Material Contribution in Clinical Negligence Litigation

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"Anyone who says they understand Quantum Mechanics doesn't understand Quantum Mechanics"

- Richard Feynman, Nobel Laureate in Physics

"Almost all aspects of the law of torts are grounded on policy … any attempt to identify or distil principles will normally be fraught with problems."

- Lord Neuberger, Some Thoughts on Principles Governing the Law of Torts, Singapore Conference on Protecting Business and Economic Interests; Contemporary Issues in Tort Law, 19 August 2016

1. Introduction

1.1. It is a brave soul who seeks to review, let alone offer a coherent explanation of, the present law of causation and material contribution. I understand that in the recent Privy Council appeal in *Williams v Bermuda Hospitals Board*[1], a clinical negligence case concerning material contribution, Counsel cited 75 authorities to the Court. Only five were referred to in the succinct, 49 paragraph judgment. Either Counsel over-estimated the complexity of the issue or their Lordships underestimated it.

1.2. In her article *Unnecessary Causes*[2], Professor Jane Stapleton sets out a clear and logically coherent analysis of the law of causation. As an academic she has the luxury of criticizing judgments such as that in *Bailey v MOD*[3] as "untenable" and of arguing for the law as she

[1] Williams v Bermuda Hospitals Board [2016] UKPC 4
[2] (2013) 129 Law Quarterly Review
[3] Bailey v MOD [2008] EWCA Civ 883, [2009] 1 WLR 1052

considers it ought to be rather than as it is. As an advocate I have to seek to explain the law of causation and material contribution as it is, as applied by the higher courts in previous cases, and then to seek to persuade the court to apply those established principles to the advantage of my client.

1.3. Due to the way in which it develops, the common law cannot be expected always to be flawlessly coherent. Sometimes, to overcome obvious injustice, express exceptions to the usual rules on causation are carved out, for example the *Fairchild* exception in mesothelioma claims. More often courts undertake what might be called purposeful interpretation of case law: the purpose being to achieve what they regard as a just result. Hence, ambiguity, inconsistency and uncertainty may thrive. As Lord Neuberger has suggested in the quote at the head of this paper, the common law of tort is grounded on policy not principle. Each case is unique because of the infinite variety of human beings and human interactions. This complexity defies distillation into simple tortious principles that fit all conceivable situations.

1.4. Causation can be a particularly problematic issue for the courts in the field of clinical negligence. Typically, but not always, the claimant ("C") will have been ill or injured prior to the alleged negligence or would have been even without a breach of duty. Very often underlying condition is a process such as sepsis, cancer, or an internal bleed. The breach is one of omission: a failure to arrest the process. Speculation about what would have happened absent the breach involves a series of questions about what treatment ought to have been given and with what results.

1.5. There are other factors that materially contribute to the difficulty in reviewing case law in this field.

1.5.1. The issue of causation and material contribution is burdened by sometimes loose and inconsistent use of terminology: a necessary cause, a "sufficient cause", "cumulative causes", "divisible" and "indivisible injuries", "material", "negligible" and "substantial" contribution.

1.5.2. There is also a risk for the judiciary and advocates of over-using hypothetical illustrations. Not many county court judges will have to decide on the liability of three men who simultaneously negligently fire their guns into a wood where a fourth man is killed by a single bullet!

1.5.3. In clinical negligence cases we often have epidemiological evidence available to deploy. The use of statistics can be misleading as the well-known blue taxi/red taxi example demonstrates. For those tempted to rely exclusively on epidemiology then Mr Justice Jay's judgment in *Rich v Hull and East Yorkshire Hospitals NHS Trust* [4] is a salutary warning (on many levels).

1.6. With these warnings and caveats, I shall attempt to extract some clear statements of law, review the recent authorities of which there are several of interest, and to point to how the courts may approach the issue of material contribution in the future.

2. Scenarios – Three Easy Ones

2.1. Absent D's breach, C would have avoided all of her injury. C recovers 100%.

[4] Rich v Hull and East Yorkshire Hospitals NHS Trust [2015] EWHC 3395

2.2. Absent D's breach, C would have avoided some of his injury. C can prove on the balance of probabilities how much of his injury he would have avoided. C recovers the avoidable portion or extent of injury.

For example D admits that C should have undergone an x-ray in A&E and that it would have revealed a fracture requiring surgical fixation. C would have made a full recovery and returned to work in 2 months. Instead C was sent home, the fracture deteriorated through use of the limb. When the fracture was eventually diagnosed and treated the recovery period was 6 months. C recovers for 4 months of avoidable injury.

