

# RISK!



## RISK AND MOTORCYCLES

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In the last decade, the risk of motorcycling has become the focus of research and government road safety departments which have identified the need to find solutions to the cause of death and injuries of riders.

A report published in 2006 by the Scottish Executive entitled "Risk and Motorcyclists in Scotland" categorises motorcyclists as "Risk Deniers", "Optimistic Accepters" and "Realistic Accepters" basing these on the decision of the researcher as to whether the information provided is correct.

For example the Risk Deniers "were not willing to believe that riding is as high as 25-times more risky than driving a car, do not worry about the risk; strongly disagree that would give up if actually true; more likely than group 3 to believe that they avoid this risk by being good riders" (2006:23).

However the statement that riding is as high as 25 times more risky than driving a car has been a point of contention for many years amongst motorcycle researchers and the reason for this is:

- 1) Because this is a comparison of billion kilometres travelled, which by the Department for Transport's own admission is notoriously inaccurate, partly due to the fact that the calculation is based on surveys and the cameras used to monitor and count road traffic do not always recognise motorcycles and
- 2) The proportion of risk would be dependent on annual calculations and on whatever area or country the motorcyclist lives in. So for example, a rider living in Scotland or Northern Ireland may travel more or less billion kilometres per annum thus return a higher or lower level of "risk" of dying. Neither of these factors are mentioned in the Scottish report.

Indeed the EU project "2BeSafe"<sup>1</sup> identified a variation of between 5 to 25 times "The risk of having an accident for PTW (motorcycle) riders, taking into account vehicle mileage ridden per annum, varies considerably between European countries. It can also be seen that the accident risk for PTW riders is much greater than that for car drivers - depending on the country, it is between about 5 and 25 times greater".

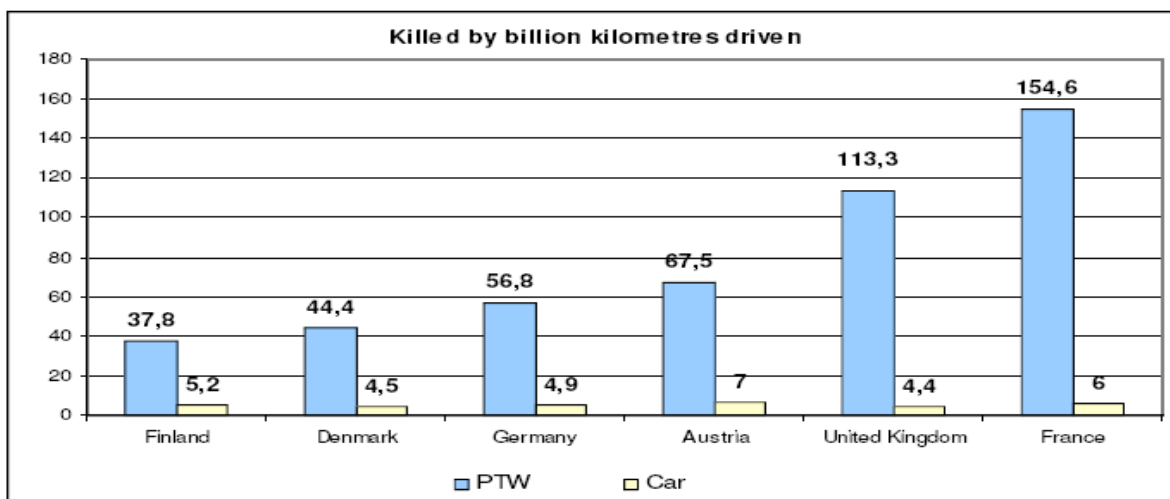


Figure 2: Killed by billion kilometres driven (Source: ONISR)

So the whole premise of the report is based on a flawed assumption and effectively highlights a much bigger problem which is that research based on a false or inaccurate theory can lead to meaningless and even dangerous conclusions.

In the event, the authors of the Scottish report argue that, the "Optimistic Accepters" might be influenced by educational campaigns designed to bring home to them the true impact of motorcycle accidents on victims and their families. "Measures designed to improve awareness of personal limitations and to reduce the belief that skill provides immunity from risk should also be useful" (2006:23).

<sup>1</sup> 2BeSafe Proposal - Description of work – unpublished document

Finally the report defines the “Realistic Accepters” as a group of riders that are the most susceptible to educational and training interventions. *“Their self-assessment of their own risk is two-to-three times higher than the self-assessed risk of the other groups, they worry more about the risks than the other groups, and they are more aware that their own skills do not protect them from this risk” (ibid.23).*

Thus the authors have “*a priori*” determined that motorcycling is risky and the inevitable conclusion of the report is that the rider is damned if he does and damned if he doesn’t (admit to being at risk). In the report, the riders were asked to compare their “risk” to other activities such as cycling, driving a car, rock climbing, skiing, hang gliding and surfing – these latter four activities being recreational sports compared to cycling and driving a car which are both means of transport. But the researchers did not ask the motorcyclists to consider walking, either as a form of transport (pedestrian) or as recreation.

