Liability in Catastrophic Road Traffic Accidents

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The legal principles

Catastrophic brain injuries bring their own unique problems in establishing liability for a road traffic accident. In this paper we look at some practical aspects of establishing liability including the need for reconstruction evidence.

In this paper we will take a closer look at some of the case-law and in particular some examples of how the Higher Courts determine liability for collisions between pedestrians and vehicles.

Once you have a high-quality accident reconstruction report you will be in a good position to judge whether you will or will not establish primary liability for the accident, and the level of contributory negligence (if any).

It is often very difficult to predict contributory negligence with accuracy as there is a wide margin of discretion given to the trial judge. The decision in 2003 of the Court of Appeal in the case ***of Karen Janet Eagle v Garth Maynard Chambers*** *[2003] EWCA Civ 1107* probably represents the highpoint of liability towards pedestrians by car drivers. The high duty in that case has probably been slightly softened since that time but it remains good law. In that case, the Court of Appeal highlighted the destructive potential of a motor car likening it to a dangerous weapon. As Hale LJ said:

"It is rare indeed for a pedestrian to be found more responsible than a driver unless the pedestrian has suddenly moved into the path of an oncoming vehicle"

The Court will apply the Law Reform (Contributory Negligence) Act 1945. Two key factors must be considered: -

1. Blameworthiness

2. Causative potency.

In ***Sabir v Nana Osei-Kwabena*** *[2015] EWCA Civ 1213* the Court of Appeal gave guidance upon how these principles are to be balanced. The Claimant got out of her car parked a few metres beyond a pedestrian

crossing. She looked, mis-judged the distance of an approaching car and proceeded to cross the road in front of it. She was 4 metres into the carriageway when she was struck by the oncoming vehicle. She suffered a very significant traumatic brain injury. The Judge found the claimant 25% responsible for the accident but the greater share of liability upon the defendant who had not paid proper attention to the road. The Court of Appeal upheld the trial Judge but stated:-

"***For my part bearing in mind that the 1945 Act speaks of responsibility for the damage rather than responsibility for the accident, I am inclined to think that it is because of the destructive potential of the car driven at even moderate speed that it is "rare indeed" for a pedestrian to be found more responsible than a driver unless the pedestrian has suddenly moved into the path of an oncoming vehicle...The proper approach I would suggest, is that the destructive capacity of a driven car comes into both aspects of the evaluation"***

In our opinion the following principles can be distilled from the case law.

1. **Pedestrians who suddenly move into the path of a vehicle with no reasonable opportunity for the driver to avoid them will probably lose or there will be a high degree of contributory negligence.**

This can be demonstrated by the following case. It is striking because the Claimant was crossing on a pedestrian crossing. In **Kayser v London Passenger Transport Board** *[1950] 1 All ER 231, 114 JP 122* the case involved an accident on a pedestrian crossing. The Claimant who was crossing in front of a bus was apparently out of the way of the bus who began to pull off expecting the Claimant to carry on crossing out of harms way. The Claimant however then reversed their direction of walking possibly due to traffic coming from the other direction and ran back in front of the bus. The

bus driver had set off very slowly in first gear and his view of the claimant was obstructed. In these circumstances the bus company escaped liability.

In **Barlow v Entwistle** 15 May 2000**, Court of Appeal,** Roach LJ, Latham LJ, reported in Lawtel**,** the claimant was larking about on the grass beside an A road with two of his friends. The claimant ran out into the road heading for the other side. The claimant was then struck by the defendant's car which was travelling at about 25mph. At first instance it was held that the defendant had failed to keep a proper look out as he had not seen any pedestrians prior to impact. Therefore the defendant was liable with contributory negligence assessed at 50%.

The Court of Appeal held that no driver could anticipate that the claimant would, without warning or reason, run across this busy road. As such, the defendant's failure to keep a proper look out was not *a causative* factor of the accident and the accident would have happened even if the defendant had seen the claimant and his friends. The appeal was therefore allowed and the Defendant was not liable.

