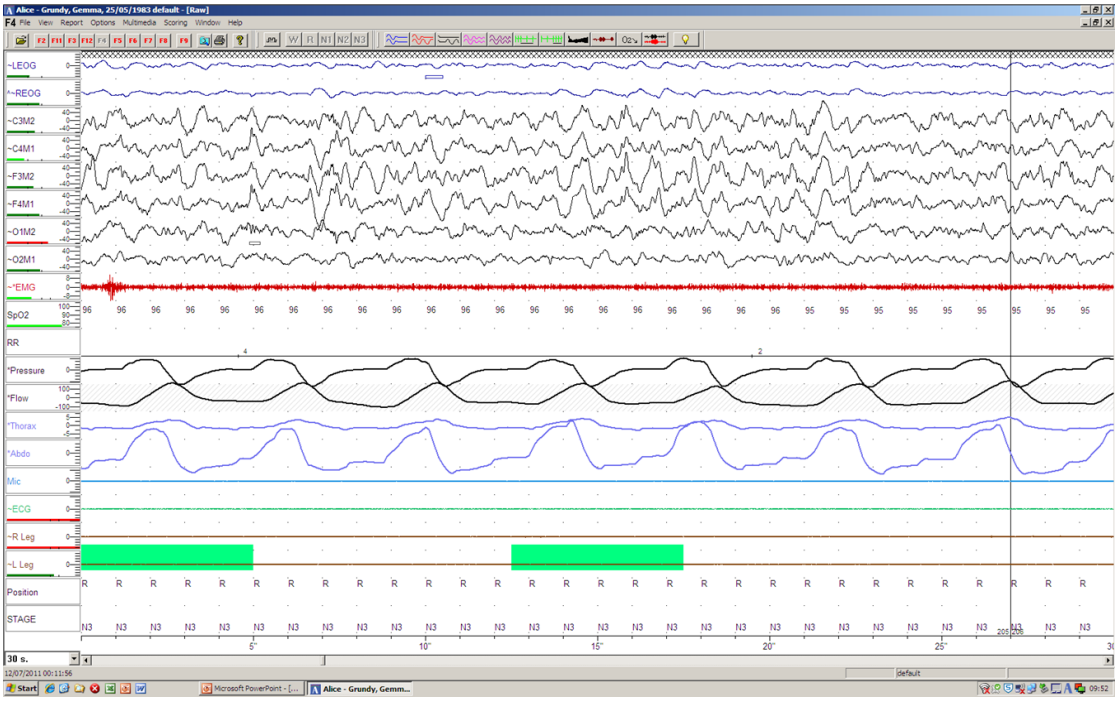
Wake eyes closed, alpha waves.



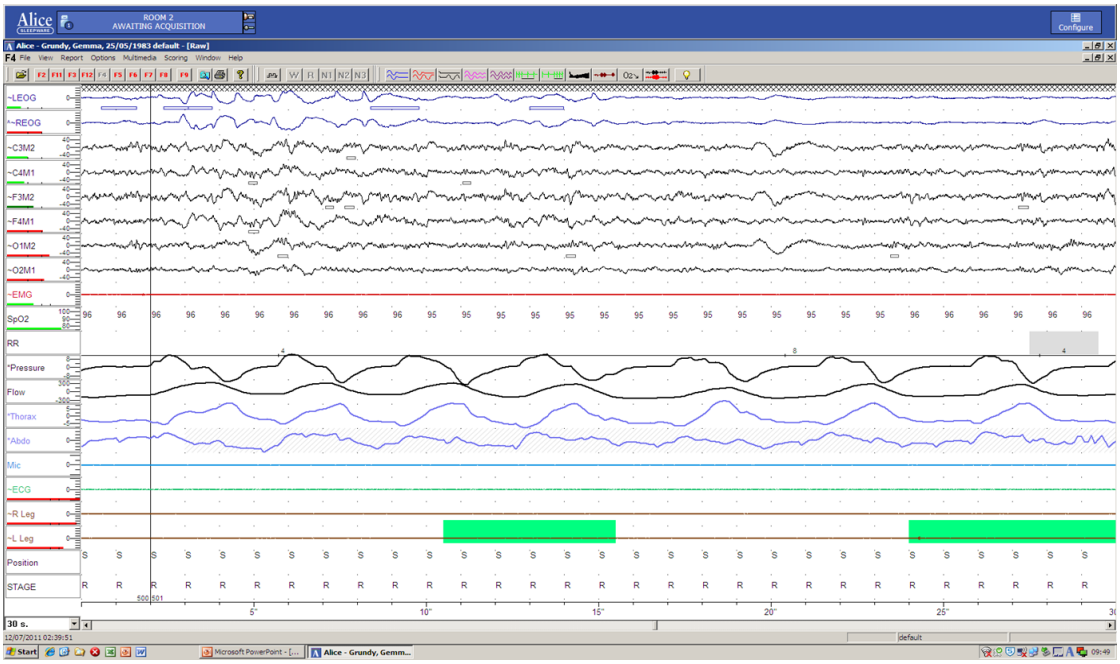
Stage N1 (NREM sleep)