As the DfT statistics indicate, walking (being a pedestrian) is far “riskier” (in terms of death and injuries) than riding a motorcycle. Road accident statistics consistently identify pedestrians as having the greatest probability of dying on the roads compared to other vulnerable road users in all European countries; In 2008 in Great Britain<sup>2</sup>, there were 572 pedestrian deaths (total KSIs 6,642); pedal cyclists: 115 deaths (total KSIs 2,450); motorcyclists: 493 deaths (total KSIs 6,049). Equally, the overwhelming majority of vulnerable road user casualties (pedestrians, cyclists and motorcyclists) are due to collisions with cars.

Motorcycle casualties are generally divided into two categories 1) collisions with other vehicles and 2) single vehicle collisions. Evidence from studies such as the Hurt report (1981), the MAIDS report (2004) Behavioural Research in Road Safety (DfT, 2004), the OTS study (2008) demonstrates that in collisions with other vehicles (typically a car) the car driver is more likely to be responsible.

Indeed as mentioned in the report *“Sexton et al also examined a sample of fatal and serious accidents and found that accidents on built-up roads tended to be the fault of the motorist rather than the motorcyclist. A significant number of these accidents were caused by cars turning right or doing a ‘u’ turn in front of the motorcyclist”* (cited in Sexton et al 2006:5)

The report continues *“However, motorcyclists were also at fault on some built-up road accidents because riders lost control due to excessive speed, slippery roads, inexperience etc. Accidents on non built-up roads were found to be mostly the fault of the motorcyclist and were often due to ‘loss of control’. Over two-thirds of the accidents on non-built-up roads involved larger engined ‘sports’ bikes (i.e. over 500cc)”* (ibid), but research in the UK and Europe has demonstrated that engine size or brake horse power is not the principle cause of crashes.

With regards to 74Kw Power limitation (100bhp) for motorcycles, the results of a 1997 study<sup>3</sup> completed by the TNO, carried out on behalf of the European Commission are still binding. The study identified that, *“there is no scientific evidence that engine size is a major factor in motorcycle accidents; engine size does not emerge as a separate risk factor”*.

Another study from the Transport Research Laboratory in the UK (TRL) produced a report in 2004 entitled ‘The Accident Risk of Motorcyclists’ which concluded that there was no link between engine size and accident risk<sup>4</sup>. Sports bikes that tend to attract high risk takers do not necessarily have the most powerful engines or the highest power-to-weight ratio: they can be as low as 125cc.

The studies that were analysed, found no link between power and risk of accidents. In this context, it was concluded that there was no guarantee that banning the largest heavy motorcycle or regulating the use of these more stringently would be effective. The evidence suggests that the rider and rider behaviour is the main cause of accidents, not the engine size of the motorcycle.

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<sup>2</sup> Scotland is part of Great Britain and all casualty data are collected and published by the Department of Transport GB.

<sup>3</sup> Motorcycle power 74kW study Phase B Report prepared by TNO for European Commission DG 11, Industry. Report No. 97.OR.VD.056.1//PR

<sup>4</sup> The authors were B Sexton, C Baughan, M Elliott, and G Maycock.

## Risk and Road Safety

Road safety has become a priority within the UK and targets set by the European Union drive policy for national governments and local authorities. While the objective to reduce road casualties is honourable and important and there are many within the motorcycling community who strive to find solutions to reduce casualties, the whole business of safety has become an industry which has taken on a life of its own. The measures and solutions that are put on the table are not necessarily the right ones because of the vested interests of the various stakeholders and in this context, the identification of risk is fundamental, because this sets the parameters in order to identify targets and funding.

## Risk and Society

In a society which is defensive about risk, concerned with risk avoidance and the prevention of harms, the regulation of risk necessarily attracts public concern which ultimately carries a spectre of blame. Carson (1996) points out that although accidents happen, risks are caused and are thus subject to hindsight scrutiny and open to litigation. The response to the uncertainty of risk and blame is the imposition of regulation through increasing prescriptive rules. Failure to negotiate a risk is considered an individual failure rather than the result of social processes outside of the individual's control (ibid).

Thus Wright Mills (1970) argues that social inequalities remain hidden or rather public concerns are transformed into a private affair. He contends that the state has taken on the role of the facilitator of actuarialism<sup>5</sup>. This requires its citizens to adopt a calculating attitude about their decisions relating to risk management which could be riding a motorcycle or climbing a ladder.

