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DRAFT VERSION

BOLAM WITH THE BENEFIT OF HINDSIGHT

Review Article

Abstract

The aim of this article is to consider the effects of hindsight bias on findings of negligence in medico-legal litigation and of the potential of the original *Bolam* direction to eliminate bias from the decision making process. The *Bolam* test may have been expanded beyond its appropriate scope in the past but these excesses have now largely been undone. It will be shown that *Bolam* still has an important role to play in tort cases. By considering breach of duty cases in which the *Bolitho* “gloss” has been applied attention is drawn to the potential dangers of disregarding practices within the medical profession.

Keywords

Bolam – *Bolitho* – hindsight bias – medical negligence

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BOLAM WITH THE BENEFIT OF HINDSIGHT

Introduction

In 1975 Fischhoff conducted a study to establish if a decision maker's assessment of the probabilities of a range of outcomes was affected by their knowledge of the actual outcome.¹ Additional experiments reinforced the finding that if people were aware of the actual outcome of a given scenario they would increase their assessment of the probability of that outcome, an effect that has been termed hindsight bias.

When determining whether negligence has occurred, a tribunal of fact must be able to make an accurate estimate of the probability of an adverse outcome and determine whether the defendant should have foreseen that adverse outcome. If the outcome is found to be foreseeable the tribunal must also determine whether the defendant has taken adequate precautions given the perceived magnitude of the risk and extent of the likely harm.^{2,3} When applied in the context of medical negligence litigation Fischhoff's research suggests that once the tribunal has knowledge of the actual outcome they are no longer able to make these essential assessments. The tribunal will overestimate probability of an adverse outcome and be more likely to find that it was foreseeable; where a risk is found to be foreseeable, because of the inflated probability, the tribunal is more likely to find that the defendant has failed to take adequate precaution. When the defendant has a choice between two paths and the chosen path results in an adverse outcome the tribunal will be biased into finding that the risks were greater on the chosen path even if the two routes were equally likely to result in harm.

This article will argue that the *Bolam* test as originally devised reduces the effect of hindsight (and other related) biases on the assessment of negligence.⁴ It will also suggest that cases applying the *Bolitho* gloss are in danger of unfairly blaming medical practitioners for mishaps that could not easily have been avoided without the ability to see the future.⁵

Hindsight Bias

In Fischhoff's study some of the test subjects were divided into two groups and given a little information about, *inter alia*, the Gorkha War fought between the British East India Company and the Kingdom of Nepal between 1814 and 1816. The subjects were asked to decide on the probabilities of a win for the British, a win for the Nepalese, a stalemate without a peace treaty and a stalemate with a peace treaty. The first group was given no additional information and assessed

that the first three outcomes would each occur roughly 30% of the time and the fourth would happen about 10% of the time. The second group were given the same information as the first, but in addition they were told that, in reality, the war had resulted in a victory for the British. The assessments of probability from the second group differed significantly from those of the first; collectively they estimated that a British victory would occur just over 50% of the time and that the other results would occur approximately 15% of the time.

Medical negligence cases often involve the consideration of risks of less than 2%; significantly Fischhoff also demonstrated that the effect of hindsight bias was greater as the likelihood of the actual outcome decreased;¹ the actual (but unlikely) outcome of a chain of events seems obvious to an observer looking back at the chain whilst it is not obvious to an observer looking at the first link. In hindsight an observer will anchor the facts that contribute to the known outcome and ignore others; in contrast the original decision maker is presented with an unfiltered view of all the competing facts any of which could ultimately prove to be either decisive or completely irrelevant. Fischhoff further established that the subjects were not aware that they were incorporating knowledge of the outcome when assessing the likelihood of possible outcomes making debiasing difficult. The inherent difficulty of reaching unbiased decisions when hindsight is made available has been observed by others.⁶

Another psychological effect operating on a court in favour of a finding of negligence is outcome bias. Outcome bias is related to hindsight bias but is slightly different in its operation; test subjects, when asked to gauge a defendant's responsibility for a mishap, tend to increase their opinions of responsibility when they are told that the mishap resulted in serious consequences for another.^{7,8} There is a very real risk that a tribunal of fact, biased by knowledge of the negative outcome for the claimant might arrive at an unmerited conclusion that there has been negligence on the part of the defendant. Any attempt by the tribunal to consider the appropriateness of the treatment received by the claimant in retrospect seems indelibly tainted by their knowledge of the injuries that the claimant sustained.

The Framing Of The *Bolam* Test

On 23rd August 1954 at Friern Hospital senior registrar, Dr Allfrey, was preparing to administer electro-convulsive therapy (ECT) to a patient who had been diagnosed with a depressive illness by Dr de Bastarrechea, a consultant psychiatrist. The patient was to be treated with a 150 volt shock to the brain for one second. At the time, ECT was a comparatively new treatment and the doctor had been trained in its administration at the hospital in which he has working. The risk of a patient convulsing

during treatment was known and the standard procedures of the hospital were designed to reduce risk of injury. As he had done many times previously, Dr Allfrey followed these procedures: three nurses were in attendance, one to support the patient's head and one to each side of the treatment couch ready to step in if needed. In order to reduce the known risk of convulsions after the initial one second shock Dr Allfrey gave the patient five momentary shocks.

