This Book was originally published by the Trinity Mirror Group of Newspapers under the heading of BETTER DRIVING by DR DRIVE (Professor Peter Russell) 2002

Professor Peter Russell

Writing as

"Dr Drive"

BETTER DRIVING

This began as a series of weekly articles

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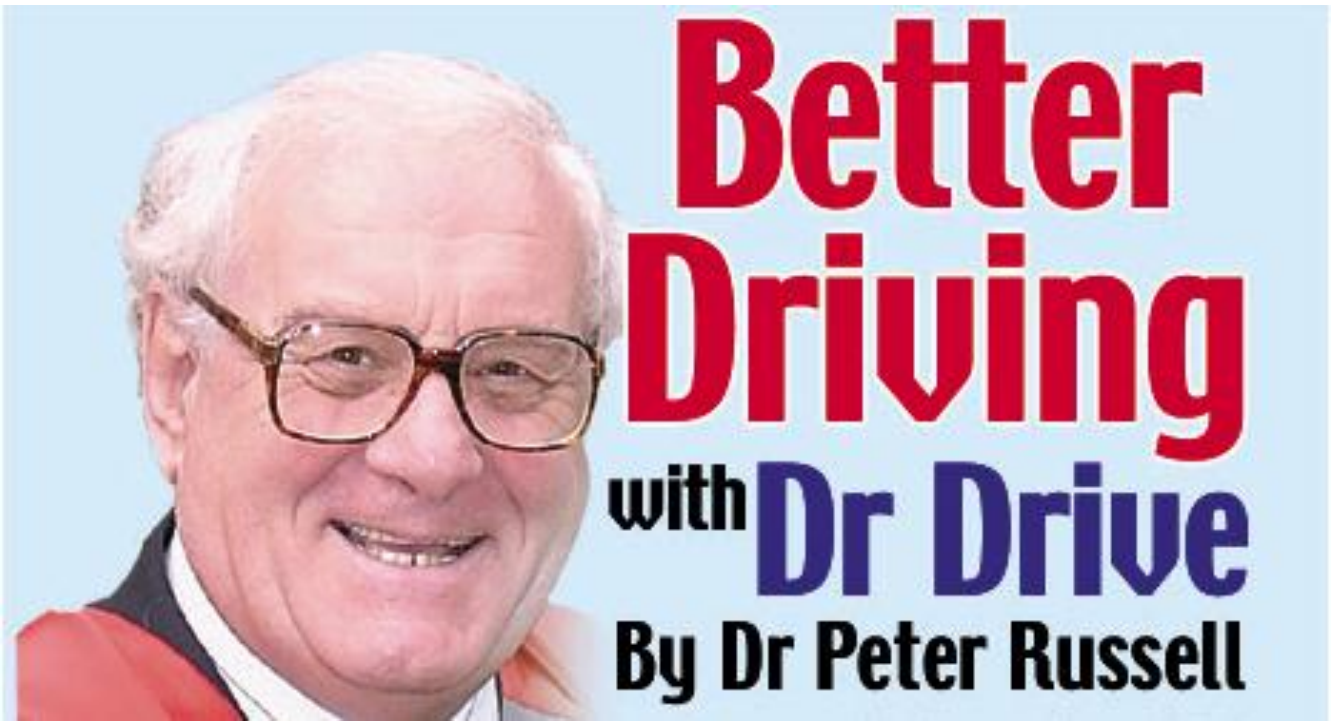

(Professor Peter RUSSELL)

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(A Text Book for Driving Without Risk)

This Book was first published in weekly instalments
as part of a year-long series of articles in the

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HOW TO BE A BETTER DRIVER

Introduction

"**Better driving**" has been defined as
"Concentrating on the driving task through the application of a practical and consistent system of vehicle control and road procedure".

OR, More Simply:

"*Driving better than you used to".*

These days, when you pass your driving test the driving examiner gives you two pieces of paper. One is the pass certificate which is the enabling document to convert a provisional driving licence to a full one. The second sheet is the marking sheet, which usually contains a number of minor or simple driving faults marked with a stroke like this ***/***. This is not just to remind you that you are not the perfect driver, but to emphasise a weakness in your driving which was noted and marked, but considered acceptable on the test, however, on a different day and under different circumstances, might still create crash potential. Should they total more than 15 this constitutes a fail; so anyone with more than eight minor faults is still very much a risk on the road. Read and learn.

Car crashes do not just happen; they are caused by road users making serious or stupid driving errors. Quite often these are the same as those identified as minor driving faults on their driving test, but ignored on this day by the examiner; however, they should not be forgotten, because all car crashes have two simple and similar causes:

- two or more road users trying to occupy the same piece of road, or
- lone drivers placing their vehicles into a space already occupied by a parked vehicle, lamp-post, wall, tree, ditch, river or even an open field.

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Better drivers recognise the risk potential of every situation before it gets out of control because they are looking and planning to avoid anything that could be a potential hazard.

All Road Traffic incidents must begin with '**vulnerability'**. Most drivers make themselves vulnerable many times whilst they are driving; but they often get away with it because not all the ingredients of a car smash are quite ready. Being vulnerable is simply a question of allowing the speed or position of the car to be beyond the control of the driver. If you are driving at a speed at which you cannot stop safely in the distance that you know to be safe, you are vulnerable. If your position on the road is within striking distance of another, you are vulnerable. The distance you know to be safe is not the total stopping distance of the vehicle ahead, it is the distance from it should a wheel fall off at any time. The distance is also the closing distance when an oncoming vehicle chooses to overtake another vehicle on a crash course with you. If you rely on the intelligence, skill, or good behaviour of any oncoming driver to take charge of a situation, you are making yourself vulnerable again. What do you intend to do about this danger?

Better Driving is so much like the lessons in good manners that your mother should have taught you when you were a child. Do not pass in front of people, do not push yourself into situations where you should not be; and never, ever, take it for granted that others will let you have your own way. Finally, never put yourself at risk from other people's stupidity.

Vulnerable drivers are always at the mercy of other road users. However, if two road users each make themselves vulnerable at the same time — and in close proximity — they create a confrontation condition. Good drivers are usually able to resolve the confrontation without it going further; however, if left unresolved, the confrontation rapidly becomes a crisis. And even good drivers can find themselves unable to prevent the consequences. However, even if you are a 'good' driver, how do you know how good your opponent really is? A Better Driver never has to hope for the best.

Lucky drivers can sometimes extricate themselves from a crisis too; perhaps 9 times out of 10; 99 times out of 100; or even 999 times out of 1000: but never 1000 out of 1000. it is this truism that leads on to the final step which is always the **crunch**.

Where two or more drivers are involved, dare you rely on the skill – or luck – of the oncoming driver being able and willing to save your life for you?

There is logic in this that is so simple that ***Better*** drivers put it into practice all the time.

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- If you never allow yourself to become **vulnerable;**
- You cannot ever be presented with a **confrontation**;
- If you never have a confrontation you can't have a **crisis**;
- If you never have a crisis you cannot have a **crunch**;
- If you are never vulnerable you cannot have any crunch **ever**.

When the incident involves just one road user making themselves vulnerable, the confrontation and crisis can develop so quickly that the crunch follows automatically. It all depends if the drivers are even aware of the danger they are facing. A simple example of this, which most drivers can identify with, is entering a bend too fast and not realising how severe the bend becomes. You know you need to maintain your grip by maximising acceleration; yet your backside tells you that you are in danger of losing the tail end of the car as it swings too far to the left or right. Braking is not the answer either, because this makes your steering more difficult to control. With hindsight you know that all you needed to do was to slow down more before you entered the bend. This is a bit like taking a dive off the top board at your local swimming pool without checking who is underneath you – or even ***is there any water in the pool?***

As a survivor it is essential that you learn from the experience; but not everyone will survive that first stomach-churning error; even fewer survive the second or subsequent repeated errors. Better drivers learn from their mistakes; but they learn much more successfully from other people's errors too.

As a potential 'Better Driver' it is easy to practise the following system in order to avoid making those simple driving errors which could so easily become stupid or dangerous ones.

- ***See what is going on all around you.***
- ***Tell other road users what you are going to do.***
- ***Adjust your position and speed to suit your immediate needs.***

- ***Keep a 'safety cushion' around you at all times.***
- ***Keep your vehicle in good condition.***
- ***Keep yourself in good health and fit to drive — safely at all times.***

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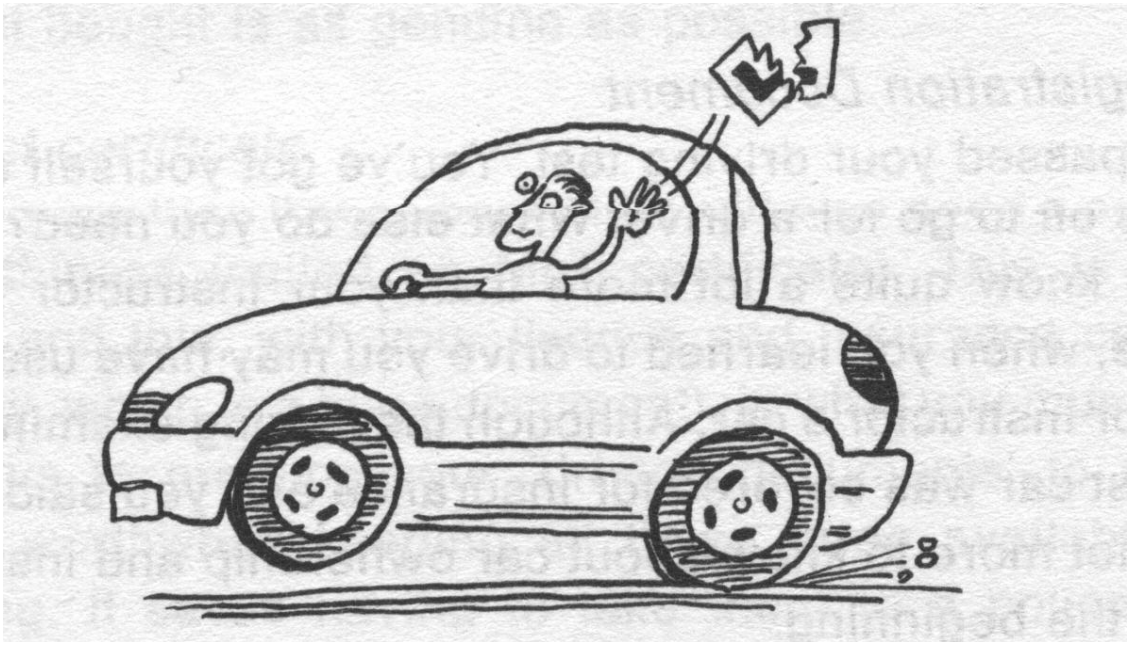

"The Perfect Driver" - one day perhaps, if he survives.

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Where Are You Positioned On The Driving Safety Line?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**???????????**

Where are you on the driving safety line? Getting Better?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**???????????**

Where are you on the driving safety line? Getting Better?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**???????????**

Where are you on the driving safety line? Getting Better?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**???????????**

Where are you on the driving safety line? Getting Better?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**???????????**

Where are you on the driving safety line? Getting Better?

Very Bad	**Bad**	**Poor**	**Good**	**Better**	**?**	**A Really Perfect Driver?**

Where Are You On The Driving Safety Line? Aim to Get Better Every Day?

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START AT THE VERY BEGINNING…..

Are You Sitting Comfortably?

One of the first things that any learner-driver instructor teaches a new pupil is how to sit comfortably in the car. And one of the first things that an advanced driver trainer looks at when taking an advanced driver or high performance client out for an assessment drive, is also how well the driver sits in the seat; and quite often it is done badly.

You would think that a car seat is just like any other seat you may use, but you would be completely wrong. Car seats have a number of operating controls to them and every time you get behind the wheel and, especially if someone else has driven the car recently, you ought to check that the seat is comfortable for you to drive. Forwards and backwards, up and down, the rake of the back rest and in some cases a lumbar adjustment each contribute to maximum comfort – or not. When did you last check and choose the most comfortable position for a long relaxing drive?

What happens in most cases is that people adjust their own seat when they first get into a new car and see no need to touch the seat controls again; even though the seat begins to sag after a few months and the driver may change weight or size. In other cases, especially with newer drivers, they get into the car and adjust the seat a little bit closer to the windscreen and lean forward so they can be sure to see better. Even in a new car, after driving for about ten minutes and then they begin to relax; drivers slump back in their seat and lay down the foundations for lumbago, sciatica or just another traffic crunch.

