Bannister v Freemans Plc [2020] EWHC 1256 (QB)

A: Introduction

1. I should make clear at the outset:

   (a) I am immensely grateful for the close collaboration and hard work of Samuel Cuthbert (one of our pupils at 12KBW) in the construction of this piece.
   (b) Although this is being drafted within the period of time during which a notice of appeal could still be filed, I have not asked the Counsel team representing the family (namely Harry Steinberg QC and Gemma Scott) whether the same is contemplated and, if so, on what basis. This blog piece represents the views of Sam and me and, insofar as we detect heterodoxy within the Judgment (and, respectfully, we most certainly do) they should not be necessarily imputed to the trial Counsel team.

2. Low dose mesothelioma claims form an ever-greater proportion of the workload of any asbestos lawyer. When, therefore, a decision of the High Court is handed down dealing with issues of proof and causation and particularly where the Court had the benefit of full submissions from two silks highly experienced in the area, it commands careful consideration. The judgment of Mr Geoffrey Tattersall QC (sitting as a Judge of the High Court) in *Bannister v Freemans plc [2020] EWHC 1256 (QB)* is just such a decision. The need to analyse it with care is heightened further by some of the commentary it has attracted so far. One commentator has been moved to opine that "*It should promote a more sceptical…approach"* to the evidence of victims. This is, of course, wrong.

3. If brevity is the soul of wit, then, once again, I shall show myself to be witless. This piece is necessarily long. It is right therefore that I provide an executive summary at once.

   (a) So far, at least, this is a first instance judgment which sits within the framework of the common law in respect of personal injury generally and mesothelioma claims in particular, as handed down by the appellate Courts. Any expressions of law contained within it must be construed accordingly
   (b) The ratio of the decision is purely factual: on the facts, the family did not prove that the victim had been exposed to asbestos fibres at all during the course of his employment with the Defendant ("D")[1]. All else is simply obiter.
   (c) The judgment contains no warrant for a general approach whereby the evidence of victims (often given in the context of nil disclosure from D and always in respect of relative mundane matters occurring several decades prior) should be treated automatically with scepticism. The proper approach is to evaluate all the evidence before the Court neutrally, to test it for what may fairly be accepted either as to primary fact or reasonable inference and then apply to it the usual *burden* and then *standard* of proof.
   (d) The Judge appears to have resolved the issue of what constitutes an exposure which materially increases the level of risk of developing mesothelioma by the

[1] *In this piece I will refer both to the individual defendant before the Court and the interests of all Defendants in general by the letter "D" as the context requires*

adoption of a test suggested by a medic, namely a level of dose above that which "*... a medical practitioner who is aware of the medical risks would define as something that the* ***average patient*** *should not worry about"* **[168]** (emphasis added). Perhaps unsurprisingly the medic's formulation of the answer includes a frank error of law – namely the failure to take into account either the 'eggshell skull' rule (*Smith v Leech Brain & Co Ltd)* or the 'crumbling skull' rule *(Environment Agency v Ellis/Athey v Leonati)* (in the form of the known existence of genetic susceptibility of certain people to asbestos giving rise to mesothelioma). Perhaps more surprisingly, the test promulgated by the medic seems to not have been thought through as to how it would ever have been applied in practice.

(e) The Judge was led by D's concession that if the facts alleged could be proven they constituted a breach of duty, into considering only (a) the issue of whether (and, if so, to what degree) exposure had occurred – proof of exposure and (b) whether such exposure (if proven) materially increased the risk of mesothelioma – proof of individual causation. In this, he concentrated on two sides of a triangle, but not the third, namely the test for breach. 'It is true that he briefly cites a short passage from Lord Phillips in Sienkiewicz on breach [107 of the Judgment in Sienkiewicz] and [27] of the Judgment in Bannister, but he rather skates over at [32] the role of material increase in creating a 'foreseeable risk' which is the essence of the proof of breach at common law in mesothelioma cases. Hence with respect, he did not fully express within the judgment an appreciation of how this third side of the triangle creates an iron logic in post 1965 cases which employers cannot evade by reference to some pseudo-objective test for de minimis. I return to the nature and effect of this 'iron triangle' below.

In short therefore, the Judge's obiter analysis of what constitutes material breach is contrary to appellate decisions eschewing objective dividing lines howsoever devised, ignores *Hughes v Lord Advocate* and the presence of genetic susceptibilities as a confounding factor when seeking to use epidemiology as a disproof of individual causation.

4. I approach the matter by summarising the case and then seeking to analyse where commentary on behalf of the insurance industry is not justified, and where the Judge's obiter reasoning went awry.

B: Summary of the Judgment

5. Dennis Bannister ("the Deceased") died of malignant mesothelioma after a prolonged illness. The claim was brought by his widow, Valerie Bannister ("the Claimant") and alleged that he had been exposed to asbestos whilst working as a manager in the accounts department under the employment of Freemans Plc ("D"). The allegation of exposure was that a partition wall had been removed from the Deceased's office over the course of a weekend, following which the Deceased was exposed to a residue of asbestos dust in his office which was cleaned up over the course of a matter of days by the cleaners. As we have seen from the above summary it was admitted that, if proven to be asbestos, such exposure was tortious.

