Diabetic drivers, hypoglycaemic unawareness, and automatism

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Case Comment

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Crim. L.R. 863 **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.

Introduction

On April 13, 2006 the defendant Trevor Norman Clarke, who was 49 years old, and had suffered from type 1 diabetes[1] for 30 years, was driving along a very familiar route, when he suffered a hypoglycaemic episode. The effect of that was to cause him to drive erratically for just over two miles. Bystanders noted that the driver looked "paranoid", "fidgety", and "out of it". He was seen to accelerate and then brake for no reason, to put his windscreen wipers on when there was no need, and to stop at a green light. Throughout this time he was swerving and weaving about the road. The defendant narrowly avoided a collision with another car only by the corrective action of the other driver. Throughout this bizarre driving the defendant appeared to be oblivious to other drivers sounding their horns. Eventually the defendant's car left the road and went on to a footpath where two boys were walking. The younger boy, who was just four years old, was struck by the car and gravely injured. He died two weeks later in hospital. The elder boy, the deceased's 14 year old stepbrother, was also injured. The defendant was charged with causing death by dangerous driving.

Crim. L.R. 864 At the first trial the jury was unable to reach a verdict, but at a second trial the jury convicted, and Clarke was sentenced to three years in prison. There was an appeal against sentence,[2] when the penalty was reduced to one year.[3] The trial is unreported. The appeal against sentence is reported but the full facts of the case were not rehearsed there. The first-named author of this article was kindly given permission by Mr Clarke to access the relevant case papers. The first-named author was also able to speak with Mr Clarke's barrister, Andrew Fisher QC; his solicitor, Joseph Figg; with Professors Vincent Marks and Anthony Barnett, who were the expert witnesses called by the defence; Dr Mary Charlton who runs the continuous glucose measurement service at Birmingham Heartlands Hospital; and with Professor Brian Livesley, who was the expert witness called by the prosecution.

Given the numbers of diabetics in the United Kingdom,[4] episodes of hypoglycaemia[5] whilst driving are naturally a public safety concern. The DVLA has placed increased restrictions on insulin-treated diabetics, citing the fact that diabetic drivers suffering hypoglycaemic episodes at the wheel cause 12-15 reported accidents per month,[6] but that, overall, insulin-treated diabetic drivers have no more accidents than the general population[7]. Modern diabetic management revolves around tight glycaemic control (and management of cardiovascular risk factors)--this is uncontroversial. Two seminal studies have resulted in the transformation of diabetes care by demonstrating the considerable benefits of tight glycaemic control.[8] Poor control also leads to cognitive problems in the long term (not to mention the other myriad complications). Mr Clarke's self management of his condition generally, and on the day in question was, in the opinion of almost everyone in the case, faultless. He had checked his blood glucose before setting off, and had eaten some food because his blood glucose was 4.4 mmol/l. This is as recommended by the DVLA guidelines.[9] The advice to diabetics to test their blood sugar before setting out on a journey has been described by expert witnesses in another case[10] as "a counsel of perfection", but that is what Mr Clarke did. Clarke had glucose tablets ready in the footwell of his vehicle, again as recommended. The self management of his condition was described by his diabetic specialist (who was also an expert witness at both trials) as exemplary. On appeal against ***Crim. L.R. 865*** sentence the Court of Appeal observed that Clarke "… was almost obsessive about testing himself, testing his blood more frequently than is recommended".[11] This view of Clarke's very careful self management was not, however, shared by the prosecution expert witness, who said that the defendant's tight glycaemic control[12] was negligent.

It is fair to say that Clarke's actions after the accident were somewhat odd, and capable of being interpreted either as evasiveness (as the prosecution contended) or as diabetic confusion (according to the defence). For example, he removed his sat nav from the windscreen, conduct seen by the prosecution as evidence against automatism, but interpreted by the defence as inappropriate behaviour and therefore evidence of hypoglycaemia. The defence experts testified that amnesia is universal in hypoglycaemia and often results in the sufferer trying later to fill in the gaps in their memory (confabulation). Clarke gave a misleading account of events to the police. At first he denied having suffered a hypoglycaemic attack, a denial which he later said was motivated by the desire to keep his driving licence. His medical condition certainly improved rapidly with glucose. Clarke's medical condition, and the fact that he had suffered a hypoglycaemic attack, was ultimately not in doubt. What remained contentious was the degree of impairment which it had caused and the defendant's responsibility for allowing the attack to happen.

