THE HIGH COURT

Record Number: 2001 No. 1910P

BETWEEN

EAMONN MCNEILIS A MINOR SUING BY HIS MOTHER AND NEXT FRIEND, EAMONN MCNEILIS

PLAINTIFF

AND

ANN ARMSTRONG AND GRAINNE MCNEILIS

DEFENDANTS

THE HIGH COURT

Record Number: 2001 No. 1893PP

BETWEEN

SEAN MCNEILIS A MINOR SUING BY HIS MOTHERS AND NEXT FRIEND, EAMONN MCNEILIS

PLAINTIFF

AND

ANN ARMSTRONG AND GRAINNE MCNEILIS

DEFENDANTS

THE HIGH COURT

Record Number: 2001 No. 19055P

BETWEEN

MARTHA MCGILL A MINOR SUING BY HIS MOTHER AND NEXT FRIEND, MARGARET MCGILL

PLAINTIFF

AND

ANN ARMSTRONG AND GRAINNE MCNEILIS

DEFENDANTS

Judgment of Mr Justice Michael Peart delivered on the 31st day of July 2006

1. I heard these three plaintiffs' actions together since they arise out of the same tragic event on a road from Ardara to Letterkenny on the 13th August 1999 in which two vehicles collided leaving all four occupants of one car dead. In the other car one child lost his life, four other children, including the present plaintiffs, were seriously injured (the rere seat passengers), and injuries were sustained also by two adult ladies seated in the front. One lady, Grainne McNeilis, is the second named defendant and driver of the car, and she is the mother of three of the children, namely the plaintiff Sean McNeilis, the plaintiff, Eamonn McNeilis, and another son Michael who died in the accident. The other lady, who was seated in the front passenger seat is Margaret McGill, the mother of the plaintiff, Martha McGill, and also of another daughter, Briana McGill whose action has already been disposed of.

Ages of the children in the rear

2. As one faces towards the front of the vehicle (which I shall hereafter refer to as "the Passat") in which the plaintiffs were travelling, the five children were positioned from left to right as follows across the rear seat:

Martha – then aged 14 years

Briana – then aged …(slightly older than Martha - ?15)

Sean – then aged 12 (almost 13)

Eamonn – then aged 8

Michael (deceased) - then aged 10

The second named defendant

3. There is no suggestion, and nor could there be on the evidence, that the second named defendant was in any way responsible for the impact which occurred. The first named defendant accepts that the accident happened as a result of the negligence of the driver of her vehicle. The fact that the second named defendant is a party to the proceedings is explained by the fact that after proceedings were commenced by these plaintiffs against the first named defendant only, she delivered a Defence, and thereafter sought to join the second named defendant as a Third Party on the basis that the latter had been negligent in not ensuring, as the driver of the Passat in which the plaintiffs were travelling, that the plaintiffs were wearing seatbelts, and that she was in breach of Article 7 the Road Traffic (Construction, Equipment and Use of Vehicles) (Amendment)(No.3) Regulations, 1991.

4. Counsel for the plaintiffs, Garret Cooney S.C., (with him Gerald Tynan SC) during the course of opening these cases, informed the Court that on that application, the plaintiffs, as a matter of prudence only, made the decision to join the proposed Third Party as a co-defendant in the proceedings, and an order was made to that effect. The first named defendant has in each case filed and served a Notice Claiming Contribution and/or Indemnity against the second named defendant.

Plea of Contributory negligence

5. It is a fact also that the Defences delivered on each defendant's behalf included a plea of contributory negligence against each of the plaintiffs, on the basis that they failed to wear the seatbelts which were provided in the rear of the vehicle. However at the trial before me the second named defendant has withdrawn that plea against each of the plaintiffs. But the first named defendant maintains her plea of contributory negligence against the plaintiffs.

How the accident happened

6. The accident happened in the early afternoon of the 13th August 1999. The plaintiffs, along with their siblings and cousins, all

being seated across the rear seat of the Passat were on their way to the cinema during holiday time, being brought by their respective mothers who were seated in the front of the car.

7. The Passat was hit head-on by another vehicle (hereafter referred to as "the Nova") owned by the first named defendant. It was travelling towards the Passat but at such speed that it went out of control at a bend in the road. The second named defendant had no chance of avoiding the impact. She brought her vehicle almost to a standstill before the impact but the Nova was out of control.

8. The passenger or near side of the Nova hit the front of the Passat, and such was the force of the impact that the Nova rose up over the bonnet of the Passat, and having passed over that car landed in an adjoining field. As I have stated already, very sadly all four occupants of the Nova perished.

9. All the occupants of that car were wearing seatbelts but nevertheless lost their lives. This has been explained in evidence as being a result of the side-on angle at which the Nova presented to the Passat at the time of impact. That angle had the effect of rendering the seatbelts ineffective, as these are effective principally in a head-on impact, and have no effect on passenger safety when the impact is to the side of the vehicle.

The seat-belts
10. It is not in dispute that in the rear of the Passat there were two three-point seatbelts fitted to the outboard positions, and that in the centre position there was what is called a lap-belt available, which is of the kind found on an aircraft seat and which restrains its user across the pelvis only and not, additionally, across the chest and shoulder area. Another undisputed fact is that these five young children were seated in the rear of the Passat at the time of the collision and in the positions described. Quite clearly, even if any three of the children had availed of these seatbelts, two other children would have to remain unrestrained, or not travel in the vehicle.

11. There is also no dispute about the fact that the impact to the plaintiffs' vehicle was a high velocity impact and therefore one of great severity. I will deal with some of the scientific evidence which has been adduced in that regard, but it suffices for the moment to describe the impact as very severe.

12. The first named defendant submits that as a matter of probability none of the plaintiffs would have suffered the injuries which they suffered if they had been wearing a seatbelt, and that any injury which they may have suffered even if restrained would have to be of a more minor nature than the injuries actually sustained. Her seatbelt expert, Mr Parkin, supports that view.

13. The plaintiffs on the other hand submit that because of the high velocity nature of the impact, it cannot as a matter of probability be said that if the plaintiffs had been restrained by seatbelts they would not have suffered any injury, or that the injuries would have been less severe than they each sustained. In fact they go further and submit that if these three children had been wearing the seatbelts provided, they would have more probably sustained even worse injury or been killed. This view is supported both by orthopaedic specialists and by a seatbelt expert, Mr Jordan, called on behalf of the plaintiffs.

14. There has been both medical and engineering evidence in relation to the issues raised in relation to the non-wearing of seatbelts. I will come to that in due course.

The issues arising in relation to liability
15. Two separate issues arise in each case for determination apart from the question of quantum.

16. The first issue is that of contributory negligence against each plaintiff which is maintained by the first named defendant.

17. The second issue is the extent if any to which the second named defendant should be held through negligence to have contributed to the injuries sustained by each of the plaintiffs herein by virtue of not ensuring that the available seatbelts in the rear of the vehicle were being worn.

18. Since each issue will essentially depend on the same factual determinations, I will first deal with the evidence which I have heard in relation to the injuries to the each plaintiff, and then consider the evidence related to the impact speed (which is distinct from the speed at which the vehicles were travelling at up to the point of impact), the efficacy of seatbelts as a restraint for rear seated children, particularly in a high velocity impact, and their capacity, if any, to reduce the level of injury in such circumstances.

19. Having made any necessary findings of fact, I can then address the legal issues as they relate to plaintiffs' contributory negligence, and contribution by the second named defendant.

The injuries to each plaintiff
Eamonn
20. On the 13th August 1999, the date of this tragic accident, Eamonn was eight years old. He was seated in the back of the car behind the driver's seat, and between his brother, Michael who was seated at the window, and his brother Sean who was in the centre of the back seat. He was not restrained at the time of the impact by either a three point belt or a lap belt. He is now aged 15 years.

21. He probably did not lose consciousness in the accident but had bruising to his right cheek. On admission to hospital he had no abdominal injury but had acute discomfort in both legs. There was bilateral swelling of both thighs with deformity, and x-rays revealed mid-shaft fractures to the femur in both legs. Because of the severity of his injuries, Eamonn remained in hospital from the 13th August 1999 until the 9th October 1999.

22. Pins were inserted to unite the fractures, after which both legs were treated on balance skeletal traction until the pins were removed under general anaesthetic on the 4th October 1999. He was then discharged home in a wheelchair. He remained immobilised in a wheelchair until mid- November 1999, and when he was seen by Mr O'Rourke, Orthopaedic Surgeon on the 20th December 1999 he was mobilising satisfactorily and both fractures appeared to have healed satisfactorily. By March 2000 he was discharged from medical care completely.

23. Mr O'Rourke's medical report dated 15th May 2000 (9 months after accident) notes that Eamonn becomes emotional about the loss of his brother, Michael, in the accident, and notes also that while he has had a number of psychological assessments already, he will require further psychological treatment. Mr O'Rourke was unable to state in that report whether the emotional effects of the accident had deteriorated Eamonn's existing psychological problems. But as far as the physical injuries were concerned he stated that there should be no long-term problems. In his report dated February 2002 (two and a half years post accident) Mr O'Rourke notes

that Eamonn walked without a limp and without pain, and that his activities are not limited in any way, and that there is no leg length discrepancy.

Psychological impact
24. Eamonn is a child with a diagnosis of Asperger's Syndrome, which is a condition at the high functioning end of the autism spectrum. In early childhood he had speech and language difficulties as well as some behavioural issues, but it would appear that with appropriate therapy he was able to progress academically quite well, but there are nevertheless some deficits consistent with the diagnosis. I mention this matter by way of background only, since there is no suggestion that the accident in which he suffered so severely caused or in any way exacerbated this condition.

25. Without detailing the contents of the reports under this heading it is clear that for a long time after this accident Eamonn was very upset at the loss of his brother, and experienced flashbacks, nightmares and so on. He has also become very anxious as a passenger in a car. He has been and even remains to an extent preoccupied by the death of his brother, and becomes tearful when discussing it. It appears that Eamonn was particularly close to his older brother Michael, depending upon him for emotional and social support. While there has been improvement in this regard there is still a great void in his life. He has attended a bereavement group which has helped him. Dr McDwyer has stated that Eamonn suffered Post Traumatic Stress symptoms following the accident and that his underlying Aspergers Syndrome has made his recovery more difficult.

