The Courts and Risk: A Case of "I'm sorry I haven't a Clue"?

The 'Health and Safety Offences, Corporate Manslaughter and Food Safety and Hygiene Offences: Definitive Guideline' states:

> *"Health and Safety offences are concerned with the failures to manage risks to health and safety…"*

Risk is central to the enforcement process:

- HSE Enforcement Policy – (para 2.1) enforcement action should be "*proportionate to the health and safety risks"*

- S40 of the HSWA – once the prosecution has proved an exposure to a material health and safety, then it is for the defence to prove that it did all that was reasonably practicable to control/manage the risk. Consideration of what is reasonably practicable requires an understanding of the risk.

- Step 1 of the sentencing guideline requires the court to determine the harm category by considering the seriousness of the harm risked against the likelihood of the harm occurring. This is in effect a risk assessment.

Often the risk involved in prosecutions is relatively straight forward, however this is not always the situation.

Despite 'risk' being central to the legislation and the enforcement there is no definition either in the HSWA, MHSWR or the Sentencing Guideline itself.

The Courts have attempted to define risk for example in *R v Chargot* [2008] UKHL, 73:

> *'when the legislation refers to risks it is not contemplating risk that is trivial or fanciful…It is directed at situations where there is a material risk to health and safety, which any reasonable person would appreciate and take steps to guard against"*

This definition:

- Does not distinguish between 'hazard' and 'risk' – what really does the court mean by fanciful and trivial risk?
- The implication is that risk is just a 'mater of common sense'.

There was a very clear definition in the ACoP to MHSWR (L21) – which has been withdrawn by HSE.

> *…a risk is the likelihood of a potential harm from [a] hazard being realised. The extent of the risk will depend on:*
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> *(i) The likelihood of that harm occurring;*
> *(ii) The potential, severity of that harm…;*
> *(iii) The population that might be affected by the hazard…*

Many prosecutions are a result of a fatal or serious injury incident. Consequently it is easy to apply hindsight to the assessment of the risk. Daniel Kahneman, who won the Nobel Proize for Economic Sciences (2002) in his book *Thinking, Fats and Slow* (2011) observes:

> *"We are prone to overestimate how much we understand of the world and to underestimate the role of chance in events. Overconfidence is fed by the illusionary certainty of hindsight"*

The chances of winning the UK lottery jackpot (i.e. choosing six numbers from 1 – 49) is 1 in 13,983,819. We know that many people have won the jackpot over the years.

Probability means the same as 'likelihood' or 'chance' of something happening. No matter how many people win the lottery jackpot, the probability of winning remains the same each time. Although many people may buy tickets for the lottery each week, they still have more chance of being hit by lightning (1 in 10 million).

It is particularly unhelpful when judges use the phrase "an accident waiting to happen". It could be said that statistically all accidents have been waiting to happen. As with winning the lottery, an accident does not change the likelihood of one happening.

In *R v How & Son* [1999] 2 All ER 249 the element of chance in an accident was acknowledged: *"…if is often a matter of chance whether death or serious injury results form even a serious breach".*

Of course this is not the same as the situation where an organisation has had a number of near missies – an incident which in other circumstances would have resulted in injury or death. Here the near misses tell us something about the likelihood of harm occurring.

One explanation often used by people looking at risk is the Swiss Cheese Model. This likens the system to series of Swiss cheese slices stacked side by side, in which the risk of a threat becoming a reality is mitigated by differing layers and types of defences which are layered behind each other. Therefore, in theory, lapse and weaknesses in one defence do not allow a risk to materialise since other defences also exist to prevent a single point of failure. Simply put only when all the holes in the defences line up is then incident occurs resulting in some form of loss.

Judges have used the phrase an accident waiting happen on many occasion – a simple google search will show small selection of when this phrase has been used.

> *"Cyclist locked up for killing a mother of two was an……"*
> *"Pay out for women who lost her leg in Cambridge fairground crash judge said was an…"*
> *"Water tank worker death in Cornwall was an…"*

The dictionary definition states:

> If you describe something as an accident waiting to happen, you mean that they are likely to be a cause of danger in the future for example because they are in a poor condition or behave in an unpredictable way.

The risk is also not changed by the damage that results. So, if someone falls down a ladder the risk was falling down the ladder. This risk is not increased if they are killed due the fall instead of breaking an arm. It could be that the death would be an aggravating feature, but it is untrue to say that the death increases the risk.

