

## **RAC Foundation response to Transport Safety Commission Inquiry Transport Safety – Who is responsible?**

### **About the RAC Foundation**

The RAC Foundation is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

### **Summary**

The RAC Foundation welcomes this inquiry from the Transport Safety Commission into 'Transport Safety – Who is responsible'. Five years ago the RAC Foundation published *Transport Safety: is the law an ass?*<sup>1</sup>, which concluded that a 'first principles' review of transport safety law was required, to make the same radical rationalisation as the Robens Report did for industrial safety law that existed until the 1970s.

The RAC Foundation would make two recommendations for the road transport arena:

- Provision to be made for accident investigation in road transport in a comparable way to marine, rail and aviation.
- Road collision investigation to be more focused on learning the broader systems safety lessons instead of focusing largely on blame and culpability.

### **Q1. Leadership, responsibility and coordination**

Management and responsibility for transport safety varies by transport mode. A brief description of leadership, responsibility and coordination by transport mode is provided below, based on Elliott (2009).

#### *Aviation*

Aviation safety is regulated largely by a set of prescriptive rules, rooted in the 1944 Chicago Convention. The International Civil Aviation Organisation (ICAO) establishes the minimum standards that must be achieved by all countries and operators, and national or regional rules may be defined that exceed the global standards. In addition, bilateral Air Service Agreements exist between every pair of countries that share an air service. The prescriptive rules apply to people and equipment; every organisation and person with a safety role is licensed, every aircraft is subject to a Design Authority. In the UK the Civil Aviation Authority (CAA) issues licences and monitors compliance with the rules. It has a strong force of skilled inspectors who monitor all licensed organisations and people. ICAO audits CAA and all other states' safety authorities.

The regulatory system relies on all parties being open, cooperative and willing to comply with the standards. This in turn demands a spirit of mutual trust. CAA has the power to enforce by persuasion and if necessary suspending or revoking a licence. It resorts to criminal prosecution only if the failing was wilful or deliberate. There is however evidence

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<sup>1</sup> Elliott, C. (2009). This response is based on the findings of this report, which is available to download at: <http://bit.ly/O0Nyy0>.

of increasing pressure on all aviation regulators for more criminal prosecutions. This is seen as potentially damaging given that this change in focus could reduce safety. The US Flight Safety Foundation, the UK's Royal Aeronautical Society, the French Academie Nationale de l'Air et de l'Espace and four other organisations issued in November 2006 a joint five-point resolution, summarised in its accompanying press release as '... decrying the increasing tendency of law enforcement and judicial authorities to attempt to criminalise aviation accidents, to the detriment of aviation safety.'

### *Marine*

Marine safety regulation is also founded on international prescriptive agreements, such as the SOLAS (Safety of Life at Sea) Convention, the Loadline Convention, certification of watchkeepers and the International Ship Management Code, all operated within the ambit of the International Maritime Organisation (IMO), a UN body. Each state that licences merchant vessels transposes the conventions into national law and requires that compliance is verified by an independent Classification Society. Commercial enforcement is also imposed by the insurance companies that also require all vessels to be in class; that is, verified as compliant by a Classification Society. Criminal prosecution following accidents is rare, at least at present and where the accident has only safety and not environmental consequences. There is however growing pressure for further regulation, at present driven primarily by the environmental consequences of an accident. For example, the EU Directive 2005/3516 criminalises accidents that arise with intent, recklessness or by serious negligence and the potential defendants include the Classification Society that classified the vessel.

### *Rail*

Safety regulation of rail is complex, involving compliance both with prescriptive rules and goal-setting legislation. It is an industry in transition, moving from a 19th century craft culture towards a 21<sup>st</sup> century management culture. The prescriptive rules are now harmonised at a European level as Technical Specifications for Interoperability, verified by independent Notified Bodies. The goals come from the duty imposed by the Health and Safety at Work Act (HSWA) to reduce risk so far as is reasonable practicable, verified either by a Competent Person appointed by the duty holder or self-verified. Operators within the EU must have a Safety Management System that complies with a set of general principles and is accepted by the state as part of licensing.