26. Mr Patrick Scallan expressed his view about Eamonn's ability to cope with the loss of his brother, and stated that because of the condition with which he suffers, it is likely that he will continue to be affected by the trauma of the accident, and the loss of his brother for the rest of his life, since one of the characteristics of Aspergers is that the person has what he described as "quite advanced memory mechanisms". But given the enormous amount of devoted and caring family support, the outlook for Eamonn is regarded optimistically despite the appalling nature of the accident itself, the injuries suffered by him and the loss of his brother.

27. A report dated 17th January 2002 from Mr Paul McQuaid, Consultant Psychiatrist, on behalf of the defendant, states in conclusion that "the prognosis, given his particular and special personality type, should be excellent." That is not inconsistent with anything stated by any of Eamonn's own consultants. Eamonn is described as well adjusted and coping well with the loss of his brother, Michael, and the sadness within the family.

28. The Court had the benefit of evidence from Eamonn himself and from his mother, Grainne McNeilis. She stated that Eamonn had begun to improve as far as his Aspergers Syndrome was concerned about a year before the accident, and that for the first time they had been able to take a family holiday together. He was having language comprehension difficulties, but speech therapy assisted him. She stated that for Eamonn the prolonged stay in hospital was particularly difficult because of his condition. It was difficult also apparently for the nursing staff, who may not have been familiar with the behaviours associated with Aspergers. Mrs McNeilis was in another part of the hospital after this accident, because she herself was badly injured and the nurses would tell her often about these difficulties and that Eamonn was very upset. She would go to his bedside to talk to him and sing him to sleep for example. She described how when Eamonn came home from hospital at first he cried a lot. While she accepts that the fractured legs healed, but is of the view that the loss of his brother left an enormous gap in his life which, particularly for Eamonn given his condition, was particularly hard to bear. She stated that even to this day he will cry when discussing the loss of Michael.

Damages
29. I do not propose to award a figure for future pain and suffering given the recovery achieved as reported.

30. I award the sum of €100,000 for general damages to cover the fractures to both femurs and associated treatment over the lengthy period in question, as well as the psychological effects of the accident, including by reference to the loss of his brother, Michael to whom he was very close, and which I regard as significant. Special damages for Eamonn have been agreed in the sum of €65,252.74.

Sean
31. Sean was born on the 16th September 1986 and was therefore almost thirteen at the date of this accident. He was seated unrestrained in the centre of the back seat, with his two brothers, Eamonn and Michael to his right and his two young cousins Martha and Briana to his left. He is now aged nineteen years.

32. Sean suffered a serious fracture to his right femur, as well as bruising to his right knee. He was conscious throughout and after the accident and was able in his evidence to recall the immediate aftermath of this terrible accident and how his brothers and cousins, as well as his mother and aunt were. He described how in the immediate aftermath of the accident he knew that his leg was broken because it was visibly out of shape and he was in a lot of pain. He also saw that his younger brother Eamonn had sustained two broken legs and that his other brother Michael was unconscious and had a head injury.

33. He recalls clearly the journey to hospital in the ambulance. He was required to lie on the floor of the ambulance due to the fact that the bunks were needed for those more seriously injured than himself. He endured a great deal of pain both before the ambulance arrived and during the journey to hospital.

34. At any rate was brought to hospital. He recalls coming out of the general anaesthetic after surgery to his leg and seeing that a pin had been inserted through his shin-bone and that there were weights attached to that and to a frame attached to the bed. He remained on traction for a period of about eight weeks until the end of October 1999. While in bed for that length of time he had a lot of discomfort and pain, as well as boredom. His ability to turn in the bed was very restricted.

35. He was discharged home at the end of October 1999 on crutches, and his leg was in a cast until about April 2000. Unfortunately he had a fall at school in November 1999 causing a fracture to the same leg and in the same position. It necessitated another five days in hospital, and delayed his recovery.

36. As he was unable to mount the stairs on crutches he had to sleep in his brother Eamonn's room downstairs. By January 2000 he was back at school.

37. However, about a year to a year and a half later it became apparent that there was a discrepancy between the length of his two legs. This discrepancy was measured at 3cms. Following advice from Mr Damien McCormack, Consultant Surgeon at Cappagh Hospital, Dublin, a decision was made that Sean would undergo an operation to lengthen his right leg. This operation was carried out in January 2000, when, following fracturing the leg, an external fixator was applied to the leg by the use of pins. This naturally involved Sean in further pain and discomfort, and of course interrupting his schooling. This fixator was removed after some ten months. However the operation was largely successful in eliminating the discrepancy for all practical purposes. Sean completed his secondary education and

is now attending third level education where he studies construction management. In my summary of Sean's treatment in this somewhat cursory fashion I do not wish to be taken as overlooking or minimising the degree of pain and discomfort endured by Sean over the entire period of his treatment and recuperation. I have heard the evidence and read the reports and I am fully cognizant of the appalling discomfort he will have endured over a lengthy period.

Psychiatric Sequelae
38. In addition to his physical injuries, Sean also suffered the loss of his brother Michael in this accident, and there are reports which suggest that his method of dealing with his grief has been to bury it and not discuss how he feels in this regard in any open way. In evidence he stated that he was close to Michael, since he was only a year and a half older than Michael. Mr Patrick Scallan, Consultant Psychologist is of the view that Sean has coped very well with the loss of his brother, Michael.

Sport
39. Sean was a keen sportsman before this accident, taking part in boxing and Gaelic football. He has had to discontinue these pursuits which he enjoyed very much.

Damages
40. As shown, Sean suffered a bad leg fracture, and having been left with a significant shortening of his leg, inspite of three months' traction, he had to undergo further surgery to lengthen the limb. He experienced a very great deal of pain and discomfort over a long period. He also suffered the loss of his brother Michael in this accident. He had to give up his hobbies of boxing and Gaelic football, and no doubt the normal enjoyment of his teenage years was diminished in many ways as would be expected.

41. To his credit he has not sought in any way to exaggerate his injuries or their effect on his life, and it is remarkable how he has succeeded in getting on with his life.

42. Taking into account therefore the serious leg fracture, the recovery time involved, as well as the second operation to lengthen his right leg, and recovery from that, the psychological effects of the accident, and its effect upon his social life and general enjoyment of the teenage years during recovery, and the loss of his brother Michael, I assess general damages in the sum of €120,000. I have not considered it necessary to make any award for damages for the future.

43. Special damages have been agreed in the sum of €84,165.96

Martha
44. Of these three plaintiffs Martha was by far the most seriously injured. Martha sustained a fracture dislocation of her left hip, as well as a fracture of the mid shaft of her right femur, and a fracture of the surgical neck of her right humerus. She underwent a general anaesthetic in order to reduce the fracture dislocation of the hip, and while thereafter it was thought that this had been achieved, in fact it was necessary to undergo further surgery three days later as it was discovered by x-ray that she had a subcapital fracture of the femural neck, and a screw was inserted to deal with this. She was then put on traction for about three months until November 1999, so as to achieve the reduction of the hip. This traction involved the insertion of a skeletal traction pin in both her upper tibia. These pins were removed prior to her discharge home in about October 1999.

45. She spent the next couple of years undergoing intensive physiotherapy, and she had great difficulty dealing with the normal activities of daily living during this period. In January 2000 she was noted to have mobilised well, but that there was some shortening (2 cms.) in the right leg which was not then considered to be a problem.

46. By June 2000 Mr Peter O'Rourke, Consultant Orthopaedic Surgeon was able to report that while she has no pain in her right leg, there is shortening and she has a limp. He noted that she had difficulties bending and therefore doing things which required bending such a tying a shoe lace, but he also noted that she still had discomfort in the left hip. His opinion at that date was that in the long term there was "a very high risk" of a vascular necrosis developing in the head of the femur" which would result in osteoarthritis developing, and that more than likely this would develop in the short term.

47. Dr M.J.Cooke, General Practitioner in Glenties, in his report states that by August 2001 she had made poor progress, having severe difficulty moving and a severe limp. These problems with her left hip were exacerbated in due course by the development of avascular necrosis in the femural head, and in addition the hip joint was showing signs of arthritis.

48. In August 2001, Dr Dominick Cooke, Consultant Physician and Rheumatologist reported that she would require a total hip replacement but that he understood at that time that the orthopaedic surgeons were reluctant to do a hip replacement at such a young age. He opined therefore that was likely to remain in considerable pain and disability. But he also noted that she was suffering from "significant post-traumatic anxiety and stress disorder."

49. In November 2001 she was admitted to Cappagh Hospital so that a group of orthopaedic consultants might discuss her condition and decide on the best course of action. One must continue to bear in mind that Martha in November 2001 was just sixteen years of age.

50. In February 2002, Mr O'Rourke reported that a hip replacement was the only hope Martha had of having a pain-free and normally functioning hip. But he was also of the view that it might not be possible to give her legs of equal length even with a total hip replacement. He was sure at that time that she would never have a normal level of physical activity, and that she would not be able to partake in high impact sports or work activities.

51. Eventually in July 2002 it was agreed by all, including Martha's parents that a total hip replacement was the best option to adopt, and this operation was duly carried out. But from 1999 to that time Martha was extremely disabled and moved about with great difficulty and discomfort.

52. Following this operation she improved as far as her mobility is concerned, but she is still left with leg shortening, and a limp. She is however, as reported by Mr O'Rourke in his report of 1st April 2003 still left with a leg shortening of 2.5cms.

53. She had extensive physiotherapy over all these years since the accident. It goes without saying that this accident and its sequelae over the years since same have blighted her life in many ways, including her schooling and her social life.

