



Medico-legal aspects of the advent of high-dose baclofen treatment of alcoholism in criminal and family law cases

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Abstract

The purpose of this paper is to examine whether the discovery of the craving-suppression effect of high-dose baclofen justifies a change in approach to legal issues arising out of alcohol-related violent crime and to intervention in families where there is parental alcohol abuse. In criminal cases, alcohol intoxication of an offender at the time of an offence is often viewed as contributing to the criminality of an offence rather than diminishing mental capacity. In family law, alcohol abuse by parents is considered harmful to children. The author stresses that, whereas other treatments act as craving-reduction agents (CRAs), the pharmacology of baclofen is unique in that it acts as a craving-suppression agent (CSA) while treating the anxiety dysphoria which, in Olivier Ameisen's theory, underlies alcohol addiction. In parallel, he reviews the judicial attitude towards alcohol intoxication in criminal cases in English language jurisdictions and social policy relating to children of alcoholic parents. He also reviews scientific literature relating to alcohol's association with violence and harm to children of alcoholic parents. The author notes that the law relating to alcohol intoxication raises questions as to whether those accused of alcohol-related crimes are being dealt with fairly. On the one hand, the scientific literature and reviews of studies relating to alcohol and violence do not support the conclusion that alcohol is a causative factor in violent offending, despite a strong association between alcohol consumption and violent crime. On the other hand, there is now sufficient scientific evidence to support arguments that alcoholism is itself the consequence of a disease which affects neurological function. The author also finds that studies of the impact of alcohol misuse on families are methodologically poor while social work approaches to families of alcoholics have little or no empirical support. These observations show that a neurologically based anxiety condition may be a more likely causative factor in violent behavior. The author goes on to discuss the ethical and legal responsibility of doctors, prosecutors and courts to consider new approaches to alcoholism treatment and examines how and when neurological issues relating to alcohol use might be used to raise a doubt regarding an accused's *mens rea* and his/her criminal responsibility. Despite substance dependence not being considered to be a mental illness in some jurisdictions, DSM-V criteria for diagnosing alcohol use disorder provide guidance for legal practitioners considering raising anxiety dysphoria as an illness affecting an accused person's ability to form the requisite *mens rea* of an offence. The author suggests that the success of baclofen as a treatment for alcoholism may assist legal practitioners advising clients charged with alcohol-related offences and in family law cases where there is the risk of intervention in the family as a result of the alcohol addiction of a parent.

Introduction

Baclofen has only recently been used a treatment for alcoholism or alcohol use disorder. It is an old drug developed in 1962 for epilepsy. It has anti-spastic effects and is now mainly used in the treatment of spasticity and multiple sclerosis. As a treatment for alcoholism, baclofen first came to widespread public attention in 2006 with the publication of *The End of My Addiction* by the late Dr. Olivier Ameisen, a French-born cardiologist and professor at Cornell University.¹ In this book, Ameisen documented his descent into alcoholism and his research into and experimentation with baclofen, by means of which he achieved sobriety, as he describes it, effortlessly. Since then there has been considerable research into the treatment of alcoholism with baclofen and, in the field of alcoholism research, there is now a radical change of direction away from a psychological and towards a neurological construction of the illness.

This paper examines the possible implications which the theory and practical use of baclofen in alcoholism treatment may have in criminal law and family law cases where alcohol abuse is a factor. Lack of effective treatment of alcohol disease has been a major problem for those advocating on behalf of alcoholics in both of these areas of law. In criminal proceedings, those under the influence of alcohol are considered to have committed offences which they could have avoided committing had they exercised more will power and their condition has been treated as an aggravating feature in the commission of the offence with which they have been charged. Criminal charges often give rise to concurrent proceedings in relation to an accused's parental responsibility either because the charges themselves raise concerns about child welfare or because involvement in the criminal process combined with allegations of alcohol use draws the attention of child welfare agencies. In sentencing, or in dealing with perceived family problems, judges or agencies do not consider the possibility that an offender with an alcohol problem could and should undergo a treatment which could affect a cure of an alcohol use disorder since no such cure has been considered to exist.

The availability of an effective alcoholism treatment should present alternatives to traditional approaches towards alcoholism and should be taken up eagerly by professionals working in these fields. In order to fully understand the significance of changes which the science of baclofen treatment and its use may bring in legal cases it is first necessary to look at how the drug works and the obstacles to its adoption as a front line treatment for alcohol use disorder.

¹ Ameisen, O., *The End of My Addiction*, Piatkus, New York, 2006.

Traditional alcoholism treatment

Until recently there has been no effective treatment that could be offered to an alcoholic. Of the treatments currently recommended for use in the United Kingdom by the substantial systematic review of the National Institute for Health and Clinical Excellence, almost all have only a small or at most a moderate effect; i.e., many patients following current treatments are relapsing and there are also sufferers who do not request treatment because they doubt the efficacy of available treatments. Thus, there has been a massive increase in alcohol-related health damage.²

Abstinence-based treatments like Alcoholics Anonymous have been the mainstay of alcoholism treatment in the UK and the USA for decades. The philosophy of AA cautions against the use of substitution treatments, which are perceived as ‘chemical crutches’ that delay or obscure the possibility of emotional and spiritual recovery. The general public tends to view alcohol dependence as a failure of will and, therefore, best dealt with by psychological approaches to strengthen determination or deal with underlying weaknesses, and few are aware that other options exist.³ While addiction treatment based on the traditional Twelve-Step programs, psychotherapy and rehab has changed little since the founding of Alcoholics Anonymous in the 1930s, the science of neurobiology has evolved and developed rapidly over the past few decades. Brain scanning technology, which enables researchers to see how drugs act in the brains of addicts, is now showing how the symptoms of addiction are “mediated at the molecular level by neurotransmission in the brain”.⁴

A number of drugs for use in the treatment of substance abuse have appeared, beginning in 1984 with the American FDA approval of Naltrexone for heroin addiction. These drugs act directly on neurotransmission by acting on the brain’s opioid receptors. In the case of naltrexone, they act on the release of dopamine. Other drugs followed: Acamprosate, which acts on NMDA receptors, Topiramate, which acts on GABA_A receptors, both of them reducing glutamate, and Ondansetron, which increases serotonin. These drugs help reduce craving and are used alongside Twelve-Step programs, psychotherapy, and rehab.⁵

While the craving-reduction approach was an important shift in addiction medicine, it has achieved only modest results. American studies have found acamprosate to be no better than a placebo. Naltrexone and topiramate have been shown to produce modest decreases in the number of heavy drinking days and modest increases in the period before the first heavy drinking day. However, craving persisted through trials and there was no progressive decrease in heavy drinking days. Topiramate has a negative effect on memory, thinking, speech, and movement. It can also produce kidney stones, trigger glaucoma and bring about suicidal thoughts and behaviours. Naltrexone can damage the liver.⁶ These craving-reduction agents (CRAs) do not eliminate the disability of addiction, but leave patients in an active disease state, struggling against craving and obsessive thoughts, which can result in relapse. Nor do these drugs relieve the underlying dysphoria, such as pre-existing anxiety or depression, which renders many vulnerable to addiction. Patients frequently stop taking Naltrexone, Acamprosate, and Topiramate because they experience so little benefit from them.⁷

2 Academy of Medical Sciences, 2004; NHS Statistics on Alcohol, 2010; Information Services Division, 2009; Leon and McCambridge, 2006.

3 Chick J, Nutt D J, Substitution therapy for alcoholism: time for a reappraisal? *Journal of Psychopharmacology*, 2011, pp. 1–8.