2.3. If C can only establish that D's breach was one of a number of causes each of which was sufficient to have caused the injury, C will fail to establish liability. In *Williams v Bermuda* Lord Toulson said[5],

> "*A claim will fail if the most that can be said is that the claimant's injury is likely to have been caused by one or more of a number of disparate factors, one of which was attributable to a wrongful act or omission of the defendant: Wilsher v Essex Area Health Authority [1988] AC 1074. In such a case the claimant will not have shown as a matter of probability that the factor attributable to the defendant caused the injury, or was one of two or more factors which operated cumulatively to cause it. In Wilsher the injury was a condition known as retrolental fibroplasia or RLF, to which premature babies are vulnerable. The condition may be caused by various factors, one of which is an over supply of oxygen. The claimant was born prematurely and as a result of clinical negligence he was given too much oxygen. He developed RLF, but it was held by the House of Lords that it was not enough to show that the defendant's negligence added to the list of risk factors to which he was exposed. The fact that the administration of excess oxygen was negligent did not warrant an inference that it was a more likely cause of the RLF than the various other known possible causes.*"

3. <u>Scenarios – Two Problematic Cases</u>

[5] Paragraph [40]

3.1. Absent D's breach, C would probably have avoided an unquantifiable part of his injury: the breach has made a material difference to the extent of injury but C cannot prove on the balance of probabilities how much of his injury he would have avoided. I shall call this case A.

3.2. C cannot prove that he would have avoided his injury but for D's breach but can prove that D's breach was a factor that made a material contribution to causing the injury. I shall call this case B.

3.3. In these two types of case claimants tend to contend that the defendant's breach materially contributed to the claimant's injury and that, accordingly, the defendant is liable to compensate him for all of the injury. It appears, on a review of the authorities that the courts have not always discriminated clearly between these two types of problematic case when applying the material contribution approach.

4. Bailey v MOD

4.1. In *Bailey v MOD*[6] C suffered brain damage as a result of a cardiac arrest following inhalation of her vomit. She had inhaled vomit because she had become too weak to cough her vomit up and out. Her weakened state had two contributing factors: pancreatitis and the breach of duty of the defendant when treating her. At first instance Foskett J held that each factor had contributed materially to her overall weakness and the weakness caused the aspiration. In the Court of Appeal, Waller J giving the judgment of the court referred to *Bonnington Castings Limited v Wardlaw*[7] as a cumulative cause case. He held that one could not draw a distinction between medical negligence cases and others and that accordingly:

[6] Bailey v MOD [2008] EWCA Civ 883, [2009] 1WLR 2052
[7] Bonnington Castings Limited v Wardlaw [1956] AC 613

"46. I would summarise the position in relation to cumulative cause cases as follows. If the evidence demonstrates on a balance of probabilities that the injury would have occurred as a result of the non-tortious cause or causes in any event, the claimant will have failed to establish that the tortious cause contributed. Hotson exemplifies such a situation. If the evidence demonstrates that 'but for' the contribution of the tortious cause the injury would probably not have occurred, the claimant will (obviously) have discharged the burden. In a case where medical science cannot establish the probability that 'but for' an act of negligence the injury would not have happened but can establish that the contribution of the negligent cause was more than negligible, the 'but for' test is modified, and the claimant will succeed."
"47. The instant case involved cumulative causes acting so as to create a weakness and thus the judge in my view applied the right test, and was entitled to reach the conclusion he did."

4.2. This statement of principle has been applied in subsequent clinical negligence cases as will be discussed below. But it has caused some disquiet and some confusion.

5. Divisible and Indivisible Injury

5.1. In *Bonnington Castings Limited v Wardlaw* [8] the claimant foundry worker contracted pneumoconiosis from the inhalation of dust, containing minute particles of silica. Most of the dust originated from the pneumatic hammers, but some dust escaped from the swing grinders. The exposure to hammer dust involved no fault on the part of the employers, but exposure of swing grinder dust did result from the employer's breach. At page 261 Lord Reid held:

"The medical evidence was that pneumoconiosis is caused by a gradual accumulation in the lungs of minute particles of silica inhaled over a period of years. That means, I think, that the disease is caused by the whole of the noxious material inhaled and, if that material comes from two sources, it cannot be wholly attributed to material from one source or the other…
I cannot agree that the question is which was the most probable source of the Respondent's disease, the dust from the pneumatic hammers or the dust from the swing grinders. It appears to me that the source of his disease was the dust from both sources, and the real question is whether the dust from the swing grinders materially contributed to the disease. What is a material contribution must be a question of degree. A contribution which comes within the

[8] Bonnington Castings Limited v Wardlaw [1956] AC 613 at 621

exception de minimis non curat lex is not material, but I think that any contribution which does not fall within that exception must be material. I do not see how there can be something too large to come within the de minimis principle but yet too small to be material."

