Hilsher (Respondent)

v.

Essex Area Health Authority (Appellants)

JUDGMENT

Die Jovis 10° Martii 1988

Upon Report from the Appellate Committee to whom was referred the Cause Wilsher against Essex Area Health Authority, That the Committee had heard Counsel on Monday the 1st, Tuesday the 2nd, Wednesday the 3rd, Thursday the 4th, Monday the 8th and Tuesday the 9th days of February last, upon the Petition and Appeal of Essex Area Health Authority, of Hamstel Road, Harlow, Essex, CM20 1RB, praying that the matter of the Order set forth in the Schedule thereto, namely an Order of Her Majesty's Court of Appeal of the 24th day of July 1986, might be reviewed before Her Majesty the Queen in Her Court of Parliament and that the said Order might be reversed, varied or altered or that the Petitioners might have such other relief in the premises as to Her Majesty the Queen in Her Court of Parliament might seem meet; as upon the Case of Martin Graham Wilsher (an infant) lodged by Heather Marjorie Wilsher, his mother and Next Friend, in answer to the said Appeal; and due consideration had this day of what was offered on either side in this Cause:

It is Ordered and Adjudged, by the Lords Spiritual and Temporal in the Court of Parliament of Her Majesty the Queen assembled, That the said Order of Her Majesty's Court of Appeal (Civil Division) of the 24th day of July 1986 and the Order of Mr. Justice Peter Pain of the 21st day of December 1984 complained of in the said Appeal be, and the same are hereby, **Set Aside**, save as to costs, and that the Cause be, and the same is hereby, remitted back to the Queen's Bench Division of the High Court of Justice with a Direction that there be a retrial before a different judge of the issue whether the negligence of the Appellants, as found by the Court of Appeal, caused or materially contributed to the Respondent's retrolental fibroplasia: That the money paid into Court pursuant to the Order of the Court of Appeal should remain in Court pending the retrial: And it is further

Ordered, That the costs incurred by the Respondent in respect of the said Appeal to this House be taxed in accordance with Schedule 2 to the Legal Aid Act 1974.

Cler: Parliamentor:

Judgment: 10.3.88

HOUSE OF LORDS

WILSHER
(RESPONDENT)

v.

ESSEX AREA HEALTH AUTHORITY
(APPELLANTS)

Lord Bridge of Harwich
Lord Fraser of Tullybelton
Lord Lowry
Lord Griffiths
Lord Ackner

LORD BRIDGE OF HARWICH

My Lords,

The infant plaintiff was born nearly three months prematurely on 15 December 1978. He weighed only 1200 grammes. In the first few weeks of life he suffered from most of the afflictions which beset premature babies. He passed through a series of crises and very nearly died. The greatest danger which faces the very premature baby, on account of the imperfect function of incompletely developed lungs, is death or brain damage from failure of the oxygen supply to the brain. That Martin not only survived but also now retains unimpaired brain function is due both to the remarkable advances of medical science and technology in this field in comparatively recent years and to the treatment he received in the special baby care unit of the Princess Alexandra Hospital, Harlow.

Tragically, however, he succumbed to another well-known hazard of prematurity. He suffers from retrolental fibroplasia (RLF), an incurable condition of the retina which, in his case, has caused total blindness in one eye and severely impaired vision in the other. He sued the Essex Area Health Authority ("the authority") who are responsible for the Princess Alexandra Hospital, Harlow, on the ground that his RLF was caused by an excess of oxygen tension in his bloodstream in the early weeks attributable to a want of proper skill and care in the management of his oxygen supply. The action was heard by Peter Pain J. and the trial lasted 20 days. In addition to the evidence of the medical and nursing staff at the hospital, the judge heard expert evidence from two paediatricians and two ophthalmologists called for the plaintiff and from three paediatricians and one ophthalmologist called for the authority. All were highly qualified and distinguished experts in their respective fields. In addition, no less than 24 articles from medical journals about RLF covering 129 foolscap pages of print were put in evidence.