4 Ameisen O, *The End of My Addiction*. Piatkus Press, London, 2009, p. 209

5 *Ibid.*, p. 214

6 *Ibid.*, p. 214

7 *Ibid.*, p. 214

The theory of baclofen use in alcoholism

Baclofen as a treatment for alcoholism has an almost unique pharmacology and represents a revolutionary advance on drugs previously used to treat alcoholism. There are a number of drugs with sedative-hypnotic effects which work on GABA (gamma-aminobutyric acid). GABA is an amino acid which works by blocking brain signals or neurotransmission. It is the chief inhibitory neurotransmitter in the central nervous system and plays the principal role in reducing neuronal excitability throughout the nervous system, thereby relieving anxiety and improving mood. What distinguishes baclofen from all but one of these drugs is that it acts on the GABA_B receptor as opposed to the GABA_A receptor. Alcohol, barbiturates, Topiramate, Vigabatrin and benzodiazepines like Valium all affect the GABA_A receptor. Besides baclofen, the only other substance known to act on the GABA_B receptor is gamma-hydroxybutyrate (GHB). GHB occurs naturally in small amounts in human beings and many other living organisms. Naturally occurring or endogenous GHB has many sites of action in the brain, including a recently discovered GHB receptor. It is highly addictive and has been used as a date-rape drug while an overdose can result in coma, so its use is tightly controlled in most countries. In Italy, it is used under the brand name Alcover™ to treat alcoholism.⁸

Olivier Ameisen postulated in an article in *Alcohol and Alcoholism* that a GHB deficiency may underlie substance dependence through a GABA_B-mediated dysphoric syndrome.⁹ In the article he states that “a biological deficit of GHB would thus be experienced as a loss of sedative effect, leading to anxiety, muscular tension, insomnia, and/or depression. Alcohol and other drugs would serve to “correct” these uncomfortable states. The fact that the sedative-hypnotic effects of GHB are mediated by the GABA_B receptor could explain why baclofen, the only other substance known to act on that receptor, can be so useful against addiction and its underlying dysphoria” and others, such as Dr. Felice Nava, have commented that, in light of both GHB and baclofen acting on the GABA_B receptor, alcoholism may be a disease characterized by a GHB-deficiency in the brain. If this hypothesis is demonstrated, the role of endogenous GHB will be elucidated.¹⁰ A 2003 *Synapse* article reported on baclofen dose-dependently reducing nicotine-, morphine- and cocaine-evoked dopamine release, demonstrating the “ability of baclofen to modulate...[dopamine] transmission,” which indicated “baclofen as a putative candidate in the pharmacotherapy of poly-drug abuse.” Dopamine release is stimulated by several drugs of abuse.¹¹ Dopamine is a neurotransmitter which plays important roles in executive, motor, motivation, arousal, reinforcement and reward functions in the brain.

Ameisen’s theory is that the dysphoria of anxiety or depression is part of a chain of events leading to addictive craving. Addiction-related brain research has begun to concentrate on the amygdala, part of the brain’s limbic system, which processes physical sensations, feelings, and emotions and is the site where most relevant neurotransmission occurs. It has been shown to be prominently involved in the experience of anxiety. The neighbouring region of the brain, the insula, also plays a crucial role in integrating feelings and desires, including addictive cravings. The neurons in the insula are predominantly motor neurons that control muscular activity. This led Ameisen to postulate the following chain of events: dysregulated neurotransmission could have its first perceptible effects on the muscles, and subsequently disturb our emotional feelings and thoughts. To treat the underlying dysphoria and addiction alike, he postulated that this chain must be cut at its first link.¹²

Baclofen is the only drug found, to date, to have the ability to suppress, as opposed to reducing, motivation to consume alcohol, cocaine, nicotine, and amphetamine in animal studies and is unique among addiction medicines in its beneficial effect on dysphoria in human patients.¹³ This discovery led Ameisen to propose

8 Ameisen, *The End of my Addiction*, op. cit., p. 222

9 Ameisen, *Gamma-Hydroxybutyrate (GHB)-Deficiency in Alcohol-Dependence?*, *Alcohol & Alcoholism*, 2007, Vol. 42, No. 5, p. 506

10 Ameisen, *The End of my Addiction*, op. cit., p.223

11 P. Fadda et al., “Baclofen antagonizes nicotine-, cocaine-, and morphine-induced dopamine release in the nucleus accumbens of rat,” *Synapse* 50(1) (October 2003): 1-6.

12 Ameisen, *The End of my Addiction*, op. cit., pp. 224-225

13 *Ibid.*, p. 214

that anti-craving agents should be classified as either craving-reduction agents (CRAs) or craving-suppression agents (CSAs). CRAs, he maintains, do not raise addicted patients to the threshold of true remission but keep the patient in the disease, whereas high-dose baclofen takes the patient out of the disease, by freeing him/her of all its symptoms and consequences. High-dose baclofen is the only known CSA at this time.¹⁴

Currently, baclofen is the only selective GABA_B agonist available for human use. It is an orally active GABA derivative, *p*-chlorophenyl gamma-aminobutyric acid. It was originally developed as an anti-epileptic, but its effectiveness was disappointing. However, it was found to have anti-spastic effects and is currently used for the treatment of spastic movement, especially in instances of spinal cord injury, spastic diplegia, multiple sclerosis, and amyotrophic lateral sclerosis. Although the mechanism is not fully understood, baclofen affects the neurotransmitters dopamine, GABA, and glutamate. It enhances GABA activity, reduces glutamate and through these effects reduces dopamine. Baclofen acts as an agonist of the GABA_B receptors, which regulate the release of various neurotransmitters, especially the amines, dopamine, and noradrenaline.¹⁵ Baclofen, therefore, reduces brain excitation, which is why it is used for spasticity and alcohol withdrawal. Because baclofen metabolism is not affected by liver damage, it is popular with hepatologists when treating alcoholics. It has proven to be a very safe drug with few side effects, the main ones being somnolence, dizziness, muscle weakness, and headache, which are not universal and can be minimized by gradually increasing the dosage. Baclofen has good absorption after oral administration (75%), with peak serum concentrations achieved in 2–4 h. Its half-life is 3–4 h. and it is eliminated primarily via the kidneys, 85% as the unchanged parent compound, which makes it relatively easy to use in patients with liver disease. Baclofen is a safe drug even in high doses and overdose. Given the safety record of baclofen since 1967, neurologists with experience in spasticity do not hesitate to use up to 300mg/day of baclofen, as long as somnolence and/or muscular weakness do not limit treatment. In the highest recorded baclofen overdose of 2 grams, the patient survived.¹⁶

Building on a number of preclinical experiments, two open-label trials testing the effect of baclofen on alcohol reduction/abstinence and craving gave encouraging results.¹⁷ In the first study, two participants continued to drink alcohol although they substantially reduced their daily drinks in the first week of treatment, whereas the seven remaining completers were abstinent for the entire 4 weeks. Alcohol craving was significantly reduced and liver function improved. Some participants also reported that their obsessive thinking about alcohol had disappeared. In the second study, 12 alcohol-dependent individuals were given baclofen titrated up to 30 mg/day for the 12 weeks of the trial.¹⁸ Although the subjects in this trial were alcohol-dependent they were not necessarily seeking to give up. Significant reductions in the number of drinking days, the number of drinks per drinking day and the number of heavy-drinking days were found even though only 6 were completers.

Subsequent controlled trials confirmed these early findings. For example, Addolorato et al. studied 39 alcohol-dependent subjects randomized to either increasing dosages of baclofen up to 30 mg/day or placebo in a 4-week double-blind trial.¹⁹ Baclofen resulted in significantly more abstinent subjects, the duration of abstinence was significantly greater in the baclofen group and there was also a significant reduction in overall alcohol craving measured with the Obsessive-Compulsive Drinking Scale. In addition, state anxiety was also significantly reduced in the baclofen group. These results were confirmed in a larger 12-week double-blind placebo-controlled trial in patients with alcohol-related liver disease of baclofen 30 mg/day versus placebo.²⁰ As well as confirming the finding of the previous study, that baclofen is effective in

14 *Ibid.*, p. 215

15 Bowery NG, Hill DR, Hudson AL, Doble A, Middlemiss DN, Shaw J, Turnbull M. Baclofen decreases neurotransmitter release in the mammalian CNS by an action at a novel GABA receptor. *Nature*. 1980;283:92–94

16 Ameisen, *The End of my Addiction*, op. cit., p.221

17 Addolorato G, Caputo F, Capristo E, Colombo G, Gessa GL and Gasbarrini G (2000) Ability of baclofen in reducing alcohol craving and intake: II. Preliminary clinical evidence. *Alcohol ClinExpRes* 24: 67–71.

18 Flannery B A, Garbutt J C, Cody M W, Renn W, Grace K, Osborne M, et al. (2004) Baclofen for alcohol dependence: a preliminary open-label study. *Alcohol Clin Exp Res* 28: 1517–1523

19 Addolorato G, Caputo F, Capristo E, Domenicali M, Bernardi M, Janiri L, et al. (2002) Baclofen efficacy in reducing alcohol craving and intake: a preliminary double-blind randomized controlled study. *Alcohol & Alcoholism* 37: 504–508.

20 Addolorato G, Leggio L, Ferrulli A, Cardone S, Vonghia L, Mirijello A, et al. (2007) Effectiveness and safety of baclofen for maintenance of alcohol abstinence in alcohol-dependent patients with liver cirrhosis: randomized, double-blind controlled study. *Lancet* 370: 1915–1922.

promoting and maintaining alcohol abstinence in alcohol-dependent individuals, it also found there were no hepatic side-effects or worsening of liver function tests.