Merlin attractions Smiler Rode had been operating for 2 years with over 3 million rides when the accident which seriously injured 16 people June 2015. The possibility of a block reset when it was occupied by a "valleyed" car was always there. For the harm to arise, there needed to be both engineers carrying out block resetting and a valleyed car win the block.

The judge in this case found there to be a high likelihood of harm. Many organisations work on the number of hours with no lost time accidents and a in some cases incidents. What does this means-to someone in an organisation managing risk?

The courts have also been somewhat inconsistent in the way they sentence when interpreting the time since the last incident.

R v Tata Steel [2017] EWCA Crim 704 – *"The lathe in question had been operated for some 150,000 man-hours [over 15 years] without incident. By itself, the period of operation without incident is powerfully persuasive pointer against the offence being one of high likelihood"*

However:

R v Diamond Box [2017] EWCA Crim 1904 *"Tata Steel does not establish a principle that a substantial period in which a risk did not in g-fact result in an accident means that the likelihood of the risk was not high"*

So, when an organisation uses the lack of incidents as mitigation, how will it know which way the court will interpret it?

Statistics have been making their way into court decisions.

R v Squibb [2019] EWCA Crim 227 – Asbestos exposure – 0.09% risk of death. Likelihood Low

R v Faltec [2019]- Legionella – *"I do not conclude that…a risk of between zero and 0.04% of death resulting could possibly be described as low, when considering an urban area."* Likelihood Medium.

R v Mick George Ltd [2019] EWCA Crim 519 – 422,000 tipper operations without incident – 0.04% chance of death from electrical incidents. Likelihood medium (once regulations breached)

How low does the likelihood have to be before the court decides that maybe the risk is miniscule? Although in the off-shore industry the calculation of failure rates is well understood, and the failures based on extensive testing and experience – small numbers and likelihood are difficult to understand especially in the context of organisation where the risks are more dynamic.

In a production line such as the making of chocolate biscuits, the raw materials arrive and are processed in a consistent way with the time to ensure a consistent product. The processing allows for the guarding, automation of the process and the reduction of people interacting and making decisions about the process.

Most work does not fall into this category eg construction road work, railways, - these all relay on people. These systems rely on people making dynamic risk assessments and so it is harder to quantify. Anyone who was involved in the initial railway safety cases found this out to their cost. In fact, one rail owner just after privatisation said life would be simpler and far less risky if they didn’t have to carry passengers.

The problem is people bring their own perception of risk bias to situations. Following rail privatisation there were a number of high-profile rail crashes – Southall (1997), Ladbroke Grove (1999), Hatfield (2000) and Potters Bar (2002). The public perception then was that the railways were less safe after privatisation than before – however – that is not the case. In 2013 according to the European Railway Agency’s report, Britain has the safest railways in Europe based on the number of train safety incidents.

People bring their own preconceptions of risk with them to work. Spare time hobbies include scuba diving, hill walking horse riding and an increase in the number of people buying high powered motorcycles. People view of risk come with them and that includes those involved in hearing, defending and prosecuting court cases including the jury.

Does it mean that a lack of risk means a lack of risk management? Where there are no accidents is this good risk management or just luck? Many years ago, a safety manager of a milling plant was called in by his MD who commented that they had had no accidents that year – why did they need a safety manager? The following year after a near fatality he was again called in and the MD said, "We’ve had a serious accident now what are you doing as a safety manager?"

Many organisations have an annual and sometimes 6 monthly review of the legislation that applies to them. This includes health a safety and environment – but also include that which relates to data protection and various elements of the Companies Act 2006. Failure to manage people data can result in very large fines – British Airways were fined £183m for a data breach – this type of penalty will worry boards and ensure that this regulation is being properly monitored and complied with. Even though fines for health and safety, food breaches and the environment are increasing – they have not yet made the level that other

penalties have. To get a boards attention to look at reputational damage and the impact on individual directors – for instance that of potential directors’ disqualification.

So why is it important to understand risk?

- Fairness – it is important for the system when dealing with breaches of health and safety to do this in a fair and equitable away – if not how can an organisation manage its risk and provide mitigation which the courts will understand?

- HSE enforcement policy para 3.1 states to promote and maintain sustained compliance with the law – i.e. promote good risk management. Therefore, courts’ decisions will potentially have impact. It is also worth pointing out that simply complying with the law does not necessarily lead to good risk management system or a safe way of working. Many organisations see compliance as the minimum they need to do. Judgments in court and the reasons given are taken notice of by organisations so they do impact on how safety is managed.