Stage N2 (NREM) showing K spindles

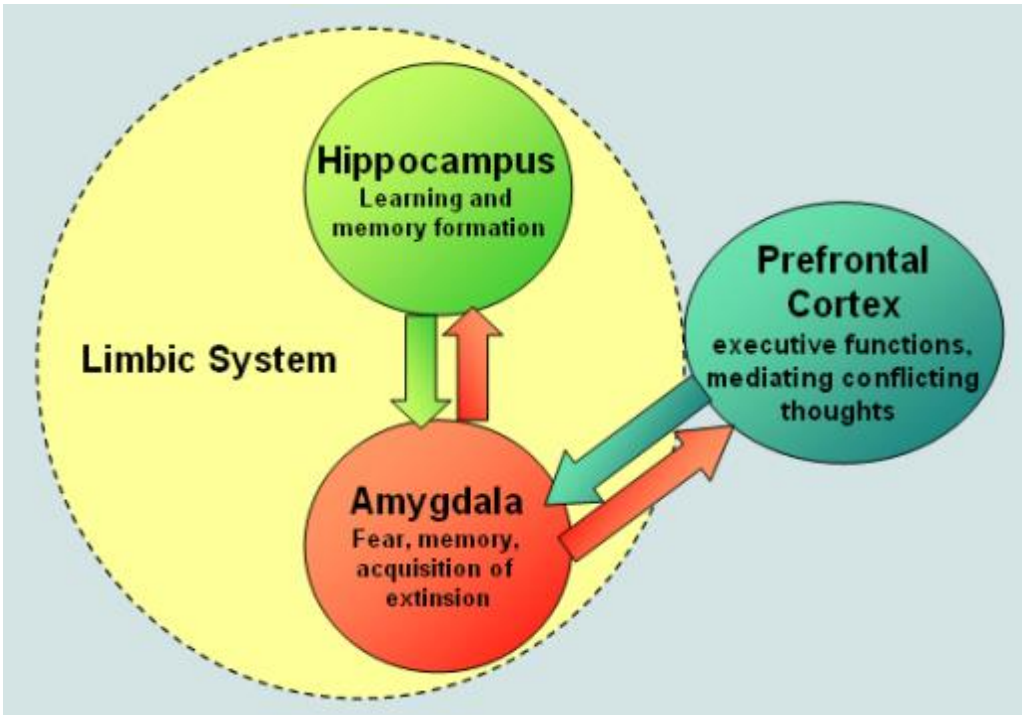


Stage N3 (NREM) showing delta waves (slow wave sleep)



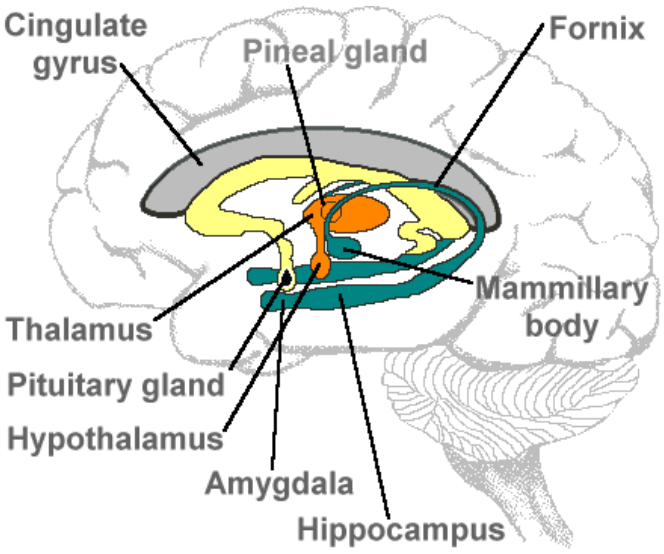
REM sleep
(Sample epochs kind courtesy of Ann Cooper)