In **Roda Sam (previously Al-Sam) v Atkins** *[2005] EWCA Civ 1452* the claim arose following a road traffic accident on 12 February 2001, on a busy four lane street. It was dark although street lights were on. The claimant, a pedestrian, intended to cross from the south side of the road onto the north side. The defendant travelling west in the offside lane was in the process of overtaking a transit van which was stationary in the nearside lane. The defendant was travelling at no more than 20mph when the claimant stepped out into her path from the front of a stationary transit van, and was struck by the defendant's vehicle. At first instance, the Judge found that although the defendant had been negligent, this was not the cause of the accident, and dismissed the claim. The claimant appealed. The Court of Appeal upheld the decision. The defendant had not been negligent. The judge was right to find in her favour, and dismissed the appeal.

In **Stewart v Glaze** *[2009] EWHC 704 (QB)* the claimant who had been out

drinking with a friend, was seriously injured when he suddenly ran out into the path of the defendant's vehicle, resulting in a collision. The court had to determine whether the defendant's driving fell below the standard of a reasonably competent driver. On the evidence, the claimant had suddenly got up in the middle of a conversation with his friend, and walked towards the kerb without warning. There was nothing in the claimant's actions, to alert the defendant to the fact that he would run out into the path of his vehicle, especially as the claimant was at a bus stop, with the inference that he was waiting for a bus. Therefore, the defendant had no reason to brake, as he did not consider the claimant to be a hazard, or potential hazard.

There was no evidence that the defendant was speeding, and therefore he was not negligent.

In ***Walford (Deceased) v London General Transport Service Ltd v Mengha*** *[2013] EWHC 1367* a pedestrian and a bus came into collision. In this case the Claimant failed to look for traffic before stepping onto the pedestrian crossing and the bus driver also failed to make proper checks. However, the bus driver's negligence was not causative of the accident as experts agreed that the pedestrian stepped into the road at such a late stage that the bus driver would not have had any opportunity to avoid the accident. The experts were agreed that once the claimant stepped into the road the collision was inevitable. There would have been insufficient time for him to respond to the sound of the horn and remount the pavement. A sounding of the horn at the appropriate point would therefore not have avoided the collision, which had been caused by the claimant's failure to look to his right before stepping into the road.

In ***Boyce v Commissioner of Police of the Metropolis*** *[2013] EWHC 395* a drunken pedestrian was knocked down by a police car travelling marginally over the speed limit. But because the pedestrian moved onto the road at the last moment a collision was unavoidable.

It was a counsel of perfection to require any motorist to treat pedestrians on the pavement in the early hours of the morning as an actual as opposed

to a potential hazard in the absence of particular features such as obvious drunkenness or horseplay.

In ***Scott v Davigan*** *[2016] EWCA Civ 544* the Court of Appeal upheld the Judge's decision that the claimant pedestrian was entirely to blame as he had been in an alcohol-induced state and had run across the road. The claimant had run at an angle in front of the defendant's moped and there was no reason to foresee the claimant's behaviour. The defendant had been riding at 30 mph and in the circumstances this was not negligent.

In **Vincent v Walker** [2021] EWHC 536 QB (David Pittaway QC) a pedestrian wearing dark clothes, during a late November afternoon had been crossing a road in the late afternoon in November. The pedestrian crossing was controlled by automated traffic lights which were green in the car's favour. The Claimant stepped from the central refuge into the road. Two thirds of the way across he was struck by a car driven by Walker. Vincent accepted that he was not paying attention when he crossed the road. The speed limit was 50 mph and Walker told the police that he had been driving at 45 to 50 mph and had applied emergency braking as soon as he saw V step into the road. Two accident reconstruction experts gave evidence as to the visibility of Vincent and the speed of Walker's car. The experts agreed that Walker was travelling at about 39 to 41 mph in a 50 mph limit. He eased off the accelerator when he saw the Claimant as was his usual practice. Motorists were required to pay particular attention to the presence of pedestrian crossings and attention should be sharper in the dark. The Court was not satisfied that Vincent would have been visible to Walker before he reached the central refuge. If Walker had scanned the refuge as he approached the junction he was unlikely to have observed Vincent. Even if he had seen him Walker could not have reasonably anticipated that Vincent would ignore the pedestrian crossing traffic lights and step into the road without looking. A reasonably prudent driver was permitted to rely on an adult pedestrian using the traffic lights before he crossed or checking that the road was clear. Even if Walker had seen Vincent on the central refuge, the accident could

not have been avoided. There was no excessive speed or failure to scan the road adequately.

