

## **How to deal with Hazards**

Most qualified drivers have a general perception of driving as an easy task and appear to have few worries about it, though a significant number do fear it as fraught with risks.

For all of us, driving is a life skill that is best viewed as a problem solving activity requiring intellectual skill necessary for concentration, observation, forward planning and anticipation; combined with handling skill necessary for car control.

Problem solving begins with the driver trainer who instils motor-skills and educates us in perceptual skills, hazard awareness and risk assessment. Driver trainers, as ambassadors of the road provide some influence of the safest views, beliefs and values. From the first moment we drive unaccompanied, experience should improve these skills. If they remain poorly developed there's an increase in risk of danger for every road user.

## **Perceptive Driving**

Worries about coping with motoring mayhem cause most new learner drivers to experience some "nerves" before starting a training course. With a careful choice of training route and positive instruction, the novice will learn to relax and lose the uneasiness. Using a programme of objectives, strengths can be developed and weaknesses overcome as the automated stage of driving is being achieved.

Within such a programme, trainers teach visual perception. A visual search system was devised in the 1950s by three researchers, Harold A. Smith, John J. Cummings and Reuel A. Sherman. Smith was a professional driver trainer who worked for the Ford Motor Company in its fleet driving division, Cummings was a crash investigator and Sherman was a recognised authority on occupational vision. They collaborated on a project to investigate how crash-free drivers stayed safe. From the research a core set of principles was devised in the form of five seeing habits. These are taught by many driver trainers throughout the world.

Perceptive driving is about being prepared for every eventuality. A clear road ahead is never empty! In order to respond to a problem, we have to see it.

## **What is the Hazard Type ?**

- Is it a fixed type such as a junction or a bend?
- Is it a moving hazard such as a vehicle or pedestrian?
- How fast are any other road users moving?
- How fast are we moving?
- Does the weather affect the visibility or condition of the road surface?
- Are there a combination of hazards?

The frequency of the comment "I just didn't see you" at the scene of a road traffic collision suggests a poor perception of the hazard because of weak observation. Our ability to interpret situations and make the best decisions relies on such factors as:

Visual capability. Excellent reflexes and good vehicle control capabilities are of little use if our eyesight is poor. Uncorrected defective eyesight will restrict our ability to see and make satisfactory distance judgements. This will be aggravated in inclement weather conditions and at night time. Low luminance myopia will also affect a drivers ability to see ahead in dark conditions.

Level of alertness. Having our senses impaired through fatigue, drinking alcohol or consuming drugs will reduce our risk perception. So will driving if we are upset or unwell.

Distraction. A lapse of attention because we are thinking about something else other than our driving, or letting someone else attract our attention will remove our concentration. Anyone can be distracted by concern, such as when the kids on the rear seats are squabbling and one has just dropped an ice cream on your upholstery. An crash on one motorway carriageway becomes two crashes on both carriageways where a “rubber necking” driver shunts the vehicle in front. Peer group pressure, particularly from young passengers on a new driver can result in “showing off” and an unintentional disregard for everyone’s safety. Another distraction factor can be “information overload,” such as having a conversation with passengers or on a mobile phone.

Assumptions. Familiarity can breed contempt where we “know” the road and drive on only our memory of it, rather than driving on what can be seen. Also if our perception of improved roads and better cars make us feel safer then we might be liable to take more risks. For instance, where cars are fitted with ABS, drivers tend to drive faster, take more chances and use their brakes more heavily. One of the first captains of the motor manufacturing industry, Herbert Austin is said to have remarked that “good brakes encourage bad driving”!

Experience. Young drivers at school, college or University are still in the learning mode and are usually pick up the mechanical driving skills quickly. Research indicates that while they may see something earlier than a mature driver, they perceive less risk in traffic situations than more experienced drivers and do not distinguish hazards as danger ahead. New drivers therefore have a tendency to underestimate thinking (reaction) time and braking distance.

Depth perception. We need a sound ability to accurately judge the speed and distance of approaching traffic when timing emerging from a side road. Knowing the comfortable maximum speed which our car is able to negotiate a tight corner will minimise chance in favour of safe opportunity.