Presented thus, most members of the public would conclude that the actions of the doctor and the hospital involved were perfectly reasonable. These facts gave rise to the litigation in *Bolam* and anyone familiar with the case will know that the patient, John Hector Bolam, fell off the couch during the course of treatment pushing the head of each femur through the acetabulum resulting in multiple fractures to the pelvis and two dislocated hips.⁴ Mr Bolam issued a claim in the tort of negligence against the hospital.

Before they could award damages the jury (juries have since been largely abolished in civil trials) in this case had to be satisfied (on the balance of probabilities) that the defendants owed the plaintiff a duty of care; had breached that duty by failing to take reasonable care of the plaintiff and that this negligence had caused the injury.⁹ The plaintiff tried to persuade the jury of the defendants' fault with three arguments any of which would be sufficient, on its own, for a finding of negligence; a) the plaintiff should have been warned by Dr de Bastarrechea about the risk of injury at the time his consent to the procedure had been requested, b) Dr Allfrey should have administered muscle relaxing drugs before the procedure to prevent convulsions and, c) the plaintiff should have been physically restrained during the procedure.

A finding of negligence based on the consent argument (a) would have led to a causation issue. If the doctors had informed the patient of the risks of injury would he still have consented to the operation? If knowing the risk, Bolam had given his consent the procedure would have gone ahead and the injury would have resulted anyway. The 'negligence' could not therefore have been the cause of the harm and the action fails. On negligence and non-disclosure of risks see *Sidaway v Bethlam Royal Hospital*.¹⁰ The causation issue was considered by the House of Lords in *Chester v Afshar* who concluded, perhaps surprisingly, that a patient may be able to recover damages if consent would have been given with knowledge of a random and inherent risk that might not have manifested itself had the procedure taken place at a different time or with a different surgeon.¹¹

At the end of the judge's summing up the jury had an unenviable task ahead of them. They were required to determine the reasonableness or otherwise of the doctors' actions which had taken place nearly three years before. The three arguments put forward by the plaintiff were robustly

supported by the evidence of Dr Randall (a consultant psychiatrist at St Thomas's and expert witness for the plaintiff) and robustly rebutted by evidence for the defence. Considering the three allegations of negligence made by the plaintiff in turn, the contradictory expert evidence presented suggests that;

- a) According to the plaintiffs patients should be warned about the risks of injury so that they can make an important decision about their future with all of the facts but, according to the defendant, never warned because knowledge of the risks might lead a mentally ill patient to unreasonably withhold consent,
- b) patients should always be given muscle relaxants because that way there is no risk of injury but never given muscle relaxants because of the risk or mortality associated with the use of anaesthetics, (or rather, relaxants should only be used where there was a peculiarly susceptibility to injury from convulsions. The small risk of mortality from the anaesthetics might be justified where the patient suffered from arthritis.)
- c) patients should be restrained if relaxants were not used because they might injure themselves when moving about but never restrained because the restraints themselves were likely to cause injury.

The jury presented with a mass of uncertainty and in the shadow of a terribly injured plaintiff was asked to decide if the defendants took reasonable precautions against the foreseeable unfavourable outcome. The judge, fearing that the jury would reach a conclusion on the issue without giving due consideration to the evidence, put some safe guards in place.

Direction Against The Use Of Objective Hindsight

For clarity the phrase 'objective hindsight' will be used in this article where knowledge is gained through past experience. In this sense 'objective hindsight' is not a bias; it is a process by which a better assessment of the true probabilities of particular outcomes is derived over time. In (subjective) hindsight bias perceptions of probabilities of past events are irrationally skewed. Medical practice changes over time; as treatments are used by medical practitioners, data are collected about the outcomes for patients; the more a technique is used the greater the volume of data. Greater volumes of data allow for greater confidence in the conclusions that can be reached about patient outcomes and as a result techniques may need to be refined or replaced. New risks are identified and precautions are devised. Sometimes the precautions that are suggested bring with them their own risks. For example, in *Roe v Minister of Health* anaesthetic was stored under antiseptic to prevent infection; unfortunately, and unforeseeably, the antiseptic contaminated the

anaesthetic through hairline cracks in glassware leaving two patients paralysed when the contaminated mixture was injected into their spines.¹² An objective assessment of knowledge gained in hindsight is essential to the development of best practice; after *Roe* it became standard practice to colour the antiseptic with blue dye so that any contamination would discolour the anaesthetic. The tort of negligence should judge defendants on the state of knowledge that existed at time of the acts that are called into question; they cannot possibly be expected be aware of risks or procedures which had not been discovered at the relevant time. Taken to extremes it would be unfair to judge doctors working in Vienna General Hospital's first maternity clinic in the first half of the 1840s by modern maternity care standards. The dangers of infection created by dissecting cadavers in the morning and then delivering babies later in the day without washing hands in between is obvious now but only because Semmelwicz, Pasteur and Koch advanced our understanding of hygiene and the germ theory of disease.

