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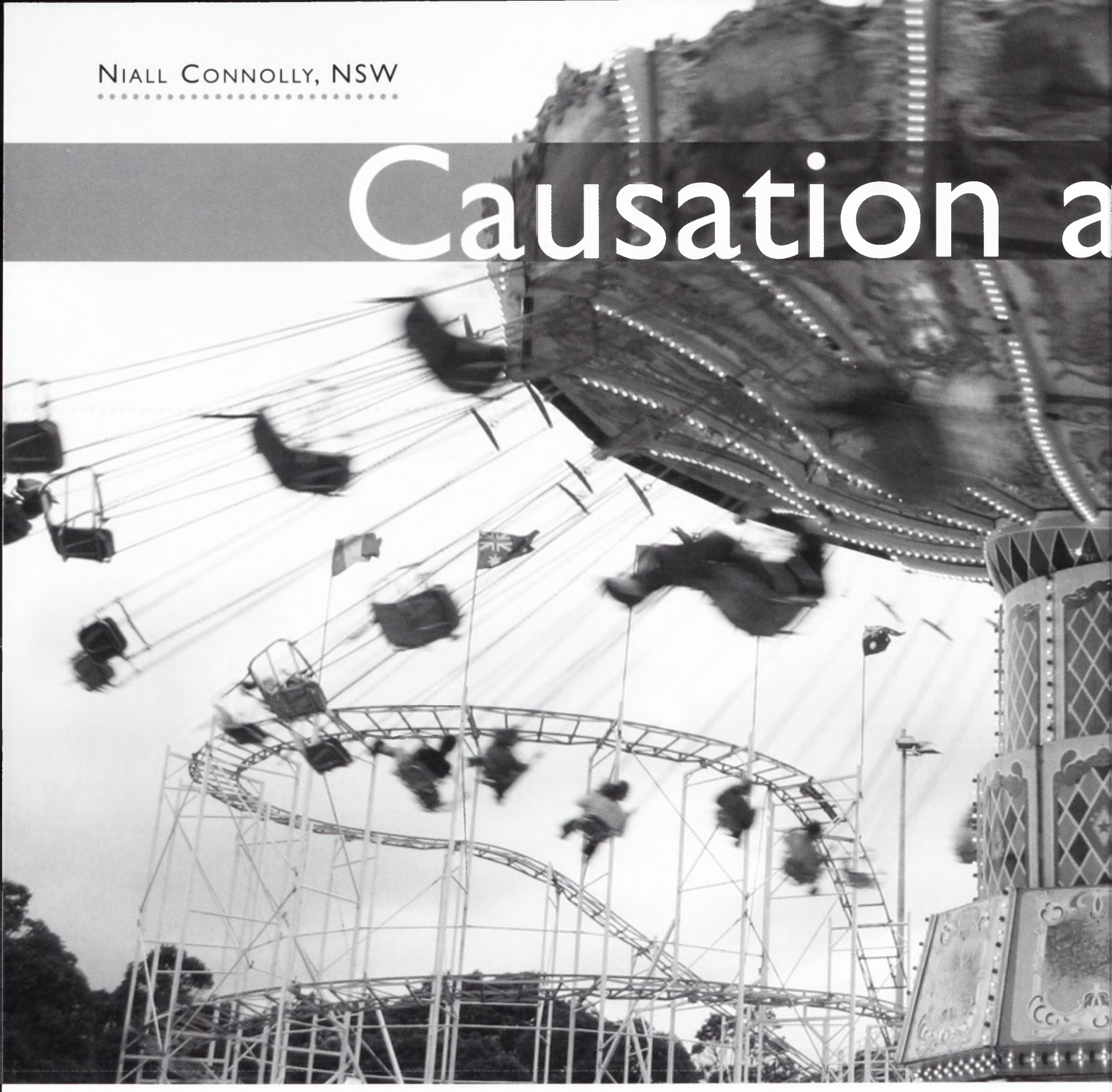
Causation a



Confusion frequently arises in practice between legal and medical causation and, in respect of legal causation, between the onus of proof and the evidentiary onus. The *Civil Liability Acts* muddy the waters still further, distinguishing between 'factual causation' and 'scope of liability'. This article summarises the law of causation on medical issues.