54. She is in addition left with significant scarring in the area of the left hip following the hip replacement, and these are a source of embarrassment to her in the context of swimwear, as would be understandable. The scar on her left hip is twelve inches in length and runs from her left buttock to halfway down her thigh. It is described by Mr McHugh as being a broad stretched scar, and as being

noticeable and visible. I have seen this scar and it is certainly significant and clearly visible. It is completely understandable that Martha would be upset and concerned about this scarring. She has also scarring of a lesser order related to the insertion of the traction pins.

55. Further hip replacements will be required throughout the remainder of her life. Mr O'Rourke is of the view that she will require further hip replacements every 15-20 years, and that "each of these procedures will be more difficult and the outcome less predictable." In a later report, Mr O'Rourke has stated that this type of revision surgery is more difficult in the case of Martha on account of the fact that "*she is of short stature with very small bones*.". Mr McManus, called by the first named defendant also was of the view that further hip replacements would be needed every fifteen to twenty years.

Psychological Sequelae
56. In addition to these physical injuries, Martha had also to deal with the psychological sequelae having regard to the effect of these injuries on her teenage life and life generally, as well as the effect on her of the bereavement following the death of her cousin Michael in the same accident. As reported by Dr Cooke she had to deal with the change in her physical Appearance, her limp, her inability to take part in sport and the normal activities of a teenage girl. She had sleep disturbance, nightmares, headaches and these lasted for two years. She had to give up her hobby of dancing also. Dr Cooke describes her social life as "shattered".

57. **Dr Mary McGuire, Consultant Psychiatrist**, saw Martha in March 2005 and described her as having become depressed after the accident, as well as self-conscious on account of having to wear a shoe-lift prior to her hip replacement, but that following that surgery she remains very self-conscious about her scars and her general gait. She is of the view also that Martha developed post-traumatic stress syndrome following the accident. However she notes Martha as being a positive young girl, and that as her physical injuries abated so did her psychological symptoms. But she regards as very significant the effect of these injuries on Martha's self image, and on her social life, including into the future. The scarring in the hip area is also something which from a psychological point of view will affect her into the future, according to Dr McGuire. She has concerns also about Martha not having yet come to terms with and discussed the impact on her social and emotional development. She feels that Martha would benefit from some form of therapy to assist in dealing with these issues for the future.

58. **Dr John Cooney, Psychiatrist** describes Martha as having suffered from "adjustment disorder" arising from the accident, and that while she has shown improvement, the outlook is "somewhat guarded". But he does note that her mother has confirmed that Martha has been able to apply herself to her studies, even though her concentration is "somewhat defective". She is also reluctant to go swimming as she did pre-accident and this is on account of the scarring to her hip.

59. **Mr Patrick Scallan, Consultant Psychologist** has given evidence that Martha has not yet dealt with the anger she feels about the injuries caused to her in this accident. He feels that if these feelings of anger are to dissipate she will need therapeutic input, so as to deal with self-confidence and self esteem. He is of the view that she has great difficulty keeping up with her peers socially and interacting with them. She has in a sense been left behind by them and cannot keep up. He was also of the view that it will be difficult in the future for Martha in this regard because of the need for ongoing surgery in relation to further hip replacement and the scarring related to that. This will have difficulties for her in the future, including in relation to how she will relate to men in the future.

60. **Leo Finnegan, Consultant Clinical Psychologist/Psychotherapist** was asked to give a report on Martha's educational potential and the effects of this accident on her education and results. He assessed her in September 2003 i.e some four years post accident and when Martha was just over eighteen years of age. He tested her intellectual functioning across a range of areas - verbal, non-verbal, written language, mathematics and so on, and without going into the results of these tests in detail, it is fair to conclude that Mr Finnegan is of the opinion that her current level of intellectual functioning reflects her pre-accident level, and that therefore it is unlikely that the accident adversely affected her in this respect. He believes that the results which she achieved are in line with her general level of intellectual ability. On the other hand he expresses the view that her level of social functioning has been adversely affected and that she has a more restricted lifestyle and more negative self-image than might otherwise have been expected.

Job prospects
61. I am not satisfied that Martha's employment prospects have been affected in any way which should be taken account of in damages. This is encouraging.

Damages
62. I will not attempt a summary of her injuries both physical and psychological. They are adequately detailed already, and in so far as I may have failed to detail particular aspects of her injuries and sequelae, I have considered all the evidence given and all the reports. Suffice to say that Martha has suffered a very serious injury indeed which will leave her seriously disabled for the rest of her life, and such that she will on the balance of probability need up to four further hip replacements over the remainder of her expected life.

63. These injuries and the scarring associated with them have devastated her life into the future, not to mention the terrible amount of pain and suffering which she has had to endure to date. She must be entitled to very substantial damages. The scarring is very significant and permanent, and for a young girl of Martha's age, it is reasonable that they should be a source of great distress, and that she will be self-conscious about them.

64. In my view, I should award in respect of past pain and suffering a sum of €200,000 to take account of all the orthopaedic injuries, the physical scarring associated therewith, and the psychological effect these have had on her life to date in the ways described. This sum will not replace the good health which she previously enjoyed, it is a proportionate award bearing in mind the guidance which the Supreme Court has given in relation to the top end of awards for general damages. For the future, and leaving aside the need for future hip replacements, I believe that a sum for future pain and suffering, including psychological sequelae in the sum of €100,000 is appropriate in relation to the injuries already suffered. But I award, in addition, a sum of €75,000 in respect of the pain and discomfort associated with the hip replacement surgery she will have to endure into the future. The total of general damages for Martha then amounts to €375,000.

65. Special damages have been agreed in the sum of €70,632.31

The issue between the first and second defendants on the Notice Claiming Contribution and/or Indemnity
66. While that issue is different in nature to a claim against a plaintiff of contributory negligence, since the latter is an allegation that a plaintiff was in breach of a duty of care towards himself, I am satisfied that essentially the same considerations are relevant in deciding whether the second named defendant has been guilty of negligence in failing to ensure either that three of the five children availed of the seat belts provided, or in driving with more than three of the children in the rear so as to avoid any child being driven

unrestrained, and therefore should contribute to the award of damages to the plaintiffs or any of them. The fact that this issue is being dealt with on foot of a Notice Claiming Contribution or Indemnity rather than on foot of a Third Party Notice does not seem to alter the nature of the issue in any way. I have heard some very interesting evidence from engineers called by the both defendants.

Mr Steven Parkin
Qualifications/expertise
67. Mr Parkin was called on behalf of the first named defendant, and he holds an Honours Degree in Mechanical Engineering, is a Chartered Engineer and a member of the Institute of Traffic Accident Investigators, and the Association for the Advancement of Automotive Medicine, all in the United Kingdom. He carried out research for about ten years for the Accident Research Centre at University of Birmingham, and from about 1988 until 1996 was Deputy Director of that centre. He describes himself as being an expert witness in accident reconstruction for road traffic accidents and seat belt effectiveness. His studies and research have examined how occupants are injured in car accidents, and this involves examining vehicles to see, if seatbelts had been worn, how the occupants interacted with the vehicle interior, as well as measuring what he called "the depth of the damage" so as to calculate what was the "impact speed". He would also consult the medical records of the occupants, and by reference to those injuries and the contact points within the vehicle, predict the cause of the injury. He stated that relevant to this task were factors such as the age, sex, seating position, seat-belt use or otherwise, impact direction, impact severity and so on.

68. In addition to that crash investigation work, he has done work also in the area of seatbelt effectiveness generally, while at the Accident Research Centre at the University of Birmingham.

The damage to the vehicles
69. Mr Parkin examined the Passat and the Nova involved in the collision in these cases. He did so one week after the date of the accident. There is no need to set out the basis on which he arrived at his conclusions as to how the accident itself happened, but he was able to say that it was the near side of the Nova which came into contact with the front of the Passat, hitting the 'A' pillar on the near-side (passenger side), which is the pillar at the side of the windscreen. He said that it was a very severe impact. He described how he had found that the front of the Passat had been driven back by 68cms - just over two feet. The engine had been driven back into the bulkhead and there was some intrusion by the engine into the footwell and the facia in front of the passenger, which would then have caused the bulkhead and the facia to move from the front backwards towards the person seated in the front passenger seat. He stated that on impact the Nova in fact rode up over the Passat and landed in an adjoining field.

Calculation of 'Speed Change'
70. He then calculated what is termed the "speed change" of the Passat resulting from this impact. He did this by measuring the frontal damage to the vehicle, i.e. the **68cms** referred to, and with the assistance of a computer programme he could calculate from the damage what the speed change was on impact, and in this case this was measured at 38mph. This speed change figure is referred to as the "Delta V". He stated that the severity of accidents is rated in terms of their 'Delta V'.

71. I should clarify at this stage that the Delta V or speed change does not refer in any way to the speed either vehicle was travelling at prior to the collision, although obviously those speeds will be one of the factors which will determine what the Delta V will be – the others being the absorption capacity of the front of the vehicle and, if seatbelts are worn, the ride-down capability of the belt in question. The Delta V is the residual speed change which the body of the passenger in the vehicle must absorb when interacting with the interior of the vehicle, after the initial speed has been absorbed by the front of the car and the seat-belt if worn.

72. It is the scale of that Delta V and the extent to which the tolerance of the body of the occupant to injury is exceeded at that point of interaction, which determines the extent of the injury that will be sustained. Relevant also would be the nature of the surface within the vehicle which the passenger interacts with - i.e. whether it is a hard surface such as a pillar or windscreen, or perhaps the back of one of the front seats which would be softer.

73. Mr Parkin stated in fact that the Passat had absorbed the severe impact amazingly well given that severity, since there was actually very little intrusion of the front structures of the vehicle towards the front passenger seat.

The Seat-belts
74. He confirmed that in the rear of the Passat there were three seat-belts available none of which had been worn by any of the children. There was a three point belt at each outboard position and in the centre there was a lap-belt. He was able to confirm from his examination of the seat-belts in the front of the Passat that both the driver and the front passenger had been wearing their seat-bets at the time of the impact. Indeed that examination was able to confirm that in this collision there had been very heavy loading on the seat-belts, and this indicates a very severe impact, as well as additional heavy loading caused by the unrestrained rear seat passengers being thrown against the backs of the front seats. He was able to see also very marked distortion and damage to the front seats where they had been, in his words, "overwhelmed by the load from the rear". This would indicate the force with which rear passengers were thrown into contact with the front seats. All of these matters confirm what is not in doubt, namely that whatever the mathematics involved, this can only be described as a very severe impact collision.