Following the injuries sustained by Bolam the ECT team at Friern Hospital began the routine administration of relaxant drugs. This may have been the result of a rational re-assessment of the risks involved in ECT (objective hindsight) or a knee jerk reaction caused by hindsight bias leading to future defensive practice. Events after August 1954 do not have a bearing on the reasonableness of the treatment the plaintiff received. Consequently the jury were warned at 122E that they should judge the defendants according to the standards at the date of the incident and not those at the date of the trial. As Lord Denning commented in *Roe* at 84, "*we must not look at the [1954] accident with [1957] spectacles.*"

Direction Against The Influence Of Hindsight Bias

The judge ,McNair J, directed against hindsight bias in *Bolam* as the jury had been given a clear indication of the probability of the plaintiff's injury, the judge directed at 120F:

I think it right that I should say this, that you have got to look at this case in its proper perspective. You have been told by one doctor that he had only seen one acetabular fracture in fifty thousand cases, involving a quarter of a million treatments.

Later, at 128F, the judge quoted Lord Denning in *Roe* who was considering the hairline cracking of the ampoules:

But I do not think their failure to foresee this was negligence. It is so easy to be wise after the event and to condemn as negligence that which was only a misadventure. We ought always to be on our guard against it, especially in cases against hospitals and doctors.

The fact that ECT was inherently unlikely to result in a serious injury to the patient justifies a reasonable doctor in taking fewer precautions against that injury; the three nurses who were present might seem sufficient to the jury.

Direction Against The Influence Of Outcome Bias

When directing the jury McNair, J commented (at 120C) that the jury:

were told the tragic story of this plaintiff's sufferings and his experiences, and when [they] later saw him in the witness-box and saw what a hopeless condition he was in, [they] must inevitably have been moved to pity and compassion.

The judge goes on to direct the jury (at 120D) that they are:

not entitled to give damages based on sympathy or compassion. [They] will only give damages if [they] are satisfied that the defendants have been proved to be guilty of negligence.

In addition to being directed not to award damages out of sympathy perhaps the judge should also have warned the jury they were likely to find that the defendants were more blameworthy because the plaintiff had suffered terrible injuries.

The Final Safe Guard – The *Bolam* Test

Overcoming the effects of hindsight bias and outcome bias is, as already stated, difficult. Apparently sensing the content of the academic works that would be produced by psychologists twenty years later the judge gave one further direction to help eliminate bias. This additional direction has become known as the *Bolam* test. He told the jury at 112B that:

A doctor is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that particular art.

The jury's task is to establish whether the practices that the defendants have followed exist within a responsible body of the medical profession. The very existence of such a practice is then to be taken as proof that the defendant has not been negligent. The jury is no longer concerned with what could be foreseen by the defendant or with the negative outcome; they are only considering the actions of the defendant in the context of the medical practice of others at the same time.

Practices within a profession become established by a consideration of the risks and precautions of particular methods or techniques and arriving at one (or more) best practice. This process was

traditionally left to the doctors themselves; the National Institute of Clinical Excellence (NICE) was formed by the government in 1999 to issue guidance to front line clinicians (now merged with the Health Development Agency and renamed the National Institute for Health and Care Excellence.) During this process, the outcomes of a large number of treatments can be considered and decision making guided by quantitative information on the probabilities of both positive and negative outcomes. The process of arriving at agreed practice is entirely prospective and without the risk of hindsight or outcome bias effecting assessments because, at its inception, a practice does not have any outcomes. The effect of the *Bolam* test as framed by McNair, J is to force the jury to consider the risks and benefits as they were seen by the profession at the relevant time and preventing a finding of negligence reasoned through hindsight, hindsight bias and outcome bias from the plaintiff's adverse outcome.

Dr Randall (the expert witness for the plaintiff) appears to have been looking down a "retrospectoscope." His evidence could potentially have been affected by both hindsight bias and commissioning bias, the latter being a tendency by expert witnesses in adversarial proceedings to give evidence which is supportive of the side that instructed them. This is to be expected since the legal teams have a free choice of experts and they are likely to instruct people who have been useful in the past. Darwinism will weed out experts who do not exhibit commissioning bias in the evidence that they give.¹³ The expert evidence from Dr Randall combined with the compassion the jury felt for the plaintiff and the effects of outcome bias might easily have led to a finding of negligence.

Following the directions they had been given the jury took 40 minutes to find that the defendants were not negligent presumably because they believed the doctors had followed established practices within the medical profession.

The Rise And Fall Of *Bolam*

The decision making processes in *Bolam* can be contrasted with those of *Hucks v Cole*.¹⁴ Three days before the birth of the plaintiff's baby daughter the defendant doctor, Dr Cole, had visited the mother-to-be at her home where she showed him a septic spot on her finger which the doctor did not treat at that time. The day after the birth in Wellington Maternity Hospital a matron noticed the spot on the plaintiff's finger and another on her toe – the plaintiff was transferred into a private room and the Dr Cole informed of the situation. He visited the following day and arranged for a swab to be sent to pathology and prescribed a five day course of tetracycline for the plaintiff. The defendant received the pathologist's report three days later; it indicated the presence of tetracycline

resistant *staphylococci aureus* and *streptococci pyogenes*. The report recommended treatment with penicillin for the latter.