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nd medicine

The statement of McHugh J in *Chappel v Hart*,[1] concerning the circumstances in which the law requires one person to pay damages to compensate another for an injury s/he has suffered, is one that is well known to lawyers:[2]

'Before the defendant will be held responsible for the plaintiff's injury, the plaintiff must prove that the defendant's conduct materially contributed to the plaintiff suffering that injury. In the absence of a statute or undertaking to the contrary therefore, it would seem logical to hold a person causally liable for a wrongful act or omission only when it increases the risk of injury to another person. If a wrongful act or omission results in an increased risk of injury to the plaintiff and that risk eventuates, the defendant's conduct has materially contributed to the injury that the plaintiff suffers whether or not other factors also contributed to that injury occurring.'[3]

A person materially increases the risk of injury to another if s/he fails to take such steps to eliminate or reduce the risk of foreseeable injury that a reasonable person would take (that is, exercising an ordinary degree of care).

SCIENCE V LAW

Earlier in his judgment, His Honour[4] adverted to a statement of Mason CJ *in March v E & MH Stramare Pty Ltd*:

> *'In philosophy and science, the concept of causation has been developed in the context of explaining phenomena by reference to the relationship between conditions and occurrences. In law, on the other hand, problems of causation arise in the context of ascertaining or apportioning legal responsibility for a given occurrence.'*[5]

The law of negligence has been developed to regulate relations between individuals in a society, so that the activities of one person do not unreasonably interfere with those of another. The concept of legal causation has been developed to realise this objective. To require an injured person to prove a causal relationship between their injury and the act or omission of another with the rigour required of a scientific enquiry would be to frustrate the object of the law of negligence and would usually present an insurmountable obstacle to a person in proving their case.

BALANCE OF PROBABILITY

Before an injured person will be awarded damages, the court must be satisfied, on the balance of probabilities, that a negligent act or omission caused their injury.

CONFUSING THE EVIDENTIAL AND LEGAL ONUS OF PROOF

Confusion occasionally surrounds the relationship between conduct that increases the risk of an injury that does eventuate and the court ultimately being satisfied, *on balance*, that the plaintiff has proved causation.

The legal onus of proving causation always rests with the plaintiff and never shifts. Establishing conduct that increases the risk of a foreseeable injury, which eventuates, discharges an evidential onus *which does shift*. If an evidential onus shifts, the defendant must adduce *some evidence* that the breach had no effect. In some cases, discharging an evidential onus is enough to satisfy the legal onus.

FAIRCHILD V GLENHAVEN FUNERAL SERVICES LTD

In a recent case decided by the House of Lords, *Fairchild v Glenhaven Funeral Services Ltd*,[6] the court heard that the plaintiffs were all exposed to asbestos dust in the course of their respective employments and developed mesothelioma. Counsel for the claimants (in the second and third appeals) identified the relevant issue as being:

> *'...whether, where a claimant proves that his mesothelioma has been caused by asbestos dust and the relevant exposure has been contributed to by more than one tortfeasor, but medical science cannot explain the pathogenesis of the disease or the causative role of any particular exposure, the court can conclude that each tortfeasor who materially increased the risk of the claimant's contracting the disease contributed to his injury...*
>
> *A tortfeasor whose act or omission makes a material (ie more than de minimis) contribution to the injury is taken to have caused it and is liable in full for the resulting damage...'*[7]

In the Court of Appeal it was common ground that the mechanism initiating the genetic process which culminated in mesothelioma was unknown; that the trigger might equally probably be a single, a few or many fibres; that once caused, the condition was not aggravated by further exposure but that the greater the quantity of fibres inhaled the greater the risk of developing the disease. The Court of Appeal concluded that, because mesothelioma was an indivisible disease triggered on a single unidentifiable occasion by one or more fibres, it could not be proved on a balance of probabilities (applying a 'but for' test), where the claimant had been exposed to asbestos fibres by several potential tortfeasors, which period of exposure had caused the disease.

Counsel for the defendants submitted:

> *'Justice and fairness require that only those who prove on a balance of probabilities that the fault of another has caused their injury are entitled to compensation...'*

Lord Bingham of Cornhill summarised the position before the House of Lords very well when he said:

> *'There is no way of identifying, even on a balance of probabilities, the source of the fibre or fibres which initiated the genetic process which culminated in the malignant tumour. It is on this rock of uncertainty, reflecting the point to which medical science has so far advanced, that the three claims were rejected by the Court of Appeal and by two of the three trial judges.'*[8]