A comfortable seating position is necessary even for short journeys and essential for any long distance driving trips.

If you ever step out of the car after any journey and have backache, take another look at the seat position.

Even if it seems correctly positioned now, it is always worth checking at intervals.

Ideally you will have been conditioned to a whole sequence of safety stages for getting into your car safely. Opening the door only when it is safe, sitting down and closing the door properly, listening for the double click of the lock. Making sure the hand brake is fully applied and only then thinking about your seat.

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You can adjust the seat, starting with the fore and aft movements then the height adjustment until your feet are comfortably positioned to reach all three pedals, and to allow enough space for your left foot room to rest alongside the clutch pedal when you are not making gear changes. Allow your right foot room to pivot comfortably from the brake pedal to accelerator and back again, with your heel just lightly resting on the floor under the pedals. The lady in the drawing is still waiting for the artist to correct this.

Make sure your seat is now locked in place; then adjust the back rest to allow your hands to take up a safe controlling position holding the rim of the wheel with finger and thumb at the “Ten to Two” clock-face position. Now you can adjust your mirrors, ensuring you can get maximum vision behind and around the rear of your vehicle. Finally fasten your seat belt and relax in the seat.

Then check once more that you feel comfortable, and you can still see correctly through your mirrors. Only now can you think about switching on the engine and driving off.

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Welcome to my world of **BETTER DRIVING.**

Why "Better Driving"? Because all drivers have their own risk factors and no one is a perfect driver. You can only ever try to give a perfect drive on your next journey. And try to become a better driver every day, better than you were before.

Non-drivers have to learn how to become novice drivers. New drivers have to learn how to cope with things that they never did before their driving tests: such things as motorways, long journeys, night driving, bad weather conditions and commuter driving, which may be the most risky driving they ever do. And experienced drivers must always continue learning from their experience.

Another name for "Better Driving" might be "***Thinking Driving***". However, because I have spent the past fifty-nine years teaching people to drive better than they did before, I think ***Better Driving*** sums it up. I hope that my driving is better than it was before, because I think about my driving. And this book is intended to help you to become a better driver too, because I hope to give you some things to think about, and some targets to aim for that will improve your own driving skills, knowledge and performance. Similarly, because I am older now than I was some years ago, I hope that my better driving principles have taken this into account too. My own driving skill was last tested at the highest level three years ago; but today is still another day. It is hard to decide at which stage a driver reaches a peak of safety. It cannot be when they have just passed their test, because there is still so much to learn. It probably isn't when you have retired from work, because age slows down both our reactions and our thinking. On the other hand, if you have never given any serious thought to your driving skills, retirement might offer the opportunity to re-assess and re-appraise your driving techniques; and perhaps, as in so many things later in life, the best is still yet to come.

There is a bi-product to this that will benefit not just you, but your family and everyone you meet when you are behind the wheel: especially those other drivers you actually avoid meeting too closely.

Every day drivers face a new driving test. There is no examiner; no marking sheet and no pass or fail. And yet there is a gain, which might just be the knowledge that the near-hit you had today (we don't call them near-misses in the road risk analysis business) might save your life next time….

…. But only if there is a next time; and only if you are still learning.

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Some people hate driving at night. Others hate having passengers with them. Quite a lot of older drivers avoid driving on motorways, even though they are the safest roads in the country,

This aim of this book of Better Driving is to give you things to think about when you are driving;

- things to look for,
- things to cope with; and
- things to understand so that you are not worried any more about them.

For example did you know that the worst month for skid related car crashes is not during the winter? In fact it is July, or in any summer month after a long hot dry spell, when all the tiny gaps in the road surface are filled with minute pieces of rubber from your tyres. Well they have to go somewhere as your tyres wear out. This is then mixed with droppings of oil and other gooey stuff from every one else's vehicle. One day there is a sudden downpour. The roads are covered with water. The rubber of your tyres can no longer grip the rubberised road surface and – hey presto – you are driving a sledge as the water on the surface of the road acts as a wedge lifting your front wheels off the road.

Water is rubber's natural lubricant. As my old granny once told me when she caught me carving my name on someone's tyres when I was a little boy. "Stupid boy", she added to the clout around my ears, "If you want to cut rubber you need to use water to help the knife!" She might have added: "If you want to create skid conditions mix water with rubber".

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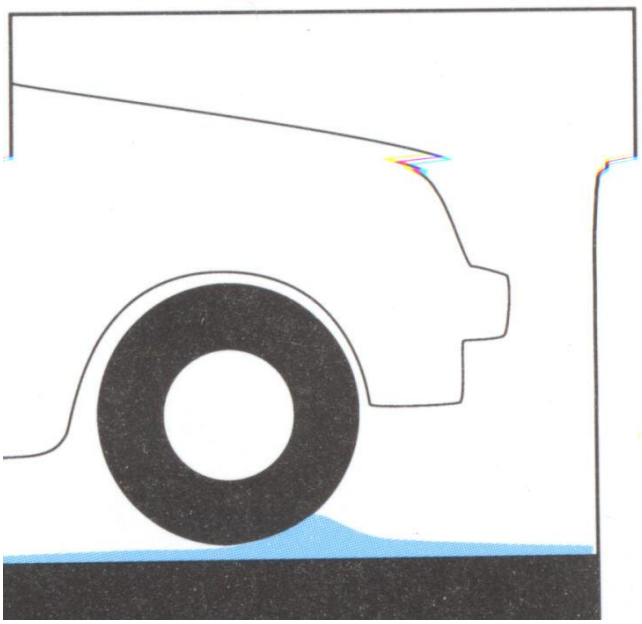

This is the wedge of water that builds up in front of your wheels as the tread, ***even on new tyres,*** is unable to disperse it quickly enough through the gaps where the tyre meets the road.

Aquaplaning can start as low as 35 mph and when you are aquaplaning you can neither steer nor stop.

Think about it; and slow down sooner. Decelerating may be safer than braking though.

.

Why do good or even average drivers have car crashes?

Very few really bad drivers actually kill other people; as I have said before, and will continue to say, most serious crashes are caused by normally good safe drivers having a bad moment, such as being distracted at a time when they may be distracted from the driving task; or by two or more drivers each taking an apparently minor driving risk at the same time and place as the other. (Dangerous, or consistently bad, drivers usually kill themselves and their passengers in solitary single-vehicle crashes).

However, when road traffic crashes are analysed, all too often it is easy to lose sight of the genuine cause, because of the obvious effects. It is not enough to examine the apparent causes of road traffic crashes; it is essential to identify the underlying reasons that make people behave in an irrational moment of stupidity.

For instance let us take the classic case where two drivers each shoot the same set of traffic lights. They are on a pair of crossing roads, one set of lights is changing from green through amber to red; the other set is red turning to red and amber. People often call drivers who go through red and amber, or amber on its own "Amber Gamblers". When two drivers each choose to shoot them at the same time, Funeral Directors call them customers.

Now let me ask you an apparently simple question: What do you think is the cause of a standard nose-to-tail collision: often called a rear-end shunt?
Is it…

- Driving too fast?
- Driving too closely? Or is it because
- Drivers are not concentrating on potential traffic changes ahead?

The significant question which should be asked is **why** do all drivers seem to drive so closely when following other traffic?

- Do they assume they can always stop in time?
- Do they not think about the risk at all?
- Do they realise the risk but still not care?

(**This is the critical factor used by the police in evidence for 'reckless driving' charges!**).

- Or could it be that they are keeping the gap closed up to prevent other drivers overtaking and cutting in?

(**This could be considered crucial evidence in a 'causing death by dangerous driving' case!**).

- In 98.5% of all car crashes faulty driver behaviour and other road users' actions are a significant cause.
- In 84.5% they are the sole cause.

Incidentally, the real reason so many drivers 'tailgate' other vehicles is a mixture of

1. They are not thinking;
2. Crashes do not occur very often;
3. Crashes only happen to other people;
4. They do not want anyone else to fill the gap;
5. They draw comfort from being close to each other; and
6. THEY NEVER DARE THINK ABOUT THEIR OWN CRASH RISK.

Remember that **PEOPLE** are the only possible cause of most car crashes.

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People who have Car Crashes

People just like you and I; but because I have made a lifetime's study of what constitutes better driving, I honestly believe I can recognise and apply safe driving practices. And, as sure as heck, I can identify what constitutes bad driving every day in my life simply by watching my fellow motorists. If I have any major surprises at all, it is that so few crashes occur; perhaps people are better dodgers than I expect.

I can almost guarantee that I will never have a vehicle crash; the almost bit has to be because I like to think I can reduce my odds to 999,999 out of one million. But remember that in the national lottery ***anyone*** can win, even if this is the first time they have bought a ticket.

What I can also state though is that anyone who reads this book and applies the principles explained in it, to their own driving practices can aim for the same odds too. You won't need a Master's degree in Advanced Driver Education – although all those who hold this qualification can certainly prove their skills practically as well as academically.

Every vehicle crash; every garage foreman's crash repair estimate; every magistrates' court crash penalty pronouncement; every crash coroners' report, and every crash victim's funeral oratory is the direct result of someone breaking the rules – taking an unacceptable risk that didn't work out – and thereby paying the price.

I investigate so many car crash cases, and I always feel so sad for those who have failed to learn even the simplest rules of the road; but especially for those who know the rules, but apparently just forgot to apply them on this particular occasion.

In today's or tomorrow's, or every day's newspapers you will read of an horrific road crash; after you have shed a tear or two for the grieving parents and survivors, read through the report again, and look for the hidden evidence. In my own local newspapers, twice in the past six months, I have read a series of single vehicle crashes where a total of nine young people were killed after crashing into a tree on a bend. Only one survived, a driver who will spend the rest of her life realising that no one had stressed to her the differences between driving a smallish motor school on lessons and test, and that of a Ford Fiesta laden with four other passengers urging her to drive faster, on a wet and winding road. No one had explained in detail the dangers

regarding loss of steering and braking ability when the back of the car is heavier than the front. And no driving examiner will ever have tested them under these conditions.

Three more cases in the same six months involved similar cars being driven in similar overloaded, underpowered situations, except in these instances there were other vehicles involved, and even more deaths of innocent people who were apparently driving sensibly. This book and the message it contains might help to prevent similar fatal crashes occurring in the future.

I suppose that if only one car crash is avoided; one family can be saved the agonies of being awakened at three a.m. by a traffic police officer asking them to identifying their late son's body; then the purpose of this book will have been achieved.

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Driving For Pleasure

You can really recognise when Spring time eventually arrives. There is a change in the air; people have a real bounce in their step; and they make plans to go in their vehicles for pleasure a bit more. Cars are brought out of the garages for their annual spring clean, both in posh avenues and also in the housing estates. They are washed; wax polished; and, in some cases, even the bonnets are opened and water added to the screen washer bottle. Tyres are usually kicked a couple of times to make sure there is some air still left in them and, occasionally, the windscreens are cleaned inside and out ready for the nice driving weather we now expect.

The weekend drivers are now ready for anything. Anything that is - except for rain; snow; skids; gearbox seizures; breakdowns; tyre blowouts; sudden stops in busy traffic lanes; and all other road users doing anything at all. Think about this interesting statistic which haunts me every Easter holiday: I cannot remember any pre-Easter holiday Thursday or Good Friday in which I have not seen the remnants of two or more – sometimes ***many*** more – caravans scattered around motorway hard shoulders. Worse still I can identify the real cause of these family devastations, which could so easily have been avoided. Many caravans are stored up for months at a time. Caravan tyres are rarely top quality ones, and they easily develop flat spots where they remain static for so long. Once on the road, after some initial safe and gentle driving, the caravanneer starts joining the rest of the traffic and cannot understand why the caravan wheels are reluctant to follow the towing car's direction precisely enough.

Professional drivers know that spring is just as dangerous as any other time of the year for road traffic crashes. And crash statisticians know that the worst weekends in the year for road deaths are not at Christmas or New Year; but at Easter and the May Bank Holidays, when caravans are almost hitched up securely again and everyone makes a rush to the beach or to the channel ferries and airports. Cars do not cause accidents. Weather conditions do not cause them either. And no one has ever been killed by a skid or a tyre blow-out, though even H M Coroners may occasionally have been misled when looking for a scapegoat.