Hypoglycaemic unawareness and prior fault in automatism 低血糖意識和自動化的先前錯誤

Diabetes is a disease of relative lack of insulin, characterised by high blood glucose. Diabetics on insulin and some oral medications may suffer episodes of low blood glucose or hypoglycaemia. The symptoms of this are, initially, pallor, sweating, tremor, hunger and anxiety. These symptoms are caused by the release of adrenaline, and normally serve to warn the diabetic that he needs to consume sugar in some form. Mr Clarke had on a previous occasion suffered a hypoglycaemic episode, and he was spoken to by the police after he had stopped his car on the hard shoulder. It is clear that he knew what steps to take at the onset of a hypoglycaemic episode. If a diabetic fails to heed the warning signs, as the blood sugar drops further, the brain will be affected and the diabetic will suffer behavioural changes, confusion, fatigue, seizure, and eventually loss of consciousness. Usually, it is the case that the diabetic driver has been at fault in some way for the onset of the hypoglycaemia. The warning signs that generally accompany hypoglycaemia should cause the prudent driver to pull over as soon as possible. [13]

There is, however, a condition known as "hypoglycaemic unawareness", where the adrenaline release that usually sets off the warning signs occurs *after* the blood sugar has dropped low enough to cause mental impairment. Consequently the diabetic *will not be aware* that his blood sugar is dropping. Other people may need to recognise the signs, and prompt him to take measures to raise his blood glucose. It is thought that hypoglycaemic unawareness is related to altered sensitivity to ***Crim. L.R. 866** hypoglycaemia of the brain's sensors in the hypothalamus. Consistently low blood glucose causes this, and the solution is to relax control of blood glucose for a while. That diabetics often suffer hypoglycaemic unawareness which makes the onset of hypoglycaemia speedier (due to delayed release of adrenaline) is well documented in the literature and, it is submitted, uncontroversial. It is said that up to forty per cent of type I diabetics have suffered hypoglycaemic unawareness at some time within ten years of diagnosis, but the vast majority of these know they have it, because their partner or other family member alerts them to the signs associated with hypoglycaemia--confusion, slurring of speech, and irritability, that will *precede* the pallor, sweating and tremor in hypoglycaemic unawareness. Those who live alone, like Mr Clarke did, may be completely unaware of this development.

A diabetic with hypoglycaemic unawareness can rapidly lose the ability to control a vehicle, with the window of insight into his impairment being non-existent or, at best, very short--as rapid an onset as a heart attack or stroke. Unrecognized hypoglycaemic unawareness is, in Professor Marks' considerable experience as an expert witness, a very rare cause of driving offences. Usually, the diabetic driver has been at fault in the management of their condition, and so any defence of automatism fails. As is well known, leading authorities on the defence of automatism [14] in criminal law indicate that the defence will fail if the defendant has been at fault in lapsing into the state of automatism. The condition of hypoglycaemic unawareness is highly relevant to this issue of fault, and is a factor to which lawyers involved in such cases should be alert. The appellate cases differ over the degree of fault which is required, and also whether driving offences are to be treated as a separate category for these purposes. These issues are returned to below.