Fairchild raised for consideration the application of the 'but for' test in England. Their Lordships considered the application of the principles in *Bonnington Castings Ltd v Wardlaw*[9] and *McGhee v National Coal Board*,[10] and whether those cases were essentially decided on their facts and inferences of law that the defenders' negligence had materially contributed to the pursuers injuries, rather than establishing authority for a broader principle that the ordinary approach to proof of causation is varied. The particular problem confronting the House was that, unlike the situations in *Wardlaw* and *McGhee*, the injured workers were exposed to asbestos dust in more than a single employment.[11]

Lord Bingham[12] referred to the High Court's decision in *March*, and that Mason CJ did not *' accept that the "but for" (causa sine qua non) test ever was or now should become the exclusive test of causation in negligence cases'*.[13] He also referred to the statement of McHugh J in *Chappel* set out above.[14] His Honour referred to the judgment of Lord Wilberforce in *McGhee*, which illustrates again the different approaches to causation between law and science/medicine:[15]

> *'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 employers 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 of 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.'[16]

The passage illustrates the importance of not only establishing factual causation, but also that it is appropriate for the scope of the tortfeasor's liability to extend to the harm. Application of a 'but for' test may not always achieve the same outcome as the application of a factual causation plus scope of liability test.

The passage also echoes Gaudron J in *Naxakis v Western General Hospital*, quoting Dixon J in *Betts v Whittingslowe:*[17]

'For the purpose of assigning legal responsibility, philosophical and scientific notions are put aside in favour of a commonsense approach which allows that breach of duty coupled with an [event] of the kind that might thereby be caused is enough to justify an inference, in the absence of any sufficient reason to the contrary that in fact the [event] did occur owing to the act or omission amounting to the breach.'[18]

Both passages suggest that, when a *prima facie* case is made out, the defendant must adduce some satisfactory evidence (the shifting evidential onus) that at least casts doubt on the proposition that the breach of duty caused the injury. This evidential onus would appear to be in the nature of a persuasive onus (the evidence need not be conclusive or probative), such as that which a plaintiff has to demonstrate (that there is evidence to establish a cause of action) on an application for an extension of time.[19]

Lord Bingham concluded:

'if (1) C was employed at different times and for differing periods by both A and B, and (2) A and B were both subject to a duty to take reasonable care or to take all practicable measures to prevent C inhaling asbestos dust because of the known risk that asbestos dust (if inhaled) might cause a mesothelioma, and (3) both A and B were in breach of their duty in relation to C during the periods of C's employment by each of them with the result that during both periods C inhaled excessive quantities of asbestos dust, and (4) C is found to be suffering from a mesothelioma, and (5) any cause of C's mesothelioma other than the inhalation of asbestos dust at work can be effectively discounted, but (6) C cannot (because of the current limits of human science) prove, on the balance of probabilities, that his mesothelioma was the result of his inhaling asbestos dust during his employment by A or during his employment by B or during his employment by A and B taken together.'[20]

then C is entitled to recover against A and B.[21] Their Lordships, delivering separate judgments, agreed.

In *Adelaide Stevedoring Co Ltd v Forst,*[22] the High Court considered whether specific exertion in the course of a stevedore's employment contributed to his death, caused by coronary thrombosis. The medical evidence, given the state of scientific knowledge and opinion, was inconclusive. The full court of the Supreme Court of South Australia concluded:

'If the expert evidence shows, as we think it does, that physical effort is commonly – although not invariably – the inciting cause of that phenomenon, we think that we are entitled to draw the inference that Professor Cleland felt unable to draw. We fully accept his view that the evidence is in some measure inconclusive. For the purpose of a scientific deduction it may be insufficient, but we repeat that courts of justice are entitled and bound to act upon the probabilities of the case.'[23]

The majority of the court agreed.

Rich ACJ stated:

'I do not see why a court should not begin its investigation, ie, before hearing any medical testimony, from the standpoint of the presumptive inference which this sequence of events would naturally inspire in the mind of any common sense person uninstructed in pathology... the investigation of physiological ▶

and pathological opinion shows no more than the current medical views find insufficient reason for connecting coronary thrombosis with effort. Be it so. That to my mind is not enough to overturn or rebut the presumption which flows from the observed sequence of events. If medical knowledge develops strong positive reasons for saying that the lay common-sense presumption is wrong, the courts, no doubt, would gladly give effect to this affirmative affirmation. But, while science presents us with no more than a blank negation, we can only wait its positive results and in the meantime act on our own intuitive inferences.'[24]

The common thread running through these cases is that, depending upon the factual circumstances, the Court may be able to find legal causation proved, on the balance of probabilities, even though science/medicine does not provide an affirmative answer to the existence of a causal connection between certain conditions and occurrences. What is required, however, is that science/medicine admits that the posited connection is *possible*.