Case studies have also shown beneficial effects of baclofen in treatment-resistant alcoholics²¹ and in a schizophrenic alcohol-dependent patient,²² that baclofen was effective in suppressing alcohol craving and preventing relapse and was apparently safe when co-administered with medications for depression²³ and schizophrenia.²⁴ In two of these reports the subjects used very high doses of baclofen 100 mg/day²⁵ and up to 120 mg/day,²⁶ increasing the dose, respectively, to 140 mg/day or 160 mg/day and at peak, 270 mg/day in stressful situations or periods, this 'as required' use presenting an option for physician-monitored treatment.

Baclofen has also been effective in treating the symptoms of alcohol withdrawal²⁷ and has been studied in alcohol withdrawal in a comparison with diazepam.²⁸ For 10 days 37 patients with alcohol withdrawal syndrome were given either baclofen 30 mg/day or diazepam and the Clinical Institute Withdrawal Assessment (CIWA-Ar) was used to evaluate the efficacy of the treatments. The study found that there was no significant difference between the treatments. Diazepam appeared to act slightly more rapidly to reduce the sweating, anxiety and agitation scores of the CIWA-Ar. These data suggest that for treating alcohol withdrawal syndrome baclofen provides an alternative to benzodiazepines, which might be clinically important in patients with a history of benzodiazepine abuse.

Baclofen treatment represents a radical and significant advance in the understanding and treatment of alcoholism. Its effectiveness in use results from its anti-anxiety properties as an analogue of naturally produced GHB in the human body. Alcohol mimics the anxiolytic effects of GHB, so by correcting or treating a shortage of this chemical with baclofen, a neurological craving for alcohol is eliminated. In theory, this advance should have resulted in changes in practice. This has happened to a degree but there are obstacles to the widespread use of baclofen in alcoholism treatment.

The present state of baclofen treatment

Baclofen has gained acceptance in some countries for use both in the treatment of alcoholism and in patients suffering from liver disease. For instance, the drug is used by gastroenterologists in the UK in treating liver patients with alcohol disease.²⁹ It is also used for alcoholism treatment by doctors in a number of countries, particularly France where, in 2014, the National Agency for Medicines and Health Products Safety (ANSM) issued a Recommendation for Temporary Use (RTU) of high doses of baclofen in the treatment of alcoholism. Pending the results of two ongoing studies, the ANSM granted the RTU in order to monitor the safety of patients receiving baclofen outside the indications of the drug's Marketing Authorization (MA). In response to the growing off-label use of baclofen outside its MA indications, the ANSM set up national pharmacovigilance surveillance in 2011. At present several tens of thousands of French patients are taking baclofen outside the MA indications to treat their alcohol addiction.³⁰ In 2013, a group of doctors published a prescribing guide based on their experience with

21 Ameisen O, (2005) Complete and prolonged suppression of symptoms and consequences of alcohol-dependence using high-dose baclofen: a self-case report of a physician. *Alcohol & Alcoholism* 40: 147–150.; Bucknam W (2007) Suppression of symptoms of alcohol dependence and craving using high-dose baclofen. *Alcohol & Alcoholism* 42: 158–160.

22 Agabio R, Marras P, Addolorato G, Carpiello B and Gessa GL(2007) Baclofen suppresses alcohol intake and craving for alcohol in a schizophrenic alcohol-dependent patient: a case report. *J ClinPsychopharmacol* 27: 319–320.

23 Bucknam, 2007 supra

24 Agabio et al., 2007, supra

25 Bucknam, 2007, supra

26 Ameisen, 2005, supra

27 Addolorato G, Caputo F, Capristo E, Janiri L, Bernardi M, Agabio R, et al. (2002b) Rapid suppression of alcohol withdrawal syndrome by baclofen. *Am J Med* 112: 226–229.; Addolorato G, Leggio L, Abenavoli L, DeLorenzi G, Parente A, Caputo F, et al. (2003) Suppression of alcohol delirium tremens by baclofen administration: a case report. *ClinNeuropharmacol* 26: 258–262.

28 Addolorato G, Leggio L, Abenavoli L, Agabio R, Caputo F, Capristo E, et al. (2006) Baclofen in the treatment of alcohol withdrawal syndrome: a comparative study vs diazepam. *Am J Med* 119: 276. 13–18.

29 Heydtmann M, Baclofen effect related to liver damage. *Alcohol Clin Exp Res* . 2011 May;35(5):848.

30 ansm.sante.fr/content/download/69391/.../ANSM-annual-report-2013.pdf

the drug in treating over 1500 patients.³¹ The guide describes a highly individualized prescribing regime which minimizes side effects.

The advent of high-dose baclofen as a treatment for alcoholism should bring about changes in practice among medical professionals. At present, baclofen is licensed in most countries for use in spasticity and multiple sclerosis, with recommended dosages of up to 80 or 100 mg per day but, other than the French RTU, it is not licensed anywhere for the treatment of alcoholism. In alcoholism treatment doctors may need to prescribe as much as three to four times the recommended dosages and the drug must be prescribed on an off-licence basis. This has resulted in a low rate of prescription by doctors, who are often reluctant to exceed recommended dosages or prescribe off-licence due to regulatory, ethical and liability concerns. However, it is part of a doctor's duty to prescribe off-licence where appropriate. This is supported by guidelines issued by medical governing bodies. For example, in France off-label prescribing is permitted under the following conditions:

- Scientific data justify this therapeutic use.
- It is required as a treatment due to the failure of properly conducted conventional therapies.
- The patient has been given comprehensive information concerning the potential benefits and risks of the treatment.
- Informed consent of the patient and his written acceptance to take this treatment with full knowledge of the risks involved.
- Appropriate medical monitoring.
- The patient is informed of the possibility of non-reimbursement of the prescription.

Under these conditions, in France, the off-label prescription is legitimate and ethically defensible.³²

Both the US National Institute on Alcohol and Abuse and Alcoholism³³ and the UK's General Medical Council (GMC) have advised that it is both permissible and advisable for doctors to prescribe baclofen if requested by patients. In the UK, the GMC's core ethical guidance for doctors is set out in *Good Medical Practice* (2013) which makes it clear that doctors must provide effective treatments based on the best available evidence (paragraph 3c of *Good Medical Practice*). They must also do their best to ensure that any treatment they offer is in the patient's best interests, and they must be satisfied that the prescribing is safe and responsible. GMC guidance, *Good Practice in Prescribing Medicines*, includes advice on prescribing medicines for use outside the terms of their label (off-licence) which may be prescribed if the doctor is satisfied that it would better serve the patient's needs than an appropriately licensed alternative, that there are a sufficient evidence base and/or experience of using the medicine to demonstrate its safety and efficacy.

A core principle of GMC guidance is that doctors must work in partnership with patients to ensure good care. This means sharing with patients the information they want and need, such as the treatment options available to them and making reasonable efforts to investigate potential treatments that are brought to their attention. Where a medicine is outside of their area of competence the guidance suggests they should consult and seek advice from colleagues, where needed. Doctors have to use their professional judgement to make good decisions based on the best available evidence to ensure that the medicines they prescribe are appropriate and in the patient's best interests.³⁴

Doctors may also be concerned over possible negligence claims against them if they prescribe baclofen for alcoholism but it is arguable that they have a positive legal duty to prescribe baclofen for their patients.

31 Renaud de Beaufort, et al., Prescribing Guide for Baclofen in the Treatment of Alcoholism, *British Journal of Medicine and Medical Research*, ISSN: 2231-0614, Vol.: 4, Issue.: 5 (11-20 February)

32 de Beaufort, et al., Prescribing Guide for baclofen in alcoholism, op. cit.

33 Ameisen, *The End of my Addiction*, op.cit., p. 231

34 *Good Medical Practice*, (2013) General Medical Council.

Professional negligence can result from failing to prescribe properly and failing to take into account new developments in medicine. The law on the subject in England is set out in the case of *Bolitho v. City and Hackney Health Authority*.³⁵ *Bolitho* is a House of Lords decision on the standard of care in negligence cases against doctors which clarified the law as set out earlier in the case of *Bolam v Friern Hospital Management Committee*.³⁶ The earlier case held that doctors could not be found negligent if they followed practices which were also followed by a responsible body of experts. The decision was often criticized because it allows doctors to set the standard of care required of them in treating particular conditions. The House of Lords in *Bolitho* changed that by reinterpreting *Bolam*, stating as follows:

“...in cases involving, as they so often do, the weighing of risks against benefits, the judge, before accepting a body of opinion as being responsible, reasonable or respectable, will need to be satisfied that, in forming their views, the experts have directed their minds to the question of comparative risks and benefits and have reached a defensible conclusion on the matter. There are decisions which demonstrate that the judge is entitled to approach expert professional opinion on this basis. For example, in *Hucks v. Cole* [1993] 4 Med.L.R. 393 (a case from 1968), a doctor failed to treat with penicillin a patient who was suffering from septic spots on her skin though he knew them to contain organisms capable of leading to puerperal fever. A number of distinguished doctors gave evidence that they would not, in the circumstances, have treated with penicillin. The Court of Appeal found the defendant to have been negligent. Sachs L.J. said, at p. 397:

‘When the evidence shows that a lacuna in professional practice exists by which risks of grave danger are knowingly taken, then, however small the risk, the court must anxiously examine that lacuna—particularly if the risk can be easily and inexpensively avoided. If the court finds, on an analysis of the reasons given for not taking those precautions that, in the light of current professional knowledge, there is no proper basis for the lacuna, and that it is definitely not reasonable that those risks should have been taken, its function is to state that fact and where necessary to state that it constitutes negligence. In such a case the practice will no doubt thereafter be altered to the benefit of patients.’ ...The court must be vigilant to see whether the reasons given for putting a patient at risk are valid in the light of any well-known advance in medical knowledge, or whether they stem from a residual adherence to out-of-date ideas.’