6. Evidence was given by the Deceased's former colleague, Mr Ford. Mr Ford had met with the Deceased following the Deceased's diagnosis, and reminded him both of the removal of the partitions and that a memo had been issued by the Defendant identifying and warning of the presence of asbestos containing infill panels. Expert engineering evidence was provided by Mr Raper for the Claimant and Mr Stear for D. Expert medical evidence was provided by two respiratory physicians; Dr Rudd for the Claimant and Dr Moore-Gillon for D. D denied that the dust contained asbestos and, in the alternative, that any exposure amounted to no more than non-actionable de minimis amounts.

7. The Judge outlined that, in making his findings of fact, there was need for particular care as regards the accuracy or reliability of the evidence of lay witnesses in historic disease claims. Such principles are derived from the dicta in *Kimathi v Foreign and Commonwealth Office* [2018] EWHC 2066, *Gestmin SPGS SA v Credit Suisse (UK) Limited* [2013] EWHC 3560 and *Sloper v Lloyds Bank Plc* [2016] EWHC 483. The Judge made three preliminary findings:

(i) He drew an adverse inference as to the Deceased's credibility (NB not honesty: credibility) from his denial of exposure to asbestos to treating medics on 3 separate occasions
(ii) Further, the Deceased's evidence was largely prompted by Mr Ford's recollection of the memo;
(iii) But for Mr Ford reminding the Deceased in early 2018 of the existence of the memo or the removal of the partition containing asbestos, the Deceased had no independent recollection of being exposed to asbestos.

8. The Judge found that, on balance, a memo was sent to the Deceased and that it referred to the infill panels in the partition being removed as having contained asbestos. He then went on to conclude that having identified the presence of asbestos and having sent a memo about the same it was probable that D also would have appreciated the need to engage a specialist contractor to undertake the removal of the asbestos with the appropriate precautions pertaining.

9. The Judge found that only the infill panels of the partition had been removed and not the central panels. He found that the infill panels were removed the weekend immediately after the memo was circulated to the Deceased. This would have created dust, and it is possible that the Deceased could then have been exposed to asbestos dust upon arriving back to work. However, the process of replacing the infill panels with non-asbestos material would also have created dust free from asbestos.

10 The Judge found overall that the Deceased was more likely to have been exposed to non-asbestos dust from a different but related process when he told Mr Ford that he could taste dust in his mouth (which was taken as an evidential token of having been exposed to some dust). Overall therefore on the facts the Deceased failed.

11. The Judge then turned to his obiter considerations. He went on to consider what the Deceased's exposure would have been had he found that the Deceased was so exposed. He asked himself (i) how a court should assess the Deceased's exposure and, (ii) what in law constitutes a material increase of the risk of the Deceased developing mesothelioma?

12. The Judge recognised that the experts' calculation of the cumulative dose has a limited value, albeit that it does have some value. Pursuant to the dicta of Aikens LJ in *Williams*, the Judge sought to make findings as to the Deceased's actual level of exposure to asbestos, whilst accepting that this might be imprecise. The two experts, after cross examination, settled on very similar dose estimates such that they were effectively in agreement as to the Deceased's cumulative exposure to asbestos. In any event the Judge preferred the evidence of the Mr Stear, given that Mr Raper's estimates for both the lower and upper ends of exposure did not withstand close scrutiny. The Judge therefore found "in round terms", in line with Mr Stear's evidence that the Deceased's exposure was no more than 0.0004fibre/ml years.

13 It was held that the test of causation is one of mixed fact and law because any assessment by the court had to reflect what test to apply in the assessment of the risk and what weight to give to epidemiological evidence. Following *Sienkiewicz v Grief (UK) Ltd* [2011] UKSC 10, what constitutes a material risk must be for a judge on the facts of the particular case. The Judge found the test set in *Sloper v Lloyds Bank Plc* [2016] EWHC 483 (QB) was an appropriate means of determining material increase in risk:

> "a dose of asbestos which was properly capable of being neglected could be defined as a dose which a medical practitioner who is aware of the medical risks would define as something that the average patient should not worry about."

14. The Judge preferred the evidence of Dr Moore-Gillon because he had attempted to evaluate the significance of the cumulative dose at 1 in 50 million, subsequently describing the increase in risk as "vanishingly low". Dr Rudd's evidence was criticised for not assessing the level of risk created by any exposure to asbestos whilst the Deceased was in the Defendant's employment, and for "straining logic" regarding an annual risk of 1 in 50 million as a material increase.