The allegations of negligence against the authority related to two quite distinct phases of Martin's treatment. The first concerned the first 38 hours after his birth. In order to monitor the partial pressure of oxygen (PO_2) in the arterial blood of a premature baby, it is standard practice to pass a catheter through the umbilical artery into the aorta. This enables the PO_2 to be measured in two ways. At the tip of the catheter is an electronic sensor connected to a monitor outside the body which, if correctly calibrated, should give an accurate reading of the PO_2. In addition, an aperture in the catheter close to the sensor enables samples of blood to be taken for conventional blood analysis at regular intervals to check and, if necessary, adjust the monitor's calibration. Again it is standard practice to check the location of the sensor by X-ray after the catheter has been inserted. In Martin's case the catheter was inserted by mistake into a vein instead of an artery so that the sensor and the sampling aperture were wrongly located in the heart instead of the aorta. This

meant that they would sample a mixture of arterial and venous blood instead of pure arterial blood, which would consequently give a false reading of the level of PO_2 in the arterial blood. The house officer and the registrar who were on duty at the material time and who saw the X-ray which was taken both failed to notice the mistake. The judge held this failure to amount to negligence for which the authority were liable. The plaintiff's case in relation to this first allegation of negligence was that the misplaced catheter gave readings of PO_2 well below the true level of PO_2 in the arterial blood which led to excessive administration of oxygen in an attempt to raise the PO_2 level and that in consequence the true PO_2 level was excessively high for a substantial period until the mislocation of the catheter was realised at 8 o'clock on the morning of 17 December 1978.

A second phase of Martin's treatment alleged to have been negligent was between 20 December 1978 and 23 January 1979. Between these dates it was alleged that there were five distinct periods of differing duration when the medical and nursing staff responsible for Martin's care were in breach of duty in allowing the level of PO_2 in his arterial blood to remain above the accepted level of safety. The judge found that four of these five periods of exposure to an unduly high level of PO_2 were due to the authority's negligence.

In making his finding of negligence in relation to each of the periods of raised PO_2 levels except the first attributable to the misplaced catheter, the judge relied upon a principle of law which he thought was laid down by this House in McGhee v. National Coal Board [1973] 1 WLR 1 and which he had stated in his own earlier decision in Clark v. MacLennan [1983] 1 A11.E.R. 416, 427 in the following terms:

> "It seems to me that it follows from McGhee that where there is a situation in which a general duty of care arises and there is a failure to take a precaution, and that very damage occurs against which the precaution is designed to be a protection, then the burden lies on the defendant to

> show that he was not in breach of duty as well as to show that the damage did not result from his breach of duty."

The judge thought that this proposition of law derived support from the decision at first instance of Mustill J. in Thompson v. Smiths Shiprepairers (North Shields) Ltd. [1984] Q.B. 405. He held that the authority had failed to prove on a balance of probabilities

either that they were not negligent or that their negligence did not cause or materially contribute to Martin's RLF. He therefore held them liable in damages and gave judgment for the plaintiff for £116,199.14.

The Court of Appeal (Sir Nicolas Browne-Wilkinson, V.-C., Mustill and Glidewell L.JJ) affirmed this judgment by a majority, the Vice-Chancellor dissenting [1987] 1 Q.B. *730.* They gave leave on terms to the authority to appeal to this House. A number of issues were argued in the Court of Appeal. They unanimously affirmed the finding of negligence against the authority, though by marginally different processes of reasoning, on the ground of the authority's vicarious liability for the registrar's failure to observe from the X-ray that the first catheter inserted into Martin's umbilicus was located in a vein not in an artery. They unanimously reversed the judges' finding of negligence in relation to the later periods when the level of PO_2 in Martin's blood was raised on the ground that he had misdirected himself in holding that the burden of proof was reversed so that it lay upon the authority to show that they were not negligent. On examination of the evidence the Court of Appeal found that no negligence was established in relation to these later periods. No issue arises in the present appeal to your Lordships' House in respect of either of these conclusions on liability and nothing more need be said about them. The crucial issue which now arises and on which the Court of Appeal were divided in their opinions is whether the judgment can be affirmed on the ground that any raised level of PO_2 in Martin's arterial blood before 8 o'clock on the morning or 17 December 1978 consequent on misplacement of the catheter caused or materially contributed to Martin's RLF.

My Lords, I understand that all your Lordships agree that this appeal has to be allowed and that the inevitable consequence of this is that the outstanding issue of causation must, unless the parties can reach agreement, be retried by another judge. In these circumstances, for obvious reasons, it is undesirable that I should go into the highly complex and technical evidence on which the issue depends any further than is strictly necessary to explain why, in common with all your Lordships, I feel ineluctably driven to the unpalatable conclusion that it is not open to the House to resolve the issue one way or the other, so that a question depending on the consequence of an event occurring in the first two days of Martin's life will now have to be investigated all over again when Martin is nearly ten years old. On the other hand, the appeal raises a question of law as to the proper approach to issues of causation which is of great importance and of particular concern in medical negligence cases. This must be fully considered.