Priestley JA, delivering judgment in the *New South Wales Court of Appeal in State of New South Wales t/a New South Wales Department of Agriculture v Allen* identified the tension that arises between causation in law and causation in science:

'The decision at first instance is a paradigm example of a feature of fact finding often found in cases involving medical issues. That feature is the major cleavage between proof of a fact in non-criminal court cases to the satisfaction of the fact finding tribunal on the balance of probabilities and proof of a fact for scientific purposes to the satisfaction of those expert in the particular field of science. The latter kind of proof is much more rigorous and demanding than the former.

The two kinds of proof are quite different in their objects and methods, but are frequently the cause of confusion when medical issues are concerned. In many such cases, experts in the field of the relevant medical science give evidence of their expert opinion concerning the medical issue. Trained in the scientific method of proof, some experts find difficulty in adjusting themselves, when giving evidence in court, to the lesser requirements of legal proof, which, looked at from their scientific standpoint, they regard as inferior and unreliable. An expert who gave evidence for a party in litigation where there has been an adverse result reached by application of the legal standard of proof is quite likely to advise the party that the result is an unscientific and unsound one. Hence, many appeals by the indignant losing party: the various trials and appeals in Hocking v Bell (see the decision in the Privy Council (1947) 75 CLR 125), provide a classic example.'[25]

Confusion about the nature of the plaintiff's probative task in cases involving scientific/medical evidence often frustrates early resolution of appropriate cases. Defendants and those representing them sometimes seem wilfully (and frustratingly) blind to the difference between causation in law and science/medicine.

FINCH V ROGERS, AND NEGLIGENT OMISSION CASES

In a recent decision of the Supreme Court of New South Wales by Justice David Kirby, *Finch v Rogers*,[26] a number of questions concerning causation arose for consideration, in the context of the *Civil Liability Act 2002* (NSW).

Finch concerned a young musician, who presented to a specialist urologist with testicular cancer. He underwent orchidectomy. He was advised to have follow-up CT scan investigations soon after the operation to check for regional metastatic spread of the disease. He was not advised to have blood tests for tumour markers whichthat would have indicated microscopic metastatic disease too small to be seen on CT investigation. The CT scan results were reported as showing no abnormality. The plaintiff returned to the urologist for post-operative follow up five weeks later. Blood tests taken at this time showed that tumour markers were rising rapidly, indicating the presence of aggressive metastatic disease spread.

When his chemotherapy treatment commenced, the plaintiff's tumour-marker levels were such that his treating oncologist considered him to be an 'intermediate prognosis' patient in accordance with a treatment protocol he subscribed

to and therefore required four cycles of chemotherapy. That same treatment protocol recommended three cycles of chemotherapy treatment for 'good prognosis' patients. The plaintiff alleged that, but for the defendant's breach of duty, in all the circumstances, he would have only required three cycles of chemotherapy rather than the four he underwent.

Unfortunately, the chemotherapy regime carried with it a risk of neurotoxic and ototoxic side effects that are cumulative and dose dependent. After the third cycle of chemotherapy the plaintiff developed some tinnitus, which resolved. After the fourth cycle he developed tinnitus, recruitment (a disabling condition whereby sounds are distorted and tolerance of loudness reduced), peripheral neuropathy and severe depression.

The defendant urologist admitted breach of duty of care. The court's task was to identify what (if any) effects flowed from the breach of duty.

The case essentially concerned a negligent omission, which required the court to consider what would have occurred, but for the breach. In a case of a negligent act, where a person is previously well, and after the act is injured in a way that *could* be a consequence of the act, in the absence of any sufficient reason to the contrary (evidence that the breach had no effect, or that the injury would have occurred even if the duty had been performed), causation is proved.[27]

In *Bennett v Minister of Community Welfare*,[28] Gaudron J distinguished the approach to causation taken in negligent act and negligent omission cases:

> *'...a case based on omission or a failure to act will, in certain respects, fall for analysis in a way that differs from that appropriate for a case based on a positive act. Thus, in the case of a positive act, questions of causation are answered by reference to what, in fact happened. In the case of an omission, they are answered by reference to what would or would not have happened.'*[29]

Finch involved aspects of both these types of cases, because it was alleged that as a consequence of the delay in diagnosis of his metastatic disease caused by the negligent omission, he required an extra cycle of chemotherapy (analogous to a situation involving the commission of a negligent act).