It is clear from the authorities that a defendant who suffers from diabetes and incurs a hypoglycaemic episode is, prima facie, able to rely on the defence of automatism, since the condition is attributable to an external cause, namely the taking of prescribed medication. [15] Two experts appeared for the defence in *Clarke,* one a recognized world authority on hypoglycaemia (Professor Marks) and the other the head of the largest diabetes unit in the United Kingdom (Professor Barnett). The expert instructed by the prosecution was a geriatrician (Professor Livesley) who, according to the assessment of the trial judge, was not a specialist, but had long term involvement in the control of diabetes. The two experts for the defence were agreed that Clarke was suffering from hypoglycaemic automatism and hypoglycaemic unawareness, and in their view his driving so erratically along a highly familiar route was entirely consistent with that diagnosis. There is evidence that Clarke was suffering hypoglycaemic unawareness. He had ambulatory monitoring of his glucose levels after the accident, which demonstrated 26 episodes of biochemical hypoglycaemia, of which Clarke was aware of only two. The prosecution expert pointed out that the reliability of this assessment depended on ***Crim. L.R. 867** Clarke's veracity, but in support of his account, Clarke was noted by observers to be hypoglycaemic during a telephone call which he made to one of his doctors. In the opinion of the two defence experts Clarke had managed his condition in an exemplary manner and had taken all reasonable and proper precautions. In their view Mr Clarke's driving was "automatic behaviour", and Clarke had been unaware of the onset of the attack. In contrast, the prosecution expert, Professor Livesley, said that he was "100 per cent certain that [Mr Clarke] was aware that he was suffering from hypoglycaemia and that he could have prevented the accident by stopping and by eating or taking glucose tablets". [16]

The central issue at the trial was thus whether the defendant at some stage had been aware that he was suffering a hypoglycaemic attack and had nevertheless continued to drive, or whether his medical condition, including his hypoglycaemic unawareness, impaired his cognitive ability to the extent that he was not so aware. [17] The jury rejected the evidence of Professors Barnett and

Marks. Their verdict can only have been based on their acceptance that there had been a time (however brief) during which the defendant was aware of his deteriorating condition. The Court of Appeal said that the legal basis for the defendant's conviction must have been his (albeit brief or fleeting) awareness of the onset of the hypoglycaemic attack and his failure at that point to stop driving. One can only speculate of course, but it seems likely that a jury, having heard conflicting medical evidence, would naturally be reluctant to acquit a defendant whose driving, to a lay person, must have seemed directed and purposive, albeit bizarre, and who had thereby occasioned the death of one child and injured another in such tragic circumstances.

To return to the issue of prior fault in automatism, it is clear that the defendant cannot run a defence of automatism successfully if he was at fault in bringing about the very condition that he relies upon as the basis for the claim. So, if the defendant's mental state is caused by the voluntary ingestion of alcohol, or an illegal drug, he cannot rely upon automatism. [18] In the well-known case of *Quick,* [19] where the defendant, a male nurse, had suffered a hypoglycaemic episode during which he had injured a patient, the Court of Appeal said the trial judge had erred in not leaving the issue of automatism to the jury but that, if the issue had been so left, there was a good chance that the defence would have failed because the defendant had not managed his condition properly and so had been at fault in getting into that state. In that case the Court suggested that the fault was to be measured in *objective* terms--whether the outcome "could have been reasonably foreseen as a result of either doing, or omitting to do, something" [20] . If negligence is the relevant standard in the present context, then it really does seem that Clarke had taken every precaution which a reasonable person could have taken in the circumstances. [21] It has sometimes been suggested that, for policy reasons, there is a different rule akin to strict liability for driving offences, but it is submitted that this is not correct. It was clearly stated in *Bratty* that "[w]hen a man is charged ***Crim. L.R. 868*** with dangerous driving … he has a defence if he can show that it was an involuntary act …". [22] In the later case of *Bailey,* [23] it was held that the test of prior fault in automatism is actually *subjective*--the diabetic needs to be reckless rather than merely negligent which, of course, would only be so if he appreciated the risk of his behaviour becoming "aggressive, unpredictable and uncontrolled with the result that he may cause some injury to others". [24] On one view the subjective test advocated in *Bailey* is applicable only where recklessness is the required fault for the offence in question. [25] In *Clarke,* however, according to Lloyd Jones J. in the appeal against sentence, it is *not* enough for criminal liability for causing death by dangerous driving that there was a time when the defendant *should* have been aware of his deteriorating condition. This *dictum* supports a broader application of *Bailey* and it may be that this point is now settled and that subjective fault is required.