There was in the voluminous expert evidence given at the trial an irreconcilable conflict of opinion as to the cause of Martin's RLF. It was common ground that a sufficiently high

level of PO_2 in the arterial blood of a very premature baby, if maintained for a sufficiently long period of time, can have a toxic effect on the immature blood vessels in the retina leading to a condition which may either regress or develop into RLF. It was equally common ground, however, that RLF may occur in premature babies who have survived without any artificial administration of oxygen and that there is evidence to indicate a correlation between RLF and a number of other conditions from which premature babies commonly suffer (e.g. apnoeia, hypercarbia, intraventricular haemorrhage, patent ductus arteriosus, all conditions which afflicted Martin) although no causal mechanisms linking these conditions with the development of RLF have been positively identified. However, what, if any, part artificial administration of oxygen causing an unduly high level of PO_2 in Martin's arterial blood played in the causation of Martin's RLF was radically in dispute between the experts. There was certainly evidence led in support of the plaintiff's case that high levels of PO_2 in general and, more particularly, the level of PO_2 maintained when the misplaced catheter was giving misleadingly low readings of the level in the arterial blood were probably at least a contributory cause of Martin's RLF. If the judge had directed himself that it was for the plaintiff to discharge the onus of proving causation on a balance of probabilities and had indicated his acceptance of this evidence in preference to the contrary evidence led for the authority, a finding in favour of the plaintiff would have been unassailable. That is why it is conceded by Mr. Henry Brooke Q.C., for the authority, that the most he can ask for, if his appeal succeeds, is an order for retrial of the causation issue. However, the burden of the relevant expert evidence led for the authority, to summarise it in very general terms, was to the effect that any excessive administration of oxygen which resulted from the misplacement of the catheter did not result in the PO_2 in the arterial blood being raised to a sufficiently high level for a sufficient length of time to have been capable of playing any part in the causation of Martin's RLF. One of the difficulties is that, underlying this conflict of medical opinion, there was not only a profound difference of view about the aetiology and causation of RLF in general but also a substantial difference as to the inferences which were to be drawn from the primary facts, as ascertained from the clinical notes about Martin's condition and treatment at the material time and amplified by the oral evidence of Dr. Wiles, the senior house officer in charge, as to what the actual levels of PO_2 in Martin's

arterial blood were likely to have been during a critical period between 10 p.m. on 16 December when Martin was first being administered pure oxygen through a ventilator and 8 a.m. the next morning when, after discovery of the mistake about the catheter, the level of oxygen administration was immediately reduced.

Having found the authority negligent in relation to the five periods when the PO_2 level was unduly high, the judge added:

> "There is no dispute that this materially increased the risk of RLF."

This statement, it is now accepted, was a misunderstanding of the evidence. Whilst it was common ground that one of the objects of monitoring and controlling the PO_2 level in the arterial blood of a premature baby in 1978 was to avoid or reduce the risk

of RLF, it was certainly not accepted by the defence that any of the levels to which Martin was subjected were sufficient in degree or duration to have involved any material increase in that risk. This misunderstanding was one of the factors which led the judge to the conclusion that Martin had established a prima facie case on the issues of causation. He then said:

> "But it is open to the defendants on the facts of this case to show that they are not liable for this negligence because on the balance of probability this exposure did not cause Martin's RLF."

It was on this premise that the judge examined the issue of causation. In a judgment which runs to 68 pages of transcript, only two and a half pages are devoted to this issue. The judge repeatedly emphasised that the onus was on the authority, saying at one point:

> "For the purpose of this action I need go no further than to consider whether the breaches have probably made no substantial contribution to the plaintiff's condition."

And, again, a little later on:

> "So I have to consider whether the exposure that occurred probably did no harm."

After a brief reference to the evidence of one of the plaintiff's witnesses and one of the authority's witnesses whose

answers were based on an assumption of fact which he was invited to make, the judge expressed his conclusion in the following passage:

> "On the basis of this evidence I find that the defendants fail to show that the first and third periods of exposure did not do any damage; indeed the probability is that they did. As to the second, fourth and fifth periods the position is more doubtful. The trouble is the lack of data. The blood gas readings were not sufficiently frequent to enable us to assess whether the excessively high readings were a peak or whether they indicate a longer period; indeed, it is possible that the true figure went higher. The defendants, in my view, have failed to show that these periods did not cause or materially contribute to Martin's RLF." (My emphasis)

Mr. David Latham Q.C., seeking to uphold the judgment in Martin's favour, naturally relied heavily on the words I have emphasised in this passage and pointed to the contrast between the judge's view, thereby expressed, of the causative effect of what is now the only relevant period of exposure calling for consideration and his doubts about the effect of three of the four later periods. He urged your Lordships to read this as an indication by the judge that, if he had held the onus to lie on the plaintiff, he would have found it discharged on a balance of probabilities. The Court of Appeal did not feel able to accede to a similar submission and I agree with them. As Mustill L.J. pointed out [1987] 1 Q.B. 730, 763G, the judge expressed no preference for the plaintiff's experts on this point. Moreover, it is inconceivable that this very careful judge, if he had directed himself that the burden of proof lay on

the plaintiff, would not have subjected the complex and conflicting evidence to a thorough scrutiny and analysis before committing himself to an orthodox finding of causation in the plaintiff's favour.