15. The Judge rejected the submission that it would be an unusual situation where an exposure to asbestos which constituted a breach of duty was deemed not to be a material increase in risk. This was deemed to erroneously conflate breach and causation. Instead, the judge found that the burden was on the Claimant to show, on a balance of probabilities, that any exposure to asbestos suffered by the Deceased in the course of his employment by the Defendant gave rise to a material increase in the risk of the Deceased developing mesothelioma. Given the Judge's preference for Dr Moore-Gillon's evidence, it was found that such burden was not discharged and any exposure would have been de minimis.

16. In sum, it was held on the balance of probabilities that the Deceased was not exposed to asbestos dust during his employment by the Defendant. In any event, had such exposure been proved, it did not represent a material increase in the risk of the Deceased developing mesothelioma.

C: Comment

C1. The approach to evidence

17. This requires consideration in respect of both lay and expert evidence separately.

18. Lay evidence:

(a) It is possible to spill a considerable amount of ink considering to what degree *Gestmin* principles should be applied outside of commercial litigation (in which usually there is a plentiful substrate of contemporaneous documentation) and personal injury claims. Doubt has been expressed in this regard in at least one decision of the High Court *(CXB v North West Anglia NHS Trust [2019] EWHC 2053 QB)* (but it is readily accepted that equally there are other Courts which have accepted its application in such cases).

(b) However, it is never more than an approach: to elevate into an evidential principle that lay evidence must always give way to written evidence, or that long term memory being relied upon by a witness is inherently unsafe owing to the passage of time takes matters too far. First, insofar as such a purported principle was to be justified on the grounds that there is a growing realisation that Judges as a body are no better interpreters of human fallibility and recall than any other interlocutor (which is often the justification) then I am afraid the medical, sociological and empirical underpinnings of such an assertion would become fair game and relevant issues of proof in any low level case. This cannot be right.

(c) Second, it would create an exquisite trap for any victim: if they gave general evidence about what happened in a mundane factory 40 years ago, D would argue 'ah, the lack of detail betokens want of real recall'. Conversely, if the victim gave an account in which there were elements of vivid detail, D would respond 'ah, that detail is an after-acquired trick of the memory which betokens that the victim's evidence is unreliable'.

(d) The Judgment in *Bannister* itself records:

> *82. Moreover, although Mr Steinberg stated that Lord Rodger`s dicta in Sienkiewicz were simply 'a reminder that the relaxation of the causation test did not apply to or eliminate the other ingredients of tortious liability', I am satisfied that such dicta and the other judicial observations in Kimathi , Gestmin and Sloper , whilst in no way binding on me, are important as a helpful and cautionary general guide to evaluating oral evidence and the accuracy or reliability of memories and I do not propose to allow the Defendant, in Mr Steinberg's words 'to convert one of the inherent difficulties in asbestos litigation - the inevitably long latency periods of the disease - into its first line of defence.'*

(e) Thus there is no warrant from this Judgment for the D commentary promulgated online that victims' evidence should be viewed sceptically as a species. D's protection is that the burden lies on the victim to prove all elements of his case and to do so on the balance of probabilities. In looking at the evidence, the Court will take all relevant aspects into account. This may be other lay evidence presented by either side; this may be contemporaneous or subsequent documentation; this may include expert comment where such evidence is relevant and admissible (see below). It will be a matter for the Judge to sift and give such weight to each element of the evidence as she deems proper. D should

recall however, that where the only evidence is that of the victim themselves, the minatory words of the Court of Appeal in *Brett v University of Reading* per Sedley LJ:

> "*where the evidence points neither way a straw in the wind may be decisive"* (see also *Hughes v Liverpool City Council,* The Times 30 March 1988 per May LJ where he said "*The onus was on the plaintiff to make out her case. If there had been only a scintilla of evidence called on her behalf tending to support the fourth inference to which I have referred, then in the absence of any contrary evidence, because no witness was called for the defendants, the judge would have been entitled to find even that scintilla sufficient to make out the plaintiff's claim".*

19. Expert evidence:

(a) The Judge effectively accepted a 'back calculation' regarding the level of exposure to asbestos which the Deceased experienced and did so by reference to figures suggested by D's engineer. He did so:

- Having determined as a matter of law that he was required to make findings of fact as to the level of exposure (citing and following Aikens LJ in *Williams v University of Birmingham* – who said that that was indeed the task of the Court; citing and *not* following Maurice Kay LJ in *Cox v Rolls Royce* to the contrary effect that no specific finding was necessary beyond a general finding that it was material **[153-157])**; and
- Having acknowledged that the experts evidence had *'limited'* value **[151]**.

(b) With respect to the Learned Judge, he appears not to have taken full consideration of *Bussey*.