It is interesting that the Court relied on the Sabir case and cited what Tomlinson J said at Paragraph 13.

"[...] there are two aspects to apportioning liability between the claimant and defendant, namely the respective causative potency of what they have done, and their respective blameworthiness. So far as concerns the former, because a car can usually do much more damage to a person than a person can do to a car, the court imposes upon drivers what Latham LJ in Lunt described as a "high burden." [...] For my part, bearing in mind that the 1945 Act speaks of responsibility for the damage rather than responsibility for the accident, I am inclined to think that it is because of the destructive potential of the car driven even at moderate speed that it is "rare indeed for a pedestrian to be found more responsible than a driver unless the pedestrian has suddenly moved into the path of an oncoming vehicle" - see per Hale LJ in Eagle v Chambers at paragraph 16. The proper approach, I would suggest, is that the destructive capacity of a driven car comes into both aspects of the evaluation. Driving a car at even a moderate speed without keeping a proper lookout in a situation in which pedestrians can reasonably be expected to be present in the carriageway, as in Jackson because of the presence of the stationary minibus and here because of the nature of the suburban shop-lined road - points to a considerable degree of blameworthiness."

The Court also had regard to Laws LJ's judgment in Anhanonu v South East London & Kent Bus Company Limited [2008[EWCA Civ 274.

"There is sometimes a danger in cases of negligence that the court may evaluate the standard of care owed by the defendant by reference to fine considerations elicited in the leisure of the court room, perhaps with the liberal use of hindsight. The obligation thus constructed can look more like a guarantee of the claimant's safety than a duty to take reasonable care."

The Court also relied upon Turner v Arriva North East Ltd [2006] EWCA Civ 410 and Sam Atkins [2005] EWCA Civ 1452 and Birch v Paulson [2012] EWCA Civ 487.

"32. … the legal test is not a question of the counsel of perfection using hindsight. Of course, it is not, and drivers are not required to give absolute guarantees of safety towards pedestrians. The yardstick is by reference to reasonable care. As the judge found, there was nothing here to require the defendant as a reasonably careful driver to act in any way other than a way in which she did act given the situation in which she found herself at the time."

The end result in the case was that the Claimant's claim was dismissed.

In **Chan v Peters [2021] EWHC 2004** (Cavanagh J) The Claimant who was 17 years of age was severely injured in a road traffic accident outside his school when the Defendant's Renault motor car struck him. The trial concerned liability only. The Claimant had no memory of the accident, but there was CCTV evidence and witnesses who gave evidence. There was reconstruction evidence from Craig Dawson for the Claimant and David Hague for the Defendant. The Claimant contended that the Defendant had failed to observe or take sufficient heed of the school and students coming out of school during the lunch break. The Claimant was there to be seen and stood at the kerb ready to cross the road and he was distracted and the Defendant should have seen that. If she had prepared to stop and sound her horn, the collision could have been entirely avoided. The Defendants submitted that there was no negligence on the part of the Defendant. She had been driving within the speed limit on a stretch of road that she knew well. It was the Defendant's case that the Defendant did not see the Claimant until he leapt into the road in front of her and that a reasonably competent driver could not have been expected to see the Claimant until the very moment that he emerged into the road in front of the Defendant's car. The suggestion of slowing down and covering the brake was the standards of a counsel of perfection. The Court went onto cite legal principles including those set out in **AB v Main [2015] EWHC 3183 at paragraphs 8-14.**

These are:-

- It is for the Claimant to prove that the Defendant was negligent.
- The standard of care was the of the reasonably careful driver armed with common sense and experience of the way pedestrians and children are likely to behave.