Injury
75. Mr Parkin stated that as far as unrestrained rear seat passengers are concerned, it was difficult to predict what injuries would be sustained in any particular impact since it depends on which part of the car interior the occupant strikes and with which part of the body and this is difficult to predict. But he was of the view that legs would go through the backs of the front seats, which would have the effect of decelerating the lower part of the body but not the upper part, and this has the effect of tipping over the body so that the occupant is moving head-first towards the front of the vehicle and will inevitably come into contact with a hard surface at the front at whatever residual speed the body is travelling at after the initial absorption of some of the impact speed by the crushing of the front of the vehicle. He stated that if it is the head which impacts against a surface such as the windscreen at a high Delta V there will be some 'give' or deformation of that windscreen by 15 to 20 cms (six to eight inches) but nevertheless it is a hard surface, and the deformation will be significantly less than the 70 to 80 centimetres of the seatbelt. Alternatively the head could impact with a head rail where there would be very little deceleration capability, and more severe and certainly fatal injury would be sustained. He concluded that the exposure to injury in such an impact if unrestrained is significantly different over different parts of the body and dependant on what part of the vehicle is hit by the occupant.

76. He stated that the unrestrained rear passenger is likely to first come into contact with the rear of one of the front seats. He described those seats in the Passat as "pretty flimsy affairs made of tubular steel or aluminium". They are not designed to withstand heavy loading, and they will accordingly start to deform at low levels of load, and will not withstand people hitting them. They are designed according to Mr Parkin to support people sitting in them. He did not consider that they provide great protection to the rear passengers and that usually the front seats will splay outwards at impact, as happened in the case of the Passat in this case, and that permits a rear seat passenger to pass between the seats from the back of the car to the front area causing the occupant to hit

a hard surface in the front.

Predictability of injuries?
77. Mr Parkin spoke of the difficulty in trying to predict what injury would be suffered by an unrestrained person in any collision since people vary as to their tolerance of injury, with factors such as age, size, sex to be taken into account, as well as what object within the vehicle the occupant contacts. But he was able to say that from the research which he had carried out, the prevailing view is that "seat belts will save about 50% of all serious and fatal injuries, but that doesn't take into account accidents where seatbelts will do no good whatsoever" - and he instanced in that regard a side impact with a tree, which would render the seatbelt irrelevant. He stated that the purpose of a seatbelt was for frontal impacts and to prevent ejection from the vehicle. A seat belt would insure against what he described as the "*lottery of decelerations by hitting stiff structures in front of you where they are not going to be as forgiving as 70 to 80 centimetres [absorption capability of the seatbelt]*".

78. Describing the sort of injuries which could result from a person wearing a seat-belt, he stated that he would expect to see bruising and abrasions at all points of contact with the belt, such as the hip, chest and shoulder area, and that the legs would tend to flail forward and hit the front seat bases and that this could lead to ankle fractures or ankle dislocations. It was possible but unlikely that there could be lower leg fractures also, as well as injury to parts such as the clavicle, sternum and acetabulum, though the latter would be unusual. Mr Parkin was in no doubt that the chances of sustaining significant injury is much greater if the person is unrestrained in the rear of the car. He was of this view inter alia because in his opinion three point belts perform very well for rear seat passengers because, unlike for a front passenger, there will be no intrusion in a frontal accident into the rear passenger area.

79. He disagrees that in the present case these plaintiffs would have suffered greater injury if they had been wearing a seatbelt. Specifically he stated that the femural injuries would not have been sustained because these occur when there is heavy loading through the knee, and furthermore if that loading is even greater, then the head of the femur will be driven out of the back of the acetabulum, i.e. a fracture of the acetabulum initiated by contact at the knee driving the forces backwards.

80. It will be recalled that all three plaintiffs suffered femural fractures. Sean suffered one to his right leg, Eamonn had femural fractures to both legs, and Martha suffered such a fracture to her right leg as well as a dislocation and fracture of her left hip. Mr Parkin is satisfied that if restrained these passengers would not have hit the front seats with sufficient force to cause these fractures.

Dr Mark Jordan – Engineer
81. Dr Jordan was called to give evidence on behalf of the second named defendant, and his qualifications include a Ph.D in 1990 from University College Dublin on impact dynamics. He is amongst other things a Fellow of the Royal Academy of Medicine of Ireland for "biomechanical engineering and research".

82. He had worked in Sweden in 1983 with the Volvo motor company, who he described as the world leader at that time in crash worthiness investigation. When he returned from Sweden he undertook six years of full-time research in that area of study. He considers that he has built up a lot of experience and knowledge, both academic and practical, in relation to vehicular safety in general and in seat-belts. For some years now he has practised in the west of Ireland as a crash consultant. He was called to give evidence on behalf of the second named defendant.

83. He made it clear that in conducting his investigations and reaching his views he had taken into account each plaintiff's age, injuries sustained, and where each was actually seated in the rear of the Passat. This is a matter which the Court is urged by the second defendant to take into account in order to favour Mr Jordan's evidence and conclusions, rather than those of Mr Parkin, who had not done so. Dr Jordan expressed the view that these details were very important since the potential for injury was dependant on where each person was seated, as was the physical stature of each plaintiff and their position on the seat.

84. The solicitors instructing him had requested his opinion as to the likelihood of the plaintiffs being injured whether or not they wore a seatbelt, and also what those injuries would probably have consisted of. In his summary report and in his evidence, he stated that it is highly unlikely that the children would have escaped injury in this impact because of its severity, even if they had been wearing a seatbelt.

85. In relation to predicting what injuries they would have suffered he stated that it was not possible to predict accurately what their injuries would have been had each been wearing a seatbelt. He stated that it was not likely that they would have suffered the precise injuries which each of them actually suffered, and that the injuries would have been of a different nature. He did go on however to express the view that the severity of injury would have been worse for each plaintiff if a seatbelt had been worn, than those each plaintiff suffered unrestrained.

86. He agreed that from a public policy perspective it was clearly better that in general a seatbelt be worn than not, but that people should be aware that seatbelts do not in all collision scenarios provide protection from injury. He stated also that his researches showed that in the case of a severe frontal impact where a seat belt is worn, some of the injuries sustained would be accounted for by the seatbelt itself

87. Dr Jordan went on to deal with the "Delta V" – in other words the speed change that a vehicle goes through in an impact, and the energy or force which this generates on a passenger. He explained that the potential damage depends on the energy generated, and he described this damage potential as being proportional to the *velocity squared*, and not simply to the velocity.

88. In this respect he opined that Mr Parkin was simply in error when he stated that the difference between a Delta V of 30mph and a Delta V of 38 mph was only 20%. That comment was in the context of Mr Parkin stating in one of his reports that the impact speed was 38mph, and through an error in another report stating it as 30mph, and to him making the comment that there was only a 20% difference between the two figures in any event and that the error was not of any significance to the overall picture. In Dr Jordan's opinion this was incorrect since it was not simply the impact speed but that speed squared which gave the degree of force or Delta V, and therefore the Delta V of a 38mph impact speed was over 60% greater than one of 30mph, and not the 20% stated by Mr Parkin. Conversely the 30mph impact speed is only 60% as damaging as the 38mph impact speed.

89. He went on to explain further that the Delta V is the speed change through which the impacted vehicle passes after initial impact, and that this so-called speed change is absorbed over what he called the "deformation distance of the car". A number of factors affect the speed at which the impacted vehicle will decelerate and the impact of that deceleration speed on a passenger, such as the absorption capacity of the vehicle and the wearing or not of a seatbelt. In other words some makes of car will be designed so as to crumple at the front on impact less than another. The former vehicle can be said to better absorb the force of the impact. This in turn has the effect of slowing down the vehicle in the very short space of time before the body of a passenger interacts with the

structure of the car, reducing the amount of injury to the person.

90. Where the front of a car does not as effectively absorb the force generated by the impact, the car then interacts with the unrestrained passenger at a faster speed, thereby causing greater injury when the passenger comes into contact with some part of the vehicle. He explained that if it were possible to have some technology which allowed the passenger's body to be fully attached to the car for the entire period of "deformation" of the car, then both the car and the person would decelerate at the same speed, causing no injury. But that is not possible. But if a seatbelt is worn, this is a means of allowing the wearer avail also of what he called the "ride-down characteristics of the belt". In other words, in addition to the absorption capability of the car as a means of deceleration, there is the restraining and absorption capability of the seatbelt itself to slow down the speed at which the passenger interacts with the interior of the vehicle itself. In an ideal world the combination of these factors would bring the deceleration speed down to within the tolerance level of the human body to withstand injury. But he explained that the greater the deceleration speed the greater the chances of the human injury tolerance level being exceeded.

91. He concluded therefore that there comes a point at which the Delta V is such that even though the impacted vehicle will have absorbed some of the force of the impact, and even though added to that feature a person is wearing a seatbelt and has the benefit of the ride-down capabilities of the seatbelt, injury will still be sustained since the residual Delta V exceeds the human body's capacity to absorb it without injury. The extent of the resulting injuries will then depend of course on the extent to which the body's tolerance was exceeded and on what part of the car the body comes into contact with – a soft surface such as the back of a front seat, or a hard surface such as a windscreen or metal door pillar, for example, in addition to what part of the body is involved.

92. In this respect, different bodies will have greater or less tolerance depending on factors such as age and size, and the effectiveness of a seatbelt will depend on the stature of the wearer. He stated that while seatbelts are designed so as to fit the majority of the population, and can be of different configurations, they will never restrain a person so that they are fully attached to the car in the way mentioned above so as to ensure that the deceleration speed of both car and person coincide, thereby avoiding any injury. He stated that in a head-on impact the normal seatbelt will be activated and the wearer will be propelled forwards against the seat belt straps which he called "webbing". The entire load of the impact force is transferred and concentrated into this webbing, and these straps in turn interact and interfere with soft tissue, and that soft tissue is in effect being supported across soft tissue areas, even with a perfectly fitting seatbelt. But if the normal three point belt when worn by a passenger is not for some reason fitting perfectly, and has for example some slack in it, the body of the wearer comes to a more sudden stop when coming into contact with the webbing, and increased deceleration speeds are experienced, with greater injury the result.