- First, he did not cite, nor apparently have in mind, the cautionary words of Underhill J about the exercise undertaken of 'back calculation' of dose by experts:

> *"[62] ...Attempting to answer the issue in this case by comparing back-calculations (it might be fairer to say 'back-guesstimations") of Mr Bussey's exposure against subsequently published figures of the kind appearing in TDN 13 is in my view unsound."*

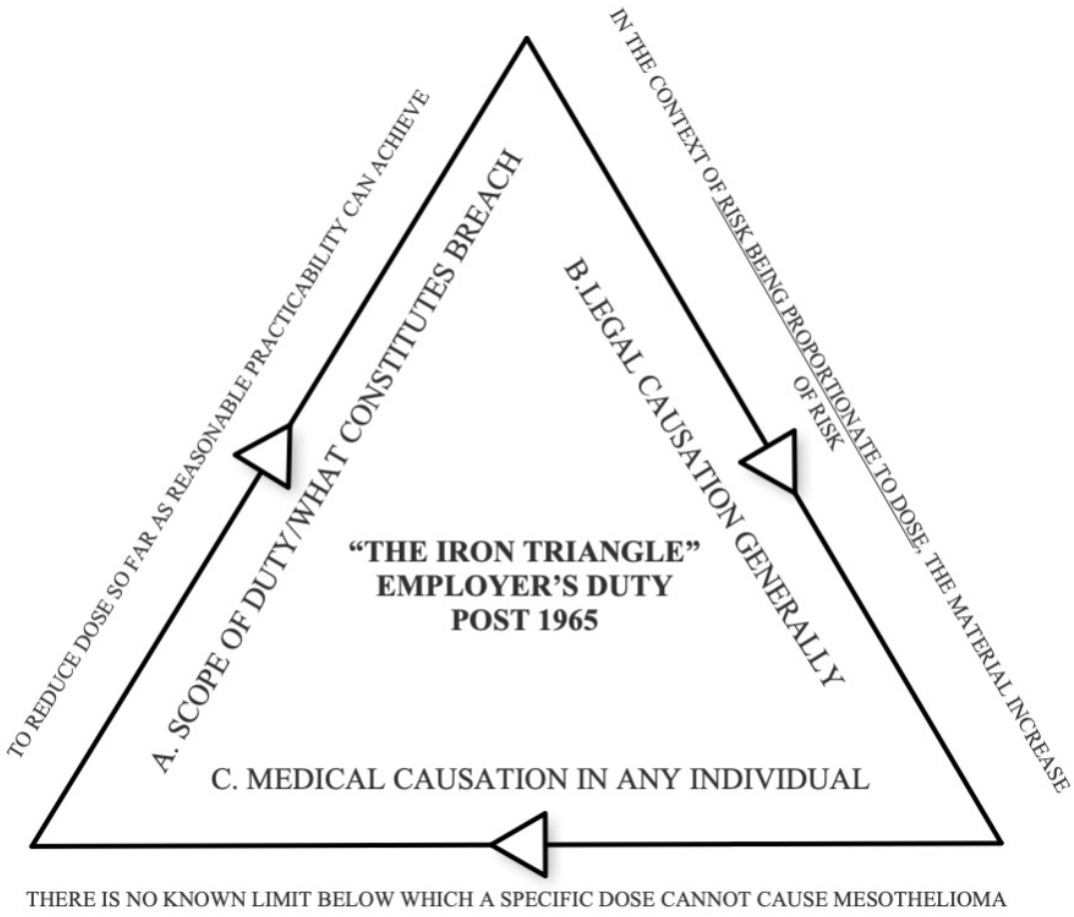
It matters not whether the purpose of the Court was to test the level of exposure against a document such as TDN 13 or for the purpose of determining whether or not a 'material' risk had been created, the whole exercise is unsound and should not be undertaken to the point where experts are providing apparently detailed figures or even ranges.

- Why? Because of the old computing acronym GIGO 'Garbage In Garbage Out'. Such ranges/values are usually calculated using an evidence stock of an impressionistic history contained in lay witness evidence. At best the experts then seek to draw on analogies of exposure with the closest studies

which ever measured such exposure. However, measurement did not become a precise science until instrumentation in the 1970s became available.

- The preponderance of appellate authority (Bussey/Cox) is against the making of a precise finding of exposure because such precision is spurious when compared to the likely accuracy actually achieved. This is the practical reason why such exercises should not be undertaken. The deeper, structural reason why this should be so is set out in the sections below.

The Iron Triangle as a thing and as an analytical tool



20. Let me explain what the diagram shows and how it does so. It is, in essence, the refinement of the argument put by Gemma Scott and me to the Court of Appeal in oral submissions in *Bussey* and put again (in other ways) by Gemma Scott and Harry Steinberg QC in *Bannister.* The diagram both demonstrates the closed logical loop (to mix my metaphors) trapping the Defendant employer who exposes the victim after 1965 *and* is intended as a map for how the Court should seek to analyse the issue of de minimis.

21. Commence with Side A: this demonstrates the applicable law *(Jeromson; Maguire)*

(a) Suppose all reasonably practicable steps had been taken by an employer but that some exposure to fibres ("*y*") was, even then, not avoidable.
(b) Now suppose that there has been a failure to take all reasonable steps and so the dose was in fact the higher dose of (*"x"*)
(c) The Defendant's breach lies in the exposure of the victim to *(x-y)* fibres.