If one accepts the existence of hypoglycaemic unawareness, then there must be some cases where no subjective fault at all can attach to the defendant. Such a case would be where the defendant suffered for the first time a hypoglycaemic episode without warning. If, however, the defendant has been made aware in the past by relatives or friends that he may be prone to lapse into hypoglycaemia that others are aware of but the defendant is not, then the question is whether that degree of knowledge is sufficient fault for these purposes. To put it shortly, what happens when the defendant becomes aware of his unawareness? Of course, the use of prior fault as a means of denying the defence of automatism is doctrinally controversial, because it breaches the normal principle that actus reus and mens rea should occur at the same time, by linking criminal liability for a later harm to an earlier culpable state of mind. This is more acceptable where the time dimension is not stretched too far--if the fault can be located shortly before the harm is manifested, and perhaps where the offence can properly be seen as a course of conduct during which both actus reus and mens rea are manifest. However, the more stretched the time frame, the more objectionable in principle this approach becomes. [26] Suppose that the defendant is aware in general terms, through having been warned by others, that he may, at some indefinite future time, even after having taken every conceivable precaution to avoid it, lapse without warning into a hypoglycaemic state. It is submitted that such earlier state of mind ought not to be sufficient fault to justify criminal liability.

In *Gilbert* [27] the 45 year old defendant had been diagnosed with diabetes as a young child. She had no convictions or endorsements on her driving licence. Her car was seen by witnesses to be weaving from side to side before the accident in which a passenger in another vehicle was killed and the defendant herself was severely injured. The judge, having heard evidence from two experts ruled that the jury be directed to acquit the defendant on the charge of causing death by dangerous driving. The Court of Appeal upheld the judge's ruling that "there was ***Crim. L.R. 869*** no evidence to support a finding of fault on her part sufficient to engage criminal liability". [28] This was despite the fact that the defendant had suffered three hypoglycaemic attacks at work which had come on without warning, and so, unlike Mr Clarke, she could not be said to be unaware of hypoglycaemic unawareness. There was also a lack of evidence as to whether she had tested herself before setting out on her journey, although always testing before driving was described by experts in this case as a "counsel of perfection". [29] Taken in the round, *Clarke* seems a stronger case for acquittal, the difference in outcome coming down to the fact of agreement of the medical experts in

Gilbert and their disagreement in *Clarke.* [30] *R v C* [31] is an appeal against another ruling of no case to answer in a case very similar to the index case. The defendant's car veered off the road crossed a strip of grass and then struck two pedestrians. The lady was killed and her husband seriously injured. Again the issues were whether or not the driver was in a state of automatism and whether or not he had any warning signs of hypoglycaemia. The defendant had driven erratically for some five miles before the fatal accident. He had not had previous attacks suggestive of hypoglycaemia unawareness (it is not stated in the report whether he lived alone), and he did not have continuous glucose measurement to diagnose hypoglycaemic unawareness. His statement to the police, however, was "Once you've used insulin you can always tell whether your sugar levels are high or when you go the opposite way, but not on this occasion. I just didn't get [any] warning." The Court of Appeal ruled that there was a case to go the jury, simply by virtue of the manner of the defendant's driving. It was for the defendant to adduce evidence at his trial that he had been unable to control his car due to an unforeseen hypoglycaemic attack, that he could not reasonably have avoided the attack, and that there had been no advance warnings during the course of that drive.

Automatism, drivers, and "total loss of control"

In the well known case of *Broome v Perkins* [32] the defendant was charged with driving without due care and attention, but claimed to have been in a hypoglycaemic state. The defendant had driven erratically for five miles along a route highly familiar to him. He was initially acquitted by the justices, but an appeal by case stated resulted in a direction to the magistrates to convict. The Divisional Court said that the defendant's mind must have been controlling his limbs and thus he was "driving". The issue of hypoglycaemic unawareness was not considered in that case. *Broome v Perkins* was criticised by the Law Commission in the Commentary to its Draft Criminal Code, where it recommended that the direction with respect to automatism be changed in future, to loss of "effective control". In *Attorney-General's Reference (No.2 of 1992)* [33] however, the need for a *complete* loss of voluntary control was re-emphasised, and that summary is faithfully ***Crim. L.R. 870*** reproduced in the *Crown Court Bench Book.* The 2003 edition, applicable at the time of Clarke's trial, said that the defendant's "ability to exercise voluntary control [must be] totally destroyed" [34] and the 2010 version states that "To be an involuntary act the loss of control must be complete. Deliberate and purposeful driving is inconsistent with involuntariness." [35] The requirement that there must be a *complete* loss of self control has been condemned across the board by leading commentators on the law as "harsh" [36] "very harsh" [37] and "unduly harsh" [38]. As well as being harsh, it is submitted that it does not make sense. As Professor Marks put it to the first named author, the law's current understanding of automatism as complete loss of voluntary control would, if taken literally, preclude even the most basic human activity, such as walking--so that the commission of virtually any crime would be impossible and the defence nugatory. [39]

