Right to be unsafe

Ype Wijnia and John de Croon *5 April 2013*

Asset resolutions
PROCESSING RISK

P.O. Box 30113
8003 CC Zwolle
the Netherlands
Info@assetresolutions.nl
www.assetresolutions.nl/en

In recent years we have seen tremendous improvement in safety, resulting in an ever increasing life expectancy. The most basic probably is the absence of war in Western Europe, one of the great merits of the European Union and cooperation between Germany and France. But also in the area of medical care, food safety, occupational health and traffic safety major improvements can be noted. Nevertheless, accidents still happen. If you do think about it, this is strange. After all, no one[1] goes on the road with the idea of causing an accident or even not to come home. But why do accidents happen anyway?

First a little history. People (other animals indeed) made the distinction between persons belonging in their own group/tribe and people who did not. Within their own group rules were applicable (such as 'thou shalt not kill'), but outside their tribe these rules were not applicable. Persons of another tribe could be held as slaves, they could be murdered and eaten. In the beginning of the industrial revolution this still was the case in a sense. The workers in the factory were of a different group (class) than the owners of the factory and if they died during the work than there were other people available to do the job. Taking care of labour conditions was really something for the enlightened. But strangely enough, from the perspective of the worker it was still convenient in a factory. In any case, it gave an income. Given all diseases and hunger around from which you suffered as a small farmer, an accident at work was an acceptable risk. With increasing prosperity developed there was also call for more safety, because people could lose more. Technologies like health science, clean water, sewer systems, city gas, electricity and so on made it possible. Sometimes that technology was also deployed in destructive way (both the First and Second World War are excellent examples of this), but we are fed up with it.

With the advent of new technologies new risks appeared, but in aviation as in the automotive industry a continuous improvement cycle has provided highly safe assets. In the seventies cars could easily skid and offered little protection in an accident (Swedish and some German cars excluded): belts were not standard. Today is very different. Cars are full of acronyms such as ABS, EBD, ESC, ESP, TCS and SIPS. In addition, the structural strength of the car has increased tremendously. In a crash test between generations, a current day very small care drove almost through one of the former safety monuments. The intrinsic safety is greatly increased. But eventually everything can break into pieces. At high speed a car is still no match for trees, overpasses, trucks and trains. One could take this into account in the design of a car, but that is either very expensive or other functionality is lost. Because technology has limits, also is made use of behavioral change for the improvement of safety. In traffic a common example is the use of alcohol or drugs, but also the enforcement of speed limits contributes. A third area that could be improved is the user interface. With respect to assets that means the ergonomics and a safe operation. In a car in which you have to operate the indicators through the steering wheel, this can lead to difficult situations in a curve. But also in the design of the road this applies. A road where the traffic is not allowed to exceed 50 km/h (crossing cyclists and pedestrians) should not be designed like a motorway where you can easily drive 180 km/h. Narrow lanes, curves, thresholds and so on naturally decrease the speed. The optical taper of 60 km/h zones in the Netherlands is also an example, like the positioning of mopeds on the road instead of the bike path.

In addition, driving skills are frequently offered for people who actively want to improve their own safety. This is often called a skid training, although officially it should be antiskid. On a closed area the driver must perform an action which disturbs the stability of the car. The special (smooth) surface leads to an uncontrolled movement of the vehicle (skid) and the driver can then try to get the car back under

[1] Of course there are always exceptions, but that is a small percentage and usually this is part of the category of murder instead of accidents

control. The first time that usually does not happen, but after some practice most participants succeed. On such a day, all possible skid situations are practiced at the end participants receive a certificate which proves that they have successfully completed the course. A big improvement for safety you might say.

Unfortunately, it appears not to be the case (Parker et all, 1995[2]). People who have followed a skid course, prove to drive less safe than those who have not followed the course. Guess why? The explanation is quite simple. People who have followed such a course think they can get their car out of the skid and therefore do less their best to prevent skidding. In other words, they drive faster and brake harder. But the problem is that on a skid course you do not learn to get a car from the skid. You learn that it is possible, but more importantly, you learn that even if you know what you can expect the first time you usually fail. In practice, you first need to identify what type of skid occurs and then you have to take the appropriate action with exactly the right timing (retakes do not exist when you collide in real life). A report on various causes of accidents and safety lessons from various disciplines[3] shows a sobering high chance of error of 55% (we classify the unexpected car skid as category A). So if you learn something of the skid course, it is that you should always avoid getting into the skid, simply because you do not have a chance as it happens. Usually they do not tell this on a skid course, but in a defensive driving course it is and that is why a defensive driving course works.

These paradoxical results can also be seen when technology is used to improve safety. People who drive with winter tires think they can drive just like with summer tires during good weather, but that is not true. People who have a four-wheel driven have more traction in the snow and so they think they can drive faster with more safety, but brakes on four wheels are available on cars for a while and the four wheel drive does not help in braking. But with exceptions, most people have no idea what kind of technology is in their car and they drive just like the safety systems are not there. The technology then really provides additional safety.

Summarised this teaches us that the attitude towards accidents is the most important. Is an accident considered as an unlucky event which happens sometimes, then there is inevitably a certain residual level. But is the premise that every accident is the result of an active fault, then very dramatic improvements can be achieved. With the idea of active faults in mind then inevitably the question pops up whether employees have the right to unsafe behavior. No organisation in the world will say ‘yes’ as an answer to that question, if it was asked.

John de Croon and Ype Wijnia are partner at AssetResolutions BV, a company they co-founded. In turn, they give their vision on an aspect of asset management in a weekly column. The columns are published on the website of AssetResolutions, www.assetresolutions.nl/en/column

[2] These results were subsequently confirmed in various countries

[3] Drs. R.J. Davids. R-2003-19. Stichting Wetenschappelijk Onderzoek Verkeersveiligheid SWOV, table page 45