- If a real risk of a danger of emerging would have been reasonably apparent to such a driver then reasonable precautions must be taken.
- If the danger was no more than a mere possibility which would not have occurred to such a driver then there is no need to take extraordinary precautions.
- The Defendant is not to be judged by the standards of an ideal driver, nor with the benefit of hindsight; see Coulson J in Stewart v Glaze.
- Drivers must always bear in mind that a motorcar is a potentially dangerous weapon.
- Drivers are to be taken to know the principles of the Highway Code.
- Judges should not make findings of fact of unwarranted precision when that was not justified by the evidence.
- Trial judges should exercise caution in relation to the evidence of accident reconstruction experts and will guard against them opining on matters beyond their expertise or acting as advocates.
- You cannot judge the Defendant's driving in a vacuum. Have regard to the actual circumstances of the actual collision. Per May LJ in **Sam v Atkins.**

The Court found that the Claimant did not look right before jogging out from a parking bay where he was largely concealed by a Vauxhall Zafira into the road. The Defendant reacted within 1 second or so but the Claimant collided with the Defendant's nearside wheel arch. The Judge found that the Defendant was driving at about 25 mph below the speed limit of 30 mph. The impact was with the corner of the car.

The Judge held that the Defendant was not liable and dismissed the claim. However the Judge said that if the Defendant had been negligent he would have reduced the Claimant's damages by 75% to take account of his contributory fault.

2. **<u>If there is a reasonable opportunity for both driver and pedestrian to have avoided the collision the Claimant is likely to establish a high proportion of liability</u>.**

The following cases illustrate the principle.

In ***Liddell v Middleton*** *[1996] PIQR P36* for example, the claimant and his wife were attempting to cross Holderness Road, Hull at 11.45 at night. The weather was fine and dry and the road was well lit. There were gaps in the traffic. The claimant and his wife reached the centre of the road in safety and both waited there for about ten seconds. The claimant's wife said she saw a car coming in the distance and ran across the remaining half of the road to the opposite pavement. The claimant did not immediately follow but waited, took one or two steps and was hit by the offside front corner of the defendant's car. The Claimant was prevented by his injuries from giving evidence. The defendant's evidence was that he was travelling in a line of cars, never saw the claimant, never saw the claimant's wife and the first thing he knew of the accident was when there was a "bang". The judge found that the claimant and his wife were there to be seen in the centre of the road and that the defendant should have seen them, was driving too fast and should have sounded his horn. The judge held the defendant 75% to blame and the claimant 25% contributory negligent. The defendant appealed. The Court of Appeal held that the defendant had failed to keep a proper look out. Furthermore, had he seen these pedestrians, the defendant, on his own admission, would have altered the manner of his driving by slowing his speed and steering further to the nearside. Had he done so the accident would have been avoided. However, the judge was wrong to conclude that the defendant should have sounded his horn simply if he had seen the claimant standing in the middle of the road. As to the apportionment of liability, both parties were to blame. The claimant's action in attempting to cross the carriageway when he did was an extremely dangerous one. The car was almost upon him and in the circumstances it gave the defendant

very little opportunity to avoid the accident. The judge's apportionment of 25% contributory negligence was wrong in principle and too lenient. Liability was apportioned on a 50/50 basis on appeal.

In **Eagle v Chambers** *[2003] EWCA Civ 1107* however, the Court of Appeal took the opportunity to enunciate the principles governing liability in collisions between pedestrians and cars. The claimant who was 17 years at the time of the accident was walking along unsteadily in the centre of a dual carriageway. She was in a highly emotive state. The defendant who was travelling along at 35mph struck the claimant causing severe injuries. The defendant failed a roadside breath test, although when retested at the station was found to be below the legal limit.

At first instance, the claimant was found to be 60% responsible for the accident and her damages were reduced accordingly. The Claimant appealed.