5.2. Do you recognize a divisible injury when you see it? In *Jones v Secretary of State for Energy and Climate Change*[9] Swift J noted the *Bonnington* decision and said that pneumoconiosis was a divisible disease, being dose-related: the severity of the disease was related to the quantity of dust inhaled[10]. She noted that in previous cases industrial deafness and vibration white finger had been held to be divisible injuries. Likewise Lord Phillips in *Sienkiewicz v Greif (UK) Ltd* [11] where he noted,

"*There is an important exception to the "but for" test. Where disease is caused by the cumulative effect of the inhalation of dust, part of which is attributable to breach of duty on the part of the defendant and part of which involves no breach of duty, the defendant will be liable on the ground that his breach of duty has made a material contribution to the disease – Bonnington Castings Ltd v Wardlaw [1956] AC 613. The disease in that case was pneumoconiosis. That disease is divisible. The severity of the disease depends upon the quantity of silica inhaled. The defendant did not, however, argue that, if held liable, this should only be to the extent that the dust for which it was responsible had contributed to the plaintiff's symptoms. It was held liable for 100% of the disease. There have, however, been a series of cases at first instance and in the Court of Appeal in which it has been recognised that where there has been a number of exposures of a claimant to bodily insults that have cumulatively caused a divisible disease, responsibility should be apportioned so that an individual defendant is liable for no more than his share of the disease. This apportionment may necessarily be a rough and ready exercise."*[12]

5.3. So, where the disease or injury is divisible, or dose-related, and the defendant's breach has made a material contribution to the disease, the defendant is liable but only to the extent to which it has contributed to the outcome. It pays its fair share but no more. That may be a difficult and rough and ready exercise, but that is what the courts should do, according to Lord

[9] Jones v Secretary of State for Energy and Climate Change [2012] EWHC 2936 (QB)
[10] Paragraph [6.5]
[11] Sienkiewicz v Greif (UK) Ltd [2011] 2 AC 229 at [17]
[12] He cites Mustill J's analysis in Thompson v Smiths Shiprepairers (North Shields) Ltd [1984] QB 405 at pp 437-444

Phillips in 2011. As has been observed by judges on several occasions, the only reason that was not done in *Bonnington* is that the court was presented with an all or nothing argument by the defendant. It was not invited to apportion the divisible injury. So, was *Bailey* a case of divisible injury just as in *Bonnington*?

5.4. In The Court of Appeal in the so-called Atomic Vets case, *B v MOD*[13] Lady Justice Smith held at [150]

> *"… we accept that, at least so far as cancers are concerned, the claimants cannot rely on proving that the radiation exposure has made a material contribution to the disease, as in Bailey and Bonnington Castings. This principle applies only where the disease or condition is 'divisible' so that an increased dose of the harmful agent worsens the disease. As is well known, in Bonnington, the claim succeeded because the tortious exposure to silica dust had materially aggravated (to an unknown degree) the pneumoconiosis which the claimant might well have developed in any event as the result of non-tortious exposure to the same type of dust. The tort did not increase the risk of harm; it increased the actual harm. Similarly in Bailey, the tort (a failure of medical care) increased the claimant's physical weakness. She would have been quite weak in any event as the result of a condition she had developed naturally. No one could say how great a contribution each had made to the overall weakness save that each was material. It was the overall weakness which led to the claimant's failure to protect her airway when she vomited with the result that she inhaled her vomit and suffered a cardiac arrest and brain damage. In those cases, the pneumoconiosis and the weakness were divisible conditions. Cancer is an indivisible condition; one either gets it or one does not. The condition is not worse because one has been exposed to a greater or smaller amount of the causative agent."*

5.5. In short, Smith LJ regarded the injury in *Bailey* as being divisible. In contrast in *Dickins v O2PLC*[14] Smith LJ said that *Bailey* was a case of an indivisible injury and that in such cases, where there is a material contribution then there is no apportionment, the defendant is liable for the whole of the injury.

[13] B v MOD [2010] EWCA Civ 1317
[14] Dickins v O2 Plc [2008] EWCA Civ 1144

5.6. She should have known, because she sat on *Bailey v MOD*[15]. So was *Bailey* a case of a divisible or indivisible injury? Surely the arrest and subsequent brain damage due to aspiration was not dose-related. A cardiac arrest either happens or it does not happen.