The assertion that "deliberate and purposeful driving is inconsistent with involuntariness" is often supported by a reference to the case of *Isitt.* [40] That case has nothing to do with hypoglycaemia. The defendant, having caused a collision, drove dangerously in order to evade the police. The judge refused to leave to the jury the defence that the defendant was suffering from "hysterical fugue", such that his subconscious mind was in control and he would not have appreciated what he was doing. It seems clear that Isitt's driving was directed to escaping from the police, and it was certainly purposeful. It is submitted that, unlike Isitt, Clarke was not merely disinhibited. The evidence indicates that he was quite incapable of the level of control which Isitt demonstrated in, say, evading the police roadblock. It was obvious to onlookers that Clarke could not control his car properly, and that he was oblivious to other drivers trying to alert him. It is difficult to imagine what reason there could have been, or what purpose might have been served, by Clarke careering through the streets of Birmingham in the course of his voluntary charity work.

The few driving cases where automatism has resulted in exoneration of the defendant have involved driving which was clearly erratic and dangerous, but which was also purposive and goal-directed. In *Gilbert* [41] the defendant, after leaving a meeting, drove for about six miles before she was observed weaving from side to side, and the accident was caused when she tried to overtake another vehicle and struck it as she passed. In *Harrison,* [42] where the Court of Appeal agreed with the trial judge that the defendant had been without fault, the defendant drove for five miles, during which time he exceeded the speed limit, hit a kerb, struck a road barrier and, again, caused an accident when trying to overtake. In *Mansfield v Weetabix* [43] a lorry driver who became hypoglycaemic (not due to diabetes but to an insulin-secreting tumour) was held not liable in negligence for crashing into a ***Crim. L.R. 871*** house after driving for forty miles. Over that distance there had been two instances of erratic driving and one minor collision with another vehicle. In all these cases it is significant that there was familiarity with the route being driven. They suggest a tacit acknowledgement in practice (despite the earlier *Attorney General's Reference* case) that driving some considerable distance can be consistent with hypoglycaemic automatism. They also support the scientific

understanding that a hypoglycaemic episode can come on without warning. Following a highly familiar route indicates that the topological functions of the brain are relatively intact, but does not signify that the driver is capable of driving without crashing. Driving safely and within the law requires certain physical motor skills (which are relatively easy to learn) but, more importantly, decision making and judgement. Chimpanzees can be taught to drive a car, and even to stop at red traffic lights and go at green, but they will go on green no matter what is in the way, because chimpanzees lack the necessary executive functions. They can drive deliberately and purposively but without any regard to the safety of others.[44] The motor skills are a necessary but not sufficient condition for a driver to be held criminally responsible. It is submitted that the residual ability to drive a motor vehicle along a familiar route is consistent with hypoglycaemic automatism, and that *Broome v Perkins* should be reconsidered. It is further submitted that the *Attorney-General's Reference* case is better understood as one where there was a lack of (sufficient) external cause to substantiate a finding of automatism. *Isitt* should have been decided on the same basis.

Conclusion

The current definition of automatism, hedged about with various policy-based restrictions, excludes some deserving defendants where medical science shows that their actions were involuntary, and they should not be held criminally responsible. Hypoglycaemic unawareness, as seen in *Clarke,* is one such example. The condition would need to be established from the defendant's history, personal circumstances, and ambulatory blood glucose monitoring. Diabetic drivers who have had episodes of hypoglycaemia need to be assessed for hypoglycaemic unawareness by an appropriate and experienced medical expert, preferably one who has access to ambulatory blood glucose monitoring to provide some objective evidence for the diagnosis. The law needs to appreciate the relevance of unrecognized hypoglycaemic unawareness on the issue of prior fault in automatism. The direction to the jury, that automatism requires nothing less than total loss of control, has been shaped by cases where, it is submitted, automatism would have been better excluded on the ground of lack of a sufficient external cause. The current legal definition of automatism as requiring a complete loss of control is inconsistently applied, but it may well deny a defence even when an undisputed medical condition has resulted in a driver losing control without prior fault.