Both parties accepted that the conflict of evidence was of such a nature that it could not properly be resolved by your Lordships simply reading the transcript. Indeed, we were not asked to examine the totality of the voluminous medical evidence. Just as Mr. Brooke accepted that it was not open to the House to dismiss the plaintiff's claim, so Mr. Latham accepted that, if he failed in the submission which I have examined and rejected in the foregoing paragraph, he could not invite the House to make an independent finding in the plaintiff's favour on the simple basis

that the expert evidence on a balance of probabilities affirmatively established causation.

The Court of Appeal, although they felt unable to resolve the primary conflict in the expert evidence as to the causation of Martin's RLF, did make a finding that the levels of PO_2 which Martin experienced in consequence of the misplacement of the catheter were of a kind capable of causing RLF. Mustill L.J. at p. 766D expressed his anxiety as to whether "by making a further finding on an issue where there was a sharp conflict between the expert witnesses, we are not going too far in the effort to avoid a retrial." But he concluded at p. 766E that it was "legitimate, after reading and re-reading the evidence," to make this finding based on "the weight of the expert evidence." This finding by the Court of Appeal is challenged by Mr. Brooke, for the authority, as one which it was not open to them to make. I must return to this issue later. But assuming, as I do for the present, that the finding was properly made, it carried the plaintiff's case no further than to establish that oxygen administered to Martin as a consequence of the negligent failure to detect the misplacement of the catheter was one of a number of possible causes of Martin's RLF.

Mustill L.3. subjected the speeches in McGhee v. National Coal Board [1973] 1 WLR 1 to a careful scrutiny and analysis and concluded that they established a principle of law which he expressed in the following terms at pp. 771-772:

> "If it is an established fact that conduct of a particular kind creates a risk that injury will be caused to another or increases an existing risk that injury will ensue; and if the two parties stand in such a relationship that the one party owes a duty not to conduct himself in that way; and if the first party does conduct himself in that way; and if the other party does suffer injury of the kind to which the risk related; then the first party is taken to have caused the injury by his breach of duty, even though the existence and extent of the contribution made by the breach cannot be ascertained."

Applying this principle to the finding that the authority's negligence was one of the possible causes of Martin's RLF, he held that this was sufficient to enable the court to conclude that the negligence was "taken to have caused the injury." Glidewell L.J. reached the same conclusion by substantially the same process of reasoning. The Vice-Chancellor took the opposite view.

The starting point for any consideration of the relevant law of causation is the decision of this House in Bonnington Castings Ltd, v. Wardlaw [1956] AC 613. This was the case of a pursuer who, in the course of his employment by the defenders, contracted pneumoconiosis over a period of years by the inhalation of invisible particles of silica dust from two sources. One of these (pneumatic hammers) was an "innocent" source, in the sense that the pursuer could not complain that his exposure to it involved any breach of duty on the part of his employers. The other source, however, (swing grinders) arose from a breach of statutory duty by the employer. Delivering the leading speech in the House Lord Reid said at pp. 619-620:

> "The Lord Ordinary and the majority of the First Division have dealt with this case on the footing that there was an onus on the defenders, the appellants, to prove that the dust from the swing grinders did not cause the pursuer's disease. This view was based on a passage in the judgment of the Court of Appeal in Vyner v. Waldenberg Brothers Ltd. [1946] K.B. 50: 'If there is a definite breach of a safety provision imposed on the occupier of a factory, and a workman is injured in a way which could result from the breach, the onus of proof shifts on to the employer to show that the breach was not the cause. We think that that principle lies at the very basis of statutory rules of absolute duty' (per Scott L.J. at p. 55). ... Of course, the onus was on the defendants to prove delegation (if that was an answer) and to prove contributory negligence, and it may be that that is what the Court of Appeal had in mind. But the passage which I have cited appears to go beyond that, and, in so far as it does so, I am of opinion that it is erroneous.
>
> It would seem obvious in principle that a pursuer or plaintiff must prove not only negligence or breach of duty but also that such fault caused or materially contributed to his injury, and there is ample authority for that proposition both in Scotland and in England. I can find neither reason nor authority for the rule being different where there is breach of a statutory duty. The fact that Parliament imposes a duty for the protection of employees has been held to entitle an employee to sue if he is injured as a result of a breach of that duty, but it would be going a great deal farther to hold that it can be inferred from the enactment of a duty that Parliament intended that any employee suffering injury can sue his employer merely because there was a breach of duty and it is shown to be possible that his injury may have been caused by it. In my judgment, the employee must in all cases prove his case by the ordinary standard of proof in civil actions; he must make it appear

> at least that on a balance of probabilities the breach of duty caused or materially contributed to his injury."