It is no good giving your car a spring clean if you don't give some thought to the nut that holds the steering wheel as well. How is your health? Has your eyesight deteriorated? Are your reactions as good as they were last year, or even when you were in your teens and twenties?

A salutary lesson could be learned if you were to ask yourself if you would still pass a driving test today if a judge suggested or even demanded it? Could you even pass if

you really tried? Most drivers passed their driving test years ago and since then have never given another thought to their driving skills, knowledge and attitudes. Even if you think you are good, what about the thousands of drivers and other road users you are about to meet as you drive for business and pleasure. How prepared are ***they*** for the road and traffic conditions that they face?

One of my favourite past-times is to remember the driving habits of friends and family (my wife's side naturally!); I remember their little quirks. And I imagine that a clone of them is at the wheel at every vehicle within hitting distance of me. We have one friend who always occupies the centre lane of a motorway and always drives at 56 mph because he was once told that 56 is the most economic speed to drive. It is a pity he never believes my comments on how tough it is for truck drivers to get past him. My wife has another friend who spends ten minutes on the cockpit drill of her "Chelsea Tractor"; then drives everywhere at a steady forty miles an hour, regardless of what limits may be imposed.

The best 'thinking' drivers regularly take advanced driving assessments and, even then, although their knowledge is much better and their vehicle handling skills are really brilliant, they need to update their driving behaviour to match. If you think about your driving at all you will know the benefits of having your driving independently assessed and approved. In the next two or three articles it might be worth looking at how you can do this, cheaply, easily and effectively.

Safe driving in the Spring is just as important as at any other time of the year; but the dangers are often much greater because drivers are lulled into false senses of security. The sun is shining, the birds are singing and all is well with the world – until…. Until, that is, someone up front brakes hard and takes everyone by surprise. Oooops! What were **you** thinking when you should have been reading the road?

If you have never thought about your driving skills and behaviour since you passed your driving test, then you definitely need to have your driving looked at professionally; more than anything else this will spell out your own personal risk assessment very precisely for you. You owe it to your family, your employer, other road users and yourself.

There are five simple safeguards that can be applied by all drivers which can guarantee they will never become involved in anyone else's incident, or – worst of all – create their own personal little bit of chaos of bloody body parts and bent metal on the roads. Say this to yourself every time you get into your car and whenever you need to remember your safety:

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"THINK FIVE!"

First of all think a further five seconds ahead than before. Look at least ten, or better still, fifteen seconds, ahead of where you are now. That way you don't have to panic – you simply plan instead.

Second – never become fourth or more in any moving traffic queue. In any moving line of traffic as soon as there are more than three vehicles ahead of you, drop back until you have an additional five and ten seconds clear driving space between you and anyone ahead. If the vehicles behind you are closer than three or four seconds drop back even further. If they then overtake you, at least they won't run into you. Would you rather have an idiot grinning at you in your mirror – or ahead of you leaping dangerously past everyone else in the queue?

Third – never commence any right turn until you have checked that the road you are turning into is clear. Never try to beat oncoming traffic by turning in front of them; look well into the road before you start to turn.

Fourth – only overtake when you have worked out exactly how far it will take you to complete the overtaking manoeuvre in complete safety. If you are driving at the legal limit on a single carriageway it takes half a mile to safely overtake another vehicle travelling at 55 mph. When was the last time you could see a clear road for half a mile or more? Confirm your safe arrival point before commencing any turn; or wait where you can do so safely.

Appreciate the distances covered in any overtake situation and confirm that the time needed for the action is really and safely available. Can you really guarantee the road ahead is clear for sixty seconds? (if there are two vehicles on a collision course at 60 mph, they need at least one mile separation at the start)

Fifth – and finally – think on behalf of every other road users within hitting distance of your own vehicle. Mentally put yourself in their position; and then imagine that they are daydreaming, driving a car with dodgy brakes, or haven't taken into account the fresh greasy surface after a shower on a hot summer road. Or they have borrowed dad's company car illegally; or just hotwired it for a short trip. Always give everyone else a little bit more time and a lot more space.

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Think **FIVE** and have a nice long safe driving year; and you might make it through to **NEXT** year too.

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It's What Your Right Foot Is For

Most drivers apparently assume that they press their right foot hard to brake and more delicately to increase speed. Regrettably many drivers never learn the finer difference between braking and accelerating. They never quite understand how important it is to make judicious use of the right foot when driving. Even those drivers who don't care about environmental issues must still appreciate the benefits of fuel efficiency. But saving fuel is only one of the benefits of a gentle right foot. Acceleration, followed by harsh braking, wears out tyres, suspension and brakes at a dramatic rate. There is a definite correlation between increased wear on tyres and brakes and excessive fuel consumption. Every driver needs, for his own bank balance sake, to discover new ways of economical driving.

Better drivers always ease off the accelerator pedal and cover the brake pedal long before the need to press the brake pedal arises. The deceleration effects caused by coming off the accelerator means you are already beginning to slow down. And this is always the first step in any safe driving sequence. The other reason is one of economics. Every time you press the accelerator pedal you are using fuel. Each time you brake you immediately waste whatever petrol or diesel you have just burnt. Why throw it away when you can see the need to slow down and cope so much sooner?

This is the real skill of using your right foot. Better drivers easily learn how to use the right pedal smoothly to pick up speed. As a better driver you also learn how to use your right foot to reach a speed just that little bit faster than the next gear needs. As you select your next higher gear you can see by looking at your rev, counter that the clutch biting point matches absolutely the beginning of the next stage of acceleration. Poor drivers can be identified as those who always seem to change gear with a noticeable jerk. They lose impetus and the car slows down momentarily before it starts to accelerate again; worse drivers are identified as those who over-accelerate in each gear so that the gear changes are marked by power surges – and wasted fuel – between gear changes.

However the best drivers are those who reach a safe cruising speed and identify precisely how to ease their right foot without losing any speed at all. Feel it for yourself, or watch other drivers when you sit with them. The clue is seamless, smooth progress.

The safest drivers are those whose passengers notice nothing about the journey. Most of this skill is found by using your right foot gently in all that you do. When you are on a straight road increase your acceleration in third or fourth gear until you reach your

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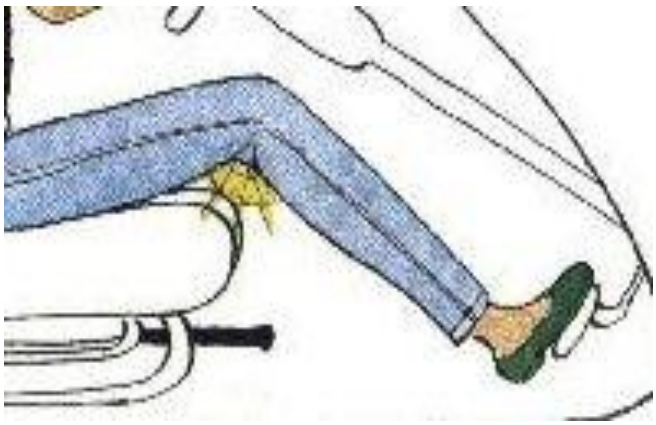
desired speed then when you get into top (fourth or fifth). Then relax your right foot but still maintain your chosen speed. Make a conscious effort to ease back your foot on the pedal until you are using just enough acceleration (and fuel) to hold your speed steady. Now you will only need to increase the pressure when you approach a hill or see the need to pick up speed to stay in the traffic flow.



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Black Cats and Black Ice

There are three phrases which regularly occur in car crash insurance claims every year. First of all is the alleged appearance of black cats which apparently run across the road causing the pet-loving driver to swerve to avoid them and, as a consequence, side-swipes someone's Rolls Royce parked at the kerbside, clouts a lamp post or just does some serious own vehicle damage. Not their fault at all; and they dare not admit to day-dreaming, falling asleep or other lack of attention.

The second phrase is 'black ice'. This apparently creates many incidents when drivers almost negotiate roundabouts or junctions and the sudden and hidden lack of adhesion to the road caused the driver to … well you know the sort of thing.

Regrettably black cats tend to be objects of fantasy that drivers invent when they have lost control of their car and are too embarrassed to state they were looking away from the road, or inspecting the inside of their eyelids when they should have been looking where they are going.

Genuine black ice is a different matter. The term black ice applies when light rain falls onto an already freezing road surface. The ice that forms as a result is very thin and hardly noticeable until drivers try to change direction or speed. It is then that tyres lose their grip and a skid occurs. Nevertheless, black ice is also relatively rare in the United Kingdom and is often an excuse used by drivers who are following the vehicle ahead much too closely. A sudden need for the leading vehicle to brake causes a chain reaction in the following queue of traffic; and each driver looks for a explanation to his insurers that removes blame from themselves.

"It wasn't my fault!" is not just an instant response made by small boys when the cat leaps in the air with a yelp, or when other domestic catastrophes happen. Drivers who are keen to maintain their insurance bonuses claim-free always see the need to exonerate themselves.

Yet virtually all car crashes are predictable and are always avoidable.

All that you need to do, as a better driver, is to look further ahead, to plan your actions earlier and smoother, and to concentrate on the driving task all the time. If you maintain a safe following distance, which is by allowing at least four seconds distance between you and the vehicle ahead; and to look and plan for at least another ten seconds ahead of you, you will have no problem spotting and coping with potential hazards.

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"Only a fool breaks the two-second rule"
However, better drivers will remember that the 'two-second' rule, quoted in the Highway Code, for safety gaps only applies when every condition is perfect. In all other conditions a four-second rule is a minimum. Better drivers remember that
"Only a fool breaks the four- to ten-second rule"

The extra care needed when driving in the dark or in potentially freezing conditions will also cope with external road surface changes. Black ice can always be seen, but only if you are looking for it.

Careful planning also helps you avoid having to use that third word quoted so often in "insurance claims" – **SUDDENLY**. Believe me, nothing can ever happen suddenly on the roads if you are seriously looking for it. To show what I mean: ask yourself what were you thinking about 5 seconds prior to the incident.

Better Braking By Design
We have previously looked at the needs and benefits of gentle use of acceleration, now we can see how careful and planned, gentle use of the foot brake can bring about even more savings. These savings extend well beyond fuel. They cover the cost of wear and tear of brake pads and linings, tyres and suspension systems too. The simple measure of coming off the accelerator earlier makes it is possible to anticipate braking needs and eliminates harshness and wear.

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You often hear the phrase “Progressive Braking”. The Driving Standards Agency, and its approved instructors and driving examiners, preach, teach and test ***progressive*** braking. However, at the slow speeds used around towns and practice driving test routes there is very little chance to experience and learn the benefits of progressive braking from higher speeds.

Initial braking starts when you remove your foot from the accelerator. It intensifies as you apply the foot brake, first gently and then harder until you are pressing for maximum efficiency. Finally just before your car comes to rest you need to ease off the brake pressure to allow the vehicle to come to rest gently and without any nose diving at the end. The braking shape is a long flat parabola and no jerks forward as you stop.

This is how “Progressive braking” actually works. But as we have already seen, looking and planning in advance will always reduce the need to brake hard at all. Gentle braking causes very little wear and tear on brake pads or tyres; but there is more to it than that. Imagine the effort you would need to bring your car to rest from sixty miles an hour. You need quite a lot of heavy braking in the second stage. The effort needed to slow down from sixty to fifty miles an hour is considerable. That same effort applied to the pedal to slow the car from twenty miles an hour to ten, or from fifteen to five, would be much too fierce. Better braking needs more forethought and, perhaps, less effort.

Better drivers normally use one braking action – and one gear change – for any hazard which is seen developing. When the opportunity occurs, and you are not causing any concern to following traffic, practise the skill of seeing a hazard ahead – one that will probably need a definite braking action in the near future – and see how easily you can make your braking actions progressive. See the hazard, decide on the need to slow down, check your mirrors, decelerate and gently brake. Then brake firmly, but fit your slowing down speed to suit the time available, before you reach the speed needed to cope with the hazard successfully. Only then select the appropriate gear. Or if stopping is the only option, ease off the brake so that you almost roll to a stop without any jerk. Remember that this sort of skill is one that is never noticed by your passengers.

Better drivers always brake in such a way that no one inside or outside the car is conscious of any sudden change of speed. If others are looking at your better driving skills, what they will see is a smooth exercise as a result of forward planning.