L) Basic Neuroscience



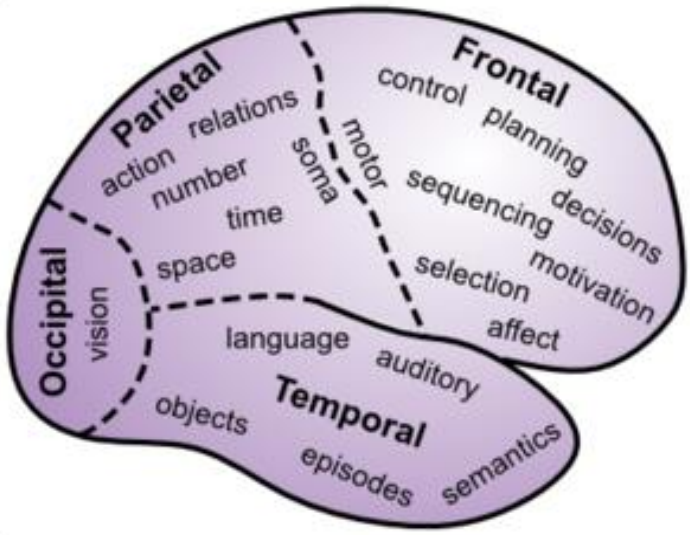
Functional diagram of connectivity between limbic system and prefrontal cortex

This diagram shows the interaction between the limbic system and the prefrontal cortex. The brain function tests indicate that during sleepwalking, the limbic system is still active, but the prefrontal cortex is suppressed. This would result in loss of executive control over more instinctive behaviours mediated by the limbic system.



Neuroanatomy of the limbic system (Creative Commons License image from http://humanmemory2007.wikispaces.com/Limbic+System)

Distribution of functions of the brain between areas of the neocortex



(Creative Commons License image from
http://grey.colorado.edu/CompCogNeuro/index.php/CCNBook/BrainAreas)

M) Hansard 15th Oct 2008

Col 799
Rape (Defences)

12.32 pm

Harry Cohen (Leyton and Wanstead) (Lab): I beg to move,

That leave be given to bring in a Bill to amend the Sexual Offences Act 2003 to prohibit the use of a defence of sleepwalking in proceedings relating to the offence of rape; and for connected purposes.

I think of this as my rape and sleepwalking Bill, because it deals with what has become a loophole in rape law. My Bill says that it shall not be a defence for a defendant accused of an offence of rape to claim that he was sleepwalking or suffering from non-insane automatism or other similar condition when the offence was alleged to have taken place.

This matter came to my attention during a Select Committee on Work and Pensions visit to Australia to obtain evidence for our excellent carers report. During the stopover at Hong Kong airport, I was reading in an Australian newspaper of an ongoing court case where the defendant, Leonard Spencer, was claiming as a defence for rape that he had been sleepwalking. I thought, no chance! To my amazement, on the journey back I saw a report in The Australian on 16 May that he had been acquitted on those grounds and that it was the first time in an Australian court that “sex-sleep” had succeeded as part of a defence.

The article said:

"It is not hard to imagine that more cases will come to light, as defence lawyers ask clients facing sex charges: 'Do you have any strange episodes in your sleep?'

It should be pointed out that Spencer's lawyer, Jon Tippett QC, did not ask his client any such leading questions. It was the police, curiously, in what seemed a throwaway question, who asked Spencer whether he had sleep issues. Spencer, who was on medication for depression, replied that he did."

From then on, the sexsomnia angle was played strongly through the trial. The article continued: "Spencer did not deny being in the woman's bed. The defence argued that he did not remember being there. A person cannot be found guilty if there is no intent involved. That's why the sleeper defence is a ripper."

I was then astonished to see not only that the defence had been used internationally—the 2005 judgment of a Canadian man, Jan Luedecke, is one sexsomniac acquittal—but that the cases of two British men were also referred to. The first was that of London man James Bilton in 2005, and the second was from 2007, when RAF mechanic Kenneth Ecott was acquitted of raping a 15-year-old girl despite admitting to having committed the act. Some experts now think that those cases have set a precedent in the law.

I sought a House of Commons Library briefing on the subject, and it brought my attention to several other cases. In 1994, Robert Burnett, a prison officer from Newcastle upon Tyne, was found not guilty of attempted rape after the court accepted that he was sleepwalking at the time. In 2006, Terry Hind, a gay race trainer—I am not sure what that is—committed a sexual assault on another man in Scotland when sleepwalking and the jury gave the verdict of "not proven", which is part of the Scottish

law. In 2006, Christopher Davies initially denied and then admitted sexually assaulting a woman, but was found not guilty because he was sleepwalking at the time. In 2007, David Pooley, a former RAF corporal, was found not guilty of rape after he successfully proved that he was suffering an episode of parasomnia, which can include sleepwalking.