It is thus the duty of courts to set standards for medical treatment so that doctors do not ignore new developments. Failure by doctors to keep up with advances in the medical treatment of alcoholism and to prescribe accordingly could result both in claims of clinical negligence and breaches of ethical standards.

Apart from licensing and legal issues, baclofen has faced hurdles in gaining acceptance as an off-licence treatment. Resistance has come from medical professionals who tend to the popular view of alcoholism as a moral rather than a medical problem. This view is often reflected in statements to the effect that the only way to recover from alcoholism is for the alcoholic to reach “rock bottom” and to then engage in 12-Step counselling programs. There is also a degree of hostility to the idea of substituting one drug for another. As a result, the side effects of baclofen are emphasized despite their being far less serious than the effects of alcoholism itself and despite guidance on prescribing of the drug to its optimal level with few or no side effects.³⁷ The idea that baclofen is a substitute, however, is misleading as the drug treats an underlying chemical imbalance in the brain and is not intended to be a substitute for alcohol in the way, for instance, methadone is used in drug addiction treatment as a substitute for heroin.

35 [1997] 4 All ER 771

36 [1957] 1 WLR 582

37 Nutt, Chick, op. cit.

Alcoholism and criminal law

The evolving construction of alcoholism as a neurobiological disease, the clinical use, recommendation for use and future licensing of baclofen may have important legal implications, especially in criminal and family law cases where alcoholism and intoxication may impact upon criminal liability and parental responsibility. This shift provides an opportunity to re-examine the approach taken by legal practitioners, prosecutors, and courts in alcohol-related offences, particularly those where violence plays a part and also the approach taken in child neglect cases where there is parental alcoholism. The legal practitioner needs to be aware of this medical development, the theory behind it and the appropriate arguments and procedures required to raise the issue on behalf of clients involved in cases where alcohol consumption is a factor. Courts, prosecutors, and legal practitioners face a number of difficult issues arising in criminal and family law cases involving alcohol and require an approach which is both consistent with the rights of the individual and at the same time protects the public from behaviour associated with alcohol abuse and addiction.

In the absence of family issues, alcohol intoxication raises complex issues in relation to the mental state of the accused at the time of the offence, during the trial and in sentencing. Criminal law requires *mens rea* for conviction of an offence. Personal experience suggests to us that we do things while under the influence of alcohol which we would not otherwise have done and neurology tells us that brain disorders, including chronic alcoholism, affect the way we behave and how we control our behaviour. Various charters of rights address this issue and require that criminal sanctions only be imposed in accordance with due process of law, which includes establishing *mens rea*. Despite this, alcohol intoxication is dealt with by legislators and courts in a unique fashion.

In criminal cases where an accused was unable to control his own behaviour at the time of the offence as a result of a mental impairment, he may rely on a defense of insanity, even if only a temporary in nature. However, alcohol intoxication is regarded in many jurisdictions, not as something which diminishes criminal responsibility, but as part of the required mental element of an offense. For instance, the English case of *DPP v Majewski*³⁸ treated voluntary consumption of alcohol to the point that a person was no longer in control of their actions as a form of recklessness, where accompanied by violence:

“Self-induced intoxication is itself a continuing element and therefore an integral part being the evidence of the actions of the accused who uses force against his victim. Together they add up or may add up to that criminal recklessness which it is the purpose of the criminal law to restrain... Fundamental to the criminal law is the concept of *mens rea*... A person who perpetrates such conduct is not criminally responsible, in general, unless such conduct is accompanied by a wrongful state of mind... *Mens rea* is therefore on ultimate analysis the state of mind stigmatized as wrongful by the criminal law which, when compounded with the relevant prohibited conduct, constitutes a particular offence. There is no juristic reason why mental incapacity (short of M’Naughten insanity), brought about by self-induced intoxication, to realize what one is doing or its probable consequences should not be such a state of mind stigmatized as wrongful by the criminal law; and there is every practical reason why it should be.”³⁹

On the basis of this reasoning, the court went on to draw a distinction between crimes of “specific intent” and of “general intent”. Where there is a requirement in the offence that the accused was able to intend some specific consequence of his action, English courts have accepted that an accused who is under the

38 *DPP v Majewski* [1977] AC 142

39 *Ibid.*, p. 15

influence of alcohol may be unable to form that specific intent, such as in an offence of assault with intent to commit actual bodily harm, although he will be considered able to form an intent to commit the crime of assault. In crimes which require only proof of only a “basic” intent, for example, a common assault charge, intoxication is not a defense. While there may be public policy reasons for this distinction, logically there is no basis for it. There is also a problem, which arises from the fundamental principle of criminal law, *actus non facit reum nisi mens sit rea*, that a person should not be held guilty of an offence if they did not have the requisite “guilty mind”. It may be argued that constructing an artificial distinction between crimes of specific and general intent does not resolve this problem.

American courts have taken a variety of approaches to the issue of alcohol intoxication. In Michigan, for example, the appeal court in *Roberts v. People* considered the effect of intoxication on the formation of the required intent to commit a crime:⁴⁰

“In determining the question whether the assault was committed with the intent charged, it was... material to inquire whether the defendant’s mental faculties were so overcome by the effect of intoxication, as to render him incapable of entertaining the intent.”

In other states, such as Mississippi, it has been held that proof of intoxication was permissible only to show that the accused was in a state of automatism at the time of the offence⁴¹ while in South Carolina proof of intoxication is only relevant to establish permanent insanity.⁴²

In Australia the courts have declined to follow the English distinction between crimes of specific and general intent and have accepted that intoxication can be a defense to a crime of violence, whether induced by alcohol or drugs, and is relevant in determining whether there is a reasonable doubt as to the existence of the mental element of the offence.⁴³

In Canada, the rule in *Majewski* was adopted by the Supreme Court in the case of *Leary v. The Queen*.⁴⁴ However, in *R. v. Daviault* the same court held that the rule that the *mens rea* of a general intent offence cannot be negated by intoxication was contrary to both of sections 7 and 11(d) of the *Canadian Charter of Rights and Freedoms*.⁴⁵ Section 7 provides that everyone has the right to life, liberty and security of the person and the right not to be deprived thereof ‘except in accordance with the principle of fundamental justice’. Section 11(d) provides that anyone charged with an offence has the right to be presumed innocent until proven guilty according to law in a fair and public hearing by an independent and impartial tribunal. In the case of *R. v. Vaillancourt*, it was recognized that in some cases substituting proof of an element of an offence, such as the intention to commit the offence, with another, the intention to get drunk, might not be an infringement of the presumption of innocence but only if “the existence of the substituted fact leads inexorably to the conclusion that the essential element exists, with no other reasonable possibilities.” The majority of the Court took the view that:

“The substituted *mens rea* set out in *Leary* does not meet this test. The consumption of alcohol simply cannot lead inexorably to the conclusion that the accused possessed the requisite mental element to commit a sexual assault, or any other crime. Rather, the substituted *mens rea* rule has the effect of eliminating the minimal mental element required for sexual assault. Furthermore, *mens rea* for a crime is so well recognized that to eliminate that mental element, an integral part of the crime, would be to deprive an accused of fundamental justice...an accused in an extreme state of intoxication akin to automatism or mental illness would have to

40 *Roberts v. People*, 19 Mich. 401

41 *McDaniel v. State*, 356 So 2d 1151 (Mississippi, 1978)

42 *State v. Vaughn*, 268 S.C. 119, 232 SE 2d 328 (1977, South Carolina)

43 *R. v. O’Connor* (1980) 146 C.L.R. 64

44 (1977) 74 D.L.R. (3d) 103

45 *R. v. Daviault* [1994] 3 S.C.R. 63

be found guilty although there was reasonable doubt as to the voluntary nature of the act committed by the accused. This would clearly infringe both ss. 7 and 11(d) of the Charter.”⁴⁶

In Europe, Article 6(2) of the *European Convention on Human Rights* provides that anyone charged with a criminal offence “shall be presumed innocent until proven guilty according to law”. This means that the prosecutor must prove all the elements of the offence. Article 6(2) requires the state to confine presumptions within reasonable limits which take into account the importance of what is at stake and maintain the rights of the defense.⁴⁷ Commentators on *Majewski* have been unable to put forward a rationally justifiable distinction between crimes of specific intent and crimes of basic intent, making it difficult to defend that approach. The objections to permitting a defense of voluntary intoxication are based on public policy and an assumption about a causal link between intoxication and offences of violence. There is, however, a considerable body of evidence from within the United Kingdom and elsewhere that while “experience may suggest that alcohol makes it easier for violence to occur by diminishing the sense of what is acceptable behaviour...[alcohol] is not in itself a cause of violence”.⁴⁸

Approaches to alcohol intoxication in criminal cases vary between jurisdictions. There is a need for courts to balance the need to control criminal behavior against the rights of individuals to be convicted of offences only where they have exercised their own free will. This has produced an inconsistent, often illogical and, some would say, unjust approach to cases where alcohol intoxication is present. Changes in the understanding of the nature of alcohol and its effect on human behavior may offer some way forward in addressing this difficult issue in criminal law and in other related areas of law, particularly family law cases involving children where there is parental alcohol abuse.