Lord Tucker said of Scott L.J.'s dictum in Vyner v. Waldenberg Brothers Ltd., at pp. 624-625:

> 'I think it is desirable that your Lordships should take this opportunity to state in plain terms that no such onus exists unless the statute or statutory regulation expressly or

> impliedly so provides, as in several instances it does. No distinction can be drawn between actions for common law negligence and actions for breach of statutory duty in this respect. In both the plaintiff or pursuer must prove (a) breach of duty and (b) that such breach caused the injury complained of - (See Wakelin v. London and South Western Railway Co. (1886) 12 App. Cas. 41 and Caswell v. Powell Duffryn Associated Collieries [1940] A.C. 152). In each case it will depend upon the particular facts proved and the proper inferences to be drawn therefrom whether the pursuer has sufficiently discharged the onus that lies upon him."

Lord Keith of Avonholm said at p. 625:

> "The onus is on the pursuer to prove his case, and I see no reason to depart from this elementary principle by invoking certain rules of onus said to be based on a correspondence between the injury suffered and the evil guarded against by some statutory regulation. I think most, if not all, of the cases which professed to lay down or to recognise some such rule could have been decided as they were on simple rules of evidence, and I agree that the case of Vyner [1946] K.B. 50, in so far as it professed to enunciate a principle of law inverting the onus of proof cannot be supported."

Viscount Simonds and Lord Somervell of Harrow agreed.

Their Lordships concluded, however, from the evidence that the inhalation of dust to which the pursuer was exposed by the defenders' breach of statutory duty had made a material contribution to his pneumoconiosis which was sufficient to discharge the onus on the pursuer of proving that his damage was caused by the defenders' tort.

A year later the decision in Nicholson v. Atlas Steel Foundry and Engineering Co. Ltd. [1957] 1 W.L.R. 613 followed the decision in Bonnington Castings Ltd, v. Wardlaw and held, in

another case of pneumoconiosis, that the employers were liable for the employee's disease arising from the inhalation of dust from two sources, one "innocent" the other "guilty," on facts virtually indistinguishable from those in the case of Bonnington Castings Ltd. v. Wardlaw.

In McGhee v. National Coal Board [1973] 1 WLR 1 the pursuer worked in a brick kiln in hot and dusty conditions in which brick dust adhered to his sweaty skin. No breach of duty by his employers, the defenders, was established in respect of his working conditions. However, the employers were held to be at fault in failing to provide adequate washing facilities which resulted in the pursuer having to bicycle home after work with his body still caked in brick dust. The pursuer contracted dermatitis and the evidence that this was caused by the brick dust was accepted. Brick dust adhering to the skin was a recognised cause of industrial dermatitis and the provision of showers to remove it after work was a usual precaution to minimise the risk of the disease. The precise mechanism of causation of the disease, however, was not known and the furthest the doctors called for the pursuer were able to go was to say that the provision of

showers would have materially reduced the risk of dermatitis. They were unable to say that it would probably have prevented the disease.

The pursuer failed before the Lord Ordinary and the First Division of the Court of Session on the ground that he had not discharged the burden of proof of causation. He succeeded on appeal to the House of Lords. Much of the academic discussion to which this decision has given rise has focussed on the speech of Lord Wilberforce, particularly on two paragraphs. He said at p. 6:

> "But the question remains whether a pursuer must necessarily fail if, after he has shown a breach of duty, involving an increase of risk of disease, he cannot positively prove that this increase of risk caused or materially contributed to the disease while his employers cannot positively prove the contrary. In this intermediate case there is an appearance of logic in the view that the pursuer, on whom the onus lies, should fail - a logic which dictated the judgments below. The question is whether we should be satisfied in factual situations like the present, with this logical approach. In my opinion, there are further considerations of importance. First, it is a sound principle that where a person has, by breach of a duty of care,

> created a risk, and injury occurs within the area of that risk, the loss should be borne by him unless he shows that it had some other cause. Secondly, from the evidential point of view, one may ask, why should a man who is able to show that his employer should have taken certain precautions, because without them there is a risk, or an added risk, of injury or disease, and who in fact sustains exactly that injury or disease, have to assume the burden of proving more; namely, that it was the addition to the risk, caused by the breach of duty, which caused or materially contributed to the injury? In many cases, of which the present is typical, this is impossible to prove, just because honest medical opinion cannot segregate the causes of an illness between compound causes. And if one asks which of the parties, the workman or the employers should suffer from this inherent evidential difficulty, the answer as a matter in policy or justice should be that it is the creator of the risk who, ex hypothesi must be taken to have foreseen the possibility of damage, who should bear its consequences."