5.7. Professor Stapleton[16] refers to the injury in *Bonnington* as being a divisible disease. The overall condition is the result of the cumulative effect of the dust exposure, becoming more severe with more exposure. She contrasts this with the injury in *Bailey v MOD*: a cardiac arrest that she describes as indivisible. Partly for that reason she criticises the judgment in *Bailey* and the application of *Bonnington* to its facts. How could the ratio in *Bonnington*, a case about a divisible injury, be applied to a case about an indivisible injury?[17]

5.8. By reference to our problematic cases, Bonnington has been generally regarded as Case A, Bailey as Case B. Case A is more typical of a divisible injury but where C cannot establish how much worse the injury is as a result of the negligence. Case B is more typical of an indivisible injury. But is that the correct analysis and, in any event, are they to be treated in the same way?

6. Post –Bailey

6.1. A review of the post-Bailey cases might assist in answering those questions. The *Bailey* approach has been applied in a number of clinical negligence cases but not always uncritically. In *Popple v Birmingham Women's NHS Foundation Trust*[18] the Court of Appeal considered a cerebral palsy case where C had suffered brain injury due to a period of hypoxic ischaemia during labour and delivery. The total period of hypoxic ischaemia could not be precisely established but it was

[15] Bailey v MOD [2008] EWCA Civ 883, [2009] 1WLR 2052
[16] ibid
[17] See also Lord Toulson in Williams below
[18] Popple v Birmingham Women's NHS Foundation Trust [2012] EWCA Civ 1628

between 15 and 20 minutes. C was delivered at 1449. It was found that but for D's breach he would have been delivered at 1444. The Court of Appeal referred to Bailey and held at [79]:

"*Here the negligent failure to deliver Nathan before 1444 caused all the damage if this was a 15 minute insult. Medical science cannot establish whether it was a 15 minute insult or a 20 minute insult. If it did take 20 minutes the damage done in the last five minutes must have made a contribution to the overall harm which was more than minimal. I cannot see why the Bailey principle does not apply."*

6.2. Of interest, the first instance judgment included the observation relying on Dr Rennie, as a causation expert, that the sustaining of brain damage should be regarded as a process rather than as a single event. The Court of Appeal did not analyse whether the brain injury was a divisible or indivisible injury but there was no question raised of an apportionment. It is not clear whether this was because quantification of the extent of worsening by negligence was impossible or because the it was unnecessary given that once material contribution is established, the defendant is liable for all the injury.

6.3. See also, *Canning-Kishver v Sandwell & West Birmingham Hospitals NHS Trust*[19]: negligent neonatal care of a premature baby materially contributed to C's cerebral atrophy. The court expressly applied *Bailey* without further discussion.

6.4. In *Rich v Hull and East Yorkshire Hospitals NHS Trust*[20], after a bravura review of the expert evidence and epidemiological studies, Jay J then considered the question of material contribution. The issue was whether corticosteroid drugs should have been given to C's mother before her delivery by emergency Caesarean section at 32 weeks gestation. C contended that this failure caused or materially contributed to her suffering Respiratory Distress Syndrome

[19] Canning-Kishver v Sandwell & West Birmingham Hospitals NHS Trust [2008] EWHC 2348 (QB)
[20] Rich v Hull and East Yorkshire Hospitals NHS Trust [2015] EWHC 3395

("RDS") as a result of which she required mechanical ventilation, suffering cerebral ischaemia resulting in cerebral palsy due to periventricular leukomalacia ("PVL"). No breach was found but the judge asked whether the failure to administer maternal corticosteroids materially contributed to C's RDS such that the D would be liable for all her loss.

6.5. Jay J noted that his preferred interpretation of *Bailey* was that the injury, namely the cardiac arrest and brain damage should each properly be characterized as indivisible. He questions whether Waller LJ in *Bailey* was right to regard the case as one of divisible injury with the weakened state having cumulative causes. Since, in his view, the weakened state was not the injury, Jay J thought that there was an artificiality in postulating that the causes of the injury were cumulative. He said at [205], "*It would be much neater … to say that the Defendant's tort contributed to the mechanism which led to Ms Bailey's indivisible injury or injuries…*"

6.6. Importantly, perhaps, Jay J noted that Melissa Rich's RDS and PVL would have been less severe had corticosteroids been prescribed but he regarded them as indivisible injuries. He noted that difficulties in categorizing injuries as divisible or indivisible can arise because an indivisible injury such as cancer can be less severe than another [204].