The doctor decided to continue with the remaining two days of tetracycline treatment. By the end of this treatment the infected lesions were both healing well but had not fully closed; there was some debate about the state of the plaintiff's finger and toe at the end of the course of tetracycline – Lord Denning observed that Dr Cole claimed that both were healing well. For some reason the sister and matron caring for Mrs Hucks were not called to give evidence even though they had been in court for the trial. Dr Cole did not give a prescription for penicillin and two days later allowed the plaintiff to return home after antiseptic powder had been applied.¹⁵ Soon afterwards the plaintiff became seriously ill with fulminating puerperal fever. Puerperal fever had been a major cause of maternal fatality in the nineteenth century but its incidence had been very much reduced by the use of antibiotics. Fulminating puerperal fever, as the name suggests, is caused by an infection which strikes like lightning giving no warning signs that antibiotic treatment is required. According to Lord Justice Diplock (as he then was) at the time of the incident fulminating puerperal fever was, “very very rare,” and at 397 col 1, “*I think there had been no example of it in the area in which Dr Cole practised for 18 years. Even in the wider field in which other witnesses practised only one case had been experienced by two consultants in the course of what [one expert] described as 40 consultant years.*”

Four expert witnesses for the defence testified that they too would have given the same treatment as the defendant but also agreed that fulminating puerperal fever was a possible result of the plaintiff's initial infection; it would be difficult for an expert giving evidence effected by hindsight bias to admit that they would not have foreseen an outcome that actually occurred. Once it has been admitted that puerperal fever is foreseeable it becomes difficult to justify not prescribing penicillin at the end of the tetracycline course. Perhaps the defendant's expert witnesses experience cognitive dissonance; they know from experience what they would have done in the defendant's situation but they are unable to reconcile that action with the knowledge they now have through hindsight and the skewed view of probabilities they have through hindsight bias.

All three members of the Court of Appeal ruled in favour of the plaintiff without making reference to *Bolam*. Lord Denning focused on the damaging testimony of one of the defendant's own experts. Lord Justice Diplock was narrowly persuaded by the reasoning of Lord Denning and by vital missing evidence from the sister and matron that could easily have been provided by the defendant whilst stating that he had initially been of the opinion that the trial judge had required, “*a higher standard of prescience and caution than is to be expected of a general practitioner with obstetric*

qualifications.”¹⁴ Lord Justice Sachs delivered the only judgment inconsistent with the *Bolam* test as it existed before *Bolitho* stating at 397 col 2:

When the evidence shows that a lacuna in professional practice exists by which risks of grave danger are knowingly taken, then, however small the risks, the courts must anxiously examine that lacuna - particularly if the risks can be easily and inexpensively avoided.

He accepted that the risks to the plaintiff were very small but added, “*The potential irrelevance of the rarity or remoteness of the risk, when the maturing of the risk may be disastrous, is incidentally illustrated in Chin Keow’s case.*” In a twist of irony, *Chin Keow’s* case was an appeal from the Federal Court of Malaysia to the Privy Council by the dependants of a nurse who had died following an allergic reaction to a penicillin injection. The defendant had negligently failed to take a proper patient history but the case also highlights the possibility of severe allergic reactions to penicillin.¹⁶ The lacuna identified by Lord Justice Sachs in *Hucks v Cole* comes into existence by hindsight bias in overestimating the tiny risk of fulminating puerperal fever (an outcome that has actually occurred) whilst ignoring the tiny risks associated with the use of penicillin (risks that, in the factual framework of the case being decided, are completely hypothetical.)

Imagine Dr Cole had prescribed a course of penicillin for Mrs Hucks and the latter had become seriously ill because of a “very very rare” allergic reaction and brought proceedings. Would Lord Justice Sachs have found a lacuna in medical practice? Had the doctor knowingly taken a very small risk of a very grave injury when he should have waited and treated puerperal fever only if and when symptoms manifested themselves? Without the benefit of hindsight would the expert witnesses for the defence have succeeded in persuading the tribunal that fulminating puerperal fever was a significant risk justifying the administration of penicillin? Perhaps the lacuna is actually a catch 22.