Changing the direction to the jury will not result in significant numbers of diabetic drivers being acquitted on driving-related charges, because most of them will clearly have been at fault for their hypoglycaemic episode. Only the small minority who have unrecognized hypoglycaemic unawareness will benefit. The ***Crim. L.R. 872** doctrine of prior fault, and the need to demonstrate a sufficient external cause, together rule out most automatism claims. A diabetic driver who is able to rely on the automatism defence may of course still be disqualified from driving in the future, by the DVLA acting in light of all the medical advice and, if appropriate, a recommendation from the judge.[45] We suggest, therefore, that there are no major public safety issues in Parliament legislating to accept the Law Commission's long-standing suggested revision, to "effective loss of control". We hope that the Commission will renew its recommendation for this change in the law in its forthcoming consultation on the insanity defence and related issues.

Thanks are due to Professors Ronnie Mackay, Alex Sharpe and Richard Taylor and Dr Sotirios Santatzoglou for their very helpful comments on an earlier draft.

Footnotes

1 Type 1 diabetics are insulin dependent.

2 *R. v Clarke* [2009] EWCA Crim 921; [2010] 1 Cr. App. R. (S.) 26 (at p.158).

3 The reduction was based upon: (i) low culpability in the defendant's case, requiring punishment well below the normal level indicated in *Cooksley* [2004] 1 Cr. App. R.(S.) 1 (p.1); *Richardson* [2007] 2 Cr. App. R. (S.) 36 (p.211), and the SGC Guidelines; (ii) that the defendant by reason of his condition would be at serious risk of harm or death in prison; (iii) that a lengthy prison sentence would mean that he would be unable to undergo islet cell transportation to treat his hypoglycaemic unawareness and (iv) the delay which had occurred in bringing the matter to trial and sentence.

4 Figures for 2010 from Diabetes UK indicate the number of diabetics diagnosed in the UK is 2.8 million, or 4.3% of the population (*http://www.diabetes.org.uk/Professionals/Publications-reports-and-resources/Reports-statistics -and-case-studies/Reports/Diabetes-prevalence-2010/* [Accessed September 1, 2011); 90% of adult diabetics are type 2 diabetics (National Service Framework for Diabetes, Department of Health, 2001).

5 Hypoglycaemia is defined in non-diabetics as blood glucose below 2.2 mmol/l, accompanied by symptoms and relieved by glucose; but in diabetic practice it is defined as blood glucose below 3.5-4 mmol/l (figures courtesy of Dr Mary Charlton).

6 *http://www.iddt.org/about/living-with-diabetes/driving-and-diabetes/hypoglycaemia-and-driving/* [Accessed September 1, 2010].

7 K.F. Lonnen, R.J. Powell, D. Taylor, A.C. Shore and K.M. MacLeod, "Road traffic accidents and diabetes: insulin use does not determine risk" (2008) 25(5) *Diabetic Medicine* 578.

8 Diabetes Control and Complications Trial and UK Prospective Diabetes Study, both extensively reported in numerous original and review articles, e.g. J.S. Skyler, "Effects of Glycaemic Control on Diabetes Complications and on the Prevention of Diabetes" (2006) 22(4) *Clinical Diabetes* 162.

9 Available at *http://www.dft.gov.uk/dvla/%EB/media/pdf/medical/at_a_glance.ashx* [Accessed September 1, 2011].

10 *R v Gilbert* [2006] EWCA Crim 3276 at [24].

11 *R. v Clarke* [2009] EWCA Crim 921; [2010] 1 Cr. App. R. (S.) 26 (p.158) at [14].

12 Glycaemic control is the parameters within which the blood glucose is kept. Tight glycaemic control means keeping the blood glucose lower, which consequently increases the risk of hypoglycaemia and subsequently the risk of hypoglycaemic unawareness over time.

13 See *R. v Marison* [1997] R.T.R. 457 CA (Crim Div).

14 Automatism is conveniently described as a defence, although the authors agree that it is properly understood as a denial of actus reus.