6.7. Jay J found at [201]:

> "*What matters … is that we have a continuous pathological process involving the destruction of cells, and not a situation where the Defendant's tort merely contributes to the risk of injury … Finally what matters is that medical science does not permit one to say what would have happened, on the balance of probabilities, but for the Defendant's tort. … [211]. In these circumstances I conclude that the ratio of the decision of the Court of Appeal in Bailey applies*."

Thus had he found breach of duty, C would have recovered in full. Jay J seems to have regarded the injury as indivisible even though it would have been "less severe" without the negligence

(suggesting that the injury might therefore be dose-related but that the worsening could not be quantified – case A above). It does not seem to have mattered to him whether the case was viewed as being of the type A or B (above) – material contribution applied.

Williams v Bermuda Hospitals Board[21]

6.8. This is an important judgment. The NHSLA's annual report lists it as one of the five most important clinical negligence judgments last year. It complains that the court ducked the challenge of addressing the difficult issues that have arisen in relation to material contribution.

6.9. C attended hospital with abdominal pain. He was suffering from acute appendicitis. There was negligent delay in investigating and treating him. When he underwent surgery it was found that his appendix had ruptured and there was widespread pus throughout the pelvic region. That caused myocardial ischaemia. Intra-operatively C suffered a myocardial ischaemic event with complications affecting his lungs, and he required post-operative intensive care. It was found that the sepsis would have developed, and have caused complications over time – it would have been a process rather than a single event. As Lord Toulson noted at [41]:

"… the judge found that injury to the heart and lungs was caused by a single known agent, sepsis from the ruptured appendix. The sepsis developed incrementally over a period of approximately six hours progressively causing myocardial ischaemia… The sepsis was not divided into separate components causing separate damage to the heart and lungs. Its development and effect on the heart and lungs was a single continuous process…
"[32] … that process continued for a minimum period of two hours 20 minutes longer than it should have done."

[21] Ibid.

6.10. The Court found that it was right to "*infer on the balance of probabilities that the hospital board's negligence materially contributed to the process and therefore materially contributed to the injury to the heart and lungs."*

This is not unlike Jay J's analysis in *Rich*, albeit he referred to a mechanism rather than a process.

6.11. At [31] of his judgment in *Williams v Bermuda*[22], in the context of his discussion of *Bonnington*, Lord Toulson quoted with apparent approval Professor Sarah Green (Causation in Negligence, Hart Publishing, 2015, Chapter 5, p 97):

"*It is trite negligence law that, where possible, defendants should only be held liable for that part of the claimant's ultimate damage to which they can be causally linked … It is equally trite that, where a defendant has been found to have caused or contributed to an indivisible injury, she will be held fully liable for it, even though there may well have been other contributing causes ..."*

6.12. Why did he use this quote in relation to *Bonnington* when, as we have seen, *Bonnington* concerned a divisible injury (at least that is how it was viewed by Lord Phillips, Smith LJ and Swift J as noted above).

6.13. The answer is that, by contrast, Lord Toulson seems to have regarded *Bonnington* as being about an indivisible injury. At [32]:

"*In Bonnington there was no suggestion that the pneumoconiosis was "divisible" meaning that the severity of the disease depended on the quantity of dust inhaled. [the particles from the swing grinders] were a partial cause of the entire injury as distinct from being a cause of only part of the injury….. [33] Since the disease was caused by the totality of the toxic material inhaled, the relevant question was whether the particles from the swing grinders made any material contribution to the whole."*

[22] Williams v Bermuda Hospitals Board [2016] UKPC 4

6.14. The Appellant Hospital Board in *Williams* contended that *Bonnington* and *Bailey* only applied where there were concurrent causes – in each case a negligent and non-negligent cause that each contributed concurrently to the injury. The Privy Council rejected that contention, holding that it was "immaterial" whether the cumulative factors operate concurrently or successively. However where events are successive, the negligent event is later in time and the Claimant was doomed to suffer the injury before the negligent event, then that is an evidential consideration that might lead to a finding for the defendant, as in *Hotson*.[23]

6.15. The Board of the Privy Council did comment critically on the Court of Appeal judgment in *Bailey*. Lord Toulson's view at [47] was that the first instance judge, Foskett J, rightly held the hospital liable but that the Court of Appeal was wrong to view the case as a departure from the "but for" test. The Judge had concluded "*that the totality of the claimant's weakened condition caused the harm. If so, "but for" causation was established."* The parallel weakness due to pancreatitis was an example of the "egg shell skull" principle.