The plaintiff alleged that, but for the delay in diagnosis, he would have been referred at an earlier time to the same oncologist who in fact treated him later on. The defendant submitted that there was no evidence that the oncologist would have been available to treat the plaintiff when the court accepted treatment ought to have been commenced, but for the delay in diagnosis. In such a case, the defendant submitted, it was appropriate to consider the treatment that would have been provided by the hypothetical 'reasonable oncologist'. The evidence was that the hypothetical reasonable oncologist would give three *or* four cycles to a good prognosis patient depending on the person's treatment philosophy.

If this argument were accepted, then the plaintiff's loss flowing from the breach would not be the provision of four cycles of chemotherapy rather than three, but the loss of a chance that he would be treated with three cycles of chemotherapy as a good prognosis patient by an oncologist who accepts that treatment protocol.

Kirby J found that, but for the breach, the plaintiff would probably have been referred to the oncologist who actually treated him, but at an earlier time and would therefore have undergone three, not four, cycles of treatment.

Kirby J then dealt with the defendant's submission regarding the 'hypothetical reasonable oncologist', and the situation where there are two competing views regarding appropriate treatment where there has been a negligent omission. His Honour accepted, on the available evidence, that both the three cycle and four cycle chemotherapy treatment philosophies had equal currency in 1997. He considered that the issue raised not dissimilar issues to those *in Bolitho v City and Hackney Health Authority*.[30] In that case there was a failure by a doctor, employed by the defendant, to attend upon a child with respiratory difficulties in breach of a duty owed to the child. The child had a cardiac arrest and subsequent brain damage. Expert evidence was called that a competent doctor would have intubated the child and injury would have been avoided. Expert evidence was also called that it would have been equally consistent with acceptable professional treatment not to intubate, in which case the child ▶

would have suffered her injuries regardless of the breach. It transpired that the doctors who would have been available to attend upon the child could be identified, and the court accepted that both were, or could be assumed to be, against intubation. Hence, a necessary condition to link the breach with the damage, was absent.[31]

Kirby J speculated on how the House of Lords might have approached *Bolitho* if the doctors who should have answered the call to attend upon the child, could not be identified. The hypothetical reasonable doctor may or may not have subscribed to the view that intubation was appropriate, with the result that the child would have lost a chance that a doctor would attend who believed that intubation was appropriate.

Kirby J conceded that, in deciding the case before the court he had at various times found a 'loss of chance' approach attractive. In such a case the extent of damage could be measured by applying the principle in *Malec v JC Hutton Pty Limited*.[32]

His Honour's observations are interesting, indicating that where there is uncertainty about what would have occurred in the past but for a breach of duty, it may be appropriate to resolve the uncertainty by applying a *Malec v Hutton* approach. A case where, but for a breach, treatment would still be required for an undiagnosed and progressive condition, and there is a risk of treatment failure and significant disability occurring anyway, may be such a case.

In another recent New South Wales Court of Appeal decision, *Southern Area Health Service v Brown*,[33] a similar question arose for consideration. The plaintiff, a psychiatric patient with a borderline personality disorder ('BPD') manifested by alcoholism, a gambling disorder and self-mutilation was admitted to hospital for treatment. Soon after discharge, an employee of the hospital inappropriately had sexual intercourse with her without her consent when her judgement was impaired by alcohol. She became pregnant as a result, and the pregnancy was terminated. The plaintiff suffered a severe exacerbation of her BPD. An issue which arose for consideration was, what would the course of the plaintiff's BPD condition have been, but for the breach of duty of care. The court concluded, after considering all of the evidence, that the plaintiff's prognosis, but for the breach, was good. His Honour, Hodgson JA, remarked:

> *'In relation to damages, I think there is some force in the appellant's contention that the primary judge gave insufficient attention to the principle in Malec v J C Hutton Pty Ltd (1990) 169 CLR 638 at 642–3 in determining economic loss. Particularly in relation to past economic loss, the primary judge could be seen as having accepted a best case scenario on the balance of probabilities, without having regard to the chances that this scenario would not have been achieved. However, on balance I prefer the more favourable interpretation of the primary judge's reasons adopted by Sheller JA, and I agree that the appeal on this aspect should also be dismissed.'*[34]

A further issue that arose for consideration in *Finch* was the extent of the damage from the fourth cycle of chemotherapy, accepting that the plaintiff always required three cycles, and the toxicity of chemotherapy was cumulative and dose dependent.