The law provides defences of insanity and non-insane automatism. The distinction between the two is crucial. According to English criminal law, the former requires a disease of the mind and is decided on the balance of probabilities. When it results in a not guilty criminal verdict, other powers can be invoked, such as the provisions under the Mental Health Act 2007. In the cases of non-insane automatism, the onus is on the prosecution to exclude it beyond reasonable doubt, or the result is an outright acquittal. My Library briefing says:

"English law lacks a satisfactory method of dealing with defendants who, although lacking fault, pose a potential threat to the public...The law in this area was described in 1973 as a 'quagmire' and recent cases have only made matters worse."

As I have said, automania [sic] is increasingly being used as a defence in rape cases in the UK, Canada and Australia, and defendants are being acquitted. There must now be serious doubt that the Crown Prosecution Service would bring such a case to court if it thought that that defence would be used, as it has become extremely difficult to get a conviction.

Just 6 per cent. of rape cases result in a conviction and such loopholes make a conviction even harder to obtain. That is a harsh injustice to the victims of rape and treats that serious crime as though it is of little consequence in the legal system. I think

that the loophole has widened following recent cases. My briefing said:

“Automatism...is a complete defence (unless it is self-induced, for instance by voluntary taking of drugs and alcohol). In a couple of the recent cases, prior consumption of alcohol was admitted but the juries still deemed it not a factor in accepting the automatism defence.”

There was one case of extreme violence back in 1991—the case of Burgess. The expert medical opinion presented evidence that sleepwalking was a mental abnormality and could deem the defendant legally insane. The judge accepted that, but the series of more recent cases to which I have referred have overridden that decision as far as rape is concerned. Rape is obviously not deemed to be serious enough. My Library briefing says that English law lacks a satisfactory method of dealing with defendants who, although lacking fault, pose a potential threat to the public, and the court will have a sentencing discretion including absolute discharge, guardianship and supervision only if a disease of the mind is established.

The law in this area is a case of political correctness gone mad. I think that it defies common sense. Sleepwalking is not a reasonable excuse for rape that should lead to acquittal. Dr. Cosmo Hallstrom, a fellow of the Royal College of Psychiatrists, has said:

“People do sleepwalk and they do strange things in their sleep, but it usually is no more complex than grinding the teeth or smacking the lips—at most they may get up and make a cup of tea. I would think it was extremely difficult to perform such a complex manoeuvre as having sexual intercourse while asleep—especially if the other person is unwilling”.

N) Rape (Defences) Bill

A Bill to amend the Sexual Offences Act 2003 to prohibit the use of a defence of sleepwalking in proceedings relating to the offence of rape; and for connected purposes.

BE IT ENACTED by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1 Amendment of the Sexual Offences Act 2003 in relation to rape

(1) Section 1 of the Sexual Offences Act 2003 (c. 42) (rape) is amended as follows.

(2) After subsection (3) insert—

"(3A) It shall not be a defence for a defendant accused of an offence under this section to claim he was—

(a) sleepwalking, or

(b) suffering from non-insane automatism or other similar condition when the offence was alleged to have taken place."

2 Short title

This Act may be cited as the Rape (Defences) Act 2008.

O) Early Day Motion 463

AUTOMATISM AS A DEFENCE IN LAW

Session: 2009-10

Date tabled: 14.12.2009

Primary sponsor: Cohen, Harry

That this House considers current UK law which provides sleepwalking as a defence for rape or murder to be grossly unreasonable following recent cases, including a not guilty verdict on a man who killed his wife; notes that the jury in this recent case were presented with the option of not guilty by way of insane automatism or not guilty due to non-insane automatism; further notes that sleep specialist Dr Chris Idzikowski is quoted in The Guardian on 5 December 2009 as saying that insane automatism is intrinsic to the person's behaviour, whilst non-insane automatism is used if a person has had a blow to the head, or is withdrawing from drugs, which creates the condition; further notes that the same article states that an estimated 10 million people in the UK have sleep problems; further notes that very many people at any one time suffer the effects of a blow to the head or withdrawal from drugs, prescription or otherwise; considers that those are not proper defences for rape or murder which warrant walking free without any consequence and if they are now deemed to be so, represent a massive legal loophole; further considers that anyone who kills or commits rape cannot be considered completely safe to walk free in the community without much more extensive tests to check that they will not act in the same manner again and that the seriousness of the act should require detention for such tests in all cases; and calls for a full-scale legal inquiry to consider this matter and to bring sense to UK law.