6.16. A Privy Council judgment is not binding but the court was Lord Toulson, Lady Hale, Lord Clarke, Lord Hughes and Lord Hodge and this decision will carry considerable weight. Arguably it has overtaken *Bailey* in importance.

Sido John v Central Manchester[24]

[23] Hotson v East Berkshire HA [1987] AC 750.
[24] Sido John v Central Manchester [2016] EWHC 407 (QB)

6.17. The Claimant, Dr John, suffered a head injury in a fall. He was taken by ambulance to Manchester Royal Infirmary and a CT brain scan was planned. There was delay in arranging the scan. The Court found the delay to be negligent and to have resulted in a delay in performing a craniotomy and evacuation of what was found to be an acute subdural haematoma of about 6 hours. During that 6 hours the Claimant suffered raised intracranial pressure. Following the evacuation the Claimant suffered from post-operative infection. The Court accepted the Claimant's approach to causation: the negligent delay materially contributed to the Claimant's long term brain damage and that, following *Bailey v MOD*, the defendant should be liable for the whole of the subsequent injury.

6.18. Picken J was aware of the *Williams* judgment and he held that the material contribution approach applied even where there were multiple, distinct, causal agents. This was not one agent, sepsis. There was the traumatic head injury, the period of raised intracranial pressure (some negligent some non-negligent) and the post-operative infection. She drew a distinction between industrial disease cases where there was a material contribution to risk and most clinical negligence cases where there is a material contribution to the damage. In the latter there might be single or multiple agents of damage.

6.19. The Judge rejected D's argument that there ought to be an apportionment exercise even if material contribution were established:

> *"if the 'material contribution' test has been satisfied, then causation is made out. It seems to me that, if that is the position, then if the evidence is such that it is not possible to attribute particular damage to a specific cause, the claimant must be entitled to recover in respect of the entirety of his or her loss.*[25]

[25] Paragraph [98]

Again, like Jay J in *Rich*, Picken J did not seem troubled as to whether this was a case A or case B type case. In fact he seems to have taken the view that there is no distinction: if it was neither possible to identify the extent to which the injury was made worse, nor that the injury would not have occurred without the breach, nevertheless if the material contribution test is satisfied, causation is made out for the whole of the injury.

DS v Northern Lincolnshire and Goole NHS Foundation Trust[26]

6.20. The Judge set out the issues as follows:

"4. The case brought on DS's behalf alleges that there was negligent delay at the end of his mother's labour in that the midwives failed to realise that his heartbeat had dropped to dangerous depths until 1500 hours; that this was because inadequate monitoring was being carried out: that once they discovered this the labour should have been managed in such a way that medical assistance was called for minutes before it was and that the doctor who then arrived should have made the decision to deliver by emergency caesarean section at least a couple of minutes before she did. But for the negligent delay DS's delivery would have been achieved 6 or 9 minutes before 1529 hours and the saving of time would have been sufficient to reduce the effects of the period of damaging hypoxia to a materially less damaging injury.

"5. The Trust defends the claim on both negligence and causation. It denies that its midwives or doctor acted in breach of their duties or that they delayed any appropriate and reasonable step in FS's care. Also medical causation cannot be established because on the balance of probabilities even an interval of ischaemic hypoxia shorter by 6-9 minutes that than which DS sustained would have caused essentially the same injury and the only way to avoid it would have been for DS to have been delivered within 10 minutes of the hypoxia starting."

6.21. The finding on breach was not favourable to the Claimant but the Judge went on to consider the causation issue.

"196. On the basis of saving 6-9 minutes of negligent delay:
i) It is agreed that DS's motor functions would not be materially different.

ii) Although there is understood to be a relationship between the duration of an acute profound hypoxic episode and the severity of brain injury caused, the relationship is not simple to define.

[26] DS v Northern Lincolnshire and Goole NHS Foundation Trust [2016] EWHC 1246 (QB)

The Claimant was apparently a healthy and robust foetus. He suffered a long period of hypoxia, at least 39 minutes (1500-1539) but more probably longer. Making an allowance of the generally accepted 10 minutes of non-harmful hypoxia (as described by the paediatric neurologists), he survived at least 29 minutes of injurious hypoxia but displays less profound injury than might be expected after that period of exposure. His neurological disabilities are atypical and not at the most severe end of the spectrum.