With growing evidence that psychological experts are unable to provide guarantees that require both a method and technology that will eliminate the possibilities of human error, Pratt (1996) argues that in this context the individual, not society is identified as the object of risk management. So the individual who does not choose wisely becomes reckless, blameworthy and responsible for their own acts of imprudence.

Rose (1996, 2000) contends that those who fall into the category of blame and imprudence are seen as those in need of remoralisation, through training, counselling, empowerment and community action. Ericson and Haggerty (1997) comment that crucial to the classifications made either by insurance or by police are the statistical data providing the evidence that risk categorisation or risk management should be warranted.

According to Ericson and Carriere (1994), the regulatory professions are deployed to ensure self-surveillance and self-regulation through which the individual is encouraged to pursue rational choice. Reddy argues that "the social construction of risks is what individuals and societies choose to pay attention to, or rather it is a culturally determined affair" (1996:223).

Furedi (2002) maintains that when the editors of the British Medical Journal<sup>6</sup> banned the word 'accident' from its pages, their reasoning was that "most injuries are predictable and preventable therefore the word accident should not be used to refer to injuries or events that produce them". While accepting that there are occasions whereby events causing injuries may be due to bad luck or 'acts of God' even in cases such as avalanches or earthquakes, they claimed that it is possible to take preventative measures simply by adopting precautionary strategies or simply, by not being there in the first place.

Furedi argues that rather than attribute death to an act of God or chance, our culture has moved towards blaming a person or institution. He argues that the development of accident claims companies has taken the responsibility of an accident from the injured person to one of blaming someone else. Therefore what once seemed as a risk worth taking is now open to interpretation as culpable negligence. In our litigious society blame has taken over from personal responsibility (ibid:12).<sup>7</sup>

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<sup>5</sup> In the Oxford dictionary of Economics, the definition of actuarialism is "The use of statistical records to predict the future. Actuarial expertise enables insurance companies to write policies with an expectation of making profits, but not with complete reliability." (Black, 1997:4)

<sup>6</sup> BMJ bans "accidents": British Medical Journal 2 June, 2001, p.1320.

<sup>7</sup> Excerpt from Chapter Four, Fear of Crime, Governance and Vested Interest: A Case Study of Motorcycles (2006)

## Risk and Consumption

The emphasis on risk and risky motorcyclists appears generally to focus on the deviator – the wrong doer i.e. the motorcyclist who appears not to comply to the norms or rules of the road and is thus a risky person. But there is more to risk and motorcycling, that researchers and government road safety organisations fail to acknowledge, which is that the motorcycle is not just a means of transport, but it is also a product.

The motorcycle market is ultimately driven by the need of manufacturers to sell their goods i.e. the motorcycle and the consumption of this “product” depends entirely on the acceptance of the consumer and the ability of the motorcycle manufacturers to advertise and convince the consumer of the benefits or prestige of owning their particular brand.

In that respect, Loader (1999) believes that consumption (...) is an expression of acting out an emotionally-laden cultural performance. In essence, choices of consumption express and generate culture and effectively create patterns of identification and discrimination. He argues that consumer goods and services are social markers that either reinforce or undermine existing boundaries (Loader citing Douglas and Isherwood, 1999).

Acts of consumption are also preceded by a desire to be satisfied by the purchasing of a particular product or service. This is reinforced by the way in which products or services are a means of identification and status within society, markers to separate out them and us (Bourdieu, 1984).

## Risk and Advertising

There is a whole culture of road behaviour which is fuelled by magazines advertising specific types of motorcycles, clothes, etc. It may be the case that riders who take “risks” is due to the marketing strategies of the motorcycle industry, with sales videos and websites<sup>8</sup> that encourage riders to do stunts like 'knee down', 'wheelies' or 'stoppies' or sliding the bike (with the caveat that these stunts are done by professional riders on race tracks). Advertising is important for the whole motorcycle industry and their products require an emotional acceptance by consumers.

As mentioned previously, it is generally recognised that there are two types of motorcycle crashes – collisions with other vehicles and single vehicle crashes, which may due to road conditions e.g. potholes, diesel spills etc. As highlighted by Sexton et al (2006) there are a significant proportion of single vehicle crashes due to loss of control which may be due to the inability of riders to understand their machine and their own inexperience. Or the belief that they can ride like their heroes.

Typically sports bike riders - and what is called the 'Weekend Warrior' - are a major problem for motorcycling, not only in terms of image i.e. sports bikes emulating the sound of a race bike and attitude but also in terms of injuries and death as highlighted by research which has demonstrated over the years that sports bike riders especially in rural areas have a higher percentage of crashes than other motorcyclists. While there is a tendency to identify powerful machines as the cause of motorcycle crashes, but there is overwhelming evidence that combining power restriction of motorcycles with age limitations (graduated licensing) does not have any effect on safety, what does seem to have an effect is attitude.