P) Account of a Somnambulist Monk from Savarin's *Physiologie du Gout* (quotation in *Paradox Lost*):

"There was a monk…who was looked upon as a somnambulist. He used often to leave

his cell, and when he went astray, people were forced to guide him back. Many attempts were made to cure him, but in vain. One evening I had not gone to bed at the usual hour, but was in my office…when I saw this monk enter in a perfect state of somnambulism. His eyes were open but fixed and…he had a huge knife in his hand. He came at once to my bed, the position of which he was familiar with, and after having felt my hand, struck three blows which penetrated the mattress on which I laid…I saw an expression of extreme gratification pervaded his face. The light of two lamps on my desk made no impression, and he returned as he had come, opening the doors which led to his cell, and I soon became satisfied that he had quietly gone to bed…On the next day I sent for the somnambulist and asked him what he had dreamed of during the preceding night…'Father,' said he, 'I had scarcely gone to sleep when I had dreamed that you had killed my mother, and when her bloody shadow appeared to demand vengeance, I hurried into your cell, and as I thought stabbed you. Not longer after I arose…I thanked God that I had not committed the crime I had meditated.' I then told him what had passed, and pointed out to him the blows he had aimed at me…"

Q) Reform of the Law on Automatism and Insanity (an article I posted online on academia.edu written 09/04/2012)

The law on automatism and insanity is currently being examined by the Law Commission. Automatism has been described as a "quagmire…seldom entered nowadays save by those in desperate need of some kind of a defence" (Lawton LJ in Quick). The need for reform has been recognized for some time, and here are some of the suggestions that have been made.

Abolish the internal/external divide doctrine

Under this doctrine, automatism with an internal cause is deemed an insane automatism and therefore defined by the MacNaughtan Rules and leading to the special verdict. If there is an external cause, it is deemed a sane (or non-insane) automatism and leading to a plain acquittal.

This doctrine is the most problematic for medical expert witnesses. Many medical conditions are a combination of a predisposition and a trigger, and therefore a combination of internal and external factors. The internal/external divide leads to anomalies, one notable example being in the case of a person with diabetes (Quick). If he either takes too much insulin, or neglects to eat or drinks alcohol, he may suffer a hypoglycaemic episode (low blood sugar) which being triggered by the administration of a drug is deemed to be a sane automatism. If he neglects his condition and fails to take sufficient insulin and becomes hyperglycaemic (high blood sugar), this is deemed an insane automatism, similarly if he suffers hypoglycaemia due to an insulin-secreting tumour.

The other difficulty with this distinction is directing the jury when either insane or sane automatism is a possibility. See Appendix 1 for part of direction given in court. The terminology of ‘insane automatism’ even confuses lawyers, as the direction below demonstrates.

If there is no distinction between the two, either all cases of automatism will have to be pleaded under the special verdict (or an alternative defence used e.g. lack of mens rea) or some other criterion will be used to distinguish between sane and insane automatism e.g. risk of recurrence or risk to the public. The criterion of dangerousness is used in

Canada (see Rabey and Parks). This would provide a better rational to the decision, understandable as it was, in R v T.

Change disposal powers

Judges have very flexible disposal powers in the Criminal Procedures (Insanity and Unfitness to Plead) Act 1991. However, those accused of homicide and acquitted by the special verdict must receive a hospital order, if they have a mental disorder. It is not known if sleepwalking would be considered a mental disorder (and this is one instance where the decision might be made on a case by case basis).

Restrict the ambit of (sane) automatism

The Butler Committee proposed restricting sane automatism to 'transient states not related to other forms of mental disorder and arising solely as a consequence of (a) the administration, maladministration or non-administration of alcohol, drugs or other substances or (b) physical injury' (para 18.23). This would not eliminate the diabetic anomaly mentioned above. Other suggestions are to restrict it still further to "reflex, spasm or convulsions" as per the first part of Clause 33(1) of the Law Commission's Draft Criminal Code (this would make the definition of legal automatism and medical automatism virtually identical). This has been suggested in combination with widening the ambit of the insanity defence. This would have the arguable advantage of requiring the defence to prove the defendant was sleepwalking etc.

The problem with this approach is the stigmatising label of "insanity". This is already an issue with epilepsy and other conditions. The solution which has been advocated for some time is to change the name of the defence. For example in Canada it is now the defence of being 'not criminally responsible on account of mental disorder' (NCRMD).