Edward Wong occurred in a non-clinical setting of land conveyancing in 1976.¹⁷ The sale of a factory in Hong Kong failed to complete satisfactorily leaving the purchaser with a building subject to the previous owner’s mortgage. The defendant solicitors had followed the prevailing conveyancing practice in Hong Kong and transferred the purchase price in advance of receiving paper title; in England payment of the price and transfer of paper title happen simultaneously. The vendor’s solicitor absconded with the purchase monies and did not transfer funds to the vendor’s mortgagee to facilitate a release of the mortgage. The Privy Council overturned the decision of the Court of Appeal of Hong Kong and found the defendants negligent notwithstanding their compliance with accepted practice at the time. The prevailing conveyancing practice had been considered by a subcommittee appointed in 1959 by the Law Society of Hong Kong which reported in 1965 that it

“does not suggest that solicitors should cease to accept undertakings and rely upon the integrity of fellow practitioners,” but, when a request was made for an English style conveyance it would be *“unethical for any of the other solicitors concerned to object or refuse to comply.”* Lord Brightman commented at 307 that, *“Mr. McElney [senior partner with the defendants] said himself in cross-examination that he supposed that the risk inherent in a Hong Kong style completion was self-evident.”* The risk that the vendor’s solicitor would turn out to be a rogue is just about foreseeable, but surely it is going too far to suggest that the risks to the purchaser (as opposed the vendor) in these circumstances were, *“self-evident.”* Affected by hindsight bias, a senior solicitor inflates his assessment of the risk and suggests that they should not have been following the accepted practice in Hong Kong at the time. The judgment goes on to state at 308 that there were simple steps to protect the purchaser that:

would not undermine the basic principles of the Hong Kong style of completion because they are in fact those advocated by the Law Society itself in a circular to members dated 25 November 1981, which was helpfully produced during the hearing of this appeal.

This circular was not sent to the Law Society’s members until five years after the incident that gave rise to the litigation. It gave guidance that the type of loss suffered by the plaintiff could be prevented by taking the simple step of paying part of the purchase price directly to the mortgagee to secure a release of the mortgage.

It seems that the Privy Council retrospectively judged the prospectively considered practices devised by Hong Kong’s solicitors knowing exactly how a rogue solicitor acting for the vendor of property could cause a loss to the purchaser. Objective hindsight alerted them to the possibility of dishonest solicitors in Hong Kong and hindsight bias led them to overestimate the probability of the plaintiff’s loss; a witness for the defence admitted (in retrospect) that the risk was obvious and there was a straightforward precaution that could have been taken to protect the plaintiff. Slightly oddly in the final words of the judgment at 308 the individual solicitor who had carried out the conveyancing work at the defendant firm was expressly absolved from responsibility, *“[t]heir Lordships wish to add that they do not themselves attach blame to Miss Leung for the calamity that occurred.”*

In *Patel v Daybells* a set of facts strikingly similar to those of *Edward Wong* arose but they were distinguished because the defendant, a solicitor in Stratford, east London, was found not to be negligent because of the time pressures he had been put under by the unusual circumstances of the purchase.¹⁸

Notwithstanding *Hucks v Cole* (which was not widely reported until 1993) and *Edward Wong* the *Bolam* test gained traction throughout the tort of negligence in both clinical¹⁹ and non-clinical cases allowing professionals to escape liability in negligence if they were able to show that their actions were supported by a body of opinion. The test also gained a foothold in other areas of law such as the determinacy of best interests for those unable to make decisions themselves.²⁰ The fact that there has been a move away from *Bolam* in best interest cases both prior to and following the enactment of the Mental Capacity Act 2005 (MCA) is to be welcomed given that the court is undertaking a prospective planning exercise for the future and not a retrospective review of past actions or decisions.^{21,22} In cases concerning treatment decisions of incompetent adults, as Dame Butler-Sloss made clear in *Re A (Medical Treatment: Male Sterilisation)* (at 200-201 in a case decided before the MCA) the use of the *Bolam* test related to whether treatment for incapable adults was justified and not to whether it was in the patient's best interests. The two duties were not "*conflated into one requirement.*"²¹ In best interests determinations, the court is operating on the basis of knowledge available to it at the time of the decision; the future outcome is unknown and cannot give rise to either hindsight or outcome bias.

The *Bolitho* "Gloss"

In *Edward Wong* the Privy Council felt that they were able to deviate from the *Bolam* test (although *Bolam* was not actually referred to in their judgments) in a case brought against lawyers presumably because they were familiar with the subject matter and were not reliant on expert witnesses. In a clinical setting *Bolam* continued to be decisive until Lord Browne-Wilkinson sitting in the House of Lords in *Bolitho v Hackney*⁵ suggested, *obiter* at 243, that defendants ought not to be allowed the protection of the *Bolam* test, "*if, in a rare case, it can be demonstrated that the professional opinion is not capable of withstanding logical analysis.*" Lord Browne-Wilkinson created an exception to the *Bolam* test which he expected to be used in, "*rare cases,*" and protected the defendants to an extent by placing the burden of proof on the claimant: the claimant must demonstrate the opinion is illogical. A similar approach was taken by Dillon LJ in the Court of Appeal in *Bolitho* who required proof that the practice was *Wednesbury* unreasonable meaning the practice was one that no reasonable doctor could have followed.^{23,24} Despite this expectation and protection Rachael Mulheron suggested (at 618) that *Bolitho* "*has changed the outcome of medical negligence lawsuits in more cases than perhaps the label of "rarity" would suggest.*"²⁵

The following is not intended to be a definitive review of post *Bolitho* case law; a more complete consideration can be found in Mulheron's article. Two lines of cases are of interest: in the first the

defendants have failed to take a (seemingly) simple precaution against an unlikely adverse outcome. In the second, judges have sought to show that professional opinion is not capable of withstanding logical analysis by requiring the defendants to provide an explanation of events.