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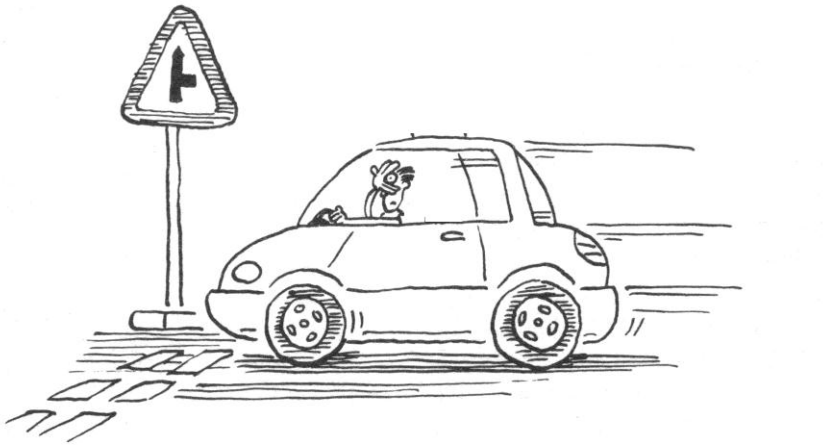

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More About Braking

Although many vehicles are fitted with Anti-Blockier Systems – often called ABS – these days, most drivers never use them. This is as it should be; because ABS only comes into action when drivers lose control. This may be caused by icy or loose road conditions or excessive speed for the road surface. Excessive speed can be as low as thirty miles an hour on water; and ten miles an hour on ice. Any fault, however, must always be that of the driver.

What normally happens is that the driver brakes too hard for the conditions that exist on the surface at the time. These include the weight and speed of the vehicle and the factors affecting tyre grip on the road surface. The safe braking distance when all the conditions are perfect is marginally better than quoted in the Highway Code. However, when any of these conditions are not met, braking distances will become very much longer. Vehicles with ABS fitted, have sensors connected to each of the brakes and these recognise the potential for skidding and then automatically release the brakes, then re-apply and release them again, as much as sixty times a second. This simulates what is known as “cadence braking”; but even the best expert drivers will agree they cannot match or beat an inbuilt ABS system.

However the problem that many new drivers face with ABS is a basic human challenge, because they have never experienced the effect of ABS operating, the first time it happens for real they panic at the sudden violent knocking from the front of the caras the ABS comes into operation. Consequently they take their foot off the pedal and lose its safety effect – and of course their braking too.

Every new driver of a car fitted with ABS needs to test it out somewhere safe (with NO ONE following) to be aware of how it feels. That way you are less likely to be frightened when you really experience its effect. This leads on to the way to use ABS most effectively.

First of all do not think that ABS stops the car more quickly. It does not. What ABS does is to enable you to steer around or away from dangers whilst still braking. Under normal conditions without ABS, when you try to steer under heaving braking the front wheels will lock up and steering becomes impossible. ABS may not stop you any quicker but, because you can steer, you may still avoid the deadly head-on smash.

Drivers who have never had ABS fitted will have come across many terms for this type of braking. Cadence braking is used to describe the effect of braking hard, recognising

the point **just before** the brakes are about to lock up, then releases that pressure and re-applies the pressure in the fashion of a musical cadenza.,

Aquaplaning is a different challenge which occurs even on good tyres on a reasonable road surface and at speeds as low as 35 mph. This was described and illustrated earlier where a wedge of water builds up in front of the steering tyres, causing them to lift away from the road surface. As this happens, you cannot steer, nor dare you brake. What you must do is to relax the accelerator pedal, preferably gently, until the speed drops enough to allow the water to disperse and the tyres to grip the road surface again. Once more driver error is the cause. If you are aware of standing surface water always ease off your speed gently. If the standing water is deep, always be sure there are no holes in the road likely to break steel or alloy wheel rims.

The golden rule that all 4x4 drivers must obey, is always walk the route before driving into or through standing water. The use of a long pole to test the depth may be essential unless you are prepared to stake your life on your ability to drive through in safety.

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Winter Breakdown Precautions

No one expects to break down or get stuck in a snow drift, but it is always worth while keeping an old overcoat and gloves in the boot throughout the winter months. If you are really organised you could keep everything in a separate bag; include a good windscreen scraper and an additional bottle of windscreen washer fluid, it is amazing how much you will use when the weather is dirty. Not only is it illegal to have an empty screen washer, ***it can kill you***. Finally add some sensible boots in case you have to walk anywhere in the snow.

The only tools worth carrying with you are those you know how and where you use them. However some items are always useful even if you have no mechanical knowledge at all. A small hand towel and hand wipes are helpful; large hand lamps are better than small torches, especially if they can be used to identify a break down; a car rug can cover the rear seat until the occasion arises for it to keep out the cold when the heater is not working or if you are held up in a snow drift. Bags of sweets or chocolate will stave-off hunger pangs. A newly prepared flask of coffee or hot soup can be worth taking if you know you are likely to be in the car for a long time.

Most of these items can be left in the car throughout the winter months of course, but you still need to plan for each separate journey.

Ask yourself some questions:

- **Are you going alone?**
- **Do you have a mobile phone plus an in-car charger?**
- **Have you told someone where you are going and what your time table is? Have you studied the relevant road maps and planned your route?**
- **Do you have enough fuel to last well into the journey?**
- **Have you got the number of a breakdown service?**
- **Have you listened to the weather forecasts?**

There is one especial word of caution for ladies driving on their own. Not only take a coat, but an old hat too, so that if you do break down you don't draw attention to the fact you are a woman on your own. If you are awaiting an engineer, sit in the passenger seat so that it looks as if your partner is only temporarily absent. Keep all doors locked and only open up when you have checked the engineer's identity. Any passing would-be Sir Galahads can be spoken to through no more than an inch gap at the top.

The only exception to this is if you do break down on a motorway. **NEVER** wait in the car. Wrap up warm and wait the other side of the barrier. If you are a bit worried about being approached, hold your biggest spanner in both hands. Remember that the

danger of being attacked on a motorway is infinitesimal; but the likelihood of being run into when parked on a hard shoulder for more than twenty minutes is quite high. Only stay in your car if everyone else is stopped as well.

Select Safe Speeds

A common question that I get is "***What is a safe speed to drive?***". The initial answer must never be higher than the statutory speed limit.

National speed limits have two determining factors, the type of vehicle and the type of road. The limit is 70 mph on dual carriageways or motorways. However trucks and most caravans, buses and coaches are usually restricted to 60 mph. The national speed limit on single carriageways is ten mph slower for each of those above.

Built-up areas are defined as roads which have street lighting and the speed limit for all vehicles is 30 mph, unless repeated signs show otherwise. These can be lower than

30 as well as higher of course. Therefore recognition of the speed limit whenever you are driving is easy. If you are in a built-up area it is 30. If it is anything else then that speed will be shown at intervals. However speed limits are not targets but warnings.

Nevertheless, no one should ever drive faster than they feel they are safe. And this also includes being able to stop safely in the distance between you and the stopping distance of the vehicle ahead. If you are in a moving queue of traffic and the vehicle ahead stops for any reason (and this might include its rear wheel coming off and the rear axle biting the dust!), then you too must be able to stop safely enough for the vehicle behind not to hit you. Think a safe distance and double it.

But what do you do when you are not happy driving at the speed limit and everyone else wants to? Or worse still when you want to drive moderately slowly and everyone else seems to be breaking the speed limit? The answer to the second question is easy. In these days of digital cameras and speed fines in the post the next day, it is not only safe; it is common sense, to insist on not joining the other idiots.

However, if the reason you are slower than the other traffic is because you don't want to drive at their speed, remember that you may well be a driving hazard to them. It is not too bad on motorways, but even dawdlers in the left lane are an annoyance to some truck drivers. Never drive in the middle lane of a motorway at slower speeds though because you really will be in danger because the sensation of being squashed between large goods vehicles can be overpowering. The law does not allow them to overtake you and you may feel browbeaten by them instead.

If you hate driving at a safe maximum legal limit, however, it might be better to ask yourself why. It would be even better to arrange a professional assessment of your driving. This is not a driving test, and your licence would not be at risk. Nevertheless if you find yourself querying your driving then you can be sure that a professional advanced driving examiner or trainer could not only identify the problem, but will offer an instant solution.

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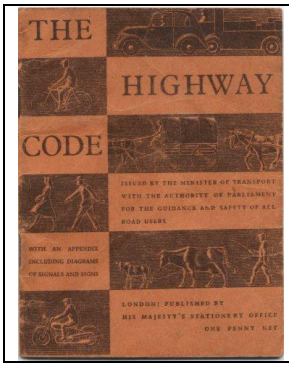

Which edition of the Highway Code was the one you last read?

"This one was my first bible in 1946".

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Hazard Awareness; (part one) Hazard Perception (as tested)

One phrase that has entered motoring vocabulary recently and one that is part of every new driver's vocabulary is '**Hazard Perception'**. It is the clue to all Better Driving procedures. And, of course, the new theory test for learner drivers has included a test on 'Hazard Perception' for a few years now.

Parents or friends of recently qualified drivers will know that new drivers must pass a computerised theory test before they can apply for their practical driving test. The new theory test now includes a series of 15 second video clips and the candidate must press a button at that point when they identify a hazard developing. There are fourteen clips and fifteen hazards, so one of the filmed pieces actually contains two hazards to be identified. Essentially, part of the marking system relies on the candidate hitting the key at the precise stage of hazard development. There are 75 marks in total and initially when first introduced, candidates had to score at least 38 to pass.

Soon afterwards the Driving Standards Agency raised the pass mark in this special video hazard perception test to 40/75. Although this is only a minor increase, you can be assured that it will continue to rise at three-monthly intervals to 55 or even 60. The reason for the low starting pass mark was to make sure that candidates could be properly prepared. It is worth noting that in the first three months of the hazard test, the pass rate of the theory test had dropped from 65% to 50%.

So what exactly are hazards? How can you perceive them and how do 'Better Drivers' cope with them?

The answers are simple. Anything that causes a road user to think about changing speed or direction is a hazard. If you want a simplistic view, hazards can also be broken down into two basic groups: static and moving.

A static hazard for a driver could be a set of traffic lights in the distance. If they are green now, what colour will they be when you arrive? This not only shows how easy it is to identify most hazards it also explains how simple it is to cope.

Moving hazards are normally created by other road users who are in your range of action and are potentially able to encroach on your piece of road space. In the DSA driving theory test, described on the next page, the examiners are only concerned with "developing" hazards. This can be confusing; but it really means when you have

passed your theory test, this is when you need practical and professional training in the full range of

- **hazard recognition,**
- **hazard identification,**
- **hazard perception; and most essential of all:**
- **hazard avoidance.**

A really vivid example of hazard awareness training would consist of teaching you the dangers of oncoming drivers in a three-lane single carriageway.

You know what I mean. Imagine a rural road with a sixty-mph speed limit. There are three lanes.
Your side;
the oncoming traffic's side;
and the lane in the middle with can be used by both sets of traffic for overtaking. This may be thought of as **Suicide".**

You will now know that if you are travelling at 60 mph in the middle lane, overtaking a vehicle doing 55 mph any traffic coming towards you in the same middle lane MUST be at least one mile away, or one minute if you like to start counting, for it to be even remotely safe. Any shorter distance and time brings into action the start of a crash that you alone cannot avoid.

However not all moving hazards are quite so imaginative, yet all drivers must cope with every single one to survive. And this is a problem, (civil servants prefer to think of problems as challenges) that the DSA has brought upon itself. Having been made aware by our European colleagues and masters, that 'hazards' should be tested as part of the European harmonised driving tests, the DSA ignored advice from professional and Approved Driving Instructors that learning the basic principles of commentary driving would address this issue, the DSA chose to have some tame academics design a series of video clips which require an unskilled (unqualified) driver to hit the keyboard when a "developing hazard" develops beyond the "noticing it" stage. In other words something not nice is now happening. This gives a false impression of what hazards really are, and how they can be avoided where possible, and dangers reduced if they cannot be avoided. It is also noted that the DSA's HP computer test does not involve any static hazards, or those which are approaching at a high speed. Naturally no road driving is involved. When hazards are first noted, whilst driving along a road, the driver's basic controls of approaching speed and relative positions are most important. When using a computer screen these options do not exist. The greatest weakness of the computerised tests, is that many new drivers think they have passed the DSA Test;

ergo they know all there is about hazards and do not need to think about them when continuing with the driving lessons – and driving life.