Even this is not wholly satisfactory, given the number of physical complaints that can cause legal insanity.

Apply the partial defence of diminished responsibility or a similar third verdict to all offences

It has been argued that in some conditions, sleepwalking included, although the sufferers are not fully culpable, neither do they have no responsibility for their actions. The partial defence of diminished responsibility currently only applies to homicide, resulting in a conviction for manslaughter rather than murder, but some commentators argue that this concept should be applied to all offences. Given the flexibility of disposal given to judges by the Criminal Procedure (Insanity and Unfitness to Plead) Act 1991, the arguments for this option are much weaker now.

Partial Abolition of the Insanity Defence

Some US states have ‘abolished’ the insanity defence. This is only partial abolition, since defendants are still able to argue lack of mens rea due to their mental illness. Another option (used in England & Wales between 1883 and 1964) is the verdict ‘guilty but insane’ and other variations e.g. ‘guilty but mentally ill’, which in some cases are in addition to the special verdict.

The objection to the former option is the possibility that treatment may not be offered to either the acquitted or the convicted that are mentally ill. The objection to the latter option is unfair labelling of the mentally ill as criminals.

Altering the standard or burden of proof

The insanity defence is an anomaly, given that the burden of proof is on the defence. This was the case for the issues of accident, self defence and provocation prior to DPP

v Woolmington (Jones, 1995). Thus it has been argued that there should only be an evidential burden in insanity, the same as for same automatism.

US Federal law requires ‘clear and convincing evidence’ of insanity of the defence, a higher standard than the balance of probabilities but less than beyond reasonable doubt.

Changing the definition of legal insanity

Various definitions are used in different jurisdictions. In the US, various states use the Model Penal Code definition (sometimes modified), the Durham test or the MacNaughtan Rules (often combined with a volitional limb). There has been a tendency away from the Durham test back to the MacNaughtan Rules. It’s unlikely that English law would change from the MacNaughtan Rules. The most likely changes would be an expansion of the definition from ‘knowledge of the nature and wrongfulness of the act’ to an ‘appreciation of the nature and wrongfulness of the act’. Scotland adopted such a definition (not yet in force) in the Criminal Justice and Licensing (Scotland) Act 2010, s. 168 which states

(1) A person is not criminally responsible for conduct constituting an offence, and is to be acquitted of the offence, if the person was at the time of the conduct unable by reason of mental disorder to appreciate the nature or wrongfulness of the conduct.

(2) But a person does not lack criminal responsibility for such conduct if the mental disorder in question consists only of a personality disorder which is characterised solely or principally by abnormally aggressive or seriously irresponsible conduct.

Changing the name of the defence

The label of ‘insanity’ is very stigmatising. Whether or not a simple name change would

reduce the stigma is arguable. The Canadian equivalent is known as ‘not criminally responsible on account of mental disorder’ (NRCMD). Some would argue that that the stigma extends to any defence that denies criminal responsibility. That is unavoidable in some circumstances.

R) Levels of Evidence for Diagnosis (Centre for Evidence-Based Medicine)

1a) Systematic review (with homogeneity) of Level 1 diagnostic studies; or a clinical decision rule with 1b studies from different clinical centres

1b) Validating cohort study with good reference standards; or clinical decision rule tested within one clinical centre

1c) Absolute SpPins And SnNouts (An Absolute SpPin is a diagnostic finding whose Specificity is so high that a Positive result rules-in the diagnosis. An Absolute SnNout is a diagnostic finding whose Sensitivity is so high that a Negative result rules-out the diagnosis).

2a) Systematic review (with homogeneity) of Level >2 diagnostic studies

2b) Exploratory cohort study with good reference standards; clinical decision rule after derivation, or validated only on split-sample or databases

3a) Systematic review (with homogeneity) of 3b and better studies

3b) Non-consecutive study; or without consistently applied reference standards

4) Case-control study, poor or non-independent reference standard

5) Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"

(from http://www.essentialevidenceplus.com/product/ebm_loe.cfm?show=oxford)

S) Publications Arising From My Research

These publications are not the major publications that will contain and discuss the results of my doctoral research, but they are the product of work carried out for my thesis.

MORRISON, I., RUMBOLD, J.M.M. and RIHA, R.L. (2014) Medicolegal aspects of complex behaviours arising from the sleep period: A review and guide for the practising sleep physician. *Sleep Medicine Reviews*, 18(3), p249-60.