Child welfare and parental alcohol use

Alcohol related crime, alcoholism and child neglect are closely connected public policy areas. Arrests in the UK, for example, result in reports to child welfare services where the detained person is a parent and is under the influence of alcohol. Hospitals and health care professionals also have duties to report parental intoxication to relevant child welfare authorities which override rules of patient confidentiality.

It is widely accepted that, in addition to the harm that alcohol consumption causes for drinkers themselves, family members—primarily spouses and children—are likely to be harmed.⁴⁹ There is also a strong statistical association between parental alcohol misuse and child neglect. The UK’s Alcohol Harm Reduction Strategy reports there are 780,000 to 1.3 million children affected by parental alcohol problems.⁵⁰ In the United States, one million children yearly are confirmed as victims of child abuse by state child-protection service agencies. Substance abuse is reported to be one of the two largest problems affecting families in the United States, being a factor in nearly four-fifths of reported cases. Alcoholism is said to be more prevalent among child-abusing parents and is more strongly correlated to child abuse than depression and other disorders.⁵¹ One report concluded, based on evidence from case studies, that alcohol use is a cause of child abuse in an estimated 16 percent of cases. Criteria for this assessment included

46 [1987] 2 S.C.R. 636 49

47 *Salabiaku v. France* (1991) 13 E.R.R.R.379 para 28

48 Ledain G, Interim Report of the Canadian Government Commission of Inquiry into the Non-Medical Use of Drugs (1972) Information Canada, Ottawa Canada; Mitchell, C N, “The Intoxicated Offender-Refuting the Legal and Medical Myths” (1988) 11 Int. J.L. & Psychiatry 77.

49 Maffli E, Problem drinking and relatives. In: Klingemann, H., and Gmel, G., eds. *Mapping the Social Consequences of Alcohol Consumption*. Dordrecht, Netherlands: Kluwer Academic Publishers, 2001. pp. 79–91.

50 UK (Prime Minister’s Strategy Unit, 2004). 53 Bavolek S J, Henderson H L, (1990). *Child*

51 Bavolek S J, Henderson H L, (1990). *Child maltreatment and alcohol abuse: Comparisons and perspectives for treatment*. Potter R T, Efron P S, *Aggression, Family Violence and Chemical Dependency*. Binghamton: Haworth Press. pp. 165–184. Daro D, McCurdy, K (April 1991). *Current Trends in Child Abuse Reporting and Fatalities: The Results of the 1990 Annual Fifty State Survey*. Working Paper Number 808. 332 S. Michigan Ave., Suite 1600, Chicago, IL: National Committee for Prevention of Child Abuse. p. 34

“reported misuse of alcohol in the family,” “intoxication reported by the perpetrator,” or “history of alcoholism.”⁵² However, the authors of the article could not identify any study that linked the risk of child abuse to particular levels of alcohol intake nor could the authors of a follow-up report.⁵³ Despite the concern for children of substance-misusing parents being mentioned in recent UK and US national policies, the focus has been on parents who use illicit drugs, and there is little epidemiological evidence regarding the number of children affected by parental alcohol abuse.⁵⁴

UK government policy in respect of children of alcoholics and drug addicts is set out in a number of documents such as *Silent Voices*⁵⁵ (alcoholism) and *Hidden Harm*⁵⁶ (drug addiction). The Children Commissioner’s report on parental alcohol abuse, *Silent Voices*, found that in the UK there is no systematic collection of data on the prevalence of children affected by parental drug and alcohol misuse, that there is a lack of alcohol-specific focus and less recognition of and response to alcohol misuse compared with drug misuse. The report commented that there is a dearth of work dealing with the large numbers of children who are affected by parental alcohol misuse and that parental alcohol misuse urgently needs equal, if not greater, attention than is given to parental drug misuse. The Report of the UK’s Advisory Council on the Misuse of Drugs, *Hidden Harm*, does not directly address the issue of parental alcohol use, but it does state that, from the evidence gathered, it is probable that even more children are affected by parental problem alcohol use than by drug abuse while, in many families, alcohol, and other drugs are both used harmfully.⁵⁷

Because of the lack of information on alcohol abuse in families, UK government policy has followed recommendations made in the drug advisory council’s report. Although it was beyond the scope of the council’s enquiry, its report considered the impact of alcohol to be an additional factor and many of the recommendations made for protecting and supporting the children of problem drug users are stated in the report to be “applicable to the children of problem drinkers.”⁵⁸ The thrust of the report is to encourage early intervention in families, often resulting in the removal of children from the homes of alcoholic or drug abusing parents. While emphasizing that a comprehensive and careful assessment of the child’s needs and the home and parental circumstances is necessary, the report concludes that it is essential for good decision making that “delays in reaching decisions about adoption can be detrimental to the child, particularly when the child is very young and developmental problems can quickly develop...it is important to be realistic about the prospects of rehabilitation”.⁵⁹

It is not just the actions of parents under the influence of alcohol in relation to children that is considered harmful, but the exposure of children to parents with alcoholism and drug addictions. The report considered that fostering offered the greatest potential for the satisfactory development of the child, while accepting that little is known about the circumstances of the many children who have been separated from their parents and live with other relatives or friends, or have been fostered, adopted or accommodated in residential care. There has been no published research regarding the quality and stability of their relationships with caregivers, their physical environment or their outcome.⁶⁰ Further, *Hidden Harm* reported that most of the social workers involved are relatively newly qualified and have had little or no training for work in the field of drug or alcohol misuse.⁶¹ The report concluded, however, that despite a shortage of formal studies it would be wrong to assume there is insufficient

52 English D R, Holman C D J, Milne E, et al. The Quantification of Drug-Caused Morbidity and Mortality in Australia, 1992. Canberra: Commonwealth Department of Human Services and Health, 1995. 55Ridolfo B, Stevenson C, The Quantification of Drug-Caused M
53 Ridolfo B, Stevenson C, The Quantification of Drug-Caused Mortality and Morbidity in Australia, 1998. Canberra: Australian Institute of Health and Welfare, 2001.

54 Templeton L, Velleman R, Russell C (2010). Psychological Interventions with Families of Alcohol Misusers: A Systematic Review. *Addiction Research & Theory* 18(6): 616-648.

55 Adamson J and Templeton L, Office of the Children’s Commissioner Community Research Company, (2012) *Silent Voices: supporting children and young people affected by parental alcohol misuse*.

56 *Hidden Harm: Responding to the needs of children of drug users*, 2011, The Advisory Council on the Misuse of Drugs, UK Government.

57 *Ibid.*, p. 90

58 *Ibid.*, p. 7

59 *Ibid.*, p.17

60 *Ibid.*, p. 48

61 *Ibid.*, p. 13

information upon which to act and cited in support of action the harrowing testimony of disadvantage and distress experienced by children.