He then referred to the cases of Bonnington Castings Ltd, v. Wardlaw [1956] AC 613 and Nicholson v. Atlas Steel Foundry and Engineering Co. Ltd. [1957] 1 W.L.R. 613 and added at p. 7:

> "The present factual situation has its differences: the default here consisted not in adding a material quantity to the accumulation of injurious particles but by failure to take a step which materially increased the risk that the dust already present would cause injury. And I must say that, at least in the present case, to bridge the evidential gap by inference seems to me something of a fiction, since it was precisely this inference which the medical expert declined to make. But I find in the cases quoted an analogy which suggests the conclusion that, in the absence of proof that

> the culpable addition had, in the result, no effect, the employers should be liable for an injury, squarely within the risk which they created and that they, not the pursuer, should suffer the consequence of the impossibility, foreseeably inherent in the nature of his injury, of segregating the precise consequence of their default." (I have added the emphasis in both these two passages.)

My Lords, it seems to me that both these paragraphs, particularly in the words I have emphasised, amount to saying that,

in the circumstances, the burden of proof of causation is reversed and thereby to run counter to the unanimous and emphatic opinions expressed in Bonnington Castings Ltd, v. Wardlaw [1956] AC 613 to the contrary effect. I find no support in any of the other speeches for the view that the burden of proof is reversed and, in this respect, I think Lord Wilberforce's reasoning must be regarded as expressing a minority opinion.

A distinction is, of course, apparent between the facts of Bonnington Castings Ltd, v. Wardlaw, where the "innocent" and "guilty" silica dust particles which together caused the pursuer's lung disease were inhaled concurrently and the facts of McGhee v. National Coal Board [1973] 1 WLR 1 where the "innocent" and "guilty" brick dust was present on the pursuer's body for consecutive periods. In the one case the concurrent inhalation of "innocent" and "guilty" dust must both have contributed to the cause of the disease. In the other case the consecutive periods when "innocent" and "guilty" brick dust was present on the pursuer's body may both have contributed to the cause of the disease or, theoretically at least, one or other may have been the sole cause. But where the layman is told by the doctors that the longer the brick dust remains on the body, the greater the risk of dermatitis, although the doctors cannot identify the process of causation scientifically, there seems to be nothing irrational in drawing the inference, as a matter of common sense, that the consecutive periods when brick dust remained on the body probably contributed cumulatively to the causation of the dermatitis. I believe that a process of inferential reasoning on these general lines underlies the decision of the majority in McGhee's case.

In support of this view, I refer to the following passages. Lord Reid said at pp. 3-4:

> "The medical witnesses are in substantial agreement. Dermatitis can be caused, and this dermatitis was caused, by repeated minute abrasion of the outer horny layer of the skin followed by some injury to or change in the underlying cells, the precise nature of which has not yet been discovered by medical science. If a man sweats profusely for a considerable time the outer layer of his skin is softened and easily injured. If he is then working in a cloud of abrasive brick dust, as this man was, the particles of dust will adhere to his skin in considerable quantity and exertion will cause them to injure the horny layer and expose to injury or infection the tender cells below. Then in some way not yet understood dermatitis may result.
>
> If the skin is not thoroughly washed as soon as the man ceases work that process can continue at least for some

> considerable time. This man had to continue exerting himself after work by bicycling home while still caked with sweat and grime, so he would be liable to further injury until he could wash himself thoroughly. Washing is the only practicable method of removing the danger of further injury.
>
> The effect of such abrasion of the skin is cumulative in the sense that the longer a subject is exposed to injury the greater the chance of his developing dermatitis: it is for that reason that immediate washing is well recognised as a proper precaution."

He concluded at pp. 4-5:

> "The medical evidence is to the effect that the fact that the man had to cycle home caked with grime and sweat added materially to the risk that this disease might develop. It does not and could not explain just why that is so. But experience shows that it is so. Plainly that must be because what happens while the man remains unwashed can have a causative effect, though just how the cause operates is uncertain. I cannot accept the view expressed in the Inner House that once the man left the brick kiln he left behind the causes which made him liable to develop dermatitis. That seems to me quite inconsistent with a proper interpretation of the medical evidence. Nor can I accept the distinction drawn by the Lord Ordinary between materially increasing the risk that the disease will occur and making a material contribution to its occurrence.
>
> There may be some logical ground for such a distinction where our knowledge of all the material factors is complete. But it has often been said that the legal concept of causation is not based on logic or philosophy. It is based on the practical way in which the ordinary man's mind works in the everyday affairs of life. From a broad and practical viewpoint I can see no substantial difference between saying that what the defender did materially increased the risk of injury to the pursuer and saying that what the defender did made a material contribution to his injury."