The one skill that ought to be developed by every new driver at this stage of learning is the ability to arrive at any specific piece of road that is the safest place to be at that specific time. A term once described by a colleague as “Coincidental Arrival”, by which he meant arriving at a time and place by deliberate actions of the driver.

Speed and Position; these are the only two things which the driver has total control over. This skill is easily developed when put together with practical commentary driving.

We need to look at how ‘Hazards’ can be defined, recognised, identified, perceived and minimised.

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Hazard Awareness (part two); Hazards Defined and Recognised

If a "hazard" is defined as "anything that may cause a driver to brake or change direction"; and you realise that most car crashes are caused by drivers failing to act properly when hazards develop, you can believe that most drivers would look ahead, see three thousand hazards and decide to catch a bus or train instead.

It is true that almost anything can be a hazard, of course, and Better Drivers are those who can look at everything around their vehicles both immediately, and subconsciously, and classify what is important and what isn't; this is an ongoing driving pattern.

With understanding and experience it becomes easy to separate risk into three broad categories. (This is over and above the two divisions I have referred to as static and moving).

The three categories can be seen as

- **those which are bound to happen;**
- **those that could probably happen; and**
- **those unlikely to happen – but you dare not ignore the possibility.**

For example, you are approaching a set of traffic lights about 100 yards (or 95 metres) away. The lights are now green and at sixty mph it takes about three seconds to arrive. You know the lights will change to amber and red very soon. Your decision starts with the question 'Will it be within the next four or five seconds?'. However you can also think what does "Stale Green" mean?

The second category contains everything from 'very likely' to 'not so likely'. Take two examples:

You are following a large truck which moves out to the right ahead. The driver hasn't signalled yet, but if there is a left turn ahead he would need to swing wide to enter. The probability is that this will happen, so you must avoid getting into any of the driver's blind spots; therefore always drop further back to give yourself more time.

The next example is a cyclist in front, making good progress but listening to his iPod and wearing ear-phones. Ahead you can see a drain cover raised slightly above the road surface; you can guess he may swerve out to miss it but he won't hear any traffic around him. Once again holding back is the only safe option.

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A final example, highlighting the 'improbable possibilities', is where you are following an old van, lots of black smoke belching from the exhaust and overloaded.

You cannot ignore the possibility that something might fall off, or even that the back wheel could come off. I can assure you from experience that when a vehicle ahead of you loses a back wheel it doesn't slow down gracefully accompanied by beautifully manicured hand signals. It stops: dead. I remember the surprise expressed once by the chairman of one of the largest driving schools in the world when a wardrobe fell out of a large truck in front of him whilst driving down the M4. ….. "I never expected that to happen", was his comment to me whilst waiting for his Rolls Royce to be collected.

So must you, especially if you don't want to join this rather not so exclusive club.

But only after you have checked your mirrors and confirmed you can stop safely in that distance without being at risk from any of your following traffic. However, if you have seen the 'trigger', you will already be fully aware of what is around you, won't you?.

Having classified hazards you will soon realise that the same answer almost resolves most of them.

Look further ahead, note what is happening and take action earlier and more gently. This is what situation control is all about, and total situation control is the hallmark of the better driver..

Hazard Awareness (part three); Hazards Perceived and Coped with

Hazard perception is vital to safe driving. But hazard control is achieved by looking for where hazards may lurk instead of waiting until they rise up and say *"Hi I'm a hazard!"*

One quote I use at safe driving presentations concerns the way in which people use their eyes. It is really a question of semantics and playing with words. But this is what I mean by looking and seeing.

Everyone driving a car usually looks where they are going. Perhaps in percentage terms is can be said that
99.0 percent of drivers LOOK.

Most drivers claim to see where they are going. If you watch them carefully, which I do, you will become very aware that most drivers let their eyes point in the right direction, but only

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50.0% of drivers actually SEE.

Expert drivers know that observation is the key to safe driving. Advanced and Better Driving Courses emphasise it. However if you watch how many drivers actually do so, regrettably less than
10% of drivers OBSERVE what is happening around them.

There is a further stage of 'hazard watching' that is hardly recorded at all. When you closely assess drivers on their abilities to cope with hazards you become aware that only about:
0.05% of drivers actually PERCEIVE what is likely to happen and when.

Seeing, looking, observing and perceiving, are all part of the whole pattern of driver behaviour that determines the likelihood of being involved in someone else's incident.

My story about the real meaning of perception is a true one that was told many years ago about Juan Fangio, the famous racing driver of the fifties. The story goes that Fangio was way ahead of the field in the Monaco Grand Prix. This is a lovely circuit and one of the very few that still uses normal traffic roads for the racetrack. Fangio was on a stretch of road with a long curving arc into a very sharp right hand bend leading to the long straight that is Monaco sea front. Fangio looked ahead of him, but also took in the peripheral view too. Something was wrong. He eased off the throttle and began to brake.

There was nothing to see, yet he still perceived danger. As he went round the hard right handed bend, Fangio carefully picked his way between various stricken vehicles and carried on to win.

Afterwards Fangio agreed that he had not seen anything to warn him. But what he had perceived had probably saved his life. As he approached the right turn, the crowd was on his left, and all he could see was hundreds of black heads of hair and sun-burnt scalps; whereas he normally expected to see sun-burned faces. But the crashed vehicles they could see round the corner were more interesting than his approach. His perception of this warned him and saved him.

You too can benefit from this attitude towards driving; it is not only what you can see that matters, it what you cannot see that may carry implications for your safety.

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Hazard Awareness (part three); Hazard Perception and Reduction

I have tried to explain how hazards exist everywhere, and yet, the very act of early perception when accompanied by pro-active thinking and positive action, resolves situations safely without apparent effort.

Pro-active thinking can best be learned by training. The pro-active person finds that it can be achieved by concentration, by dedication and by determination. Your personal concentration must always be on the driving task. If your route is a strange one, be on guard and maintain all your safety cushions. If you know the route well, don't become complacent.

Dedication to road safety is common sense. If you play any important game against a strong competitor, as soon as your concentration and dedication slips, you lose. In driving there is another game being played. The winners are those who arrive home safely every time, and the losers are those who only thought themselves safe. They cut this corner last week, and the week before, and it was perfectly safe then. They even cut the same corner yesterday so it ***must*** be safe today.

And it would have been safe today if some ***other*** idiot hadn't chosen to be in the their place at the wrong time and day. "This is ***my*** piece of Road!!".

I like to imagine that other road users are a bit like ants in the garden. If you examine them for some time, you will see that many of the ants are buzzing to and fro with specific jobs to do. However, some of them seem to be just whizzing around with no apparent aim in life at all. They don't actually go anywhere at all; they just run around getting in everyone else's way.

I call them "Lurkers". I believe that some drivers are like that too. They only have one purpose in life; to wait until you make a slight mistake and then they pounce. It is a bit like you dozing along in the middle lane of a motorway. Suddenly some pratt in the left lane moves across in front of you. Naturally, you have to swing out into the third lane, and it is then that this blasted Lurker is there, just behind on your right where you needed to be. He blasts his horn at you, so you do the same to the other idiots who caused it and everything reverts to normal.

It wasn't your fault was it? If it hadn't been for that "Lurker" sneaking up trying to overtake you, no one would have bothered about it. And this is where determination comes into it.

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Determine that you every time you drive you will look for potential change. ***Perceive*** those things that just could cause you to change direction or speed sooner and sharper than you intended.

Resolve to see, to perceive and to act, sooner and so gently, that no one else in the car is even aware that anything has happened. By using a positive and pro-active driving approach you will ensure that no one outside your car is even aware that you had to take any action at all.

That is Better Driving!

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Hazard Awareness (part four); Hazard Development Training

The subject of Hazard Awareness and Hazard Perception seems to have struck a chord with many readers. Certainly it has been the cause of the greatest correspondence I receive from Approved Instructors who wish to progress to become Driver Trainers and Coaches in the Fleet and Corporate world of driver training and assessment.

Most drivers (or at least those who contact me) seem to be very conscious that new **L** drivers, possibly family members or friends, are being tested quite thoroughly and separately on the subject before they can get their licences to drive.

"Is it something new, that experienced drivers also need to think about?" has been a consensus of what a number of my readers – including learner drivers; qualified drivers; advanced drivers; advanced driving examiners; and even those who help to train all the above; have asked. However the majority of experienced drivers really want to know how they can help their own family 'new' drivers to cope. There seems to be considerable confusion about the ways in which hazard recognition should be learned, and how it is currently being tested by **L** test examiners.

First of all there is only one intelligent way to learn to cope with hazards and that is on the road, in a motor car whilst the driver's mechanical – or auto-pilot – skills are actually controlling the car. Experienced drivers find they can cope with a two hour drive in a variety of conditions without too much stress. Their only needs are for natural comfort breaks. New drivers, and especially learner drivers, are ready to crumple in half this time and need a physically and mental break. Whilst experienced drivers find it easy to filter out all the unnecessary distractions on the road, however, novice drivers need consciously to look at, to decide and then to discard them.

The reason the Driving Standards Agency uses a computer screen to test new drivers on their ability to spot developing hazards is so that a standardised test can be delivered to all candidates. You can easily imagine how few hazards a driver in small towns in Scotland or Wales will come across on their practical tests compared with someone taking a test in London, Birmingham or Manchester

For fifty years Driving Examiners tested a new driver's theory knowledge at the end of the practical test, invariably after the examiner had decided the result of the test! Eventually, but only after European Union pressure, the theory test was separated as part of the Government's acceptance of the need for graduated, or staged, driver licensing. The use of computers followed by hazard perception testing, are just further

steps on this path. Perhaps a new Government may view things differently; but it isn't likely.

However, the only fulfilling way to learn hazard perception and to cope with hazard development is in the car. The only purpose of CD Rom or video practice tests is to acclimatise learners in the use the testing equipment. All advanced driver trainers and most good learner driver instructors know exactly how to teach hazard perception. One of the most successful practical exercises that would benefit all drivers is the use of sensible running commentaries. This is another of the hallmarks of the Better Driver.

Hazard Awareness Training - Running Commentaries (1)

Previously I have commented on the value of running commentaries as a means of improving your better driving observational skills. Good running commentaries fulfil two essential Better Driving roles. They concentrate the drivers' minds onto the driving task. But they also boost their pride in their driving performance as they encourage drivers to look further ahead.

I think you might enjoy a genuine example of a commentary once given to me by a very keen and earnest young Police Constable who desperately wanted to join the Traffic Division.

"We are travelling in a saloon car at 28 mph in a thirty limit; it is mid-morning and dry road conditions and we are in a suburban residential area. It is a single carriageway road with light traffic flow and we are behind a bus at twice the normal safe following distance. I am watching the bus to see if any passengers stand up to give an indication that the bus may pull in.

"I am also looking for pedestrians or other road users who may cause me to change my speed or direction. As we approach an uncontrolled pedestrian crossing I notice there is a lady walking on the pavement towards that direction. Just to make the situation safe I check my mirrors. There are a number of cars following so I feel that an arm signal may help them to realise I am going to slow down just in case the lady does turn towards the crossing.

"As my driving window is up, I wind it down slowly so that my left hand on the steering wheel is not affected; I give a formal arm signal three times to ensure the traffic behind are aware of my intentions; and gently brake. I check my mirrors again and now I see the lady has put her left foot onto the crossing at the same

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time as I arrive. It is too late to stop now so I shall carry on driving whilst she quickly steps back onto the pavement.

"She has just made me break the law!"

Giving a bad example of something is not always a good way to teach. But what this young man showed was a typical trait of those who try to carry out running commentaries. He started very well by setting the scene. But he broke the law (and could have wrecked his 'Traffic' career) by trying to deliver sensible, understandable sentences.

Running commentaries should be short statements. You don't always need verbs. You certainly don't need adjectives. Had he approached the task differently he could so easily have given a positive example that I could have used here instead.

"*28 mph - single carriageway - thirty limit; 11.am dry - light traffic - residential.*

"Watching for bus passenger movement.

"Uncontrolled pedestrian crossing - LADY!!

"Mirrors! Gently brake, reduce speed to two mph. Select 2nd gear;

"Cars following. Mirrors - lady's foot on the crossing - looks and crosses.

"Lady completes crossing.