However, formal studies of family systems do not show a causal relationship between alcohol consumption and problems within families and the studies themselves have been criticized as being disparate, often lacking in orientation, and methodologically poor.^{62 63} One study focusing on the impact of alcohol on families concluded that the way alcohol treatment services currently operate within the UK is preventing “the required move towards consideration of a broader range of outcomes for clients and their families”.⁶⁴ Criticism has been levelled at the alcohol treatment field and its commissioners for not adequately including family members in service delivery.⁶⁵ Family members’ suffering can be further exacerbated by this lack of support.⁶⁶ Whilst several systematic reviews have focused on interventions for people with alcohol problems, few reviews have attempted to synthesize findings from studies of family-focused interventions.⁶⁷

In neither the criminal law or family law, as it relates to children, is there a scientific basis for the approach taken towards the role of alcohol misuse in causing either violent crime or child neglect. Scientific studies have also failed to establish a causal link between alcohol on the one hand and violence and problems in families on the other. Evidence of such a link must come from experimental and observational studies but this research has not yet answered the fundamental question of whether alcohol is causally related to aggressive behaviour.^{68 69 70} Experimental studies do not support the theory that alcohol acts pharmacologically to weaken people’s inhibitions against acting aggressively.⁷¹

The lack of scientific evidence linking alcohol consumption to violence may suggest that there is another cause. Ameisen’s theory is that the cause of alcoholism is a neurological dysphoria which manifests itself as anxiety in the conscience of the sufferer. Research into the cause of violence, or impulse aggression has been conducted and it is to this field one must turn to see whether there is a connection between neurological deficits and the dysphoria described by Ameisen in particular, on the one hand, and violence on the other.

A neurological approach to aggression and violence

Psychological evidence is frequently presented in courts as to the identity and expected consequences of mental disorders such as major depression, schizophrenia, as well as chronic stress, and substance abuse, which may affect an individual in a way which precipitates criminal conduct, diminishes criminal intent or responsibility, or to mitigate the circumstances of a criminal act. Traditionally, the emphasis has been on the impact of these “functional” or emotional factors on issues of criminal behaviour, with little regard to mental disorders that result from brain dysfunction.⁷² Among these organic disorders are disease entities such as tumors, cerebrovascular disease, and progressive dementias, and other brain injuries and deficits, including the effects of chronic alcoholism.⁷³

62 *Ibid.*, p. 619

63 *Ibid.*, p. 619

64 Templeton et al, *op. cit.* p. 635

65 Hidden Harm, *op. cit.*, p. 618

66 *Ibid.*, p. 618

67 *Ibid.*, p. 619

68 Gelles R J, and Loseke D R, eds. *Current Controversies on Family Violence*. Newbury Park, CA: Sage Publications, 1993.

69 Lipsey M W, Wilson D B, Cohen M A, and Derzon J H, Is there a causal relationship between alcohol use and violence? A synthesis of evidence. In: Galanter, M., ed. *Alcohol and Violence: Epidemiology, Neurobiology, Psychology, Family Issues*. Recent Developments in Alcoholism, Vol. 13. New York: Plenum Press, 1997. pp. 245–282.

70 Pernanen K, What is meant by “alcohol-related” consequences? In: Klingemann, H., and Gmel, G., eds. *Mapping the Social Consequences of Alcohol Consumption*. Dordrecht, Netherlands: Kluwer Academic Publishers, 2001. pp. 21–31.

71 Gmel G, Rehm J, *Harmful Alcohol Use*, National Institute on Alcohol Abuse and Alcoholism, December 2003.

72 Wagner M M: *Neuropsychological Evidence in Criminal Defense, Rationale and Guidelines for Enlisting an Expert*, Mental Health and Experts Manual, Kentucky Department of Public Advocacy – 2005.

72 *Ibid.*

73 Anchor K N, Rogers, J P, Solomon, G S, Barth J T, Peacock C, Martell D A (1985) “Fundamentals of Disability Determination and Rehabilitation: A Higher Ground for the Applied Neurobehavioral Sciences.” *American Journal of Trial Advocacy* 8 pp. 337-375, Hall, H. V., & D. McNinch (1988) “Linking Crime-Specific Behavior to Neuropsychological Impairment.” *The International Journal of Clinical Neuropsychology* 10, pp. 113-122.

In recent decades, however, the relevance of brain deficit to criminal behaviour has emerged as an area of forensic attention.⁷⁴ There is now a large body of research in the neurobehavioral literature associating specific brain lesions with specific behavioural effects.⁷⁵ Accumulated research has established a connection between brain deficit and the increased risk of violent behaviour due to the impairing of inhibition of violent impulses.⁷⁶ High base rates of brain damage have been found in violent offenders versus non-violent offenders.⁷⁷ Brain dysfunction, regardless of the source, may result in impairments of memory, language and cognition which have significant implications for criminal law standards of behaviour. The same degree of behavioural control cannot be expected of someone who suffers from an organic brain disorder as is demanded of individuals who are without such disorders.⁷⁸

Some studies suggest that individuals predisposed to aggression and violence have an abnormality in the central circuitry responsible for these adaptive behavioural strategies—a defect in the brain regions that control emotional regulation. The evidence indicates that the orbitofrontal cortex, OFC, and the structures with which it is interconnected (including other prefrontal territories, the anterior cingulate cortex, or ACC, and the amygdala) constitute the core elements of a circuit that underlie emotion regulation. The OFC, through its connections with other zones of the prefrontal cortex, PFC, and with the amygdala, plays a crucial role in restraining impulsive outbursts, and the ACC recruits other neural systems, including the PFC, in response to conflict. Deficits in this circuit are believed to increase a person's tendency to impulsive aggression.⁷⁹ Imaging studies with positron-emission tomography have revealed prefrontal abnormalities in glucose metabolism in individuals prone to impulsive aggression. An increased metabolic rate was also observed in the limbic region, that is, the hippocampus, amygdala, thalamus, and midbrain in the right hemisphere in impulsive murderers, compared with both the control group and those murderers who had planned their crimes in advance. Many factors influence the structure and function of this circuitry. Nevertheless, the first important step is to recognize that impulsive aggression and violence reflect abnormalities in the emotion regulation circuitry of the brain.⁸⁰

There appears to be a connection between violence and underlying neurological disorders. Presenting a case in terms of a neurological disorder rather than a mental illness may also yield better results both because of the lack of effective treatments for major mental illnesses and because mental illness in itself may not be a cause of the criminal behaviour. A US study of the relationship between mental illness and violence aimed to clarify whether or how severe mental illnesses such as schizophrenia, bipolar disorder, and major depression lead to violent behaviour. Using data collected as part of the National Epidemiologic Survey of Alcohol and Related Conditions (NESARC) the study, conducted by the National Institute on Alcohol Abuse and Alcoholism, demonstrated that severe mental illness alone did not predict violence and studies of only mental health and violence showed statistically higher levels of instances of violence for those suffering from severe mental illness where there was concurrent use of alcohol. 46% of those suffering with severe mental illness had a lifetime history of co-morbid substance abuse or dependence.⁸¹ While alcoholism is associated with violence, characterizing the violence as resulting either from mental illness or from alcohol consumption would appear not to be helpful in explaining its cause.⁸²

Deficits in the emotion regulation circuitry of the brain may explain violent behavior where alcohol misuse is suspected. Ameisen's theory of an anxiety-craving cause of alcohol addiction and studies on the cause

74 Lezak M D, *Neuropsychological Assessment*, 3rd Ed (New York, 1995)

75 Volavka J, Martell D A, Convit A J (1992) "Psychobiology of the Violent Offender." *Journal of Forensic Sciences JFSCA* 37, pp. 237-251.

76 Langevin R, Ben-Aron M, Wortzman G, Dickey R, Handy L (1987) Brain Damage, Diagnosis and Substance Abuse Among Violent Offenders, *Behavioral Sciences and the Law* 5, pp. 77-94; Martell, D A (1992b) "Forensic Neuropsychology and the Criminal Law." *Law and Human Behavior* 16, pp. 313-336, Nachshon I, Denno D "Violent Behavior and Cerebral Hemisphere Function." In S A Mednick, Moffitt T E, Stack S A (eds.) *The Causes of Crime: New Biological Approaches* (New York, 1987) Silver J M, Yudofsky S C (1987) "Aggressive Behavior in Patients with Neuropsychiatric Disorders." *Psychiatric Annals* 17, pp. 367-370.

78 Wagner, *supra*.

79 Damasio A, *Violence and Aggression – The Dana Guide*, March 2007

80 *Ibid*.

81 Elbogen E B, Johnson S C, *The Intricate Link Between Violence and Mental Disorder Results From the National Epidemiologic Survey on Alcohol and Related Conditions*, *MDArch Gen Psychiatry*. 2009, 66(2): pp. 152-161.

82 *Ibid*.

of impulse aggression both focus on deficits in the limbic region of the brain. The limbic system consists of brain structures below the surface of the brain which are involved in primitive aspects of emotional behaviour. Damage to any of a variety of limbic system structures may result in marked aggression or violence, hypersexuality or rage reactions. Sudden loss of control over aggressive tendencies, such as in explosive episodes, with minimal stimulation, can be found in limbic system lesions.⁸³ Thus, damage to the limbic region from deficits such as alcoholism can be linked to violent, aggressive and explosive behavior. Damage to other areas of the brain, while not directly related to aggressive behaviour or impulse control, can nevertheless greatly impair a defendant's cognitive capacity to a degree which is relevant to state-of-mind forensic issues such as competence, responsibility, and intent. Furthermore, the cognitive capacity required to comprehend court proceedings, make reasonable decisions, and recall court proceedings from one day to the next depends on intact brain function. Dysregulation of the limbic system of the brain, which Ameisen associates with a neurological anxiety underlying alcoholism, may be a cause of violent behavior.