HSWA is the legal basis for most railway safety law. This is somewhat illogical, since it regulates rail companies in their capacity as employers, not as transport operators. That approach is appropriate for the safety of workers and passengers within a workplace (carriage, maintenance depot) but not for regulating a system because it does not address interactions between players. Also, it is uncertain and subjective. There are further difficulties with applying HSWA to a hybrid public/private structure, such as the question as to whether affordability is relevant to reasonable practicability. HSWA was the product of the Robens Report in 1972, which specifically recommended that its otherwise highly effective principle that duty holders must each do all that is reasonably practicable should not apply to transport, 'Provisions for the safety and health of those engaged in flying aircraft, driving trains, lorries and so on clearly cannot be considered in isolation from a whole complex of special considerations such as the constraints imposed by the design of transport vehicles, the circumstances in which they operate which include many eventualities beyond the control of an employer'.

The section on 'Transport workers' concludes that the proposed general occupational safety and health provisions should extend to '...all transport workers except whilst they are directly engaged on transport operations'. Robens never intended that the legislation that he was designing should be used to regulate passenger safety.

The Office of Rail Regulation as National Safety Authority issues licences (certificates or authorisations) and has force of Inspectors to monitor duty holders' compliance. It in turn is audited by the European rail Agency. ORR has a hierarchy of responses to breaches from warning through Enforcement and Prohibition Notices to prosecution using HSWA powers. Although ORR is sensitive to the potentially harmful effects of excessive use of criminal prosecution, it is not the only prosecutor and the Crown Prosecution also brings HSWA prosecutions when it believes that this is in the public interest.

### *Road*

Bus and coach services are licensed by traffic commissioners who must satisfy themselves that the operator has: good repute (few criminal convictions for serious offences), good financial standing (in practice capital of at least £5000 per vehicle) and professional competence (at least the transport manager holds an appropriate certificate). Safety is not explicitly considered. Vehicles are subject to exhaustive prescriptive regulations, type approval and annual testing but there is limited regulation of drivers, even though accidents are at least in part a result of driver error.

Safety regulations are enforced using roads legislation. This is based in criminal law; the action after an accident is to seek a criminal prosecution. However, prosecutors rarely charge drivers with manslaughter. Defendants whose actions are alleged to have caused a fatality are charged with causing death by dangerous (or careless) driving, which usually carries lighter penalties than manslaughter would. Road safety management is clearly different to other transport modes.

## **Q2. Objectives and targets**

No transport is perfectly safe. Equipment can fail, people can make mistakes or parts of a system may be incompatible when they come together. But transport also brings many benefits. Safety regulation should ensure that the level of risk is acceptable, low enough that it is out-weighted by those benefits. Aviation, marine and rail is all subject to common international standards derived from treaties or conventions and are to various degrees prescriptive:

- **Aviation** is highly prescriptive and subject to enforcement by state bodies that are themselves overseen by international organisations. Licensing of people and organisations is key; there is even pressure to license cabin crew.
- **Marine** is less prescriptive and enforced by private organisations that are recognised by states and the international bodies but chosen or paid by the ship owner. This could invite "class shopping", where the owner chooses the Classification Society most likely to give it an easy time but this risk is present in any independent audit and is one against which the responsible Classification Societies are constantly vigilant. It has to be balanced against the strength of a competitive market that encourages research and innovation. Some safety-critical roles are subject to licensing but it is less widespread than for aviation.

- **Rail** is a mixture of prescription and local optimisation. The trend is towards greater prescription, in order to allow interoperability which both strengthens the market for supply of equipment and allows trains to run seamlessly across borders. Enforcement is changing, historically having been by state employed inspectors but increasingly by independent companies (some of whom are divisions of the Classification Societies in the marine sector). Formal licensing of individuals is rare, although an EU system for driver licensing is being introduced, track work supervisors are accredited and professional bodies accredit for example signal engineers.
- **Road transport** is significantly different from the others, probably because passenger transport services share infrastructure with self-drive vehicles so fit within their regulatory framework. Type approval of vehicles is increasingly prescriptive and harmonised, at least within the EU, but the human side of safety, including safety management, is only loosely defined.

It is hard to see any justification, other than historical accident, for the modes being treated differently since they have much in common. Not only do they all expose their passengers to risk, they all benefit commercially from standards to allow smooth interoperation and they all operate internationally.

### **Q3. Perceptions and culture**

Public perceptions of safety differ significantly by mode of travel. Passengers do not tend to think about safety when they use public transport. They take it as given that their journey will be safe –possibly delayed, overcrowded or uncomfortable but not unsafe. The media reporting of rail and air incidents has had a tendency to skew public opinion about the safety of different modes of transport.