22. Now consider Side B:

(a) Since the risk of developing mesothelioma is proportionate to the dose received;
(b) And the test for legal causation generally in mesothelioma is the tortious creation of excess risk,
(c) then it follows from our consideration of Side A of the iron triangle, that the employer's breach lies in creating a risk in the proportion of *(x/y).*

23. Side C:

(a) This deals with individual causation in fact.
(b) Since there is no known lower limit below which asbestos fibres cannot cause mesothelioma then individual causation is proven by simply demonstrating that *x* is greater than *y*.
(c) Subject to de minimis below, one does not also need to prove that *x* is greater than *y* by any fixed amount: that is the importance of the analysis of the majority in *Bussey.*

24. Before going on to consider the issue of de minimis, and harking back to my observation that the Court had not concentrated on the role of breach in the light of D's concession in this case, the analysis of the iron triangle above immediately makes clear that proof of breach marches in perfect lock-step with proof of legal causation as a matter of logic because risk is proportionate to dose and the proof of causation in mesothelioma claims is the proof of the increase of risk.

(a) Put another way, once it is proven that breach has occurred (ie that there has been a material increase in the dose which could have pertained with the taking of risks: *x-y*,) then it **necessarily** follows that causation has been proven to precisely the same degree. Conversely, if there is a failure to show that a material increase in dose has occurred sufficient to found breach, then there is also a *necessary* failure to show that causation has been proven.

(b) Put yet another way (and this is the cornerstone of this part of the argument) one cannot test the question 'what is de minimis for the purpose of proving breach?' by cross referencing (either as a reality check or otherwise) on 'what is de minimis for the purpose of proving causation' or vice versa. To do so is a tautology since they are necessarily and directly proportionately connected findings.

(c) This last point was effectively argued by Harry Steinberg QC in *Bannister* as can be seen from paragraphs 193-194. It was rejected by the Judge. With respect to the Judge, I agree that where liability is based upon a failure to comply with

a ‘yes/no’ statutory duty (such as a failure to keep an asbestos register under the 2002 Regulations) then it does not necessarily follow that an increased risk has been created. However, where I respectfully disagree with the Judge is that where common law principles of negligence are relied upon to prove breach then any finding by the Judge that causation had not, by the same evidence also been proven, cannot easily be justified. That is the effect of the iron triangle.

25. A principle of de minimis also operates within the iron triangle. That much is a matter of fixed law. But how is it to be identified?

There are only 3 methods by which it could ever be identified:

- By reference to some principle or definition as enunciated by the Courts (see 26 below);
- By reference to some objective bright line (see 27 below);
- By reference to the operation of the internal logic of the iron triangle (see 28 below).

26. De minimis in high authority

(a) As the Judge in this case seems to have acknowledged by his citations, high authority does not assist in identifying, as a practicality, what constitutes de minimis. Representative of this lack of assistance is the following passage from *Sienkiewicz* (cited at **[27]** of this Judgment) in which Lord Phillips stated:

“108. I doubt whether it is ever possible to define, in quantitative terms, what for the purposes of the application of any principle of law is de minimis. This must be a question for the judge on the facts of the particular case. In the case of mesothelioma, a stage must be reached at which, even allowing for the possibility that exposure to asbestos can have a cumulative effect, a particular exposure is too insignificant to be taken into account, having regard to the overall exposure that has taken place. The question is whether that is the position in this case”

(b) This amounts to a circularity: what is de minimis? Anything which is less than material. Then what is material? Anything which cannot be dismissed as being de minimis.

(c) There is thus no help to be gained there.

27. De minimis by reference to some objective bright shining line

(a) It was precisely Ds’ collective leap upon the judgment in *Williams* as warrant for the proposition that a bright shining line existed (in that case exposure to 2 fibre/ml because of the terms of TDN 13) which was unanimously rejected in *Bussey*. Jackson LJ doubted that that was the meaning of Aikens LJ in *Williams* in any event but that if it was, then such an assertion was wrong *(Bussey* [51]). The other two LJJ were even clearer that no such bright line existed. The appropriate questions were set out by Underhill in *Bussey [63]*

> *"…In my view the right approach in principle to the necessary inquiry is twofold: (a) the first question is whether Anglia should at any time during Mr Bussey's employment—that is, between 1965 and 1968 (the precise dates are not known)—have been aware that the exposure to asbestos dust which his work involved gave rise to a significant risk of asbestos-related injury. (I say "significant" only so as to exclude risks which are purely fanciful: any real risk, albeit statistically small, of a fatal illness is significant.) That will depend on how quickly the knowledge, first widely published in 1965, of the fact that much lower exposures than had previously been thought to be dangerous could cause mesothelioma was disseminated among reasonable and prudent employers whose employees had to work with asbestos. One aspect of this question is whether, even though Anglia may have been aware of the risk in general terms, it was reasonable for it at the material time to believe that there was a level of exposure below which there was no significant risk, and that Mr Bussey's exposure was below that level. (b) If the answer to the first question is that Anglia should have been aware that Mr Bussey's exposure gave rise to such a risk (including that there was no known safe limit) the second question is whether it took proper precautions to reduce or eliminate that risk.*