Small Risk Of Adverse Outcome

A line of cases following the reasoning of *Hucks v Cole* has developed employing the *Bolitho* gloss to overcome a body of professional opinion supporting the actions of the defendant. Expert evidence (provided by witnesses with knowledge of the outcome) generally fixes a very low probability of an adverse outcome and the judge then finds that this outcome was foreseeable. The leap from evidence showing that an event has a low probability to a finding that the event was foreseeable is not, in itself, wrong providing the sample is large enough. Picking 6 winning numbers in the UK National Lottery is extremely unlikely (45,057,474 to 1) but is entirely foreseeable because of the number of players.

In *Reynolds* the claimant suffered from cerebral palsy following asphyxia caused by an external cord prolapse during childbirth from a footling breech position.²⁶ The claimant argued that the midwife was negligent in not carrying out a vaginal examination (VE) having reasonably reached the conclusion that the claimant was cephalic (i.e. head downwards.) There was a difference of opinion between the expert witnesses as to whether the examination to exclude the possibility of cord prolapse should have been carried out in the circumstances as they were reasonably perceived to be. The leading reference work of the time, Myles Textbook for Midwives, suggested that a VE was indicated in the circumstances but there was evidence before the court demonstrating that practices differed between hospitals at the time. One of the claimant's witnesses clearly exhibited objective hindsight in evidence at [26] (emphasis added,) "*with the presenting part at 3/5 and ruptured membranes, there was always a possibility that the cord could prolapse, even had the presentation been cephalic. The risk is multiplied in breech presentation. I can therefore say that in this case Sister Jackson should have performed the vaginal examination to ensure there was no prolapsed cord.*" This breech presentation was unknown to Sister Jackson, the defendant's midwife, who had reasonably relied on previous antenatal observations of cephalic presentation. The claimant's obstetrics expert witnesses suggested at [41(2)] that the risk of a cord prolapse in the perceived circumstances was between 1 in 250 and 1 in 500 (possibly less); he said that he had never actually encountered a prolapse in such a situation (an experience shared by the defendant's obstetrics expert who described the complication as extremely unlikely.) The defendant's expert suggested that VE brought with it a risk of infection and was best avoided at the relevant time. The judge

pointed out at [30] that the expert had not provided any documentation for this opinion. It was not known to the court that academic research was available to support this assertion.²⁷

The judge could have applied *Bolam* and found the midwife not negligent. Instead the judge applied the *Bolitho* gloss and reached the conclusion at [45(3)] that: “*the risk of infection is outweighed by the risk of cord prolapse; in terms of gravity of consequences, they are not [...] in the same league,*” and at [47(4)]:

the only reason articulated in its support for not conducting an immediate [VE]... does not withstand scrutiny. Where the sole reason relied upon in support of a practice is untenable, it follows (at least absent very special circumstances) that the practice itself is not defensible and lacks a logical basis.

In making this decision the judge had overlooked the significance of the ‘Oxford paper;’ research at the John Radcliffe hospital found that in a sample of 132 incidences of cord prolapse there were no stillbirths and only one neonatal death as a direct consequence of the prolapse. One baby in the study was found to have cerebral palsy although this may have been attributable to a very premature birth rather than the prolapse. The authors commented that, “[t]he most significant finding of the study is the low incidence of directly associated mortality and morbidity.”²⁸ When applying the *Bolitho* gloss consideration was given to the 1 in 250 to 1 in 500 risk of the prolapse but not the much smaller risk of the prolapse occurring *and* harm resulting from the prolapse which, based on the Oxford paper’s assessment of <1% mortality and <1% morbidity, would be less than 1 in 12,500. At [33] the judge commented that, “*The risk of cord prolapse in this situation was “not large” but if it materialised it could give rise to a “potential disaster” and not doing a VE was equivalent to ignoring a “red signal on a railway line.”* The judge, in adopting the words of the claimant’s expert, is not drawing a distinction between a “potential disaster” and an actual disaster. It is explicit in the judge’s account of the claimant’s expert evidence ([27] for Mrs Christophe & [33] for Mr Steele) that there were risks associated with the VE. An overestimate of the probability of harm may have trumped medical practice by operation of the *Bolitho* gloss in a case that is not quite as rare as Lord Browne-Wilkinson initially intended.