Lord Simon of Glaisdale said at p. 8:

> "But Bonnington Castings Ltd, v. Wardlaw [1956] AC 613 and Nicholson v. Atlas Steel Foundry Engineering Co. Ltd. [1957] 1 W.L.R. 613 establish, in my view, that where an injury is caused by two (or more) factors operating cumulatively, one (or more) of which factors is a breach of

duty and one (or more) is not so, in such a way that it is impossible to ascertain the proportion in which the factors were effective in producing the injury or which factor was decisive, the law does not require a pursuer or plaintiff to prove the impossible, but holds that he is entitled to damages for the injury if he proves on a balance of probabilities that the breach or breaches of duty contributed substantially to causing the injury. If such factors so operate cumulatively, it is, in my judgment, immaterial whether they do so concurrently or successively."

Lord Kilbrandon said at p. 10:

"In the present case, the pursuer's body was vulnerable, while he was bicycling home, to the dirt which had been deposited on it during his working hours. It would not have been if he had had a shower. If showers had been provided he would have used them. It is admittedly more probable that disease will be contracted if a shower is not taken. In these circumstances I cannot accept the argument that nevertheless it is not more probable than not that, if the duty to provide a shower had not been neglected, he would not have contracted the disease. The pursuer has after all, only to satisfy the court of a probability, not to demonstrate an irrefragable chain of causation, which in a case of dermatitis, in the present state of medical knowledge, he could probably never do."

Lord Salmon said at pp. 11-12:

"I, of course, accept that the burden rests upon the pursuer to prove, on a balance of probabilities, a causal connection between his injury and the defenders' negligence. It is not necessary, however, to prove that the defenders' negligence was the only cause of injury. A factor, by itself, may not be sufficient to cause injury but if, with other factors, it materially contributes to causing injury, it is clearly a cause of injury. Everything in the present case depends upon what constitutes a cause. I venture to repeat what I said in Alphacell Ltd, v. Woodward [1972] AC 824, 847: 'The nature of causation has been discussed by many eminent philosophers and also by a number of learned judges in the past. I consider, however, that what or who has caused a certain event to occur is essentially a practical question of fact which can best be answered by ordinary commonsense rather than abstract metaphysical theory.' In the

> circumstances of the present case it seems to me unrealistic and contrary to ordinary commonsense to hold that the negligence which materially increased the risk of injury did not materially contribute to causing the injury."

Then after referring to the cases of Bonnington Castings Ltd, v. Wardlaw and Nicholson he added at pp. 12-13:

> "I do not find the attempts to distinguish those authorities from the present case at all convincing. In the circumstances of the present case, the possibility of a distinction existing between (a) having materially increased the risk of contracting the disease, and (b) having materially contributed to causing the disease may no doubt be a fruitful source of interesting academic discussions between students of philosophy. Such a distinction is, however, far too unreal to be recognised by the common law."

The conclusion I draw from these passages is that McGhee v. National Coal Board [1973] 1 WLR 1 laid down no new principle of law whatever. On the contrary, it affirmed the principle that the onus of proving causation lies on the pursuer or plaintiff. Adopting a robust and pragmatic approach to the undisputed primary facts of the case, the majority concluded that it was a legitimate inference of fact that the defenders'

negligence had materially contributed to the pursuer's injury. The decision, in my opinion, is of no greater significance than that and the attempt to extract from it some esoteric principle which in some way modifies, as a matter of law, the nature of the burden of proof of causation which a plaintiff or pursuer must discharge once he has established a relevant breach of duty is a fruitless one.

In the Court of Appeal in the instant case Sir Nicolas Browne-Wilkinson V.-C., being in a minority, expressed his view on causation with understandable caution. But I am quite unable to find any fault with the following passage in his dissenting judgment [1987] Q.B. 730, 779:

> "To apply the principle in McGhee v. National Coal Board [1973] 1 WLR 1 to the present case would constitute an extension of that principle. In the McGhee case there was no doubt that the pursuer's dermatitis was physically caused by brick dust: the only question was whether the continued presence of such brick dust on the pursuer's skin after the

time when he should have been provided with a shower caused or materially contributed to the dermatitis which he contracted. There was only one possible agent which could have caused the dermatitis, viz., brick dust, and there was no doubt that the dermatitis from which he suffered was caused by that brick dust.