93. In view of this factor, his evidence was that a young person, who is smaller than the person regarded as average for the purpose of seatbelt design, will find that the belt is not ideally positioned on the body. For example, he stated, in relation to the three point belt, such a young person would find that the lap portion of the belt would not remain properly at the iliac crest – the upper part of the pelvis - but rather would ride up on the abdomen. Similarly, the diagonal strap across the chest could conflict with the young person's neck. He stated that factors such as these expose such a person to risk of injury simply on account of the nature of the belt and its interaction with the smaller body.

94. He was of the view, unlike Mr Parkin, that if Martha was seated on the far left of the car in question and had been wearing a three point belt, she would first of all have had the four other children seated to her right, that she would have been squashed up against the left side of the car and that in such a position the diagonal strap of the seatbelt would have been conflicting with her neck at the high point, especially since she is a small framed girl and at the date of this accident was aged fourteen years. He stated that in the impact her entire trunk would have passed under the shoulder part of the belt, and the belt would have caught her neck and fractured it. He is of the view that a child or small framed person, even if seated properly, will not fit the belt properly, and that there would be slack in the belt causing the body to "submarine" under the belt and that this has the potential to cause injury to the neck. In addition if the body submarines, so to speak, beneath the belt, this can cause the body to move forwards causing the legs to come into contact with some unyielding part of the vehicle.

95. Dr Jordan also referred extensively to a report by the U.S. Bureau of Accident Investigation of the National Transportation Safety Board. This is a report which looked at the performance of lap-belts and lap/shoulder belts in relation to injury sustained, compared to passengers who are unrestrained, in relation to high velocity impacts. He summarised the conclusions of that report as far as matters relevant to the present case is concerned, by stating that it shows that in an impact as severe as the present case, restrained occupants, whether wearing a lap-belt or a lap/shoulder belt, are no better off in the back seat than unrestrained occupants as far as potential for injury is concerned. Put slightly differently, he stated that it showed that a restrained occupant is as liable to injury as an unrestrained occupant. He was also of the view that high speed impacts render seatbelts "practically irrelevant". It will be recalled that some of the medical experts stated that at speeds in excess of 40mph "all bets are off" as far as what injury will be suffered whether or not seatbelts are worn.

96. Specifically in relation to whatever plaintiff or passenger may have been able to wear the centre lap belt, Dr Jordan was of the view that this belt would not have properly fitted any of the children and if worn, the child's body would have engaged with the belt in a way which would have caused the belt to ride up into the gut, causing a hemicorpectomy – a slicing in two of the body. He stated in particular that if Sean (aged 12 at the time) as was suggested by Denis McCullough S.C. on behalf of the first named defendant, had been wearing the lap belt he may well not have received the exact injury which he in fact received, but that he would certainly have been seriously injured, since in his view lap belts cause injury to children, and this particular lap belt was after the accident found to have been a poorly fitting belt and could not have maintained the injury thresholds below what his body could have sustained. He was of the view that it did not require engineering knowledge to appreciate how such a lap belt would cause injury to the abdomen of a child, and that the abdomen would be exposed to far greater forces than if the child was unrestrained completely. In the event of being unrestrained he would probably come into contact with one of the back seats of the car, and that the force is thereby spread across a much larger contact area. If Sean had been restrained by the lap belt as Mr McCullough suggested he should have been, Dr Jordan referred to the fact that Sean would have been reliant entirely on that belt to dissipate the speed change of 38mph/ high Delta V. He described such energy levels as "phenomenal forces". Dr Jordan is of the view that the American study to which he referred already demonstrated clearly that had Sean been wearing the centre lap belt he would have fared much worse than being unrestrained completely. He described this opinion as being a matter of scientific probability, and not simply conjecture or speculation. He is firmly of the view that while the injury would be different, the injury would be as serious or more serious than the injury actually sustained while unrestrained. This view differs from that of Mr Parkin who, as already stated, was of the view that if the plaintiffs had been restrained, there would at worst have been fractures to ribs and sternum with bruising and abrasions to the chest area, but any injuries above that were the result of failure to wear a seatbelt. Dr Jordan completely disagrees, and states that fractured ribs can in such a situation rupture the aorta and that this would be catastrophic.

97. Dr Jordan stated that as far as the plaintiff Eamonn was concerned there was no seatbelt available since he was between Sean (seated in the centre) and Michael (who died) who was next to the window on his right. The only possibility suggested in relation to

Eamonn is that perhaps both he and Sean might have been able to avail of the lap belt. In so far as that may be suggested Dr Jordan stated that it would have been catastrophic, certainly as far as one of them is concerned, that being the boy who would be seated in front of the other. In the event that each could have availed of the lap-belt while being seated side by side, he was of the view that each would probably have slipped through the lap-belt and the outcome would have been just as bad as what actually occurred i.e. very severe injury.

98. Looking at the situation of having five children and two adults travelling in the car on this occasion ands what was the safest way of dealing with the fact that in the rear of the car there were only three available seatbelts, Dr Jordan stated that one option would have been for one child to have travelled in the front passenger on the lap of the passenger adult, leaving four children to sit in the rear, one of whom would not have worn a seatbelt. But in that event the child in the front would have suffered catastrophic injury, and have been ejected from the vehicle, and that the safest course to adopt was that which occurred, namely that all five children were seated unrestrained in the back He went on to express the opinion that seatbelt or no seatbelt the data which he has studied shows clearly that these children would have had the same severity of outcome given the nature of this crash – high speed head-on collision with a significant Delta V (38 mph or even more possibly), as explained above.

99. When cross-examined by Mr McCullough he expressed that his engineering expertise in this area of seatbelt safety and biomechanics is the appropriate expertise from which to express opinions in relation to these matters, rather than a medical specialist, although he did go on to say that some medical specialists may also have some expertise in the area of biomechanics, and that there can be an element of crossover between the two areas of expertise. But he described biomechanics as an engineering discipline, and that it was engineers who discovered body tolerance levels and so on.

100. While he accepted that Mr Parkin had the same type qualifications as his, he nevertheless felt that Mr Parkin had relied upon his own personal experience and data drawn from that experience, rather than, as he had done, drawn not only upon his own personal experience of crash investigation and data drawn therefrom, but had also drawn upon worldwide data for the purpose of reporting on and giving evidence in relation to this particular accident, which was an unusual one. This was because in his own personal experience, he would have come across only a few such accidents involving high speed frontal impact with five rear seated children. He feels that Mr Parkin's evidence suffers from the limitation that his data is confined to his own experience and data drawn from that. He felt that Mr Parkin's personal experience and his own was similar in size, and that while 20% of accidents are frontal impacts, one has to look for a subset within that 20% which would come within the kind of collision involved in this case, and that a very small percentage of such accidents would have occurred. That is why he felt it preferable to draw on a wider statistical database than his own.

101. Dr Jordan, in answer to Mr McCullough, made it clear that he would agree with the general public policy that it was better to wear a seatbelt than not to, but as an engineer and if it was possible to predict before setting out on a journey that he would be involved as a rear seat passenger in a high speed frontal impact, he would have a preference to being seated in the rear behind a front seat passenger and not to wear his seatbelt. From an engineering point of view and in view of all the data he has read and research which he has carried out, he would consider this to be the optimal way of minimising injury. He of course accepts that it is not possible to predict the nature of any collision which might occur, and that informs his view, which he expressed, that the wearing of a seatbelt is a prudent and safe thing to do, and he advises people to do that. He would also advise that children should wear a seatbelt or, when appropriate, sit in what he called a booster seat. It depends on the age and size of the child in question as to the nature of the appropriate restraint in any given situation.

102. In cross-examination, Dr Jordan also conceded or accepted that it was a matter of common sense for a driver adult to ensure that a child travelling in the car has available a properly fitting and appropriate seatbelt, and that it is worn.

103. In relation to the situation in the present case where there were only three belts available for five children, Dr Jordan stated that in general it would be better to use the available seatbelts in some way, although in the present case his view is that the wearing of the belts would not have resulted in a better outcome for the plaintiffs given the nature and severity of the impact. He agreed, when asked, that a reasonably prudent adult would ensure before setting off on a car journey that as many of the children as possible being carried was wearing a seatbelt.

104. He also agreed that none of the plaintiffs would have suffered the particular injuries which they suffered in this accident if they had been wearing a seatbelt. He agreed also with something which Mr Parkin had stated namely that research had shown that the wearing of even a lap belt was 18% safer than wearing no belt at all. He did not think that 18% was a significant improvement, but he accepted that the research of a Leonard Evans had shown this to be so in his study. There was further questioning of Dr Jordan about how that percentage of safety improvement would move upwards when irrelevant collisions were removed from the data from which the conclusion was drawn – in other words collisions such as side-impact collisions, in which the lap belt would have no effectiveness whatsoever. Dr Jordan stated that for any meaningful distillation of the data all data relating to collisions other than high velocity frontal impacts would have to be taken out, and he opined that when that exercise is undertaken, the result on the 18% safety improvement figure is to bring the results into line with the report by the U.S. Bureau of Accident Investigation of the National Transportation Safety Board to which I have already referred, but without looking at that report in detail he was unable to say what the percentage shown actually was.

105. In relation to the difference in effectiveness between a lap belt and a three point belt, Dr Jordan was in agreement that generally speaking the three point belt is better in safety terms than a lapbelt, and that studies have shown that the wearing of a three point belt by front seat and rear seat passengers in frontal impacts will reduce fatality levels, but that for children the wearing of the three point belt does not show the same level of reduction. On the other hand the research shows that while fatalities have been reduced, there is what he called a "concomitant increase in certain types of injuries… [and] some of these can be fatal."