Summary: This review is aimed at summarizing the current state of knowledge regarding parasomnias, which have been implicated in medicolegal cases as well as providing guidance to those working within common law jurisdictions regarding the technical aspects of the law. Sleepwalking and sexsomnia as a defence are being raised more frequently in criminal cases and there has been public debate on their validity. Unfortunately, expert evidence on forensic sleep disorders continues to be heavily opinion-based with the potential for miscarriages of justice seen in recent highly publicized cases. There is an apparent inertia in research into violent sleep disorders. We review the current state of forensic sleep science in the United Kingdom (UK) and abroad and discuss the need to formulate guidelines based on available evidence. We also highlight the pressing necessity for more research in this area as well as the need

to reform the law, which is the subject of a recent Criminal Law Commission report in the United Kingdom. In time, this will facilitate the efficient, proportionate, and just disposal of violence arising from sleep, thus benefitting both society and the individual sufferer.

RUMBOLD, J. and WASIK, M. (2011) 'Diabetic drivers, hypoglycaemic unawareness, and automatism'. *Criminal Law Review,* pp. 863-72.

Summary: The recent case of Clarke and the issues that arise from unrecognized hypoglycaemic unawareness with respect to automatism and driving are reviewed. Diabetics will be rightly concerned that the courts do not properly acknowledge expert evidence of hypoglycaemic automatism, and the consequential prospect of being convicted for driving offences even where their self-management has been blameless.

T) Seminal Sleepwalking Cases

This is a short collection of high profile and important sleepwalking cases with the details reported in the press and academic literature. In some cases I have been able to add further details from interviews with the expert witnesses involved. I have also added some commentary.

Parks
Found not guilty of murder

In Toronto in 1987, Kenneth Parks (23) fell asleep at home watching *Saturday Night Live*. The next thing he knew

> *he "woke up" over a woman with a "help me" look* (Cartwright, 2010)

The "woman" was his mother-in-law. His level of consciousness gradually increased and he head the kids upstairs screaming. He tried to reassure but all the children heard was animal grunting noises. When he realised he had a knife in his hands and

that there were two people lying covered in blood, he drove to the police station saying “I just killed someone with my bare hands; Oh my God, I just killed someone; I've just killed two people; My God, I've just killed two people with my hands; My God, I've just killed two people. My hands; I just killed two people. I killed them; I just killed two people; I've just killed my mother- and father-in-law. I stabbed and beat them to death. It's all my fault”. Only then did he realise that he had several severed tendons in his hand which required surgical repair.

In the interim period he had got up from the couch; put on his jacket and shoes; went out the house without locking the door (which he was normally punctilious about); drove 23 km which would have required negotiating at least one set of traffic lights, depending on the route; entering his in-law’s home; and strangling his father-in-law into unconsciousness and stabbing and beating his mother-in-law to death. His description of the events he recalled was consistent during several interviews.

Kenneth Parks was very close to his in-laws, especially his mother-in-law, having gone after their daughter when she ran away from home (before they were married). He was a ‘gentle giant’ (larger than average stature is a feature of chronic sleepwalkers) not known for violence.

His acquittal was upheld in the Canadian Supreme Court, who held that since sleepwalking arose from the normal state of sleeping, it couldn’t amount to legal insanity. It was also commented that the medical evidence was different to that presented in *Burgess.*

The prosecution instructed no sleep experts to refute the defence of sleepwalking.

Falater

Found guilty of first degree murder

In Phoenix, Arizona, in 1997, Scott Falater went to bed, and was woken by the police at his door. When the detectives informed him that they were the Homicide Squad, he asked "Does that mean my wife is dead?"

During the night he had got up to fix the pool motor. Perhaps his wife Yarmila had disturbed him during a sleepwalking episode, but for whatever reason he stabbed his wife of 20 years 44 times, coming back later to drown her in the pool. He tidied away his

tools, put them and the bloodied shirt and knife in a Tupperware container in the boot of the car, washed his face and went back to bed. A neighbour who saw Scott drown his wife called the police.

This case contains a number of features that seem to be inconsistent with sleepwalking. If the washing of the face and tidying away of the tools, knife and shirt are seen as covering up, this rules out sleepwalking. However the washing of the face missed blood on the neck, the knife was not cleaned and part of the shirt was sticking out of the wheel well in the boot, enabling the police to find the evidence easily. If it was a cover-up, it was a very poorly organised one. On the other hand, it could be seen as an expression of Falater's normal behaviour - he was a very tidy man. Crucially he made no effort to conceal the body at all. Although his wife may have triggered the initial violence by disturbing Falater, this could not have been the case when he later drowned her. The neighbour saw Falater motion to his dogs to keep down.