....

vii) I am persuaded that if birth had been as much as 9 minutes earlier, a substantial proportion of the total hypoxic insult would have been avoided and although I cannot calculate it exactly I am satisfied on the balance of probabilities that it would have made a material difference to DS's cognitive abilities so that although the care support he needed may have been the same his ability to manage himself, to make daily (not legal) decisions and the degree to which he would be able to join in his care would have been substantially improved.

"viii) On the other hand, in all the circumstances the Claimant has not persuaded me that it is likely he would have suffered materially less injury had he been delivered 6 minutes before 1529 on 4th June 2005. DS was bound to suffer significant brain damage from the acute hypoxia following placental abruption until resuscitation and although a saving of 6 minutes before delivery and a consequential shorter period of necessary resuscitation may have made some proportionally minor difference to his cognitive functioning, it is impossible to say to what extent that saving of time would have improved his current condition."

6.22. Strikingly there is no reference in the judgment to *Bailey*, *Popple*, *Williams* nor any other authority on causation. The Judge simply states at paragraph 7 that the Claimant,

"*must show that any negligence he has proved caused, or made a material contribution to, his injury and damage; in the context of this case what has to be proved is that but for the negligence DS would have been born unharmed or if harmed the level of damage likely to have been sustained would have been materially less."*

6.23. There might have been an argument that the 6 or 9 minutes of hypoxia ischaemia due to negligence was a material contribution to a process or hypoxia ischaemia that caused C's brain damage and that the brain damage was an indivisible injury that did not permit of an analysis of the extent of the contribution to the injury was attributable to the breach. It was not incumbent on C to prove that he would have suffered less injury had he been delivered earlier.

7. Key Points

7.1. Identify the injury: in *Bailey* the claim was not for the injury of weakness, but of brain damage due to aspiration. If there are separate injuries (broken leg and depression) consider each separately.

7.2. Was the injury divisible or indivisible? This has caused considerable difficulty. The fact that, say, cancer may be more or less severe for different individuals, does not mean that the cancer suffered by the claimant is necessarily divisible. Cancer has been said to be indivisible[27]. Injuries that are dose-related are generally regarded as divisible. However, one approach to take is that if "medical science" (often taken to mean the experts in the case) does not permit one to say to what extent the injury has been "made worse" by the negligence in question, then the injury is surely an indivisible one (Case A above, and see *Rich* and *Sido John*).

7.3. Identify the process by which the injury was caused. But for that process would the injury have been avoided? If C cannot prove that it would then C will fail to establish causation (*Wilsher* is an example). If, absent the process, there would have been no injury and on the balance of probabilities the negligence made a more than negligible contribution to the process then, following *Williams*, it made a material contribution to the injury and the defendant is liable in full for the injury.

7.4. If the injury is divisible then medical science (the experts) ought to be able to determine, however roughly, by what extent the injury has been made worse by the negligent contribution

[27] In B v MOD (Atomic Vets) and Rich at [204] (both ibid.)

to it. In such cases the defendant is liable only for the part of the injury its negligence has caused.

7.5. If D can show that C would have suffered the same or essentially the same injury even without the negligence, then C will lose. This is probably the reason for the decision in *Hotson* (and *DS*).

7.6. A contribution to the risk of injury is not the same as a contribution to the process that caused the injury. Statistical approaches to proving a material contribution such as "doubling of risk" should be treated with extreme caution[28].

7.7. The question of what falls under the term "process" will doubtless exercise judicial minds in the next two to three years.

8. The Burden of Proof

8.1. Professor Stapleton wrote her article prior to *Williams* but her analysis would probably remain unaltered. She describes a case such as Williams as one where the relevant step in the injurious mechanism is known to involve a threshold. In particular there are cases, she observes, where there may have been more of the factor that caused the injury than was necessary to bring it about. Mr Williams might have suffered heart and lung complications with only the non-negligent period of sepsis. The negligent sepsis was not proven to be a necessary cause of the heart and lung complications. Professor Stapleton contends that it is right nevertheless for the law to regard the "unnecessary" negligent factor as a cause of the injury.

8.2. That is not the end of the matter. Professor Stapleton contends that there is a further step in the analysis. If causation is established then the question should be asked, "Did the injury represent

[28] Per Lord Toulson at [48] in Williams commenting on Sienkiewicz (both ibid).

"damage" for the purposes of the "no better off" principle of compensatory tort damages?" D is not liable to pay compensation if the same or an equivalent injury would have occurred in the absence of the breach.

8.3. Without dwelling on whether this is a useful analysis, it is one that has not thus far appealed to the courts. Accordingly, if causation is established, as it was in Williams, then Professor Stapleton's second stage was disregarded. On one view, as expressed by Jay J in Rich, material contribution is applicable to the very cases where C cannot establish what the outcome would have been without D's breach. That is the distinction between these cases and Hotson.