"Check mirrors again – look all round. Is it safe to continue?; pick up speed.

"Bus slowing down…Mirrors … ."

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Hazard Awareness Training - Running Commentaries (2)

In the previous chapter I looked at two examples of running commentaries. The first one was beautifully descriptive and continued in this vein until the driving task overtook the commentary. That is what is wrong with so many early attempts to use commentary driving as a hazard awareness training method. Drivers spend so long talking about developing hazards that by the time the hazard has arrived they are still saying what they might do. The second example looked at the same situation but limited the vocabulary to those words that required, or might require, action to be taken. Consequently the driver was able to cope by starting his driving sequences earlier.

A running commentary focuses the driver's thinking further ahead. This is a simple way to solve almost all young driving challenges. In this particular situation the driver saw the lady approaching a pedestrian crossing and once he had checked his mirrors and signalled he was able to adjust his speed on approach to the crossing so that the lady had arrived, looked and crossed in safety before the car driver – commentator had arrived. This enabled him to carry on moving. Apart from the fact that the commentary was out loud, any passengers would not have been aware that anything had happened out of the ordinary at all.

This then is the real secret of driving commentaries. As a better driver it soon becomes relatively easy to practise your commentaries – on your own of course – to focus your mind. You know they are successful as soon as you realise that your concentration and anticipation skills are improving. Naturally, running commentaries will improve immensely with practice.

Early attempts should concentrate on simple static and moving hazards. But as you get better you will find there are so many other things to look for and to indicate appropriate action. The skills you will develop are all part of the same programme aimed at making your driving pro-active, rather than re-active.

Another term for this is '**Situation Control'**. Poor drivers are those who characteristically are always taken by surprise by what other road users do to them. Better drivers are not surprised, because they know what to expect, and quite often, have managed to avoid any confrontation situation developing. Their passengers are not even aware that any such situation existed.

However, speaking aloud can always be embarrassing, especially with family members or friends in the car. So, ideally, you should practise them on your own; and there is no

reason why they should not be silent if you wish. The only time that running commentaries need to be delivered aloud is when you are with a professional driving assessor; either a specialist trainer or an advanced examiner. However Better Drivers do not really need to concern themselves with driving assessments.

Advanced, or
Better, or
Careful, or
Defensive, or even
Expert driving tests are great fun for badge collectors.

However, truly concerned drivers are satisfied to know that their driving is safe at all times, regardless of which letters of the alphabet are used.

Hazard Avoidance - Running Commentaries in Practice (3)

Perhaps the greatest single benefit that any driver will find once the habit of giving occasional silent running commentaries has developed is that day-to-day vulnerabilities are easily reduced – or avoided altogether.

I have mentioned earlier in this series that the greatest single cause of road traffic incidents, (no one really believes they are 'accidents' do they?), is the typical habit of following other vehicles too closely. Everyone seems to drive too closely to the vehicle ahead, simply because it is comforting to do so. Regrettably, another reason they do this is to avoid some other idiot filling the gap that is created as soon as they drop back. Even worse is the thought that if they do drop back they are seen as losing their place and with it some sort of status. If that is the only reason, why didn't they leave home earlier or start their journey sooner?

The simplest ever commentary method you can employ as a life-saving guarantee, is the well known "Two-Second Rule". All you had to say to yourself was:

"**Only a fool breaks the two-second rule**".

To which all Better Drivers add their own extra bit which says:

"**Only a fool breaks the two-second rule;**
but make it a bunch, to avoid the crunch".

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Everyone knows the Highway Code Rule 105, don't they? Don't they? Don't YOU? Oh dear, then I had better repeat it here.

"Drive at such a speed that will allow you to stop well within the distance you can see to be clear. You should:

- *Leave enough space between you and the vehicle in front so that you can pull up safely if it suddenly slows down or stops. The safe rule is never to get closer than the overall stopping distance (shown on pages 28-29)*
- *Allow at least a two-second gap between you and the vehicle in front on roads carrying fast traffic,. The gap should be at least doubled on wet roads and increased still further on icy roads*
- *Remember, large vehicles and motorcycles need a greater distance to stop.*
-

Then there is a pretty picture showing two cars using a fixed point to measure the two-second gap.

The two-second rule is only supposed to work in ideal weather conditions. Of course, in a well maintained vehicle; with good tyres on a good dry road surface; with perfect brakes; a perfect driver at the wheel of your own vehicle with instant reactions, fantastic forward observation; and the vehicles ahead and behind both being driven by good drivers who are also concentrating on the driving task.

If the situation shows anything less than the above then you really need to have at least a four-second gap for complete confidence. It is not really just a case of doubling the distance in the wet and even more on ice. You really need four-seconds in any road and traffic condition.

All you have to do is remember the four-second rule and say it to yourself often.

"**Only a fool breaks the two-second rule;**
but make it a bunch, to avoid the crunch".

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Coping with bends

When you are out in the country, no matter where you are you will soon come across a bend. Bends restrict your visibility and also the speed at which you drive. The rule must always be to stop safely in the distance you can see to be safe. As you drive in towards a bend you need to reduce speed so that you can always stop in that distance ahead. Try to imagine a large combine harvester trundling around the corner towards you occupying all the road. If you can't stop easily in that distance, at that speed, then you are driving too fast.

The best way to cope with bends is to take driving in three progressive stages. These are: smoothness of transmission; equal tyre grip at all times; and maximizing your position through bends.

Transmission first

Your first skill is to learn how to control the vehicle's transmission smoothly. Every time you change gear your clutch should come up slowly enough to make sure that there is no jerk at all. If each time you select a new gear the engine speed grinds or the clutch judders then you are not matching your engine speed to that of the road wheels.

Four tiny footprints of rubber tyre-tread

Once this is mastered you need to think in terms of keeping all four tyres with equal grip, all the time, on the road. This is always important, of course, because your tyre tread is the only grip that you have, but it is much more important on bends, because at this point your car wants to travel **in** a different direction to the way you are turning the steering wheel. Provided the tyres grip properly all is well. However if the tread is smooth, or the road is too wet, or your speed is too fast, then your tyre grip can be lost, and the car wins.

Opening and closing bends

Straight roads are relatively rare. This is why motorways are so safe. You can see for miles at a time. On country lanes you can rarely see more than five or six hundred yards ahead of you. If your visibility projects beyond your braking distance, all is well. If the distance reduces to less than your stopping ability then you must slow down.

The final degree of driving skill concerns your ability to deal with bends. You can think of each bend as one that opens or closes as you approach. Consider the vanishing point, the point at which the parallel sides of the road appear to meet in the distance. If it appears to be moving at the same speed that you are, then the approaching bend is a neutral one, and you can maintain your speed. If you can't see any further round the corner because the vanishing point remains in the same place, then the bend is a closing one, and you must lose speed on approach. If the view round the bend is

increasing as you approach then this is an opening bend, and you may be able to increase your speed through, round, and out of the bend. The amount of braking or decelerating on approach to closing bends, and the point at which you can increase your speed when coming through opening bends, are totally dependent upon the tightness or openness of the bend itself.

This is the secret of correct approach to bends at all times. It's not restricted to bends on country roads, of course, the principle applies all the time you are driving, and on all roads. Every road bends, and this vanishing point in the distance is the limit of your visibility. This the basis for all your planning, speed, and decision making.

However, where you need to discipline yourself is in the way you actually use the controls. *You must not brake on bends.* All speed changes need to be carried out whilst on the straight stretches. All you have to do on the bend is to maintain the speed you have whilst concentrating on holding the same line through the bend. Whilst you are steering you need to keep the accelerator pedal firm and steady at whatever engine speed you felt was correct. However, it is essential that you make the decision about the exact and precise speed before you start to steer through the bend. You must not change your mind halfway through a bend. If you need to go slower halfway through, it's because you selected the wrong speed to start with. Even so the safest way to is hold your speed constant, keeping the accelerator steady. Avoid sudden deceleration, even if you do want to go slower. The car is much more stable under slight acceleration than when you decelerate or brake. Hold your speed and you will hold the road. It is safer to drive through under power than to use the brakes and risk locking up or losing your line.

Next time approach a similar road just a little bit slower until you can recognize exactly what speed is safe for that type of bend, on that type of road surface and camber, in that type of vehicle.

The logical way to think it through is to start off driving through bends quite gently and only increase the speed at which you drive through them as you gain confidence.

The expert driver

These road-reading and vehicle-control skills will eventually lead you on to the final stage of driving behavioural skills, one that you will reach when you have become an expert driver, instead of just a competent or proficient one. At this stage of your driving you become aware of how you can actually adjust your steering, even though only very lightly, by increasing or decreasing the pressure on the accelerator pedal. But that is for another book.

Points to remember

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- **Read the road**
- Look for early indications of what is ahead.
- Read the road as far ahead as you can.
- What sort of camber do you have and is it changing?
- Predict how the road and traffic conditions may change.
- Look for white lines, road signs, road markings, and other warnings.
- Look for pedestrians, horses, farm vehicles, mud, and other animals.
- **Treat bends with care**
- **What direction do** they take? Your position may need to change.
- How sharp are they? Your speed may need to be reduced.
- Bends may be sharper than you think.
- Decide if each bend is an opening, closing, or neutral one.
- Make sure your tyres maintain equal grip through each bend.

- **Mirrors and signals**
- Remember your M-S-M and P-S-L routines at all times.
- Your mirrors are your second line of observation.
- Know who is behind and what they may want to do.
- Tell others what you want to do as well.
- Sound the horn if you are sure it will help — but don't frighten the horses.

- **Overtaking**
- Only overtake when you know it is perfectly safe.
- Overtaking takes quite a long time — measure it sometime.
- Judge the speed of others correctly before committing yourself.

- **Stopping with care and thought**
- Stop when you must, but bear in mind other traffic.
- Don't stop in passing places.
- If you must park, try to pull off the road.
- Look and signal if necessary, before you slow down.
- Wait for horses and riders; they won't be in your way for long.
- Relax and enjoy the countryside but concentrate on what matters.

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Which Road Users Can You Identify?

One of the regular in-car games that I played with my children and grandchildren, was to identify other road users.

Perhaps the most prolific are members of that famous institution:
The Middle Lane Owners Club.
No matter what other traffic exists, they stick rigidly in the middle lane of every motorway. Long service members are those who drive at a constant 52 mph, thus preventing trucks from overtaking.

Then there are those who belong to the
Centre White Line Shufflers.
Regardless of the width of any single carriageway these drivers (and especially riders) insist on keeping their front wheels almost on the centre lines. They do it because they know they will never meet another member coming the other way of course! Well, perhaps just once!!

Keen observers will also recognise members of the
Constant Speed Club.
They drive at a steady 40 mph all the way through the countryside where the national speed limit is 60 mph. However they can best be spotted when they enter built-up areas where the speed limit drops to 30 mph or less. They continue blithely on at a constant 40 mph.

More sneaky are members of the
Caravan Syndrome Society.
These drivers hang on closely to the vehicle ahead as it emerges left or right into a main road. They live (and die) by the well-known principle that says if there is room for one more car to emerge then there is definitely room for a second. After all they are close enough to be considered to be a caravan attached to their predecessor.

Dedicated followers of this fashion can be elevated to membership of the
Continuing Caravan Syndrome Society.
These are the drivers who know that they can emerge even when they are third or fourth in a queue of traffic joining traffic coming on the main road.

It is believed that such drivers have to belong to the
Tailgater's Gang
for at least five years before they can join. Guess what Tailgaters do!

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Motor Cyclists, especially on the main commuter runs, are automatic members of the **Inter-lane Fraternity & the Wandering Weavers.**
Membership of this august body is offered free with every motorcycle. Use of this facility is noticeably in direct inverse proportion to the power of the bike used.

Pedestrians can be classified too: there is the
Pavement Hugger.
These keep one foot right near the edge of the gutter, twitching their backsides every now and again as if to dart across the road. They score extra marks when they suddenly dash across within fifty feet of the zig-zag lines approaching pedestrian crossings; but never on one.

However, pride of place really has to be given to those members of the
Baby Carriage Pushers Assisted Suicide Society.
These can best be identified by looking for the terrified faces of the push-chair occupants who are about to be 'assisted'. Again most of these can be found emerging between parked cars two feet above the ground.

Naturally Better Drivers' families would tell you if you are any of these; I hope.