- Potential for disparity between the court’s approach to risk management and that taken in the workplace. If you look at refuse collection vehicles they are now fitted with reversing cameras – in fact many have all round cameras. Vehicles have accidently run over pedestrians they didn’t see because no one was acting as banksman. However, the cameras are no substitute for someone on the ground managing pedestrians and traffic as the cameras will always have a blind spot. Recommendation to enhance safety is one thing but not to be a potential substitute.

- The sentencing process – determining the harm category effectively asking the court to perform a risk assessment. So, if the court is doing this how qualified are they do this and with what level of consistency?

- Insurance. In Lion Steel the case followed form the death of an employee who fell through a fragile roof. The court asked the company’s insurer why they had not commented on a lack of signage for a fragile roof. This comment caused a momentary sharp intake of breath in the insurance industry as they wondered if they would be held accountable for not indicating that something was missing. They are not but they do have great sway over how organisation carry out their work. In one case they asked about hot work in within the organisation. The organisation carried out with all the requisite safeguards where there could be a risk to buildings but in remote areas with no flammable materials they did not. The insurers suggested various arrangements including the use of fire blankets. The organisation disagreed – but the insures said that if they wouldn’t comply then they would significantly increase the premium.

But is an answer to the issue of understanding risk to ensure in difficult cases there is appropriate expert evidence?

The Law Commission in 2011 – *Expert Evidence in Criminal Proceedings in England and Wales* said that advocates tend not to *"probe, test or challenge"* the underlying bias of the underlying bias of experts' opinion, but attempt to undermine their credibility (para 1.21)

On visiting a consultant surgeon for an opinion about your knee you don't start by questioning their training and competence – you listen to what they say, ask questions and then consider it. What would be the point of the using them if you used as a starting point by questioning their expertise?

How often in health and safety cases are the reasons and opinion of an expert interrogated rather than just simply attacking their expertise? Is there a true examination of an expert's opinion when there is a guilty plea?

In more general terms is the view of HSE, as a specialist regulator, more likely to be accepted by the courts than a defendant which has relevant industry experience?

In the past the criminal courts have found it challenging to deal with topics that they are rarely required to consider. A good example is statistics.

Bayes' Theorem Is named after the 18th Century British mathematician Thomas Bayes and it is a formula for determining conditional probability.

R V Adams (No. 2) [1998] 1 Cr App R 377, CA is an example of where the court declined the use of Bayes' Theorem.

The facts of the case were as follows. A rape victim described her attacker as in his twenties. A suspect, Denis Adams, was arrested and an identity parade was arranged. The woman failed to pick him out, and on being asked if he fitted her description she said he did not. She had described a man in his twenties and when asked how old Adams looked, she replied about forty. Adams was 37; he had an alibi for the night in question. The DNA was the only incriminating evidence heard by the jury, as all the other evidence pointed towards acquittal. The prosecution's case was that there was only a 1 in 200 million chance that it was not the defendant. Using Bayes' theorem the defence challenged this.

The defendant's age was substantially different from that reported by the victim, the victim did not identify him and he had an alibi which was never disproved. The 1 in 200 million match probability calculation did not allow for the fact that the perpetrator might be a close relative of the defendant - an important point, since the defendant had a half-brother in his 20s whose DNA was never tested.

The defendant was convicted and his appeal failed. The Court of Appeal said that juries employ common sense reasoning in reaching their verdicts in criminal cases, and should not be encouraged by expert witnesses to employ mathematical formulae, such as Bayes Theorem, to augment – or more likely confuse – their ordinary processes.

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Guidance on statistics is now available for lawyers in the publication: *Statistics and probability for advocates: Understanding the use of statistical evidence in courts and tribunals (2017),* published by the Inns of Court College of Advocacy and the Royal Statistical Society. In the introduction it states:

> *"The Royal Statistical Society started to work on statistics and the law following a number of court cases where the interpretation of statistics, particularly those presented by experts who were not professional statisticians, has been of concern.*

The idea that common sense is more desirable than a proven statistical method chimes with the idea that assessing risk is just a matter of common sense.

So where is the guidance on risk?

In an article about statistics and law by Tim Hartford *"Making a lottery out of the law"* FT 31.1.15 , Tim writes:

> *It is the controversial cases that grab everyone's attention, so it is difficult to know whether statistical blinders in the courtroom are commonplace or rare, whether they are decisive or merely part of the cut and thrust of legal Argument. But I have some confidence in the following statement: A little bit of statistical education for the legal profession would go along way".*

There are currently a number of Guides/primer being published for judges on scientific evidence. In November 2019 primers on DNA analysis and forensic gait were published. Future primers on the topics of statistics and the physics of vehicle collisions are planned.

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