Showing a neurological disorder is not enough to avoid charge or conviction in a criminal case. If a person suffers from a mental, neurological or brain illness or deficit it must satisfy a legal test of insanity. In the UK, the M'Naghten Rules apply in all cases where insanity is raised as a defense. They provide that "to establish a defense of insanity it must be proved that, at the time of the offense, the accused was suffering from "such a defect of reason, from disease of the mind, 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 what he was doing was wrong".⁸⁴ In this test, "disease of the mind" is not a medical term but a legal one. A mental illness or brain deficit may not result in such a disease nor does an accused need to be suffering from a brain disease, only a disease which affects the functioning of the mind.⁸⁵

M'Naghten places the burden of proof on the accused as the Rules provide that "every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes until the contrary is proved to their satisfaction".⁸⁶ It is for the trier of fact, whether judge or jury, to decide whether an accused is insane. While expert medical evidence needs to be presented to support an argument that an accused was insane at the time of the offense, it is for the trier of fact to decide whether the evidence supports a finding of insanity.

In the United States, the strict M'Naghten standard for the insanity defense was used until the 1950s and the *Durham v. United States* case in which the court ruled that a defendant is entitled to acquittal if the crime was the product of his mental illness and that the crime would not have been committed except for the disease.⁸⁷ The test is a more lenient guideline for the insanity defense and addressed the issue of convicting mentally ill defendants, which is allowed under the M'Naghten Rules. The federal *Insanity Defense Reform Act* of 1984, however, shifted the burden of proof from the prosecution to the defense and adopted a new test that more closely resembled M'Naghten.⁸⁸ Under this new test, only perpetrators suffering from severe mental illnesses at the time of the crime may successfully employ the insanity defense. The defendant's ability to control himself or herself is no longer a consideration. The Act also curbed the scope of expert psychiatric testimony and adopted stricter procedures regarding the hospitalization and release of those who found not guilty by reason of insanity. In most states the burden of proof is on the accused to prove insanity on the preponderance of the evidence. In others, the burden is on the prosecution to prove sanity beyond a reasonable doubt while in federal court, and in Arizona, the burden is placed on the defendant, who must prove insanity by clear and convincing evidence. The consequence of this is that findings of insanity are uncommon.⁸⁹

83 Wagner, *supra*

84 M'Naghten's Case [1843-1860] ALL ER Rep 229

85 R. v Kemp [1957] 1 QB 399

86 McNaghten, *op. cit.*

87 *Durham v. U.S.* (214 F.2d 862)

88 *United States v. Freeman* 804 F.2d 1574 (11th Cir. 1986)

89 Schmallegger, Frank (2001). *Criminal Justice: A Brief Introduction*. Prentice Hall. ISBN 0-13-088729-3.

Defending a charge – when to raise the issue

Not all alcohol consumption results in violent behavior and not all violent behavior, even if associated with drinking, results from alcohol consumption at levels which can be said to be indicative of an underlying illness. It is one thing to postulate a neurological connection between alcohol and issues of violence and child neglect but another to translate that into a legal strategy which can be used in court. This requires presenting evidence that a neurological deficit of the limbic region, of the type described by Ameisen, had an effect on an accused's mental state. The evidence of a neurological expert will be needed who will have examined the patient and can comment on the psychological consequences of the patient's alcoholic illness; whether it has reached a point that it interferes with cognitive processes, and the prospects of successful treatment.

Raising an illness which underlies alcoholism as a defense or in mitigation in criminal proceedings depends on the client's instructions and the particular circumstances of the case. It may be that the seriousness of a charge is not sufficient, for instance, to warrant the consequences to a client of disclosing an alcoholic condition or that an accused person does not feel that their consumption of alcohol did, in fact, interfere with their mental capacity and is unwilling to advance such an argument in any event. A plea of insanity can result in the UK and the United States in an accused being held in a hospital, in the UK, for instance, under the *Insanity and Unfitness to Plead Act, 1991*. The result of this is that a person may be held until they are deemed not to be a threat which could be for longer than had they been imprisoned after conviction. However, where an accused person who was under the influence of alcohol considers that their behavior was affected to such an extent that they do not feel they ought to be held accountable for their behavior, lawyers should consider whether the behavior was brought about by an illness.

The difficulty in some jurisdictions in making such an argument, in addition to the strict requirements of the M³Nachten Rules is that substance and alcohol dependence is not considered to be a mental illness which would affect mental capacity. For instance, in the UK, section 1(2) of the *Mental Health Act 2007* defines mental disorder as “any disorder or disability of the mind” but section 1(3) of the Act excludes dependence on alcohol or drugs from that definition. However, mental disorders which accompany or are associated with the use of or stopping the use of alcohol or drugs, even if they arise from dependence on those substances, may come within the meaning of “mental disorder” for the purposes of the Act.

Despite these difficulties, practitioners ought to consider issues of alcohol-related illness when the standard diagnostic criteria, referred to as the social consequences of alcohol use indicate⁹⁰ the presence of an illness. These consequences are reflected in the diagnostic criteria for alcohol use disorder (AUD) given in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*.⁹¹ The DSM-5 defines AUD as alcohol use that results in:

1. Taking the substance in larger amounts or for longer than you meant to.
2. Wanting to cut down or stop using the substance but not managing to.
3. Spending a lot of time getting, using, or recovering from use of the substance.
4. Cravings and urges to use the substance.
5. Not managing to do what you should at work, home or school, because of substance use.
6. Continuing to use, even when it causes problems in relationships.

⁹⁰ Österberg E, Alcohol-related adverse social consequences within the European Union. In: Peters, T.J., ed. *Alcohol Misuse: A European Perspective*. Amsterdam: Harwood Academic Publishers, 1996. pp. 181–194; Klingemann H, and Gmel G, Mapping the Social Consequences of Alcohol Consumption. Dordrecht, Netherlands: Kluwer Academic Publishers, 2001; Rehm J. Concepts, dimensions and measures of alcohol-related social consequences: A basic framework for alcohol-related benefits and harm. In: Klingemann H., and Gmel G., eds. *Mapping the Social Consequences of Alcohol Consumption*. Dordrecht, Netherlands: Kluwer Academic Publishers, 2001. pp. 11–19.

⁹¹ American Psychiatric Association 2013.

7. Giving up important social, occupational or recreational activities because of substance use.
8. Using substances again and again, even when it puts you in danger.
9. Continuing to use, even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.
10. Needing more of the substance to get the effect you want (tolerance).
11. Development of withdrawal symptoms, which can be relieved by taking more of the substance.

Under DSM–5, anyone meeting any two of the 11 criteria during the same 12-month period would receive a diagnosis of AUD. The severity of an AUD – mild, moderate, or severe – is based on the number of criteria met. DSM–5 adds craving as a criterion for an AUD diagnosis. It was not included in DSM–IV. If an accused exhibits sufficient consequences to be diagnosed as suffering from a mental illness, consideration should be given to whether the illness affected an accused’s mental capacity and to what extent.

DSM 5 only sets out criteria to help establish whether an individual is suffering from an illness and is not definitive of whether a person meets the legal definition of insanity. In the UK and under US federal legislation an expert cannot testify as to whether a person is insane, which is a legal issue to be decided by the trier of fact. Whether an illness does give rise to an argument over mental capacity will depend on whether the particular illness can be associated with mental impairment of a kind and to such extent that it interferes with cognitive function. In order to put forward such an argument, practitioners would have to present expert evidence of a neurological impairment and a connection with the behavior complained of. One useful manual setting out guidance to practitioners suggests there are a number of conditions under which investigating from a neuropsychological perspective is strongly indicated. The manual sets out a number of questions which should be posed concerning the defendant; the last four of which may be applicable to cases involving alcohol use:

1. Were there any developmental events (perinatal or childhood in origin) that (could have) involved central nervous system injury, whether or not they were considered important at the time?
2. Have there been any events leading to loss of consciousness or disorientation, even if hospitalization did not occur?
3. Is there any documented disorder involving brain damage (such as chronic alcoholism)?
4. Is there a history of significant alcohol abuse or poly-substance abuse for several years or more?
5. Is the criminal behaviour completely out of character for the defendant?
6. Is there a pattern of problems with impulse control, memory dysfunction, or violent behaviour?

Positive responses in any of the above categories would suggest proceeding to involve a neurological expert who would then determine if there is sufficient reason to suspect the presence of brain dysfunction in an accused and present evidence on his behalf.