Falater was a devout Mormon and devoted to his wife. He stated of her "She was my best friend and the only woman I ever loved". In the months prior to the incident, Falater had been under considerable stress at work. The project he was working on was failing, and he was debating on what to tell his bosses. He asked his wife what to do, and she advised him to "Just tell them what they want to hear". As a Mormon he normally didn't consume any caffeinated beverages but he started taking caffeine tablets. He was also suffering sleep deprivation from the stress of his work situation. He was distraught on learning that his wife was dead.

There were conflicting accounts about the state of their marriage. Also Falater had heard about the Parks case weeks before the death of his wife.

Lowe

Found not guilty by reason of insanity of murder

In Manchester in 2005, Jules Lowe (22) had gone drinking with his father after his father's partner had died. There was forensic evidence that suggested that Lowe had battered his father to death during a prolonged assault which had some features that were not indicative of a sleepwalking automatism. The defendant had had a considerable amount to drink; he may have sought out his victim; the episode lasted

some time, involving at least four separate attacks in the night (Pressman, Mahowald, Schenck et al, 2009); and there were attempts to clear up the blood. Mr Lowe had no memory of the events and did not mention sleepwalking at all in his interviews to the police. It was only nine months when a friend mentioned a TV programme about the actions possible during sleepwalking that Lowe mentioned to his solicitors that he was a sleepwalker and wondered if sleepwalking on the night in question was a possibility.

The defendant had a personal and family history of sleepwalking from at least adolescence, corroborated by several witnesses among his family and friends. The defendant had no motive and made no organised attempts at cover-up (like Falater, there were some ineffective attempts to clear up blood). The expert witnesses described the testing done in Broadmoor as "the most detailed scientific tests in British legal history". Lowe was described as “the first sleepwalking murder in the UK” by Ebrahim, apparently ignoring *Fraser* from the previous century, and the admittedly contentious *Boshears*[740] THE TIMES, 1961. US Sergeant is Cleared of Murder. *The Times*
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An initial sleep study had proved technically inadequate and a further three-night study persuaded the initially skeptical prosecution expert (Dr Ebrahim) that this was in fact a case of parasomnia (whether a confusional arousal or sleepwalking). The case report published (Ebrahim & Fenwick, 2008) prompted heated discussion among the forensic sleepwalking community. It has been suggested that the amount of alcohol consumed by the defendant made the defence of sleepwalking untenable, and that the Alcohol Provocation Test used was inappropriate due to being unvalidated (Pressman, Mahowald, Schenck et al, 2009). The signs of an assault at four different loci were interpreted by the critics as signs of four separate assaults.

Lowe’s father was known to be violent when drunk, so it entirely plausible that he might have provoked an incident. Again like Falater, if there were attempts to cover up they were very poorly organised.

Lowe received a hospital order, and was released after ten months.

Thomas

Found not guilty of murder

[740] Staff Sergeant Eugene Willis Boshears of the US Air Force was accused of strangling a young woman in Essex in 1961. He claimed he awoke to find himself strangling the woman in question. He later disposed of the body in a ditch. The jury acquitted him.

In Aberporth in 2008, Brian Thomas and his wife were on holiday in their campervan. They had stopped overnight in a car park and had been disturbed from sleep by boy-racers in the car park where they were staying overnight. Later that night he had a dream that someone was on top of his wife in the campervan. He went to pull the man off by pulling at his neck. In the morning he realised he had in fact strangled his wife and called 999, saying “I think I've killed my wife. Oh my God. I thought someone had broken in; I must have been dreaming or something. What have I done?”

Mr Thomas had a history of sleep disorders - he had been a sleepwalker since childhood. However, he attributed erectile dysfunction to the medication he took for depression and Parkinson’s disease, and so would periodically omit to take them so he could make love to his wife. He had come off his medications the week before the holiday in question.

The prosecution accepted that Mr Thomas was not responsible for his actions, so the only issue at trial was whether the jury should find him not guilty by reason of insanity or just not guilty. Both the sleep experts agreed he had been suffering a sleep disorder, and when the forensic psychiatrist testified that there were no public safety concerns to justify a hospital order, the trial was halted and the judge directed the jury to acquit. The experts did not disclose the bulk of the details in court, to reduce the chance of “copy cat” crimes.

The media coverage was universally sympathetic to Mr Thomas, who has no known motive and a well-established medical history.