The Court of Appeal per Hale LJ as she then was, held that it was rare for a pedestrian to be found more culpable than a driver unless it could be shown that she moved suddenly into the driver's path. As there was no evidence that the claimant had done this, the court adopted the traditional approach in placing a higher burden on the driver particularly as a car has more destructive potential. The court held the drivers conduct was more blameworthy than that of the claimant, although there was sufficient evidence to justify a finding of contributory negligence. The claimant's contributory negligence was therefore reduced to 40%.

The Court of Appeal in **Adjei v King** *[2003] EWCA Civ 414* again found a pedestrian attempting to cross a dual carriageway 40% contributorily negligent.

The defendant was travelling at a speed of 25mph before he started to skid. The speed limit was 30mph. The judge felt that the defendant was travelling too fast for the conditions and that had he been travelling slower the accident could have been avoided.

In **Green v Bannister** *[2003] EWCA Civ 1819* the claimant had collapsed in a drunken stupor in the roadway of a residential cul-de-sac outside his parent's house.

The defendant had reversed from a parking space outside her home in the cul-de-sac, looking over her right shoulder. She continued to reverse for about 35 yards, before running over the claimant.

The court at first instance found in favour of the claimant, but with a deduction of 60% to reflect contributory negligence. The defendant appealed on the basis that the trial judge was applying a driving standard of perfection. The Court of Appeal rejected the appeal. The driver ought to have looked in her side mirrors and if she had done so would have seen the Claimant lying in the road.

In **Parkinson v Chief Constable of Dyfed Powys Police** *[2004] EWCA Civ 802,* the Court of Appeal refused permission to appeal where the Judge held the Claimant 35% contributorily negligent when under the influence of alcohol he stepped into the road in front of a police car travelling at 40 mph. It was a built-up area and it was night-time. The defendant's officer should have anticipated that there may be pedestrians under the influence of alcohol given the time and area and adjusted his speed accordingly.

In **Belka v Prosperini *[2011] EWCA Civ 623*** the claimant, a pedestrian was struck by the defendant taxi driver as he attempted to cross a dual carriageway. The collision occurred in the early hours of the morning when the claimant was on an unregulated crossing of a dual carriageway of the A 193. Although pedestrians were entitled to cross at this point, they did not have precedence over vehicles.

Instead of waiting for the defendant to pass, the claimant took a chance and ran out into the path of the defendant's vehicle resulting in a collision. Liability was apportioned 1/3 – 2/3 in favour of the defendant, and the

claimant appealed.

The defendant could be criticised for failing to take his foot off the accelerator as a precaution that the pedestrian may decide to cross the road in an untoward manor. However, as the claimant attempted to cross the road in front of a vehicle that had the right of way, he was more to blame for the accident. Therefore the judges apportionment of blame could not be criticised and the appeal was dismissed.

In ***Hickman v London Central Bus Company Ltd*** **[2013] EWHC 1703** the court was faced with a situation where a Claimant crossed a road, not at a pedestrian crossing, and wrongly assuming that the traffic was halted by traffic lights. However the bus driver failed to make proper checks before pulling away. In such circumstances the bus driver was 60% to blame. The High Court held that a failure to see something was not necessarily negligent but in this particular case it was.

In **Tavares v Hudson-Rotin [2012] EWHC 3171** (Globe J) T had crossed a single track road subject to a 20 mph limit in a busy shopping area when he was struck by H. H had been exceeding the speed limited and was doing between 28 and 30 mph. T stepped into H's path with 33 metres to spare. There was CCTV evidence. H conceded she should have been driving 5 mph below the speed limit when it became clear that H thought the speed limit was 30 mph and not 20 mph! To add to this, H had used the road at least once a week for the previous 9 months!. Judgement for the Claimant. H had a very poor understanding of her responsibilities as a driver. "Completely unable to grasp the concept of having to have regard to other road users" and thought that everyone else should move out of her way. Even though T therefore stepped into H's path contributory negligence was only 15%.