106. Dr Jordan was asked also about at what age it would be appropriate for a child to not sit in a booster seat, but rather be restrained by means of an adult belt. He responded by referring to size rather than age. He stated that seatbelts are designed to fit females in the 25th percentile, and that this means in effect a person of about five feet in height, and that the cut-off point would be four feet and eleven inches. He agreed with Mr McCullough that at some point during the teenage years an adult seatbelt became appropriate. Reference was made to an Australian paper on the subject: "Adult seatbelts, how safe are they for children" by Michael Henderson. That paper has stated that for maximum protection a child should be restrained in a child seat or an adult belt supplemented by a booster seat "unless they are of a size appropriate to the use of adult belts." That paper went on to state, as referred to by Mr McCullough:

> *"However, field data from investigating crashes involving 121 children, aged 1 to 14 years in adult lap/shoulder belts [i.e a three point belt] show they were generally well protected even in severe frontal crashes. None sustained belt induced inertia neck injury. Change of velocity was related to injury risk but age was not…….*

Lap belted children sustained a higher proportion of abdominal injuries and a similar proportion of head injuries despite almost all being seated in central positions away from the side of the car."

107. Dr Jordan had some reservations about accepting this material since the paper according to him did not give any breakdown of what particular injuries were sustained at particular Delta V speeds. He also stated that the term "frontal impact" could be anywhere in an arc of 120 degrees, and not just 20 degrees which was the angle of impact in the present case, so he was hesitant to draw any definite conclusion from the paper itself for the purpose of this particular case. He also felt that the paper suffered from the fact that in the sample used there was a very small cohort of unrestrained occupants.

108. Mr McCullough cross-examined Dr Jordan also in relation to certain of the findings in the report of the National Transportation Safety Board. There is no disagreement about the greater efficacy of the three point belt over the lap belt, even for young children, and the potential hazards deriving from the use of a lap-belt especially by young children, although there is some evidence that the use of a lap-belt in some crashes is better than using no belt at all. Dr Jordan felt that while the report showed that the use of the three point belt reduced fatalities in cases of a Delta V of up to 40mph, it also showed that significant non-fatal injuries were sustained. He agreed that it was not possible to say with any accuracy what particular injury these plaintiffs would have suffered had they been wearing a belt of any kind, since there would be a wide range of possible injuries. But he maintained his opinion that each plaintiff, if restrained, would have suffered at least as severe an injury as occurred, and probably worse.

Doctors - Re: effect of seat-belt to reduce injury

109. A number of medical experts gave evidence as to their opinion as to the efficacy of seat-belts to reduce or eliminate the likelihood of injury in a motor accidents. All agree that as a general principle persons travelling in cars should wear seatbelts. However, it is true also that each of these orthopaedic consultants was of the view that when the impact speed exceeded about 40 mph, a person was likely to suffer significant injuries even if a seatbelt was worn, although, as Mr Damian McCormack, Consultant Orthopaedic Surgeon puts it in his evidence, "*the pattern of injury would be different*". He described an impact speed of greater than 40mph as a "lethal impact" and that the injury pattern will just depend on the mechanism of the injury". He went on to say that "*the seatbelt might itself crack your clavicle, but the impact deceleration will rip your aorta and kill you*." Mr McCullough, while allowing for the fact that the greater the impact the greater the likelihood of injury, nevertheless asked Mr McCormack did it still not remain the case that a person is better off wearing a belt than not wearing a belt. He replied:

"Yes is the answer until the impact speed exceeds say 40 miles an hour - then unfortunately all these things are irrelevant."

110. He was asked also was it not a fact, where persons were involved even in a high speed impact accident and were wearing a seatbelt, that their injuries would tend to be to the upper body, the chest, sternum, and ribs. Mr McCormack stated in response that it was very difficult to generalise, and that it would depend on the mechanical circumstances of the accident. He said for example that Sean McNeilis (unbelted) had received in this accident sufficient kinetic energy to crack his femur, and that had he been belted his body would have still received the same kinetic energy and had he been wearing the lap belt, for example, this energy "*probably would have broken his lower spine rather than his femur*", and added: "*there is no escaping the impact velocity and the kinetic energy imparted to his body - something was going to be broken or injured.*" At a later point in his cross-examination Mr McCormack stated that that the majority of people who came under his care following accidents in which they have received lower limb fractures state that they had been wearing seatbelts, and that in his experience lower limb fractures do occur in passengers who are restrained by seatbelts. He stated in this regard that it really does depend on the impact forces, and their direction. Again he was of the view that at high impact speeds "all bets are off" as far as the effectiveness of belts to reduce injury is concerned.

111. He was however sure that if he had worn a seatbelt his femur would not have been broken, but he would have suffered another injury such as a dislocation of his lower thoracic lumbar spine. He was of the view that the pattern of injury would have been different but the severity would have been worse. Mr McCullough was at pains to get Mr McCormack to agree that as a matter of probability the injuries, if seatbelts had been worn, would not have been the same injury as in fact was suffered. To that specific question, Mr McCormack was in agreement, although he retained his opinion that given the impact speeds involved the injury would have been significant and possibly greater. He accepted that this was a matter of some speculation as to exactly what injury would have been suffered if a belt was worn.

112. Another Orthopaedic Consultant, Mr William Quinlan stated, in relation to Martha's injuries, that at a mild to moderate speed a seatbelt would have erstrained Martha and that she would not have been thrown around the car, but that even people who are wearing seatbelts receive what he called "ferocious injuries", and that he would regularly see such people with fractured femurs and hips. But he stated that at high speeds, as in this case, he felt that no seatbelt would restrain an occupant. He agreed that this was his "opinion" gained from seeing the aftermath of road traffic accidents, rather being based on any studies.

113. Specifically in relation to Martha's injuries he could not agree that if she was wearing a seatbelt she would not have received the type of injury which she received. He felt that in a highs peed impact she would have been very susceptible to similar type injuries. When asked whether as a purely general principle, people who wear a seat-belt suffer less injury, he agreed, but remained of the view that the position was not clear in this respect in cases of high speed impact, such as the present case.

The issue of contributory negligence against the plaintiffs

114. I have come to the conclusion that these plaintiffs cannot be found to be guilty of contributory negligence in the particular circumstances of this accident. This conclusion is reached by me without reference to the question as to whether the plaintiffs would or would not have suffered different, worse or reduced injuries had they been restrained, but rather on account of other matters such as their respective ages, and/or maturity, and the nature of the somewhat unusual and complex situation which presented itself to them in relation to the number of seat belts relative to the number of rear seat passengers.

115. First of all there is no evidence that any of these plaintiffs was asked by the first named defendant (or indeed by the front seat passenger Mrs McGill) to wear a seat-belt. Sean was almost 13 years of age. He could not recall if he would normally have worn a seat-belt in the back of a car at that time, but he agreed that if he had been told to wear one, he would have done so. He was asked whether at that age he would have known that wearing a seatbelt was safer than not doing so, and answered in reply: "I don't know, maybe not."

116. Martha was about fourteen years old at the date of the accident, and she was asked by Mr McCullough why she had not worn the three-point seat-belt that was available at the position she was seated in the rear of the car against the door. She replied by saying that it was impossible since there were five children in the back of the car. She went on to explain that they were all crammed on top of one another. It was put to her that she would have been able to put on the belt in her position even if the others were unable to do so, and she agreed when pressed. She also agreed that she would have known at her age that as a general rule it was

safer to wear a belt than not to do so. She agreed that she was saying that the only reason why she did not wear a belt was that there were five children in the back. She stated that nobody in the front of the car (i.e. her mother or her aunt) told her to wear a belt.

117. Eamonn was not questioned about not wearing a belt, but being even younger than the others, and suffering from the condition referred to, there could be no question of a finding against him of contributory negligence.

118. These admissions by both Sean and Martha must be seen in the light of their age and immaturity Martha has agreed that she knew that it is safer to wear a belt than not, but Sean was not sure. Martha stated this in cross-examination, and when pressed. I had the important opportunity of seeing these plaintiffs giving their evidence. I am not prepared to take these answers to questions put to them in cross-examination by Mr McCullough as sufficient evidence in order to fix them with the sort of realisation as to the desirability of wearing seatbelts in the circumstances of this case, so as to determine that they were each so in breach of their duty of safety to themselves that I should find them guilty of contributory negligence. These are immature children. Needless to say I do not use that term in any critical or pejorative way, but simply to describe a certain innocence and lack of what I might call 'street-wisdom'. They are not to be judged by reference to standards perhaps to be expected of the more sophisticated and street-wise teenagers who sometimes come before the Court. I have no doubt whatsoever that these particular children still depended as of the date of this accident, on guidance and direction from their respective mothers when in her company. They were each in this car with their mother, and in an unusual situation where there were five in the back and three belts fitted. In spite of any knowledge or awareness which Sean and Martha may have had regarding the desirability of wearing a belt if available, I do not find it fair and reasonable that they should be found to be negligent in that regard given their particular age and characteristics, especially where there is no evidence that they were asked or told by either the second named defendant or Mrs McGill (the front seat passenger) to wear the belts as best they could.

The Road Traffic (Construction, Equipment and Use of Vehicles)(Amendment)(No.3) Regulations, 1991 - S.I. No. 359/1991 ("the regulations")
119. As part of the issue in this case as between the first named defendant and the second named defendant (the driver of the vehicle), it is alleged that the latter was in breach of article 7 of these regulations, which provides as follows:

> "7. (1) This article applies to every passenger vehicle having passenger accommodation for not more than eight persons exclusive of the driver, when used in a public place.
>
> (2) Subject to the provisions of article 8 of these regulations, a person occupying a forward facing seat, not being a front seat, of a vehicle, to which this article applies shall, as and from the 1st day of January 1993, wear a safety-belt or an appropriate child restraint.
>
> (3) Subject to the provisions of article 8 of these regulations, the driver of a vehicle to which this article applies shall not, as and from the 1st day of January 1993, permit a person who is under seventeen years of age to occupy a forward facing seat, not being a front seat, unless that person is --
>
> (a) 4 years of age or upwards and is wearing a safety belt, or
>
> (b) restrained by an appropriate child restraint."