The defendant argued that:

> *'... if the court can identify damage which is attributable to the fourth cycle, and if for example a finding could be made that a particular percent of loss or damage flows from the fourth cycle, the amount to be awarded is that percent of the amount fixed as the quantum having regard to the assessments put forward by the plaintiff and the defendant.'*[35]

That approach did not commend itself to His Honour, who found that, having regard to the legal test of causation (articulated by McHugh J in *Chappel* which he referred to[36]), and to the facts:

> *'The evidence does, to my mind, establish as a probability that the fourth cycle materially contributed to the disabilities from which the plaintiff now suffers. But for the fourth cycle, there may have been damage but it probably would not have been disabling. I take that view for a number of reasons...'*[37]

Finally, the question of causation in *Finch* was required to be resolved in accordance with the provisions of s5D of the *Civil Liability Act 2002* (NSW). The section provides:

(1) 'A determination that negligence caused particular harm comprises the following elements:

(a) that the negligence was a necessary condition of the occurrence of the harm ***(factual causation)****, and*

*(b) that it is appropriate for the scope of the negligent person's liability to extend to the harm so caused (****scope of liability****).'*[38]

His Honour found that s5D (1)(a) and (b) fundamentally reflected the common law and concluded that both the factual causation and scope of liability elements had been met.[39] PL

Endnotes: **1** *Chappel v Hart* [1998] 156 ALR 517. **2** See *Todorovic and Another v Waller* [1981] 37 ALR 481 at 486 per Gibbs CJ and Wilson J. **3** 156 ALR 517 at 525 per McHugh J. **4** 156 ALR 517 at 523. **5** (1991) 171 CLR 506 at 509, 99 ALR 423 at 425. **6** [2003] 1 AC 32. **7** [2003] 1 AC 32 at 35-6. **8** [2003] 1 AC 32 at 43. **9** [1956] AC 613. **10** [1973] 1 WLR 1. **11** There is an excellent discussion of these cases and Australian authorities on causation generally (and comprehensively) in an unreported decision of the New South Wales Court of Appeal (23 December 1998), in *EM Baldwin & Son Ltd v Plane & Anor; Jsekarb Pty Ltd v Plane & Anor* reported in (1999) Aust Torts Reports 81-499, and Butterworths online BC9902289. This case considered, like *Fairchild*, causation of mesothelioma where exposure to asbestos dust occurred in more than one employment. **12** [2003] 1 AC 32 at 44. **13** 171 CLR 506 at 508. **14** [2003] 1 AC 32 at 63. **15** [2003] 1 AC 32 at 53. **16** [1973] 1 WLR 1 at p6. **17** (1945) 71 CLR 637 at 649. **18** (1999) 73 ALJR 782 at 788. **19** See discussion of Hope J in *Briggs v James Hardie & Co Pty Ltd* and others (1989) 16 NSWLR 549 at 552. **20** [2003] 1 AC 32 at 40. **21** [2003] 1 AC 32 at 68. **22** [1940] 64 CLR 538. **23** [1940] 64 CLR 538 at 569 per Dixon J. **24** [1940] 64 CLR 538 at 564. **25** Unreported, 13 July 2000, Butterworths online BC200003934. **26** Unreported decision of Justice David Kirby, 13 February 2004, [2004] NSWSC 39. **27** See discussion of Gaudron J in *Bennett v Minister for Community Welfare* [1992] 176 CLR 408 at pp420-1. Her Honour considers the statement of Dixon J in *Betts v Whittingslowe* referred to above, and the question of a shifting evidential onus adverted to in *McGhee v National Coal Board* 1 WLR 1 at pp6-7 per Lord Wilberforce. See also *Watts v Rake* (1960) 108 CLR 158, *Purkess v Crittenden* (1965) 114 CLR 164, and (more recently) *Shorey v PT Ltd* [2003] 197 ALR 410. **28** [1992] 176 CLR 408. **29** [1992] 176 CLR 408 at 420. **30** [1998] AC 232. **31** *Finch*, p114. **32** (1990) 169 CLR 638. **33** Unreported Decision, 18 December 2003, [2003] NSWCA 369. **34** *Brown*, p136. **35** *Finch*, p141. **36** *Finch*, p133. **37** *Finch*, p134. **38** see *Finch*, p145. **39** Finch, pp146 and 148.