Vehicle characteristics. In an unfamiliar car, even one of the same model, there may be some characteristics that need to acclimatising to. This means performing a cockpit drill; checking the minor controls and instruments; making a brake test and spending a few moments considering our driving tasks to get the brain and body in gear. Looking away from the road ahead to find a control while driving will at least double or treble your reaction time and any panicking will impair the decision making process.

Style and ability. Pride in our driving skills should compete favourably as an influence on our mood behind the wheel against the pressure of a busy lifestyle and workload. Being in a hurry and trying to make progress by driving too close to the vehicle in front; making rash decisions without taking account of the full circumstances increases the likelihood of so called “unexpected” situations where other drivers; poor roads; careless pedestrians and bad weather are liable for blame.

Looked, but failed to see; not looking in the right places or ignoring what can be seen increases risk. One example is where traffic signs have been placed approaching a road works, but the driver only responds when the actual construction activity comes into view

and therefore has to brake heavily, so increasing the likelihood of a rear end shunt. To monitor the movements of following and overtaking traffic the perceptive motorist relies not only on peripheral vision, but also glances frequently in the interior and exterior mirrors and constantly considers the car's overall stopping distance.

Knowing the various risks presented, the perceptive motorist drives well below the speed limit on a residential road made narrow by a corridor of parked cars, particularly during school holidays. Kids move quick and some think that cars can stop dead. While a law court might agree that an crash may have been a child's fault and was unavoidable even for a prudent driver exercising reasonable care, this isn't going to make a grieving parent feel happier.

Attitude. Many drivers who are too fast, aggressive and inconsiderate do not perceive themselves as being unsafe. They're happy with the way they drive, their own attitude is okay and there is no need to change, the problem is with the "others on the road".

Attitude determines how knowledge and skills will be used. It shapes our style towards being co-operative or competitive and therefore how safely and well we drive. Our behaviour on the road is first influenced at a young age by watching how our parents and other road users drive, then by the people we mix with socially and at work. Having passed the driving test many of us see ourselves as motoring experts; with experience we begin to view ourselves as the best drivers since Ben Hurr and the Highway Code's status is relegated to learner driver level.

The prevailing driving culture might be considered as normal, but how far is it acceptable?

### **Perception of the Road**

Public roads are shared by many drivers with differing abilities and perceptions, who are in charge of various types of vehicles. Where there's plenty of room for all, driving becomes easier, however traffic volume and physical road layout limitations can combine to create stress and frustration.

The new government is considering ways to control traffic volume in our towns. Local authority traffic engineers, guided by regulations consult with the police and road safety officers to achieve the most suitable designs. Certain aspects, such as speed limits are set by conditions beyond our control which we have to accept. A road design and the traffic flow pattern might appear to support a higher limit, but it has to be considered that not every driver will be concentrating or is experienced, so a protection factor is incorporated.

### **Paradoxical Perception**

An alternative perception that opposes accepted beliefs is that an increased level of skill removes the fear or respect for danger, creating more competent risk taking. Advocates would conclude that the less trained overestimate their risk and drive with greater caution.

Driver training is about improving our perception of what is happening on the road. Better perception increases awareness and should therefore improve our judgements; decisions and ability to cope, so reducing crash risk.

Personal perception of crash likelihood is possibly another paradox. When comparing the total number of drivers on the road and their average yearly mileage with the number of serious crashes, it's possible to calculate an apparently low risk. Statistically, the incidence of a fatality occurring is one in every 76,247,916 miles driven and for an injury crash it's once in every 866,235 miles.

From an absolute perspective 10 road deaths and 120 serious road injuries occur daily on UK roads. If 10 jumbo jets crashed every year killing everybody on board and the cause was identified as a combination of tired pilots; aggressive pilots frustrated by delays jumping the queue for takeoff and landing slots; pilots disregarding safety instructions or directions given by air traffic control, imagine the public outcry and how would you chose to travel to your next foreign holiday or overseas business destination?