120. Article 8 of these regulations contains a number of exclusions from the application of the regulations, and relevant to the present case is that appearing at article 8(3) which states as follows:

> "8. (3) If and so long as three or more children under the age of 15 are being carried on a vehicle the provisions of sub-articles 7(2) and (3) of these regulations shall apply *only in so far as is reasonably practicable.*" (my emphasis)

121. The second named defendant submits that in a situation where she was the driver of a vehicle in which in the back seat were five children under the age of fifteen years and where there wear only two three point belts and a centre lap-belt, it was not reasonably practicable for the purpose of these regulations to comply with article 7 thereof, and that therefore she was not in breach of the regulations. The first named defendant on the other hand submits that the second named defendant could have easily ensured that some three of these children could have been wearing the available belts, and that if she had so done it would have been a reasonable compliance with the regulations, even though a situation would have remained where two children would have remained unrestrained.

122. I am of the view that the second named defendant on balance was not in breach of the regulations, given the existence of three belts for five children, and in view of some of the evidence which I have heard, namely that it would not have been feasible for the outer three point belts to be properly and safely worn by the two children who occupied the outboard seats, when there were three other children in the middle. There would inevitably in such a situation have been a bunching of the children across the back seat which would have precluded a proper application of these belts, and it would have been impossible for one of the children in the centre to have applied the lap belt. I do not feel that it was reasonably practicable in these circumstances to comply with the regulation, and that the situation is covered by article 8(3) accordingly.

The seat belt issue as between the Defendants
123. From the evidence of Mr Parkin and Dr Jordan, the Court can be completely satisfied that this was a high speed impact, and that the Delta V as discussed above was very significant. There is no real dispute between these two experts in this regard. These experts do however disagree over the question of what injury would have been received by these plaintiffs if they had worn a seat-belt.

124. Mr Parkin is of the view, as I have already set forth, that if they had been restrained the injuries would have been confined to bruising and abrasions at all points of contact with the belt, such as the hip, chest and shoulder area, and that the legs would tend to flail forward and hit the front seat bases and that this could lead to ankle fractures or ankle dislocations. He stated that it was possible but unlikely that there could be lower leg fractures also, as well as injury to parts such as the clavicle, sternum and acetabulum, though the latter would be unusual. It is a fair summary of this evidence that Mr Parkin is of the view that not only would these plaintiffs not have suffered the injuries which they in fact suffered but that the injuries which would have been sustained would have been less severe.

125. Dr Jordan disagrees, as do Mr Quinlan and Mr McCormack, the orthopaedic consultants, although they come to these matters from different specialties. I have considered the competing views carefully, and in arriving at a conclusion for the purpose of these

proceedings, I can do so only on the basis of probability. However, it is first necessary to decide what is the question which the court is required to determine. Mr McCullough on behalf of the first named defendant submits that the question to be decided is simply whether the first named defendant has discharged the onus which is upon her of showing as a matter of probability that if these plaintiffs had been wearing any of the belts available in this vehicle, they would have suffered the injury which each suffered. He submits that this is the only issue arising, and that it is not a question of determining whether the second defendant is correct in saying that if they had been wearing a seat-belt they would have suffered injuries which were either as severe though different, or perhaps even worse, including causing death. If that is the correct question, then the evidence is clear, and it is inconceivable that in any case whatsoever, that precisely the same injury would have been sustained whether or not a seat-belt is worn. It is hard to see how such could ever be the case. Certainly in the present case, there can be little room for doubt that each of these plaintiffs would have received precisely the same injury whether or not they were restrained, leaving aside completely the speculation involved as to whether those injuries would be more severe than those actually occurring.

126. In making that submission, Mr McCullough relies on the decision of the Supreme Court in *Hamill v. Oliver* [1977] I.R. 73. In that case it was held that the plaintiff's failure to wear a safety belt amounted to negligence on her part if her injuries would have been prevented or reduced had she been wearing the safety-belt at the time of the collision. Mr Parkin's evidence would support the first named defendant's reliance on this decision. But Mr McCullough refers specifically to a particular passage in the judgment of Griffin J. (with whom the then Chief Justice and Henchy J. agreed) where at page 76 of the judgment he states as follows:

> *"In the accident, the plaintiff, as she described it, was 'thrown onto the gear handle' of the car and received injuries to her chest and ribs. She fractured the fifth, sixth and seventh ribs on the right side, and she suffered a right pneumothorax with collapse of the lung on that side. The nature of the accident, coupled with these injuries, shows that the primary cause of her injuries was an impact with the gear lever, which would have been situated to her right. She was obviously thrown forward and to the right. This was a type of accident which could not have happened if she had been wearing a seat-belt.*
>
> *Prima facie, therefore, there was contributory negligence on her part. As it was held in Froom v. Butcher, any person who travels in the front seat of a motor car, be he passenger or driver, without wearing an available seat-belt must normally be held guilty of contributory negligence if the injuries in respect of which he sues were caused wholly or in part as a result of his failure to wear a seat-belt. There may be excusing circumstances for not wearing the seat-belt, such as obesity, pregnancy, post-operative convalescence, and the like; but it is for the plaintiff who has not worn it to raise and prove such excusing circumstances.*
>
> *In this case, the trial judge ruled out contributory negligence on the ground that there was no evidence that the wearing of a seat-belt would have prevented the accident. However, as was decided in Froom v. Butcher, that is not the correct test. The question is whether the wearing of a seat-belt would have prevented or reduced the injuries. Here, as in most cases, no special evidence was required on that point. The jury could not but have come to the conclusion that the impact injuries the plaintiff received when the right chest and ribs struck the gear-lever would not have happened if she had been wearing a seat-belt. Therefore the issue of contributory negligence was incorrectly ruled out."*

127. Mr McCullough refers to the approval in that judgment of the judgment in Froom v. Butcher [1976] Q.B. 286, a case in which the Court of Appeal that in determining whether a plaintiff was guilty of contributory negligence the question was not what was the cause of the accident but what was the cause of the damage, and he homes in as it were on the reference to the question being whether the injuries sustained would have been prevented or reduced by wearing of the seat-belt. He refers to the evidence that if a seat-belt had been worn the injury sustained by these plaintiffs would not have been sustained - ergo, he submits, there is contributory negligence, and it is irrelevant to that consideration whether the injuries instead would have been as severe, more severe or even fatal.

128. Edward Walshe S.C. on behalf of the second named defendant on the other hand submits that the issue as Mr McCullough would put it above, and that it is not sufficient to simply establish that the precise injury sustained would not have been sustained, and he submits that Hamill v. Oliver is not authority for that.

129. In considering Hamill v. Oliver, one must, I feel, have some regard to the nature of the injury involved, and from which one can reasonably infer that the impact in that case, while sufficient to cause the plaintiff in that case to be "thrown onto the gear lever" was of an entirely lower degree of force that that we are dealing with in the present proceedings. There can be no doubt about that, particularly when one considers that the plaintiff, Hamill, was an unrestrained front seat passenger. The Supreme Court was dealing in that case with a situation where it was reasonable to conclude that the only reason that the plaintiff suffered any injury was the fact that she was not wearing a seat-belt. That is the context in which Griffin J. stated that "*this was a type of accident which could not have happened if she had been wearing a seat-belt*", and also, when referring to *Froom v. Butcher*, the learned judge stated that "*any person who travels in the front seat of a motor car, be he passenger or driver, without wearing an available seat-belt must normally be held guilty of contributory negligence if the injuries in respect of which he sues were caused wholly or in part as a result of his failure to wear a seat-belt.*" (my emphasis)

130. Context is important, and if taken out of the appropriate context, it is easy to see where Mr McCullough seeks to gain support for what appears to be a somewhat illogical and unfair conclusion - namely that even if the plaintiff succeeded in establishing as a matter of probability that the wearing of a seat-belt would have caused either the same degree of injury, or a greater degree of injury, including fatal, it still follows that such plaintiff is guilty of contributory negligence if the precise injury sustained and sued for would not have occurred. I cannot be satisfied that this is a reasonable interpretation of, and conclusion to be reached on the basis of, the judgment of the Supreme Court in Hamill v. Oliver - a decision which is of course binding upon me. A more reasonable interpretation in my view, and one which can take account of the different nature and severity of individual accidents, would be that the question arising is whether the wearing of a seat-belt would have prevented injury altogether, or reduced same. It is not simply whether it would have prevented "the injuries".

131. It does not seem to me to be correct that a person can be held to have negligently contributed to his own injury where it can be established by him that in any event the wearing of a seat-belt would not have availed him. It seems to me that the causative link between the negligent act alleged, namely the failure to wear the seat-belt, and the damnum suffered, would be missing. I do not believe that Hamill v. Oliver is authority for the latter. This is supported in my view by the reference by Griffin J. in the extract from his judgment quoted above, namely that: "*the jury could not but have come to the conclusion that the impact injuries the plaintiff received when the right chest and ribs struck the gear-lever would not have happened if she had been wearing a seat-belt*", and to his earlier statement that "*she was obviously thrown forward and to the right. This was a type of accident which could not have happened if she had been wearing a seat-belt*". It seems clear that in that case the plaintiff, if she had been seat-belted, would have been restrained so that she would have received no injury whatsoever. That is a significant distinction from the present case, where

given the very high impact nature of the collision, these plaintiffs were always going to be injured even if belts were worn.

132. Having thus concluded as to the correct question to be addressed it remains to consider the question as to whether the second named defendant has been guilty of negligence so that she should contribute to the damages awarded in this case.

133. That question involves firstly a consideration of the duty of care owed by her towards these plaintiffs as the driver of the car. In my view there can be no doubt but that the driver of a car is under a duty of care towards his/her passengers to ensure that they are transported in the car as safely as is reasonably practicable. This extends to ensuring that seat-belts are provided, and in the case of young children especially, ensuring that such children are belted appropriately to their ages, including where necessary by the use of a booster seat for very young children.