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Test the Nut that Holds the Steering Wheel

Earlier I stressed the need for all drivers to give themselves their own personal MoT test. If you agree that it is necessary for any car more than three years old to be tested annually, then you must accept that the nut holding the steering wheel would also benefit from an occasional check too.

At the top end of this check testing list is to take an advanced driving test. There are three national organisations that would desperately love to get the chance to assess your driving. I will look at them individually in the next article. But for those who do not really want an official test of their driving skills and safety then there still plenty of ways to get an assessment without the formality of getting a professional driving examiner to do the job.

One of the easiest ways, and one that you can do any time is to do a self-assessment. Naturally there are weaknesses with this, not the least of which is the obvious fact that if you are not aware of your own risk factor, how can you assess it? Nevertheless in its simplest form all you need to do is to take a journey that you do often; lasting half an hour to an hour on a variety of roads: dual carriageways, residential areas, country lanes and even a spot of motorway too.

Because you know the route you will be aware of the various fixed hazards that you will come across: pedestrian crossings, awkward lane selection at roundabouts, weird junctions and even weirder signposting. Don't count these, but drive the route and see if you can count the number of moving hazards. That is how see often you have to check your mirrors before thinking about changing speed or direction of what someone else is about to do. Just say "one, two, three …etc" as they occur. The act of noticing them will improve the way you drive. But this is only half the story.

Then additionally to this, give yourself another list to check. This time count out how many times you are almost caught out by something happening that took you by surprise. Or if you want to salve your conscience a bit, count the number of times you were **almost** taken by surprise. This number should never be more than once a journey. If it is, then self assessment might not be best for you; but any form of driving assessment by a qualified trainer is essential.

For those who would like to try a simple non-driving assessment try the following quiz

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How likely am I to have a Road Traffic Accident?

Place a large dot somewhere in each box below. You can assess your own personal risk rating by scoring yourself somewhere between 0 & 10

	0 1 2 3 4 5 6 7 8 9 10	
Young	|	Mature
Nervous	|	Stable
Flippant	|	Serious
Stressed	|	Relaxed
Tired	|	Alert
Slow Reactions	|	Quick Reactions
Bored	|	Attentive
Inexperienced	|	Experienced
Strange car or situation	|	Known car or situation
High mileage	|	Low mileage
	0 1 2 3 4 5 6 7 8 9 10	

Some of the headings refer to your general disposition, and some refer to the way you feel or behave at any specific time. However if you can make an accurate judgement of what you are, where you are going, how you feel and how you are likely to behave for this particular journey, then you can give yourself a reasonably accurate "Potential Risk Score".

If you score less than 30 you are at risk on this and every journey
If you score between 30 - 40 you need to drive more carefully
If you score between 40 - 60 you risk one serious accident per year
If you score between 60 - 70 you are an average company driver
If you score more than 80 you should be safe if you are not fooling yourself.

Please Note:
This is nor a scientific study of your likelihood of having an accident, but the items listed give you some idea of the factors which are involved in accident causation.

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Testing the Nut that Holds the Steering Wheel: (for real)

I have suggested an opportunity for readers to carry out a self-analysis test of their own road risk. As with all self-testing schemes there is a natural flaw that is connected to the subjectivity of the system. If you don't believe me, next time you are in a club or pub, or any social gathering, ask any small group of drivers, especially of the male variety, whether they consider themselves to be below average, just about average or above average in their own group. If the number of people present is high enough you can even add two additional groups of 'well' below and 'well' above.

The result? I guess, if you have an 'average' sort of audience, you can expect that most male drivers (perhaps 90%) will consider themselves above average or well above; and the remaining ten percent would opt for 'sort of average'. If there are any statisticians in the audience you may have to call for a paramedic to cope with their sudden onset of apoplexy.

If you ask the same question of women drivers, dependent upon the age group you may find that sixty to seventy percent consider themselves below average.

Perhaps we should opt for an independent expert's opinion. There are three national organisations which regularly test drivers at an 'advanced' level. They are the Institute of Advanced Motorists (IAM); the DIAmond Advanced Motorists; and the Royal Society for the Prevention of Accidents (RoSPA) - who conduct their own Advanced Drivers test. Incidentally the RoSPA test began as the League of Safe Drivers test and was taken over by RoSPA some forty years ago. If any reader still carries an old LSD badge on their badge bar, they might consider up-dating their test too. Incidentally the RAC in conjunction with BSM who have both now been taken over by a variety of owners, have followed the lines of the DIAmond advanced motorists by using DSA standards of marking

As well as testing drivers at advanced level, all three organisations offer membership of their own "Advanced Driver Association" to successful candidates and publish regular magazines. All advanced tests cost much the same and can be taken all round the country, by arrangement, with any of the various examining bodies. The DIAmond test however, is the only one which has been accredited by the Driving Standards Agency and uses the Agency's own system of objective driver assessment at advanced level. This same system is used for testing driving instructors, instructor trainers, advanced and fleet driver trainers and driving examiners. Although the same methods of marking are used, the standard of acceptance becomes higher and higher with each grade.

Further details of the tests and what preparation should be made before taking the test can be found by applying to:

- The Institute of Advanced Motorists

IAM House, Chiswick High Road, LONDON W1 4HS 0208 994 4403

- The DIAmond Advanced Motorists

Croydon

- The Royal Society for Prevention of Accidents, Hagley Road Birmingham, 021 200 2461

The IAM and RoSPA use former or serving police officers to examine clients and offer cheap training for the test with existing members. The DIAmond Advanced Motorists recommend using Government registered and Approved Driving Instructors.

I will explore the marking systems used in the following chapters

How do they Test the Nut Holding the Steering Wheel?

Over the course of the last few articles I have stressed the need for all drivers to give themselves an opportunity to test their own driving for themselves, or to have it tested professionally.

I have specifically recommended the DIAmond Advanced Motorists advanced driving test, not just because I think it is the fairest and most standardised test in the country, but because the Department for Transport agree with me. The DIAmond test is the only one which has DfT Accreditation and which also uses the Driving Standards Agency's own system of objective marking. The test you will take is the same, regardless of whether you take it in Cornwall, central London, Manchester, Ireland, Scotland or the Isle of Wight. All examiners are trained to the same standards and their testing is monitored and quite often supervised to Department for Transport guidelines.

However readers are more likely to be concerned in what they will be tested on rather than the credentials of the examiner. This is how the test is structured and errors marked.

Advanced driving means applying a systematic approach to driving which looks for, anticipates and avoids potential risk situations. The simplest form of a driving system is that used in training for the learner driver L test. By applying the safe and common

sense principles which form the basis of the DSA's system of better driving, all drivers could be safer - and more than half a million accidents could be prevented every year.

The Government's Cardington driver testing system, using minor-driving, serious and dangerous fault markings, has proved to be an efficient and extremely objective way of determining driver safety for over sixty years. It is also the ideal standard to train and assess advanced drivers at any level.

Minor-driving errors do not involve any other road users, but are still examples of sloppy or inefficient driving. These are marked with a single stroke like this ***/*.**
Serious errors are those which cause other road users some inconvenience and if allowed to continue could cause accidents. They are marked with a single **X**. Only one such mark would be put on the marking sheet as this would constitute a failure of the test.

Dangerous errors are those which actually cause other road users to change speed or direction in order to take avoiding action. They are marked with a **D.** This would also cause a candidate to fail the test, and if the error was sufficiently dangerous the examiner would most likely get the driver to pull in at a safe and convenient space off the road and discuss the circumstances. Such things rarely happen on any driving test of course, especially Advanced ones. But it is for this reason that anyone wishing to take the DIAmond test is advised to have an initial assessment with a professional instructor who could ensure that no such danger exists, or is likely to occur on test.

Those who wish to pass the DIAmond Advanced Motorists test must **not** make more than 6 minor driving errors to be awarded a pass.

Suddenly it is Summer again Part one

The sun is shining; the birds are singing; trees are blooming; and Motor Insurers are busy reading the latest claim forms from their insured drivers. And every report seems to have the word '*suddenly*' writ large all over it.

All drivers are likely to become involved in an incident; we no longer call them 'accidents' do we?. Actually they are crashes. However those drivers unfortunate enough to become involved with another road user see the need to find something that takes away the blame. They usually begin with:

"***The chap in front suddenly signalled right,***…" or

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"***All of a sudden the brakes locked up and I couldn't steer***;…" and

"***The truck in front suddenly stopped for no apparent reason…..***".

or my own favourite:

"The other idiot didn't see me so I had to brake suddenly; but it was too late...."

Perhaps, and more telling still, is the crash incident report that begins:

"***I was driving along quite safely when I had to brake suddenly. As I braked my brakes appeared to fail so I took my foot off the pedal and changed to a lower gear. Suddenly I hit the truck***….."

When we investigate the symptoms of this apparent brake failure it appears that when the driver hit the brake pedal hard, a dreadful chattering noise and terrible vibration appeared to be coming from under the bonnet. The driver reacted by taking his foot off the pedal. If we ask the driver if the vehicle was fitted with ABS, he doesn't know. No one had ever demonstrated the effects of ABS when they braked hard and, worse still, no one had explained that ABS enables them to steer whilst braking; but only if they kept their right foot firmly on the pedal. More on ABS later.

However the real skill shown by genuinely Better Drivers is to avoid the need to use the brakes harshly – or suddenly – at all. Drivers who look even further ahead and who make pro-active decisions about what they will be doing in fifteen seconds time very rarely have to brake harshly. And they will never need to do anything ***'suddenly'***.

It is not only advanced braking systems, or traction control, or variations now being built into so many motor vehicles these days, which need to be explained. All drivers will benefit from sensible assessments of their skills, and from training in how to read the road ahead. You will be shown how to plan your driving and still maximise progress. However you need to understand how this can be done without needing to drive too closely to whatever potential risk lies in wait.

The sun was shining, the birds were singing and all was well with the world – until…. until, that is, someone in front braked hard and stopped 'suddenly' – except to those safe, better, confident, defensive drivers who always plan for that possibility occurring and are able to cope with the situation in perfect safety.

Nothing ever happens 'suddenly' to those who are planning ahead.

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Suddenly it is Summer again - Part two

ABS and things.
For many years 'advanced' drivers and trainers have talked in technical terms using words like '*cadence*-' or '*pulse*-' or '*rhythm*-' or '*threshold-braking*' to explain how you should press your foot hard on the brake pedal until that precise moment just before the wheels lock up, then how to ease off the pressure on the brake before re-applying pressure once more. The more skilful of them even demonstrated how they used the car's own transfer of weight to assist this procedure by maximising the amount of braking when the weight was fully over the front wheels. They called this '*weight-transfer braking'* . The essential purpose of all this was to enable the driver to avoid front wheel lock-up whilst maintaining some steering ability.

ABS. Anti-lock-braking – as it is now generally called – does exactly the same as all this. Except that it does it better than any driver can. But it only does it if drivers allow it to happen. Many drivers whose cars are fitted with ABS are often taken by surprise when braking in an emergency by the effect produced. As the wheels begin to lock-up and then unlock, much faster than any human foot could do, the effect produces this terrible chatter and bouncing sensation at the front which makes unsuspecting drivers remove their feet away from everything.

I used to tell my students, at all levels of driving, how my grandmother automatically understood the basic fundamentals of safe driving. As an example, one day I was sitting in the gutter, carving my initials with my birthday pen knife on the rear tyres of a parked truck – just as bored six year-old kids did in those days – when all of a sudden my granny clunked me around the head with her handbag. "Stupid boy – what do you think you are doing?" she grumbled. I was cross and replied I wanted to get my name published even if only in rubber. I always wanted to be a writer. "Stupid boy", she repeated, "even a non-driving old granny like me, knows you cannot cut rubber with steel. You need a cutting agent; and water is rubber's natural lubricant; pour some water on the tyre then use your brand new knife I bought you for Christmas and it will cut through it like a hot knife through butter.

From then on, whenever I needed a relaxant for a tyre on rubbery roads, I knew that all I needed was a layer of water between the tarmac and the tyre.

There is one more myth to be exploded. ABS will not allow any car to stop more quickly, or in a shorter distance, than vehicles without ABS. All that ABS does is to

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enable drivers to steer at the same time as they brake. Locked-up wheels will not steer. Cadence and similar driver operated systems of braking allow you to steer for short periods whilst the drivers' feet are off the pedal. But with ABS you can steer all the time you are braking and therefore you have a better chance of avoiding that stationary truck or hazard ahead which created the need to brake 'suddenly'.