In *Lowe v Haverling* Judge Peter Crawford QC used the *Bolitho* gloss to find that a decision to set an eight week gap between appointments for a patient with very high blood pressure was illogical and therefore negligent because, although generally acceptable, it did not take into account considerations specific to the claimant.²⁹ In particular it did not sufficiently prioritise the claimant, a comparatively young man with dependent children who had already suffered a mild to moderate

stroke, over other patients. The claimant's treatment was delayed because he had been referred to an andrologist for an investigation into sexual potency – a consideration of the claimant's circumstances which earned a rebuke from the judge at page 80. The judge decided at 75 that the doctor had made a "*routine decision taken in the course of clinical practice,*" and at 73 that, "*It is impossible to quantify risk precisely on an individual basis.*" The finding of negligence was based on the doctor's failure to deviate from his usual and acceptable practice although (the court assumed) it would have been quite easy for the defendant to see the claimant more frequently. The crux of the matter seems to be that the doctor and the judge arrived at different assessments of the probability that the claimant would suffer an adverse outcome over the eight week period. The judge, and the expert witnesses, had the advantage of knowing that the claimant would suffer a massive and debilitating stroke a day after the eight week hiatus. Causation was not admitted; the defendant did not accept that, with more frequent appointments, the claimant's stroke could have been avoided. The judge discounted the evidence against causation from the defendant's experts on the basis that they had failed to take into account the various special aspects required for this claimant when considering whether a breach of duty had occurred. The judge's acceptance that effective treatment could have been given seems a little odd given his statement (emphasis added) at 80 that "*the claimant had not only a high blood pressure, but an uncontrolled one - that is to say, it went up to high levels and then down irregularly and **responded poorly to treatment.***" In *Marriott v West Midlands Regional Health Authority* there was a similar disagreement between experts about the precautions that should be taken after a head injury.³⁰

Judge Requiring Reasons

It is clear from Lord Browne-Wilkinson's judgment in *Bolitho* that the 'gloss' is not to be used lightly. It has become accepted that a judge who is discounting the evidence of medical experts should give reasons for doing so and make the necessary findings of fact. In *Glicksman v Redbridge NHS Trust* the Court of Appeal at [10] allowed the defendant NHS Trust's appeal because:

*On the medical issues considered in this case, no reasoned rebuttal of any expert's view was attempted by the judge: her conclusions alone were stated in circumstances which called out for definition of the issues, for marshalling of the evidence, and for reasons to be given. Those matters go to make up the building blocks of the reasoned judicial process, and those safeguards were not present here. Each of us was concerned at the prospect of a finding of professional negligence being made in their absence.*³¹

The Bolitho gloss was employed in *Kingsberry v Greater Manchester SHA* to find a registrar liable in negligence when a baby was born with cerebral palsy after a forceps delivery was attempted without either the presence of a more senior registrar or trial of forceps (an attempt at delivery with forceps in an operating theatre with provision made to proceed immediately to caesarean section if required.)³² There was no doubt that, if the baby had been born in 2005, trial of forceps would have been the only appropriate course of action for the doctors to take. However, the baby was born in 1985 at a time when, according to evidence of practice within the defendant hospital, trial of forceps was either not carried out or was exceptionally rare. McKinnon, J commented at [45]:

Just as a trial of forceps was called for here in all the circumstances, as a result of the [...] factors referred to in 2005, so, all other things being equal, a trial of forceps should have been mandatory in 1985.

The question that the judge wanted answered was why the practice at the hospital had changed between 1985 and 2005. He did not accept that changes in the responsibilities of registrars made a difference and found therefore that the 1985 practice of the hospital was irrational. It is likely that no one knows specifically what changed between the two dates. Over twenty years the medical profession's awareness of the risks of forceps delivery and the advantages of the trial of forceps procedure changed practices to the point where the latter became the only method that could be justified in some circumstances. By adopting his approach, the judge placed the burden of proof on the defendant to prove the logical steps that had led to a change in practice between 1985 and 2005. The defendant was unable to provide a satisfactory explanation. The judge expressly arrived at a conclusion through the use of objective hindsight and then relied on the defendant's inability to provide an explanation for shifting practices to provide a justification for discounting expert evidence.

The Court of Appeal in *Lillywhite* considered an appeal against a first instance decision of Jack J in favour of a Professor of Obstetrics who failed to diagnose semi lobar holoprosencephaly (a condition in which the developing brain does not divide into two hemispheres) by identifying brain structures in an ultrasound scan of the claimants' unborn child that were not present.³³ The same misdiagnosis had been made by two other senior medical practitioners in independent 'on focus' scans. In a dissenting judgment Arden LJ noted at [55] the Bolam test mattered because the appellant was suggesting that all three of the independent scans had failed to meet the standards expected of reasonably competent tertiary sonologists. Combining the apparent care taken by the Professor during the scan and the less than 100% accuracy of semi lobar holoprosencephaly diagnosis through ultrasound with the results of the independent scans led Arden LJ to conclude at [77-79] that he

could not overrule the findings of Jack J. Whilst the majority (Latham and Buxton LJ,) accepted that the facts of the case did not allow a finding of negligence on the basis of *res ipsa loquitur*, they required the defendant and his experts to explain what brain structures had been mistaken for those missing from the unborn child. Again, at [34], when the explanation was not satisfactory the defendant was found negligent.