The Value of Preventing a (Statistical) Fatality (VPF) is a long-established tool for measuring public attitudes to safety. It is an estimate of the amount that people are willing to pay for an incremental reduction in risk, scaled to represent the amount they would pay to prevent one statistical fatality.

There is a strong parallel between the use of the VPF to determine how much people are willing to pay for safety and the technique used by the National Institute for Health and Clinical Excellence (NICE). NICE makes a quantitative estimate of the benefit that a treatment will provide the average patient in units of Quality Adjusted Life Years. For example, a treatment that offers an extra 2 years of full quality life would provide 2 QALYs, or a treatment that improved the quality of life from 50% of normal to 75% would, over 20 years of life expectancy, provide 5 QALYs. NICE ranks treatments in order of value for money (in pounds per QALY) and recommends that the NHS should fund all of the most cost-effective up to the limit of the budget (subject also to qualitative judgement to refine its recommendations).

NICE's approach avoids the need to attribute an absolute value to safety. Rather, it leaves the political decision as to how much to spend in total to the political process, then uses objective tools to get the most health benefit for the available resources. Despite that, there is good alignment with the VPF. NICE's threshold is of the order of £30,000 per QALY. If one assumes that a person killed in a road or rail accident had around 50 years to live, the value is similar to the VPF.

A clear picture emerges from the results of a number of pieces of research on public attitudes to transport safety - it is possible to have a constructive debate about safety and to capture – qualitatively and quantitatively – what people believe and demand. Furthermore, we (this is about us, not “people” in the abstract) are sensible and realistic recognising that:

- resources are limited, safety spending can be a bottomless pit, someone has to balance costs and risks (but it’s very difficult to talk about the safety of “your child”)
- There should be a proportionate response, not ‘safety at all costs’
- We don’t weight one cause more than another – eg a death in a fire or in an accident in a tunnel is no worse than in an impact accident
- We don’t weight multiple death accidents more than single – eg an accident in which 3 people die is no worse than 3 accidents in which one person dies
- We don’t weight a death that is in part self-inflicted as highly as a passive death – eg a trespasser is less important than a passenger or worker. (This research did not investigate the relative weight attached to different types of victim – for example, young or old, an issue with which NICE has grappled - in part because the hazards do not differentiate between types of victim)

The research also highlights a clear ethical duty to be competent:

- A duty holder should not argue that a safety measure is too expensive if the reason is that the duty holder is not efficient.
- Poor service undermines trust.
- People expect safety when buying a ticket and have rising expectations – modes of transport that are already very safe create an assumption that they will be perfectly safe.
- We appear to be able to sustain two simultaneous views: as consumers we will tolerate accidents but as citizens we are outraged by blameworthy behaviour and incompetence. This does not mean that there is great appetite for criminal prosecution of transport operators who have accidents. Rather, it suggests that an accident that is perceived as avoidable is more damaging to society than one that is seen as being no-one’s fault.

#### **Q4. Funding**

No comments.

#### **Q5. Promotion**

No comments.

#### **Q6. Monitoring and evaluation**

The disparity between accident investigation in the different modes of passenger transport is striking. Three modes have an independent accident investigation branch with terms of reference that require it to investigate cause, not blame. Road accidents are hardly investigated at all for similar collisions and systematic weaknesses. Even in the modes where there is systematic collision investigation there is increasing pressure to focus on punishing individuals and not on identifying and rectifying systemic failings, which is of great concern. Unfortunately political and enforcement actions are too often

driven by press coverage and media attention than considered analysis. Principles and practice vary greatly between modes of transport, which largely appears to be due to historical accident rather than a logical basis.

## **Q7. Research**

No comments.

## **Conclusions**

The over-riding objective is clear. It is important to work towards a legal regime that delivers the level of passenger safety that people want and are prepared to pay for – consistent, fair and enforceable, driven by prevention not punishment. The RAC Foundation would recommend that this inquiry investigates the following:

- What the regulatory regime looks like, across all modes of public transport
- What can we do in the UK to bring about the changes necessary
- Whom should we influence outside the UK and how

The RAC Foundation would make two recommendations for the road transport arena:

- Provision to be made for accident investigation in road transport in a comparable way to marine, rail and aviation.
- Road death investigation to be more focused on learning the broader systems safety lessons instead of focusing largely on blame and culpability.

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**April 2014**