3. **Drivers should be prepared for children to be less careful than adults.**

Paramasivan v Wicks **[2013] EWCA Civ 262** concerned a driver who should have seen a group of youngsters and adjusted his speed. The claimant

was 13 however and not a young child. There was no indication that the child would run into the road. The trial judge had found that 25 mph was too fast and the defendant ought to have been driving at 15 mph. He held that both parties were equally to blame.

The Court of Appeal overturned the trial judge's decision of an equal contribution to the accident. The majority of the blame (75%) lay with the pedestrian who had gone into the road at the last moment making a collision unavoidable.

In ***Ellis v Kelly*** *[2019] EWHC 2031* (Yip J) an 8 year old child allowed to use a playground without supervision who ran across a road and was struck by a speeding vehicle was not contributorily negligent for his injuries. His previous experience was that cars would stop at pedestrian crossings and at his age he was unable to judge that the car was travelling too fast to stop. A contribution claim against the child's mother also failed and the case is worth reading on those grounds alone although outside the scope of this article.

The judgment reveals some of the factors that the Court will look at in such circumstances:-

- **The age of the Claimant.** Younger children tend to be more impulsive and can be taken to have lesser awareness of road safety but there is no hard and fast rule at what age a child can be found guilty of contributory negligence. The standard of care to be taken by the child is to be judged by the reasonable expectations of a child of the same age, intelligence and experience.
- **Distance from the road.** The group had been quite a way from the lane in which the defendant was driving,
- **Physical separation.** The group had been separated by a pavement, parking bay and the northbound carriageway,
- **Predictability.** There was nothing to suggest that they were about to leave that safe area and run across the road. The

boys were not small infants running indiscriminately, and had provided no reason to require every driver passing by to reduce his speed to as low as 15 mph.

- **No hindsight.** There was a danger in the liberal use of hindsight, and a pedestrian's safety was not guaranteed.

4. **Drivers should be prepared for drunken pedestrians to be less careful.**

In ***Robert Ian Ayres v Maehshodedra* [2013] EWHC 40 (QB)** a motorist was primarily liable for a road traffic accident in a pedestrianised city centre zone in which he had run over a pedestrian who had stopped in front of his car, since he should have waited until the pedestrian was safely out of his way before attempting to pass him. The pedestrian was held to be only 20 per cent contributorily negligent because of his drunken state and the fact that he had dropped his trousers had hampered his ability to move freely and at normal speed out of the vehicle's path.

In **Parker v McClaren [2021] EWHC 2828 (Matthew Gullick QC)**

A taxi driver was found liable for catastrophic injuries sustained by Parker when she was crossing the road just before midnight on a Saturday in a city centre. The taxi driver had been travelling at just below 20 mph which although below the speed limit was too fast given the number of people on the streets at the time, some of whom were coming out of pubs and bars. A safe speed was no more than 15 mph and there was primary liability. However the failure to see the pedestrian in the road until it was too late to stop was not negligent and there was a 50% reduction in damages for contributory negligence in failing to look before entering the road.

It is submitted that relevant factors will often be:-

- **The time of day -** drivers should be prepared for pedestrians later at night to be under the influence of alcohol. If it was a festival day

or celebrative day such as St. Patrick's day, this would probably be a relevant factor.

- **The location.** Was it near to a pub, club or in a busy pedestrianised zone or city centres.
- **Indication of intoxication.** Could a claimant be reasonably seen to be intoxicated by reason of unsteadiness on their feet.

Conclusion

We have tried to extract some of the principles in the case law involving pedestrians.

In ***Jackson v Murray* UKSC 5** the Supreme Court observed that there is no precise formulation and that contributory negligence is a somewhat *"rough and ready"* exercise. The Court also observed that different judges may legitimately take a different view of what is "just and equitable" in particular circumstances.

The Court in this case reduced the appellate court's finding of contributory negligence at 70% to 50%. The trial judge had found that the pursuer was 90% contributorily negligent.