The legislative response – diversion towards treatment

The legal framework in which questions of mental capacity are dealt with where there is alcohol intoxication relies on archaic fictions. Using DSM–5 and similar criteria as a guide in representing clients in court may be of assistance in some instances but courts can only deal with individual cases. A legislative response is required to implement changes which affect all cases and which are fair. The *European Convention on Human Rights* (ECHR), particularly the Article 3 prohibition of “degrading”

treatment, requires European Union member states to consider diverting those suffering from mental illnesses away from court. In compliance with this legislation, most Council of Europe countries have specialized systems for people whose mental disability is a direct cause of their criminal behavior. The ECHR is clear that where the justification of a person's detention is based on the existence of a mental disorder, he/she should receive treatment in a therapeutic environment such as a hospital.

In common law jurisdictions such as England, where the onus is on the prosecution to establish *mens rea* beyond reasonable doubt,⁹² prosecutors must consider information about an accused person's mental health at the earliest opportunity in order to review the case in accordance with the *Code for Crown Prosecutors* as set out in *Home Office Circular 12/95*.⁹³ The information provided to the prosecution may include a recent report from a psychiatrist, community psychiatric nurse or social worker which will provide the prosecutor with information about the offender's mental disorder upon the prosecutor to decide whether a prosecution is in the public interest.⁹⁴ While substance dependence is excluded from the definition of a mental illness under UK legislation, offenders with drug addictions are offered addiction treatment.

The *Drug Interventions Programme* (DIP) is part of the United Kingdom's strategy for tackling drug-related crime.⁹⁵ It aims to engage drug-misusing offenders in formal addiction treatment and other support, thereby reducing drug-related harm and reducing offending behaviour.⁹⁶ The program does this through a variety of methods, some, such as the *Tough Choices* program being compulsory, and some relying on voluntary engagement. Class A drug-misusing offenders are identified steered towards treatment, which has included the prescribing of methadone or Subutex (Subudone), and support. Under the *Police and Criminal Evidence Act 1984* (PACE), it has been possible for police to drug test Detained Prisoners since 1984. The *Drugs Act 2005* introduced, at selected "intensive DIP area" police stations, a mandatory drug test for every individual who had been arrested for a specified list of "trigger offences." Trigger offences were first set out in the *Criminal Justice and Court Services Act 2000*, and constitute a list of offences known to have a clear link to substance misuse. Individuals who refused to take this test, a "non-intimate saliva sample", could face up to three months in prison and a £2,500. Individuals who tested positive were then compelled to undergo a two-part "Required Assessment" with a drug worker from their local DIP.⁹⁷ It is claimed that the DIP has contributed to a fall in recorded acquisitive crime of around 20 per cent'.⁹⁸

Under this approach "trigger offences" are not ones which are caused by substance abuse, but those which relate to the offender's need to fund their drug habit. A similar approach in alcohol-related cases, taking into consideration the nature of the offence, DSM 5 criteria, and an offender's background could indicate that an offender ought to be diverted towards treatment and away from prosecution and provide a fairer and more reasoned policy towards alcohol related offending.

Child welfare

In child welfare cases, the key principles of the legislation which apply to all families with children are derived from the *United Nations Convention on the Rights of the Child*. These are the following:

- The well-being of the child is of paramount importance in any court proceedings regarding a child's upbringing.

92 *Woolmington v DPP* [1935] A.C. 462

93 *Home Office Circular 12/95*

94 http://www.cps.gov.uk/legal/l_to_o/mentally_disordered_offenders/

95 "Drug Interventions Programme Strategy". Home Office.

96 "NTA Models of Care 2006" (pdf Page 8, section 2.5.1). NTA

97 Home Office (2009). "Drug Interventions Programme Operational Handbook" (pdf). Home Office. Retrieved 30 July 2011

98 Home Office (2008). "Drugs: Protecting Families and Communities. The 2008 Drug Strategy. First Edition."(pdf).

- All children have the right to be protected from abuse, neglect, or exploitation.
- Parents should normally be responsible for the upbringing of children and should share that responsibility.
- Public authorities and other agencies should promote the upbringing of children by their families so far as is consistent with safeguarding and promoting the child's well-being.
- Any intervention by a public authority in the life of a child should be properly justified and supported by services from all relevant agencies.

The principle that 'parents should normally be responsible for their children' is especially important in that it places the onus on public authorities not to separate the child from the parent unless it is clearly in the child's interests to do so.⁹⁹ In cases involving children and parental alcohol misuse, there is already in European countries legislation which should require public authorities to consider treatment of alcoholism as a medical problem. In family and children's law, the European Convention on Human Rights (ECHR), Article 8, provides that "everyone has the right to respect for his private and family life" and provides that "there shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary... for the protection of the rights and freedoms of others". This often entails weighing the rights to family life of an alcoholic parent against protection of the child. The availability of new and effective treatments for alcoholism may have to be considered under European legislation before a public authority could legally intervene in the life of a child within a family. If raised, the discovery of a new treatment which has proven to be effective and has a scientific basis would have to be taken into account by a child welfare tribunal considering a child's safety within a family affected by parental alcoholism. Article 8 of the ECHR may preclude a tribunal from making an order where evidence is presented that a treatment such as baclofen is available to, or being used by, a parent suffering from alcohol dependence.

UK policy documents do already acknowledge that treatment of parents who are suffering from addiction should be considered as an option. One of the key messages of the *Hidden Harm* report is that the risk of harm to the child may be reduced by effective treatment and support for the affected parent(s) and by other factors such as the presence of at least one other consistent, caring adult, a stable home with adequate financial resources, maintenance of family routines and activities, and regular attendance at a supportive school.¹⁰⁰ It is implicit that the report's recommendations apply to cases where the parent's problem is alcohol abuse. There is also evidence in the wider health field that offering psychosocial support to patients and their families, can be beneficial and there is increasing evidence of a variety of ways of working with families affected by alcohol misuse¹⁰¹ and that involving the family in treatment can bring huge benefits to family members, including children and the alcohol-misusing relatives, as well as bringing potential cost-savings to services.¹⁰²

Legislation affecting the right to family, family law policy, and studies of family systems do support arguments that child welfare tribunals ought to take into account available alcoholism treatment before interfering in the family life of alcoholic parents. The availability of an effective treatment should be considered as an important and viable option.

99 *Hidden Harm*, op. cit., p. 58

100 *Ibid.*, p. 11

101 Templeton L, Velleman R, Russell C (2010). Psychological Interventions with Families of Alcohol Misusers: A Systematic Review. *Addiction Research & Theory* 18(6): pp. 616-648

102 *Ibid.*, p. 635

Conclusion

The problem of alcohol abuse and its association with violent crime and family law issues involving children is so great that one might reasonably expect policies developed to deal with it to be based on strong scientific research. This appears not to be the case. Despite numerous studies conducted into harmful alcohol use, none has established a causal connection between alcohol consumption and violence. Legal and social policies relating to alcohol abuse, violence, and child welfare have no scientific backing.

There has been considerable research into the use of drugs to combat alcohol and substance abuse over recent years. Advances in neurology and the use of scanning techniques have allowed medical researchers to understand how alcohol affects the brain and to see whether and how drugs work. The theory supporting baclofen use provides an important argument for practitioners in cases where there is a real concern over the mental capacity of an accused. The theory illustrates the nature of the underlying condition of alcohol dependence while, at the same time, providing a treatment for it. In trials and clinical use baclofen has proven to be an effective treatment which suppresses alcoholic craving.

The recognition of a neurological disorder as underlying both alcoholism and impulse aggression and which may be amenable to treatment is a significant development. With the use of appropriate expert evidence, it is now possible to argue that alcoholism is itself the consequence of a disease which affects neurological function and which may diminish criminal responsibility and that baclofen is an effective treatment of this illness. Courts and practitioners can begin to look at whether alcohol dependence indicates a disorder which may be amenable to treatment, or whether the behavior in question is truly voluntary, and can be checked with appropriate sanctions or supports.¹⁰³ While it is an individual's responsibility to take medication, if he has a treatable medical condition, it is difficult to see how blame can be placed on someone unless there is knowledge of and a collective willingness to accept and understand new models of treatment.

The cost to individuals, families and the public of alcohol abuse is high. Where a person's alcoholism has resulted in grave social consequences such as arrest and court proceedings or intervention by social work agencies, legal practitioners ought to consider raising neurological issues relating to alcohol consumption and to refer clients for medical treatment. •

103 Gmel G, Rehm J, Harmful Alcohol Use, op.cit.

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Notes:

**Medico-legal aspects
of the advent of high-dose
baclofen treatment of
alcoholism in criminal and
family law cases**

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