In Cheshire, England, the Infamous Cat and Fiddle Road to Buxton is frequently used by motorcyclists. The technical, twisting nature of the road offers a demanding challenge to bike enthusiasts but despite numerous safety initiatives over the years, 21 people were either killed or seriously injured on this road in 2008. In 1998 an analysis of crashes in this area<sup>9</sup> found that 67% were due to errors by the rider and of these, 43% were sports bike riders. 55% of rider casualties were aged between 26 and 40 years. Various

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<sup>8</sup> <http://www.youtube.com/watch?v=JHw2BpclmZE> (video of KTM doing stunts)

[http://www.harley-davidson.com/wcm/Content/Pages/2006\\_Campaigns/XR1200\\_minisite/XR1200.jsp?locale=en\\_GB&swfxrdna=1](http://www.harley-davidson.com/wcm/Content/Pages/2006_Campaigns/XR1200_minisite/XR1200.jsp?locale=en_GB&swfxrdna=1)

[http://www.streetfighter.ducati.com/main\\_en.html](http://www.streetfighter.ducati.com/main_en.html)

<http://replica.yme.com/aerox-team-replica> (this is an advert of a moped with the colours of Valentino Rossi eliciting the young rider to emulate his/her hero on the roads)

<sup>9</sup> Rural Leisure Motorcycling – Addressing Accidents. John Moss MBE, Chief Road Safety Officer (Retired), Cheshire County Council

factors relating to rural motorcycle crashes lead unerringly to the conclusion that riders are failing to ride their machines within their personal capabilities, even though the bike itself may well have been within its performance envelope at the time of the crash. The vast majority of the “bend” crashes had clues which indicated that the riders had either braked or shut their throttle mid-bend, resulting in understeer crashes.

Other research in Sweden (2003), the U.K. (2004), Europe (2008) and in the U.S (2009) all highlight the same issues of casualties and sports bikes<sup>10</sup>.

*“...Millions of pounds are spent on race bikes. There is more money spent on formula one racing and everybody watches that, but if people could afford a Ferrari as easy as they can afford an R1, then there would be an awful lot more sports cars on the road and there would be an awful lot more deaths on the road for cars and it wouldn't be so obvious the difference between bikes and cars. It's the fact that people can afford these bikes (....) But because they see it all the time, they want that lifestyle, they want to be like their friends and heroes”.*<sup>11</sup>

Equally, motorcycle magazines are an important commercial part of motorcycling and cover issues from classic motorcycles, racing, maintenance, owner groups and so forth. However some motorcycle magazines can and do give messages that are overtly irresponsible: features relating to ‘doughnuts’ (spinning wheels), reckless riding on the back wheel, encouraging high speeds on public roads. Unfortunately there are riders who follow the “advice” of these magazines who actually believe that they are gaining skills to ride more proficiently.

In an article in 2007 on the latest casualty figures from the IIHS (US insurance industry) David Hough, US motorcycle journalist commented: *“...motorcyclists, motorcycle enthusiast organizations, and the mainstream motorcycle press have been lax by neither helping control the carnage of motorcycling, nor promoting the correct image of motorcycling. For instance, why don't we see riding skills articles in every motorcycle magazine, or "status reports" from the AMA about the failure of automobile occupants to protect themselves from head injuries (...)? The Sept 11, 2007 IIHS Status Report should serve as a wake-up call to the motorcycle industry. However, I don't think the alarm is loud enough to be heard over the din of the cash registers”.* In other words, it is in the (profitable) interests of the insurance industry to identify motorcycling as risky and for the motorcycle industry to advertise risk.

No road safety initiative can ever make motorcycling risk-free, but this is true for any road user. However, educating young (and older) riders *and drivers* how to tackle these risks and how to adapt and live comfortably in our modern society would unquestionably have an important impact on the reduction of injuries and accidents. In the end, focussing on the individual as the problem rather than as a symptom of a much more complex cause is undoubtedly the easiest solution, but not necessarily the right one.

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## References

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<sup>10</sup> Studies include the Swedish Vägverket SRA in-depth study (2003); DfT In-depth study of Motorcycling page 28 and 29, Road Safety Research Report No.54, Nov. 2004; European Road Safety Observatory (2006) Powered Two Wheelers, page 29, retrieved August 1, 2008 from [www.erso.eu](http://www.erso.eu);

Motorcycle Crashes (2009): Insurance Information Institute. <http://www.iii.org/media/hottopics/insurance/motorcycle> ; (SSB) Statistics Norway on behalf of the MC-Council: The Council consists of representatives from the Motorcycle Wholesaler's Association (MGF), Safe Traffic, Police, Vegdirektoratet and NMCU (Norsk Motorcykel Union).

<sup>11</sup> Comment from Focus Group participant, page 28, Near Miss Study of Motorcycles (2009) [www.writetoride.co.uk](http://www.writetoride.co.uk)

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