8.4. What seems clear, following Williams, is that in cases of a material contribution C does not have to prove, on the balance of probabilities, that he or she would have suffered no, or less injury, in the absence of the breach (as opposed to the process to which the breach contributed). Defendants may well regard that as shifting the burden of proof.

9. The Future of Material Contribution

9.1. Delay in diagnosing cancer

9.1.1. The injury in these claims is not the cancer, it is usually the treatment, reduction in life expectancy, psychological injury. I acted for a claimant in a High Court trial that settled after three days. The Claimant had metastatic cancer after a short delay in diagnosing and treating her primary breast cancer. There was a vigorous dispute as to whether the delay was responsible for the development of metastases. One of our arguments was that during the period of delay the tumour grew in size and that any micro-metastases present would have grown and multiplied. There was therefore a process that led to the overt

metastases. But for that process the metastases would not have occurred. The period of delay materially contributed to the process that led to the injury. The Defendant contended that the metastases would have occurred in any event, but perhaps the burden of proof would have been on the Defendant to establish that contention. That would have been difficult because statistical evidence firmly showed that C had a 90% chance of surviving 10 years or more, disease free, had she been treated without the negligent delay in diagnosis.

9.2. Suicide/attempted suicide

9.2.1. See the County Court Judgement of HHJ Denyer QC in *Dr E and Dr JG v Somerset Partnership NHS Trust* [29]. A 14 year old girl had a severe eating disorder and took her own life. There were breaches in discharging her too early from hospital, not involving the family sufficiently, failing to consult with colleagues. The Court rejected evidence from C's expert that on the balance of probabilities but for the breaches the girl would not have committed suicide. Equally he did not accept the Defendant's expert's assertion that the suicide was unrelated to the eating disorder. He held that the breaches materially contributed to the girl's "ongoing problems which led her to take her own life". The breaches materially contributed to the girl's decision to take her own life, "whatever the immediate trigger for that decision might have been."

9.3. Cerebral Palsy

9.3.1. Perhaps *DS v North Lincolnshire* is a case that turned on its own peculiar facts, and in particular the fact that even without the delay the Claimant would have suffered a very

[29] Dr E and Dr JG v Somerset Partnership NHS Trust Bristol CC Case No. A90BS058, reported on Lawtel

long period of hypoxia ischaemia following abruption. Nevertheless one wonders whether the argument could have been made as set out above. In *Popple*, the Court of Appeal seems to have been happy to infer that if there was a fifteen minute period of hypoxic ischaemia even prior to the negligent delay and then a further five minutes attributable to the delay, the negligent delay "*must have made a contribution to the overall harm that was more than minimal."* [79] If 5 minutes out of a total of 20 made a material contribution, why wouldn't 6 to 9 minutes out of 39? The answer is probably that 15 (non-negligent) minutes would cause some but probably not profound disability, whereas 30 (non-negligent) minutes would likely cause profound disability.

9.3.2. Although the judgment in *DS* does not include any review of the authorities discussed here, and therefore can be criticized on that ground, it does demonstrate difficulties for claimants in such cases:

9.3.2.1. It cannot safely be assumed that negligent delay of any duration must have made a material contribution.

9.3.2.2. Even if the burden of proof is seen as being on D, it might be able to establish that even without negligence there would have been materially the same level of brain damage and disability.

9.3.2.3. Some experts are fond of putting hypoxic ischaemic exposure into 5 minute brackets. If the contribution to the process caused by the negligence would not change C's position in the bracket, then D might well establish that the outcome would have been the same in any event.

9.4. <u>Coning</u>

9.4.1. Coning is often the end result of a process of pressure building in the brain. Therefore if the negligence contributed to that process, Williams might well be applicable. Brain injury such as in Sido John has been found to be suitable for the application of the material contribution approach.

9.5. Death

9.5.1. Death is an indivisible injury. Often it follows a process and is the consequence of an accumulation of insults to the body. Consider the typical post mortem report conclusion which is, in effect: cause of death X, contributed to by Y. In many cases it would seem possible to contend that clinical negligence was a factor making a material contribution to the process that caused death.

9.6. Supreme Court

If causation, like other aspects of tort law, is essentially an issue of policy, then it is a concept sufficiently malleable for the Supreme Court, given the opportunity, to hammer it into a new shape. Perhaps a clinical negligence case will provide it with the material to do so.

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