15 This is of course controversial, and it appears that a defendant who suffers from *hyper*- glycaemia cannot rely on the defence, since such condition is attributable to an *internal* cause (the diabetes alone, as opposed to the treatment for diabetes, insulin), and hence the only options for the defendant are to rely on the insanity defence, or to plead guilty to the offence: *Hennessy* [1989] 2 All. E.R. 9 CA (Crim Div).

16 *Clarke* [2009] EWCA Crim 921; [2010] 1 Cr. App. R. (S.) 26 (p.158) at [4]

17 *Clarke* [2009] EWCA Crim 921; [2010] 1 Cr. App. R. (S.) 26 (p.158) at [3].

18 *cf Lipman* [1970] 1 Q.B. 152 CA (Crim Div).

19 *Quick* [1973] Q.B. 910 CA (Crim Div).

20 Dictum of Lawton L.J. in *Quick* [1973] Q.B. 910 CA (Crim Div).

21 H.L.A. Hart, *Punishment and Responsibility* (1968) p.154. See also the civil case of *Mansfield v Weetabix* [1998] 1 W.L.R. 1263 CA (Civ Div) where the Court of Appeal said that the defendant lorry driver had not been negligent in crashing his lorry into a house because "he did not know, and could not reasonably have known, of his infirmity".

22 *Bratty* [1963] A.C. 386 at 410, although of course strictly D does not have to "show" this: D bears an evidential burden on the matter, inevitably requiring that expert evidence be called to support his assertion, but the burden of disproving the defence rests on the prosecution.

23 *R. v Bailey* [1983] 2 All ER 503 CA (Crim Div).

24 *Bailey* [1983] 2 All ER 503 at 507 CA (Crim Div).

25 See, e.g. *Blackstone's Criminal Practice* (2011) A3.7.

26 P. Robinson, "Causing the conditions of one's own defence" (1985) 71 *Virginia Law Review* 1.

27 *Gilbert* [2006] EWCA Crim 3276.

28 *Gilbert* [2006] EWCA Crim 3276 at [24].

29 On the issue of advance testing see also *JG* [2006] EWCA Crim 3276.

30 See also *Harrison* [2004] EWCA Crim 1527 where the two experts agreed that the defendant (a man of previous good character) had suffered "without warning" a drop in his blood sugar level. The defendant chose to plead guilty to an offence of dangerous driving, but the recorder found that "no moral blame attached" to the defendant, and ordered an absolute discharge. The Court of Appeal upheld that disposal.

31 *R v C* [2007] EWCA Crim 1862. Thanks to Professor Mackay for drawing our attention to this case.

32 *Broome v Perkins* [1994] Q.B. 91; (1987) 85 Cr. App. R. 321 CA (Crim Div); also see *Watmore v Jenkins* [1962] 3 W.L.R. 463 QBD.

33 *Attorney-General's Reference (No.2 of 1992)* [1994] Q.B. 91 CA (Crim Div).

34 Specimen direction No.47.

35 At p.315.
36 R.D. Mackay, *Mental Condition Defences in the Criminal Law* (1995) p.63.
37 Sir John Smith, commentary on *Broome v Perkins* [1987] Crim. L.R. 272; J. Herring, *Criminal Law: Text, Cases and Materials,* 4th edn (Oxford University Press, 2010), p.679.
38 A. Ashworth, *Principles of Criminal Law,* 6th edn (Oxford University Press, 2009), p.89.
39 According to Mackay (1995), p.63, "if this was the true basis of automatism … the defence would be restricted to spasms, convulsions and reflex acts, which is clearly not the case."
40 *Isitt* (1978) 67 Cr. App. R. 44 CA (Civ Div)
41 *Gilbert (Jean)* [2006] EWCA Crim 3276.
42 *Harrison* [2004] EWCA Crim 1527.
43 *Mansfield v Weetabix* [1998] 1 W.L.R. 1263.
44 C.H. Calisher, "What do we know about anything?" (2008) 49(3) *Croatian Medical Journal* 436.
45 Road Traffic Act 1988 s.93. The relevant procedure is set out in *Harrison* [2004] EWCA Crim 1527.