The case indicates how fact specific the issue of contributory negligence is and how difficult it is to evaluate how any particular court will determine the issue.

It is best to avoid trying to find "***comparable" cases*** because no two cases are the same and reported cases do not contain the case papers and photographs of the scene of the accident. Lawyers and Judges will of course vary in their approach to contributory negligence.

As Baroness Hale observed at the Personal Injury Bar Association conference in 2019: -

"The Supreme Court is not the final Court because it is always right; it is right because it is the final Court".

Baroness Hale, President of the UK Supreme Court.

Contributory negligence, particularly in respect of pedestrian liability is one example where that statement is exactly on point.

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Reconstructing the accident

There is much that can be done from an analysis point of view even where you lack reliable witness evidence to determine what happened. It can also serve as a check against that witness evidence.

There are four principle methods of reconstruction. Two methods of reconstruction are commonly used.

1. **CCTV-**The first and perhaps the most reliable evidence is usually CCTV evidence either from surrounding road traffic system cameras used to control the traffic or from the car itself or from buildings around the scene of the accident. This can be used to determine the speed of the vehicle on approach and prior to impact as well as the actions of the driver and pedestrian or motorcyclist or cyclist as the case may be.
2. **Pedestrian Throw-** the second, but usually less reliable reconstruction evidence can be from a pedestrian throw calculation which can be used to determine the speed of the vehicle at impact;
3. **Physical evidence-** the third, can be from physical evidence from the vehicle(s) themselves or evidence left or deposited on the road. An example might be skid marks.
4. **Electronic Evidence-** The fourth from Electronic systems within the vehicle such as the electronic control unit which may hold data such as speed, airbag deployment and forces sustained in a collision. Such evidence usually means that the police needs the co-operation of the manufacturer which is sometimes not forthcoming.

CCTV Evidence

A modern "closed-circuit television system" or "CCTV" consists of a number of

cameras connected to a digital recorder which records the footage on to a hard drive. The footage can then normally be copied either onto a data CD or DVD or USB memory stick together with proprietary software enabling the footage to be viewed on a normal computer.

Most CCTV cameras produce 25 images per second. This is therefore not the same as a television which produces at least 60 images per second. There is usually a constant time period of 0.04 seconds in between the consecutive images. If all of these images are recorded the footage is called "real-time" footage. In some cases however the camera system only records a proportion of the images which allows for better usage of space on the hard drive. This is known as "time lapse" CCTV footage.

Hard drive recorders do not necessarily record time lapse footage at a constant rate so the time intervals between consecutive images can vary. However, because vehicle speeds change only gradually in the short time intervals between the consecutive CCTV images it is possible to calculate the time intervals between the CCTV images by using the vehicle movements. The average speed of a vehicle between two CCTV images can then be calculated provided that the time interval and the distance travelled between those two images can be established.

One problem that can occur is that when CCTV footage is not preserved on the original hard drive and it is downloaded to, say, a DVD-video, images can be lost and the image quality reduced when the CCTV footage is converted from its original format into DVD-video format.

It is therefore very important for an insurer, or lawyer when presented with a catastrophic injury claim where footage may exist, to act very quickly to advise or secure or preserve the original footage. The police cannot always be relied upon to secure or preserve the original footage. Furthermore, most CCTV footage will be lost if active steps are not taken within perhaps 3 months of the accident date to secure the original footage.

One method of seeking to preserve the footage is to seek undertakings say from the local authority or police or an individual to secure the footage. On other occasions an interim order for the preservation of property may be specifically required.

Pedestrian throw calculation

There are ways in which the speed of the vehicle can be found from the evidence at the scene of the accident. Some methods require the distance the person was thrown , whilst others use the spread of debris or the position of the head strike. Much will depend upon who visited the scene after the accident and the precision with which recording and preservation of the evidence was made. For this reason, it is always of course vital to ascertain not just whether there was a police report but whether the collision accident investigator attended the scene, made a full and detailed report and took video or photographs of the evidence. In order to perform a pedestrian-throw calculation it is necessary to know the Claimant's height and weight and what clothes they were wearing.