Conclusion

The Bolam test, as originally devised, was to help a jury reach a just conclusion on the culpability of doctors unwittingly involved in the tragedy that befell the plaintiff. The test's ease of operation led to overuse as applications were found well beyond the scope initially intended. In particular a mechanism to prevent juries reaching perverse decisions through various forms of hindsight by making them consider the prospectively derived practices of the medical profession was highjacked by the judiciary to facilitate decision making where hindsight was not an issue. During the last quarter century attempts have been made to reduce the influence of *Bolam* in the face of claims that it is, *inter alia*, too deferential to medical professionals.³⁴ Recent case law suggests that the *Bolitho* gloss is now being used to limit the scope of *Bolam* for establishing breach of the duty of care in medical negligence cases where hindsight is an issue. Fischhoff demonstrated that test subjects are not aware of the operation of hindsight bias and consequently judicial statements that defendants are being judged by contemporaneous standards should be approached with caution. It needs to be remembered that the *Bolam* direction removed some powerful biases from judicial processes that could result in doctors (and other health professionals) being judged by the outcomes of their actions rather than their actions themselves; a danger that is still present even though judges have now universally replaced juries in medical negligence cases. When doctors have been following an established body of medical opinion a court should be extremely careful before retrospectively finding a practice to be an irrational one for fear of reintroducing biases that have otherwise been controlled by the English Law. *Bolam* has no role to play when courts make decisions about the future but it is a simple and effective way of preventing injustice when courts are reviewing decisions that doctors made in the past.

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- 2 *Bolton v Stone* [1951] AC 850
- 3 *Paris v Stepney Borough Council* [1951] AC 367

- 4 *Bolam v Friern Hospital Management Committee* [1957] 2 All ER 118
- 5 *Bolitho v City and Hackney Health Authority* [1998] AC 232
- 6 Kamin KA, Rachlinski JJ. Ex Post \neq Ex Ante. Determining Liability in Hindsight *Cornell Law Fac Publ.* 1995;(Paper 646).
- 7 Baron J, Hershey JC. Outcome Bias in Decision Evaluation *J Pers Soc Psychol.* 1988;54(4):569–79.
- 8 Caplan RA, Posner KL, Cheney FW. Effect of outcome on physician judgments of appropriateness of care. *J Am Med Assoc.* 1991 Apr 17;265(15):1957–60.
- 9 *Donoghue v Stevenson* [1932] AC 562
- 10 *Sidaway v Governors of the Bethlam Royal Hospital* [1985] AC 871
- 11 *Chester v Afshar* [2004] UKHL 41
- 12 *Roe v Minister of Health* [1954] 2 QB 66
- 13 Hugh TB, Dekker SWA. Hindsight bias and outcome bias in the social construction of medical negligence: a review. *J Law Med.* 2009 May;16(5):846–57.
- 14 *Hucks v Cole* [1993] 4 Med LR 393
- 15 Who Decides the Standard? *Br Med J.* 1967;5565(3):624–5.
- 16 *Chin Keow v Government of Malaysia* [1967] 1 WLR 813
- 17 *Edward Wong Finance v Johnson Stokes & Master* [1984] AC 296
- 18 *Patel v Daybells (A Firm)* [2001] P.N.L.R. 3
- 19 Keown J. Doctor Knows Best: The Rise and Rise of the Bolam Test *Singapore J Leg Stud.* 1995;342–64.
- 20 *Re F (Mental Patient: Sterilisation)* [1990] 2 AC 1
- 21 *Re A (Medical Treatment: Male Sterilisation)* [2000] 1 FCR 193
- 22 *Re S (Adult: Sterilisation)* [1999] 1 FCR 277
- 23 *Bolitho v City and Hackney Health Authority, CA* [1993] 4 Med LR 381
- 24 *Associated Provincial Picture House v Wednesbury Corporation* [1948] 1 KB 223
- 25 Mulheron R. Trumping Bolam: a Critical Legal Analysis of Bolitho’s “Gloss” *Camb Law J.* 2010 Nov 12;69(03):609–38.
- 26 *Reynolds v North Tyneside Health Authority* [2002] All ER (D) 523

- 27 Seaward PG, Hannah ME, Myhr TL, Farine D, Ohlsson A, Wang EE, et al. International Multicentre Term Prelabor Rupture of Membranes Study: Evaluation of predictors of clinical chorioamnionitis and postpartum fever in patients with prelabor rupture of membranes at term *Am J Obstet Gynecol*. Elsevier; 1997 Nov 11;177(5):1024–9.
- 28 Murphy DJ, MacKenzie IZ. The mortality and morbidity associated with umbilical cord prolapse *Br J Obstet Gynaecology*. 1995;102(October):826–30.
- 29 *Lowe v Haverling Hospitals NHS Trust* (2001) 62 BMLR 69
- 30 *Marriott v West Midlands Regional Health Authority* [1998] WL 1043499
- 31 *Glicksman v Redbridge Healthcare NHS Trust* [2001] EWCA Civ 1097
- 32 *Kingsberry v Greater Manchester Strategic Health Authority* (2005) 87 BMLR 73 (QB)
- 33 *Lillywhite v University College London Hospitals NHS Trust* [2005] EWCA Civ 1466
- 34 Woolf H. Are the courts excessively deferential to the medical profession? *Med Law Rev*. 2001;9(1):1–12.