(b) We should draw several conclusions from this:

(c) When searching for the answer 'how do we know when *(x-y > de minimis)* it matters not that the issue under consideration in *Williams* was a bright shining line in the context of breach of duty (ie what amount of exposure constituted breach of duty) and the focus of the debate in *Bannister* was a bright shining line in respect of causation. As we have already seen above, since breach and proof of causation (albeit separate issues) are in complete and necessary lockstep, there is no distinction of principle to be drawn between them.

(d) It follows that there can be no call by the Court upon either the presence or absence of an 'objective' state of affairs in order to determine whether or not de minimis operates: such a circumstance is not a route out of the iron triangle.

(e) As such, therefore, the first criticism of the Learned Judge's acceptance of the test for de minimis promulgated by the medic namely,

> *'…a dose which a medical practitioner who is aware of the medical risks would define as something* ***the average patient*** *should not worry about'* (emphasis added)

is that, in disguise, this is another attempt to identify an objective bright shining line – in this case '**the average** patient'. As we shall see later, there are many other reasons why this test must be wrong (principally, it doesn't work in fact; it ignores genetic disposition and it contravenes the 'thin' or 'crumbling' skull rule).

28. De minimis via the internal logic of the iron triangle:

(a) We have already seen that one cannot test whether a tortious dose constitutes a breach by asking whether it constitutes sufficient exposure to amount to proof of causation. This is because (to repeat) the test for causation relies upon the legal foundations that the creation of risk is taken to be proof of causation and the risk is proportionate to the (excess/tortious) dose. Thus it is only to the third arm of the iron triangle, that is medical causation in fact, to which we must turn. And this is a source of bad news for those seeking comfort on behalf of Ds within *Bannister.* This is because:

- The Court expressly noted the orthodoxy that there is no safe limit of exposure;
- D's medical expert could not in cross examination set out what level of exposure could not cause mesothelioma in a susceptible person (we will return to this when we consider epidemiology and genetic susceptibility).

(b) It therefore follows that when testing for the purpose of determining whether or not an excess dose constitutes breach (and for that matter as a corollary, proof of causation) the only test that can be applied by way of cross check is *'is the excess/tortious dose sufficient to be able to cause mesothelioma in a susceptible individual*?' since that is the only other parameter available to the analyst within the iron triangle. **Since no medic can yet say that any excess dose is insufficient to cause mesothelioma it would appear that whilst the existence of de minimis is legally well established, as a matter of medical evidence it cannot actually be identified and proven by any D.**

(c) **This is not as extreme as it sounds. Each arm of the triangle represents either now well established law or trite fact trotted out in case after case. Also look to the reality of exposure: no exposer at the time they expose the victim can know whether or not their dose is the only dose which the victim will ever have or whether, in combination with past or future doses, the index dose was the difference between developing mesothelioma or not. Again, that last proposition is a matter of settled law (per Hale LJ, *Jeromson*).**

It is for this reason, together with reasons of practicality, that the Appellate Courts have predominantly held that no precise figure for exposure is necessary, still less desirable: it is a matter of impression for the Judge. The error which, respectfully, is identified in the approach of Mr Tattersall QC is not that he failed to appreciate that that was the law (he expressly reminded himself that this was indeed the law at [171]) but rather he sought to answer the impressionistic question of whether the exposure would have been material by reference to a pseudo-objective standard set out by C's expert, namely what a medic informed about the risks would consider an average patient should worry about. In turn, he sought to determine what such a medic would do by a reference to epidemiology [cf 173-175]. Let us turn to that test now.

C3. *The test promulgated by the medic*

29. Dr Rudd is immensely experienced. The test which was adopted by the Court had been first put to him in cross examination by Mr Platt QC in the case of *Sloper*. He agreed with the formulation. The same happened again in *Bannister.* I will deal with the test in three stages:

(a) As a proposition of law (paragraph 30 below);

(b) As a matter of practicality (paragraph 31 below);

(c) The use of epidemiology (paragraph 32 below).

30. The difficulty in adopting the test can swiftly be put: it is no more permissible to tie the what is de minimis question (which is, after all, an issue relevant to both breach and causation) to the notion of 'an average response to worrying news' than it is to assume an average strength and thickness of a skull where the skull has been negligently struck. The relevant passage from *Clerk & Lindsell (22nd Ed – 2nd Cum. Supp) 2-166 to 2-170*), viz.