Next, the way in which the pedestrian was struck can tell us quite a lot about the accident and potential speed of the vehicle even before an expert is instructed. There are basically 4 ways in which a pedestrian can be struck.

1. The fender vault;
2. The forward vault.
3. The wrap Vault;
4. The roof vault.

The Fender vault

This is where the pedestrian has been struck by one corner of the vehicle. The pedestrian tends to slide across the wing. The pedestrian does not tend to receive the full strike of the motor car and is unlikely to be accelerated to the same speed as the motor car. Any calculated speed from a pedestrian throw calculation is unlikely to be a true estimate of speed. It is likely to be an under-estimate of speed. The body is often deflected to the side of the vehicle and is likely to come to rest behind the vehicle.

The evidence can help to tell us whether the person walked or ran in front of the vehicle. If the person is walking towards the car it is possible to find a head strike on the windscreen as the upper body continues to move across the car despite the wing pushing the lower body away. The head strike is normally to one side of the windscreen. It would be wrong to assume that the injuries cannot be very severe just because the body does not undergo acceleration to the full speed of the striking vehicle.

If the pedestrian was running across the road and into the car you often get

crush damage to the side of the wing caused by the pedestrian and the head strike is further across the windscreen. As the speed of the vehicle increases the head strike tends to rise further up the windscreen.

Forward vault

This sort of impact usually occurs when the pedestrian is struck by a predominantly large and flat fronted vehicle such as a bus or goods vehicle. It can be seen when a pedestrian particularly a child is struck by a large off-road type vehicle. The pedestrian undergoes a very high rate of acceleration and is thrown horizontally away from the vehicle. A pedestrian throw calculation is therefore quite useful.

The wrap vault

The pedestrian in this case is usually being struck around the centre of the vehicle and wraps himself over the front profile of the vehicle. The lower legs make contact with the bumper of the car. The upper legs and waist then roll over the leading edge of the bonnet. The abdomen and chest then fall onto the upper area of the bonnet. The mechanism is speed dependent. At lower speeds the shoulders and head will strike the upper edge of the bonnet of the windscreen. As the speed increases this can push the position of the head strike further up the windscreen. There is usually a path of contact marks on the vehicle from the bonnet up to the windscreen which tells the story. Dirty cars will also show even more as clothing wipes away the dirt on the surface. These are called "cleaning marks". Even clean cars will often reveal scratches to the paintwork particularly when viewed carefully in different lighting conditions and at different angles. Preservation of the original vehicles in the accident rather than just police photographs can be very useful.

Roof vault.

As the impact speeds increase it is possible for the body to rotate in the air as it disengages from the impact. Much then depends upon the reaction of the driver. It is possible for the pedestrian to remain suspended in the air whilst the

car passes underneath. There is then often a secondary impact to a flailing arm or leg resulting in damage to the roof rail. This mechanism may be a sign of excessive speed (depending on the speed limit for the road involved).

A careful examination of the vehicle itself can also reveal skin deposits (see as white powder marks) and of course blood and hair deposited on the vehicle itself.

Motorcycle leathers can leave seam stitch marks on the vehicle and buttons and belts and buttons can leave gouge marks.

Calculating the speed

Pedestrian throw calculations are open to doubt for all manner of reasons. Broadly speaking, it is possible within certain parameters of error to calculate the speed of the vehicle if the distance the pedestrian is thrown from impact to point of rest is known. The point of rest can usually be determined from debris and photographs or blood on the road. The point of impact can be more difficult to determine. Other methods use the distance the body has slid after landing. An estimate of impact speed can sometimes be made from the position the head has travelled up the windscreen.

Conclusion.

The important points for lawyers and insurers are to be aware of the points concerned and ensure that there is not just an over-reliance on the witnesses in such collisions. The evidence from the scene can be determinative in an investigation into liability and should be preserved quickly where possible. Even where it has not been preserved, photographs and even downloaded CCTV can help to establish what happened with much greater clarity.

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