In the present case the question is different. There are a number of different agents which could have caused the RLF. Excess oxygen was one of them. The defendants failed to take reasonable precautions to prevent one of the possible causative agents (e.g. excess oxygen) from causing RLF. But no one can tell in this case whether excess oxygen did or did not cause or contribute to the RLF suffered by the plaintiff. The plaintiff's RLF may have been caused by some completely different agent or agents, e.g. hypercarbia, intraventricular haemorrhage, apnoea or patent ductus arteriosus. In addition to oxygen, each of those conditions has been implicated as a possible cause of RLF. This baby suffered from each of those conditions at various times in the first two months of his life. There is no satisfactory evidence that excess oxygen is more likely than any of those other five candidates to have caused RLF in this baby. To my mind, the occurrence of RLF following a failure to take a necessary precaution to prevent excess oxygen causing RLF provides no evidence and raises no presumption that it was excess oxygen rather than one or more of the five other possible agents which caused or contributed to RLF in this case.

The position, to my mind, is wholly different from that in the McGhee case where there was only one candidate (brick dust) which could have caused the dermatitis and failure to take a precaution against brick dust causing dermatitis was followed by dermatitis caused by brick dust. In such a case, I can see the common sense, if not the logic, of holding that, in the absence of any other evidence, the failure to take the precaution caused or contributed to the dermatitis. To the extent that certain members of the

House of Lords decided the question on inference from evidence or presumptions, I do not consider that the present case falls within their reasoning. A failure to take preventative measures against one out of six possible causes is no evidence as to which of those six caused the injury."

Since, on this view, the appeal must, in any event, be allowed, it is not strictly necessary to decide whether it was open to the Court of Appeal to resolve one of the conflicts between the experts which the judge left unresolved and to find that the oxygen administered to Martin in consequence of the misleading PO_2 levels derived from the misplaced catheter was capable of having caused or materially contributed to his RLF. I very well understand the anxiety of the majority to avoid the necessity for ordering a retrial if that was at all possible. But having accepted, as your Lordships and counsel have had to accept, that the primary conflict of opinion between the experts as to whether excessive oxygen in the first two days of life probably did cause or materially contribute to Martin's RLF cannot be resolved by reading the transcript, I doubt, with all respect, if the Court of Appeal were entitled to try to resolve the secondary conflict as to whether it could have done so. Where expert witnesses are radically at issue about complex technical questions within their own field and are examined and cross-examined at length about their conflicting theories, I believe that the judge's advantage in seeing them and hearing them is scarcely less important than when he has to resolve some conflict of primary fact between lay witnesses in purely mundane matters. So here, in the absence of relevant findings of fact by the judge, there was really no alternative to a retrial. At all events, the judge who retries the issue of causation should approach it with an entirely open mind uninfluenced by any view of the facts bearing upon causation expressed in the Court of Appeal.

To have to order a retrial is a highly unsatisfactory result and one cannot help feeling the profoundest sympathy for Martin and his family that the outcome is once again in doubt and that this litigation may have to drag on. Many may feel that such a result serves only to highlight the shortcomings of a system in which the victim of some grievous misfortune will recover substantial compensation or none at all according to the unpredictable hazards of the forensic process. But, whether we like it or not, the law, which only Parliament can change, requires proof of fault causing damage as the basis of liability in tort. We should do society nothing but disservice if we made the forensic process still more unpredictable and hazardous by distorting the law to accommodate the exigencies of what may seem hard cases.

Leave to appeal was given by the Court of Appeal on terms that the authority should not seek an order for costs in this House or for variation of the orders for costs in the courts below. For the reasons I have indicated I would allow the appeal, set aside the order of the Court of Appeal save as to costs and order retrial of the issue whether the negligence of the authority, as found by the Court of Appeal, caused or materially contributed to the plaintiff's RLF.

LORD FRASER OF TULLYBELTON

My Lords,

I have had the advantage of reading in draft the speech of my noble and learned friend Lord Bridge of Harwich and I entirely agree with it. For the reasons stated in it I would allow the appeal and make an order in the terms proposed by my noble and learned friend.

LORD LOWRY

My Lords,

I have had the opportunity of reading in draft the speech of my noble and learned friend Lord Bridge of Harwich. I agree with it and accordingly concur in his conclusions and in the order which he proposes.

LORD GRIFFITHS

My Lords,

I have had the advantage of reading in draft the speech prepared by my noble and learned friend Lord Bridge of Harwich. I agree with it and the order which he proposes.

LORD ACKNER

My Lords,

I have had the advantage of reading in draft the speech of my noble and learned friend Lord Bridge of Harwich. I agree with it and the order which he proposes.