"2-166 ***The Eggshell Skull Rule*** *Long before Wagon Mound, it was an established doctrine that a defendant has to take his victim as he finds him, which means that if it was reasonable to foresee some injury, however slight, to the claimant, assuming him to be a normal person, then the defendant is answerable for the full extent of the injury which the claimant may sustain owing to some peculiar susceptibility. The rule applies only when the claimant's pre-existing hypersensitivity is triggered into inflicting the injury complained of…2-169….The Canadian courts refer to such cases as "crumbling skull" cases. In Athey v Leonati[571] the Supreme Court of Canada observed that: "As long as a defendant is part of the cause of an injury, the defendant is liable, even though his act alone was not enough to create the injury. There is no basis for a reduction of liability because of the existence of other preconditions: defendants remain liable for all injuries caused or contributed to by their negligence."*

(a) The analogy is precise: since there is no known limit of exposure below which mesothelioma cannot be caused, every exposure must be deemed capable of being a cause. Thus in every low exposure case in which mesothelioma arises out of individual susceptibility (whereas in other persons such exposure would be tolerated) D cannot be heard to say 'but my exposure would not have caused disease in some others': D takes the victim's body as he finds it. Therefore must he take the victim's reaction to information imparted by the medic.

(b) I respectfully suggest that a test relying on what *the average* patient *should* worry about is wrong in law. If it were ever capable of being the test (and it isn't because it is an overall impermissible attempt to create an objective shining path as we have already seen), then it would have to be cast in subjective terms: what *would this victim have worried about?*

(c) Now, it might be argued that I have misunderstood the role of words 'should not' within Dr Rudd's formulation of the test. Let us remind ourselves again of the wording:

"..[de miminis could be] *defined as a dose which a medical practitioner who is aware of the medical risks would define as something that the average patient should not worry about".*

Ds may argue 'well, the role of 'should not' in that sentence means 'should not worry about because objectively there is nothing to worry about'. But that cannot be right for two reasons:

- Since there is no dose which can be excluded as being small enough as not to be physically capable of causing mesothelioma, then as a matter of strict fact, there is no dose which should not be worried because there is objectively nothing to worry about.
- This reality was adverted to by Underhill LJ in *Bussey*

"I say 'significant' only so as to exclude risks which are purely fanciful: any real risk, albeit statistically small, of a fatal illness is significant".

Until medicine can set a dose below which mesothelioma simply cannot be caused, then what dose, I ask rhetorically, can properly be called 'fanciful?'

31. As a matter of practicality, how could the test ever operate?

(a) The test would quickly break down into one which was personal to the victim before the medic and not some notional 'average':

- Age makes a difference: a person exposed at 20 has many decades of the fibre burden on their lungs. A person at 90 would almost certainly be dead before clinical manifestation of mesothelioma arising from such exposure. Thus the approach to what they should worry about would differ;
- The same can be said for antecedent family history: a person might well be entitled to worry more if their father and grandfather had died from mesothelioma following asbestos exposure;
- The same can be said for antecedent fibre history before the index exposure: a man aged 50 who had just had 1 day's exposure and no other might very well be less 'entitled' to worry than one who was 60 but had suffered 10 fibre/ml exposure prior to the index exposure;
- The same can be said for gender since the *Darnton & Hodgson* paper relied upon by Dr Moore-Gillon – which was the same as the one he relied upon for de minimis - states that up 1/3 women have idiopathic mesothelioma.

Thus the test would have to be formulated in subjective terms 'De minimis is the level below which an informed medic would consider a person of the victim's own gender and age and exposure and family history should be worried about'.

(b) In fact there are multi – layers of subjectivity in this test:

- What does the Judge consider that;
- The medic should have considered that the;
- Victim should have worried about.

Thus, as a shining bright line, it is quickly rendered lost to the subjective undergrowth of weeds.

(c) Finally, when would the test be being administered? The day after the exposure? The day after a sinister cough developed decades after the exposure? Some intermediate point? If it is the day after symptoms commenced then which medic would ever say 'well I would have told him not to worry had he asked me the day after the exposure, but now I know he has a cough and a shadow on the lung, I think he should worry'? It would quickly then be seen that the test simply demonstrated that no medic can ever inform safely a victim that they have no chance of developing mesothelioma after an exposure.

32. Epidemiology:

(a) My respectful criticism of the Judgment is not that the Court failed to note that epidemiology was capable of being a false guide [173-175] but that it relied upon epidemiology *at all* to seek to answer what constitutes 'de minimis'. This is because epidemiology, being the study of cohorts, cannot inform in an individual case whether or not a genetic factor has been at play. Thus it cannot be known in the low exposure cases, whether or not a person developed mesothelioma having inhaled (let us say) 1,000 fibres because that is an amount which might cause mesothelioma in anyone. Equally, owing to a genetic risk factor being present, 1,000 fibres will be sufficient in some whereas in those without the risk factor 5,000 fibres would otherwise be necessary.