134. There are regulations in place and to which I have already referred. That indicates a legislative intention as regards ensuring as far as practicable passenger safety. But the fact that I have concluded that the second named defendant may not have been in breach of these regulations, does not lead also to the conclusion that she was not in breach of her common law duty of care. In the present case the second named defendant, as the driver of the car, owed a duty of care to these plaintiffs and the other children. The requirement of proximity is clearly present between her and these plaintiffs. I am completely satisfied that it was foreseeable that in any collision which might occur the plaintiffs would be exposed to injury. I do not have to decide whether the particular type of impact or the particular injuries which were sustained were themselves foreseeable. Neither is there any room for any suggestion that there might be any public policy consideration which might mandate that she not be under this type of duty of care, and it is fair and reasonable that such a duty of care be upon her. In this way all the requirements for the existence of a duty of care exist in this case in relation to the second named defendant towards the plaintiffs herein.

135. I make no finding in relation to whether in respect of Martha, Martha's mother who was seated in the front passenger seat shared with the second named defendant (her sister as it happens) the duty of ensuring the safety of her own daughter by ensuring that she wore a seat-belt. It is outside the issues arising for determination in the present case, and must await an appropriate case in which the issue is raised.

136. Having so concluded, the next question is whether there was a breach of that duty in the particular circumstances of this case by failing to ensure that the plaintiffs wore the seat-belts provided. As we know, there were five children being placed in the back of this car. There were only three belts in total. It follows that even if three children wore the available belts, two were going to remain unrestrained. The Court cannot speculate as to whether or not two of these particular three plaintiffs would have been those who would not have been belted. I have heard no evidence from the second named defendant as to what if any consideration was given by her to the question of how to use the available belts between the five children in the back. She gave some evidence in her capacity as the mother of the plaintiff, Eamonn, but she was not cross-examined as to the seat-belt issue, which is understandable since she gave no direct evidence in that regard. But the fact is that no evidence was lead by her in relation to that matter. There is therefore no evidence as to whether any consideration at all was given to this question, and I must conclude therefore that she did not give consideration to the problem of having five children in the back, and that there were only three belts. She must be taken to not having even decided that in the circumstances where there were five children and only three belts available, that it was safer to leave all children unrestrained. I must conclude, and do so, that she gave no consideration to the matter at all, and that the children were simply put into the back, and they were left to their own devices as to the seat-belts.

137. In those circumstances, I must conclude that there was a breach of the duty of care upon her since she failed to give any consideration to the safety of the plaintiffs. Had she at least considered the problem, and made a reasoned decision in the light of the circumstances prevailing, I might have been able to conclude that she had not breached her duty of care, even if I might also form the view that the decision taken by her was wrong. But in the absence of any evidence from her, I must conclude that she was in breach of the duty of care upon her.

138. Lastly it is necessary to consider whether the breach of the duty of care has a causative link to the injuries sustained by the plaintiffs and in respect of which they seek compensation. The second named defendant has sought to adduce evidence that even if these plaintiffs had been wearing a seat-belt, they would have been injured at least as badly as they were, and potentially more seriously. The first named defendant submits the contrary, namely, firstly, that it is safer to wear seat-belts than not to, and secondly that as a matter of probability, if they had been wearing a seat-belt they would not have suffered these particular injuries, and further, that any injury which they would have suffered would as a matter of probability have been of a lesser degree than what was actually suffered.

139. Mr Parkin's engineering evidence for the first defendant is to the effect that the injuries would have been less, and that certainly the femural injuries would not have been sustained if belts had been worn, and that the injuries would have been more to the upper body. No orthopaedic surgeon was called to give evidence in this regard by the first named defendant, and I am asked by the second named defendant to infer from that fact that no such evidence would have been forthcoming to back up Mr Parkin's evidence in this respect, which of course is given from an engineering perspective and from Mr Parkin's professional experience and his studying of data and research into the question of injuries related to the wearing or otherwise of seat-belts. The orthopaedic surgeons who gave evidence on behalf of the second named defendants are of the view that while in low impact crashes a seat-belt will in all probability be effective in reducing the extent of injury which will otherwise be sustained, in a high or severe impact crash "all bets are off", and the extent of the injury sustained even if belted is completely unpredictable given the high energies involved, and which are transferred to the bodies within the car. Dr Jordan's engineering evidence on behalf of the second named defendant is also to that effect, and he has produced some very interesting research evidence which he says supports his opinion. He believes that this research shows that the injuries likely to have been suffered by these plaintiffs, if belted, would have been more severe and possibly fatal.

140. I have considered all this evidence carefully. I am of the view that the severity of the impact in this particular case is crucial and central to this question. This is an impact at the higher end of the scale. There is no controversy as to the severity of the impact. I am impressed by the evidence of the orthopaedic consultant's view that in such an impact "all bets are off". Each consultant expressed this view, albeit in differing terms. There experience on the ground as it were treating persons who have been involved in high impact crashes is that even where persons have been wearing seat-belts they often receive very serious injuries, including injury to the femur. I accept of course that neither of these consultants has carried out research as such, and therefore it is not possible to take their evidence other than anecdotal and as a general proposition. They have not sought, for example, to distinguish between injured persons who might have been front seat passengers, drivers, children of various ages and so on. But nevertheless it is helpful for the Court to hear their overall view in order to arrive at a view on the basis of a probability. Dr Jordan's research also points to the probability that it is unpredictable as to what injury will be sustained in a high impact collision. Even with the benefit of Mr Parkin's evidence, which was most helpful, informed and interesting, I am left in some considerable doubt, I have to say, that these plaintiff's would have suffered significantly less serious injury had they been belted. There is too much speculation involved in determining

whether the injury which would be sustained would be less than was suffered if belts had been worn, in order to reach a conclusion in that regard in favour of the first named defendant.

141. If the question to be determined was simply, as posed by Mr McCullough, whether the plaintiffs would have suffered "the injuries" which they suffered, if they had worn a belt, I would have no doubt that the answer would be different. But it is not so simple a question, as I have already found. I am satisfied as a matter of probability that even if these plaintiffs had been wearing a seat-belt, they would have suffered significant and serious injury of some kind. The first named defendant had not discharged the onus upon him to show that the injury would have been less.

142. In arriving at my conclusion in this regard, I believe that I am entitled to have regard also to the available evidence as to how this accident happened in the first place. The second named defendant was in no way responsible for the occurrence of this accident. The blame lies fairly and squarely on the driver of the other vehicle. That is in no doubt whatsoever, and no contrary suggestion is even put forward. But even without that particular feature, I am satisfied in any event that the injury would in all probability be significant and severe, though different possibly in nature, or even worse. In these circumstances, I conclude that the necessary causative link between the breach of the duty of care owed by the second named defendant to these plaintiffs, and the injuries sustained by them is absent, and that in this respect she cannot be found liable to contribute to the first named defendant's liability to the plaintiffs on foot of the Notice of Contribution/Indemnity filed and served herein.

143. I would like to conclude by suggesting that there is another issue which arises in cases such as the present one. While in the light of my findings as to causation the issue does not arise in the present case, it is an important issue which could arise in other cases. This is whether in circumstances where a driver knew, or ought to have known, that there were only three available seat-belts, it is negligent to carry more than three children in the back at all, regardless of whether three can use the available belts. This would be in spite of the exclusion contained in article 8(3) of the regulations referred to. Where an adult driver is carrying more children in the back of the car that there are belts available, it seems to me to be highly arguable that even if three of those children wear the available belts, it is negligent to carry the remaining children where they must inevitably remain unrestrained. It seems to me arguable that the necessary 'proximity of relationship' exists, that the likelihood of injury is 'foreseeable', that there can be no possible countervailing public policy consideration, and that, given the prevalence of motor accidents and the obvious desirability of reducing the incidence of injury, that it would have to be 'fair and reasonable' that a duty of care of that scope should be imposed on such a driver. As I say, in the present case that issue itself can be left aside, since causation of injury has been decided in a particular way. But I leave it for another case to decide whether it is negligent to carry in the back of a vehicle more persons, especially children, than there are available belts, even where the available belts are used. In the present case, if it had been necessary to do so, I would have concluded that it was no excuse for the second named defendant to plead that given that she had five children in the back, and only three available belts, it was impossible to decide which child should wear a belt.

144. The final matter which I should like to address is the disturbing evidence which I heard during this case as to the dangers for young children who wear the lap-belt in the centre of the back seat. The evidence has been that the lap-belt is singularly inappropriate for young children to wear. The reason for this has been stated to be that such belts are designed so as to fit across the iliac crest, which is the strongest part of the pelvic area. When a normal adult applies the lap-belt, it crosses across the iliac crest, and this has the effect that in an impact where the person is thrown forwards, it is the iliac crest which impacts against the belt, and that part of the body is particularly well-suited to withstand the force generated. However, where a small child, or even a lightly built young teenager is wearing a lap-belt, the belt will not, in an impact, remain over the iliac crest, but will ride up the abdomen somewhat. This has two effects at least. The first is that the person will 'submarine', as it is called. In other words, the young person will be thrown forward and under the belt with all the obvious risks of not being restrained appropriately. In addition, there is a clear and known risk that when the young person is thrown against the lap-belt, it will be positioned at the abdominal area, and the force generated into the body will cause massive internal organ damage, including catastrophic damage to the aorta and fracture of the spine, or even worse, hemicorpectomy. I do not believe that parents and others in charge of young children in vehicles are aware of the fact that in all probability the wearing of a lap-belt by a child will in relatively severe impacts render the child more likely to suffer serious injury or even death, than if they were unrestrained altogether. That is the content of some of the expert evidence which I have heard, and I believe it is appropriate that I should say so, even if the precise issue did not as it happens need to be the subject of a determination in relation to the particular plaintiffs with which the proceedings are concerned. It is perhaps a matter for legislation.

145. I therefore give judgment in favour of Eamonn McNeilis in the sum of €165,252.74; in favour of Sean McNeilis in the sum of €204,165.96; and in favour of Martha McGill in the sum of €445,632.31.