(b) Let me take an analogy across 2 scenarios:

First Scenario:

- Sam and I each buy a single lottery ticket with a single line on Sunday.
- On Monday at 9 00 am, each brandishing our ticket, we attend at our mutual accountant and ask him 'how will we account to HMRC for our winnings at the next lottery? Is it capital gains or income – a lot rides on this for the next tax bill'. Our accountant looks at us both and says 'Gents, since the chance of either of you winning is 14 million to 1, you have nothing to worry about'.

Second Scenario:

- This scenario is identical to the first, but this time our accountant has heard a rumour that one barrister at 12 KBW has struck a secret deal with the Lottery – namely that for each ticket bought, the lottery will print another million tickets for that barrister each with their own unique number sequence.
- Now, when Sam and I attend, the accountant cannot know whether the ticket we are each waving represents 1 line or 1 million and 1 lines. He does not know if either of us have struck the secret deal and if so, which?
- Now when we ask him our question, he must answer differently because there is a risk that one of us is actually very much more likely than is obvious to win.

It is statistically valid to add up lots and lots of independent chances and see overall what the combined risk is. Test the matter in your mind in this way: if I toss one coin and ask myself the question: what are the chances that I will turn up a head, then the answer is 50:50. But if I toss 2 coins (either together or separately) then the chance of my turning up a head is 75:25

		SECOND COIN	
		H	**T**
FIRST COIN	**H**	HH	HT
	T	TH	TT

And so it is with asbestos fibres. Each individual fibre is very, very unlikely to cause mesothelioma, but the risk is cumulative with each extra fibre ingested. And hence why the medical position given is that the risk of mesothelioma is proportionate to the dose.

(c) The analogy with genetic susceptibility is a close one. Science cannot say who has it and who has not; science cannot say how the susceptibility works or at which stage – whether it renders 1 fibre as potent as it were 50 fibres or whether it makes the usual limit of 50 fibres to cause mesothelioma drop to 1 fibre or any combination in between.

(d) It was this failure to analyse the role of the genetic factor, notwithstanding that it was raised in submissions and in cross examination of the Defendant's expert who, perfectly reasonably, could not say from the medical perspective what the safe limit of exposure was to someone with a genetic susceptibility, that led the Court to accept evidence which was an exercise in comparing apples with pears. The Court accepted that the Deceased's dose would, had it been asbestos, have been insufficient to raise the risk of developing mesothelioma above 0.2 deaths per 100,000 and amount to a risk 3,000 times lower than the annual risk of being in a road traffic accident. The criticisms here are several:

- First, as a matter of law, this is an analysis that the increased risk was 'acceptable'. Why else draw the analogy with the risk of road traffic accidents? But, in this, the Court accepted a line of logic expressly rejected by the majority in *Bussey*. There is no test of the creation of 'acceptable risk' which is not actually 'de minimis'. Thus de minimis remains the only measure of actionability (ie if the exposure is above it);
- Second the risk of road traffic accident death is not uniform. My copy of 'The Grim Reaper's Road Map' (2008) shows that the risk of dying in an RTA is three times greater for men than for women; greater for men in their teens to 30s; and greatest still in rural areas where cars are the only way of travelling, pavements absent, lighting poor and, in Scotland where the highest rate of deaths occur, the nights are long. The standard mortality rate in northern Scotland approaches 400 (as compared to the national average of 100). Thus comparing mesothelioma in a susceptible individual with the risk of an octogenarian lady living in well-lit Surrey suburbia is far greater than being 1/3000th;
- Third, and with profound respect, he criticised Dr Rudd for expressing the orthodoxy which I have set out so exhaustively above:

"187. By contrast, Dr Rudd conceded that there were some cases where exposure was so trivial that he would regard them as not material but he could not explain on what principled basis I could assess whether there was a material increase in risk. Moreover, his evidence made no attempt to assess what level of risk, if any, was created by any exposure to asbestos whilst the Deceased was in the employment of the Defendant or whether such risk was more than de minimis…. do not accept Dr Rudd`s evidence and I felt that he was straining logic and common sense to regard an annual risk of 1 in 50 million as a material increase in risk and I am satisfied that in making any such assertion that there was no material increase in risk, Dr Rudd was hoping that I would rely on his consummate experience to justify an assertion which he realised could not properly be made."

It is right that what is material is a matter for the Court and not for medics as materiality is a purely legal concept.

It is right that he could not provide an objective measure for materiality – the appellate Courts have rejected such measures.

It is right that the level of materiality could not be measured in any one case because the effects of genetics (and the stochastic nature of carcinogenesis generally) rendered such an exercise impossible.

It was wrong for the Learned Judge to first caution himself on the 'dangers' of the epidemiology and then to apparently rely on it entirely when rejecting Dr Rudd's evidence on the basis that the risk was only 1 in 50 million (not least because that was, at best, the excess risk beyond that which we all face).

33. It may be that it will be necessary for these matters to be considered again by the Appellate Courts. Full and proper consideration would require epidemiology, the evidence of chest physicians and evidence in respect of carcinogenesis. With profound respect to the engineers, their evidence would be of marginal utility at best in such a case.

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