The term 'aquaplaning' – eloquently described so often as '*the brakes and steering just stopped working and I seemed to be flying along the road'* – effectively means just that. In summer the sun heats the road surface; tiny bits of rubber from tyres mix with droplets of oil and grease to form nice sticky rubbery solutions filling in the gaps in the tarmac that normally create a tyre-gripping surface. Rubber tyres are now running on 'rubbery' roads. They only need some lubrication to provide a skidpan surface.

Water is rubber's natural lubricant and a sudden shower instantly creates a very thin film between the tyres and the road surface, breaking the grip. In effect this turns the road into an instant skidpan; as drivers who need to brake and steer in a hurry 'suddenly' find out to their cost. This is when you do remove your foot from the brake pedal; just enough to allow the front wheels to settle.

Nothing on the road ever happens suddenly. It only appears to be 'sudden' to those drivers who fail to read the road far enough ahead.

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Road Deaths and Teenage Girls (Part One)

I hope readers will excuse me if I make a complete change of approach for the next chapter. My normal practice is to look at practical driving skills, and normally concern drivers and how they can improve their skills, knowledge and motivation to make them better drivers. Now I want to look at a more obscure, but incredibly important, aspect of road safety that has more to do with passengers than drivers.

Initially it may appear to be a surprising and awful statistic that young girls between the ages of twelve and sixteen are proportionately more involved in road crashes and deaths than boys of the same age. However even the most cursory research will give clues to the reasons why this happens.

Girls of this age group naturally go through a whole range of emotional and physical changes. They progress through the challenges of puberty and menarche and, with the freedom that secondary education brings, find themselves overwhelmed with options to break free from parental control.

The temptations on offer include smoking, shoplifting, alco-pops, soft and hard drugs, under-age sex and riding in fast cars. The only links are risk and the chance to cock a snook at society.

When you ask teenage girls about 'risk' you will find many answers. They may not recognise the proportions of the risk, but when presented with a statement that says 'smoking will give you cancer', they often reply that it doesn't kill you immediately and they don't really care if they die of cancer when they get old. The unusual concept here though is that 'old' for a fourteen year-old is perhaps twenty-one and certainly no more than twenty-five.

Teenage girls can almost be divided into two disparate groups: those still comfortably under the control of their parents or guardians; and those who desperately crave the ability to shock. Regrettably, teaching them about risk, even the risk of death or serious injury, has little effect on them. They buy cigarette packets which are emboldened with the words 'smoking ***kills***'. They go shoplifting en-masse, quite often as a means of passing a peer group test. They all know other girls who have tried under-age sex and not all of them have become pregnant; and drugs are available in almost every school playground

So it is with riding in stolen cars or with unsafe drivers. Unlicensed drivers who steal cars know they can get away with it, without being caught, most of the time, and they

know too that if they are caught the punishment is laughable. At least it seems laughable to their friends. Even the thought of attending a court carries no great stigma. And there is nothing quite like the 'buzz' of driving, or being a passenger in, a car at high-speed deliberately putting their lives at risk.

Impressionable young girls with an older boy behind the wheel so easily forget or ignore a lifetime's warnings from mums and dads. This is fun!

Is there anything that parents and teachers can do?

Road Deaths and Teenage Girls (Part Two)

I have mentioned the problems associated with teenage girls being proportionately more involved in car crash injuries and deaths than boys of the same age. We looked at the reasons and it seems that a normal 'educational' approach about the risk has little or no effect.

"*Coming for a ride?"* holds no more fear for many teenagers than popping a pill, or getting drunk and incapable. After all what is incapable? It is only another sensation. And you need as many sensations as you can before you get old, or even reach twenty-one.

So if young girls discuss and then discard the risk as not worth worrying about, what educational roles remain?

Shock videos in road safety television adverts, detailing injuries and the risk of death don't work. It is easy to dis-associate yourself from unwelcome adverts. If this were not true cigarette sales amongst the young would be nil. And so would the deaths of passengers in stolen cars or those badly driven by inexperienced drivers.

t is apparent that peer group pressure is one of the strongest factors that govern the lives of teenage girls. So much of everything they do and wear is the subject of what effect this will have on 'authority'. And this is where traditional educational approaches to changing teenagers' behaviour fail.

Traditionally young girls prefer to seek boy friends from an age group about three to five years older than themselves. There are a number of reasons for this. Fourteen year-old boys are not usually emotionally ready for relationships with girls. And when they discover this interest they find that the girls of their own age are already interested in

boys who are older. Therefore they have more success with younger girls. So we have a self perpetuating system. There is a strong school of thought that argues that when relationships are based on couples of similar age, the female is more dominant and the male less likely to take risks. But where the boy is older the girl is happy to go along for the ride – as it were. And this is how they live – and die.

Traditional lectures and discussions on road safety, risk and changing driver behaviour do not succeed; but there may be an alternative 'educational' method that may work. Throughout this summer I have been involved in a national 'Expert Think-Tank' discussing how these unnecessary deaths and injuries can be reduced. My own view is that learning – change of behaviour – has more chance of success when involvement is involved.

I wonder whether it would be possible to create a survey which invites girls to put their own personal wish list of risks into proportion. This may be too drastic for some teachers and road safety specialists who just say 'avoid all risk' and leave it at that. I feel that if risks could be put into context, the more responsible youngsters might decide to miss out the risks that have more immediate chances of happening.

What do you think?

Road Deaths and Teenage Girls (Part Three)

In the past two chapters I have tried to find ways to reduce the absurd road safety statistic that means more girls in the 12-16 year-old group are killed or seriously injured than boys of the same age. One obvious reason is that when youngsters steal cars for what they call 'joy-riding' and what others call car theft, the boys tend to do the driving and are marginally safer behind a steering wheel airbag than their unbelted passengers, especially those in the rear seats. Most often the passengers tend to be girls. When crashes inevitably occur the passengers are more likely to be killed by being thrown out of bursting doors or through the windscreens than the drivers.

That is the challenge; the problem is how to educate, inform, train, or bring home, the risk factors to those involved. Those who want to put the task onto teachers are dodging the real issue. The girls who are usually involved are not those who respond well in schools. Road Safety officers would probably never touch first base with them either. However this does not mean that efforts must rest solely on the parents, although these are the ones with the greatest interest in cutting down deaths.

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One suggestion which I favour is to invite youngsters to discover their own views on risk, perhaps by making comparisons of various risk factors. They could be invited by means of quizzes to compare the likelihood of dying or serious injury as a result of smoking, of taking drugs or of driving in potentially dangerous situations.

If this is a viable method then perhaps the best way to get the message through is by using the pages of girls' magazines, or feeding life-like story lines into some of their favourite television soaps. Once upon a time most books and television stories aimed at impressionable audiences always emphasised that bad actions eventually resulted in bad reactions. If people stole cars they crashed them and died. Noddy was never allowed to benefit from dangerous driving.

These days when youngsters steal cars n soap stories, car thieves escape punishment, either judicial or moral; and carry on as before. Even in radio programmes such as the Archers allow their young roughnecks to be glorified. Their victims forgive them, in spite of fears of amputation; the culprits never change their attitudes and later on they buy cars without any worries about the problems that real people have getting satisfactory and affordable insurance cover.

The reason I have spent three whole weeks looking at this problem, before returning to the more reasonable theme of helping those who wish to become better drivers is that I have been personally involved in finding solutions.

Solutions that have baffled road safety experts and will still continue to do so – perhaps forever. I have done this in the hope that some of my readers might recognise the challenges of reducing teenage road deaths, both boys and girls, within their own family circles and they can find solutions at their own level of this national problem.

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Expanding your Horizons; Part One

There are two great hurdles – or milestones, depending on which way you look at them – which occur in most drivers' lives at some time or other. The first one is the first time you decide to drive down a motorway on your own without a supervisor or an advanced driving instructor. No matter how many times you have driven on them accompanied, the first time on a long and strange motorway journey all alone can be worrying. In a way this is also similar to the second milestone you need to pass: Taking your car abroad.

Foreigners are funny people, to start with they all drive on the wrong side of the road and although traffic concentrations are generally much lighter than in the UK, all these foreign drivers seem to have a death wish. For example even though driving in Italy is a real – or surreal – experience; even Roman and Milanese drivers won't drive in Naples. Speed and traffic direction signs are disregarded as if it were a matter of honour there.

However if you have never taken your car abroad, possibly because you are not sure what it will be like, there is an easy way to slip yourself into it without frightening yourself, or the attendant horses, too much.

Incidentally this is definitely not the story of the elderly lady in Bournemouth who decided to take her car across the ferry to France and then drive south all the way to Monaco. She made some enquiries and read lots of booklets and listened to everyone's advice. However two weeks before her intended trip she wrote to the ferry people, cancelling her journey.

"*I have been told that the French drive on the right instead of the left"*, she wrote, "*I wasn't really happy with the idea of driving on the wrong side to begin with; but since I have started practising around Bournemouth Square I don't like it one bit*."

No, the answer is to visit the place where they drive on our side, like proper English gentlemen do. And the best place to go is to what George Bernard Shaw called John Bull's other island: the Emerald island: Ireland.

First of all, yes they do drive on the left as we do, but they also speak our language and their road signs, although they seem to be a bit what I call 'thinner' than ours, they still tell the same message that we get here.

In the next three issues I will explore more in detail of what it is like driving just across the Irish Sea and the best ways to get there. For the moment I will make three basic

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suggestions. The easiest way to get to southern Ireland is probably to take your own car across one of the short ferries. The second way is to fly over and hire a car when you get over there. The third option is to take an overnight ferry from Swansea to the south of Ireland.

More on these various options follows

Expanding your Horizons; Driving in Ireland Part Two

Last week I suggested that the most relaxing way to begin travelling abroad with a car was to take an initial driving holiday in the Republic of Ireland. However, first of all, it is worth mentioning one or two basic differences between driving on holiday in Ireland and driving for business in the UK.

Ireland is in the same time zone as the UK so you don't need to adjust your watches. In fact I suggest you put your watch away. The pace of life, especially in the countryside, is such that you will probably just amble along the country lanes without any time-table and without any definite expectations of when you want to arrive. That way you will feel a little bit of the Irish spirit within you already; but preferably not the alcoholic kind. Save that for your overnight stops.

There is so much natural beauty around you, especially in such places as the Wicklow Mountains that you won't want to be hidebound by any itinerary. Just take your time as most of the other road users do. When you call in a local corner shop to pick up a newspaper or a loaf of bread, be prepared to stop and chat. In some of the country villages you might be the only British visitor they have seen all day so they want to ask your views on most events of the day. A recent experience earlier this year showed me that the subjects mostly centred around how much additional tax the Irish now had to pay, even plastic shopping bags now cost 15 cents; on how few Americans now wanted to travel over; and how the Euro has apparently increased prices of just about everything.

Petrol and diesel are still cheaper than here in the UK and, because of a more relaxed pace, your miles per gallon rate will be much better than here. I use the terms miles-per-gallon deliberately because one of the first things you will notice about driving in Ireland is that they have adopted many metric signs and terms into their every day life. But they have also retained most of their old fixed signs such as speed limits in miles per hour as before. Naturally, although all their distances on road signs have been changed to kilometres; all the inhabitants take great pride in referring to miles, yards,

feet and inches; and to pounds and ounces as if anything else would be sacrilegious. As indeed they do with that most precious of all measurements – the pint.

The secret of enjoying your travel is in finding serendipity just round almost every corner and the opportunity to pull in for a cup of coffee or tea or something else, at almost every traditional pub you pass. But don't expect to go in, drink up and leave instantly, as if it were a Little Chef. You need to talk too. This is not just idle chatter, you will learn of many more places to go to, just round the next corner that you might, otherwise have missed.

Expanding your Horizons; Driving in Ireland Part Three

Although in these previous articles I have made continual reference to the lovely country lanes, and the magnificent scenery of the lakes and hills when driving around the Republic, this does not necessarily apply to the area within a twenty-mile radius of Dublin. Regrettably the ever-ready supply of European funds has seen a dramatic rebuilding and fresh construction of many of the busier Irish roads. So whenever you are on a motorway or dual carriageway you will certainly see huge placards stating that this is being built with Euro-funding. Instead get further out and look at some of the magnificent new private houses and bungalows which have been built in the last two or three years. They are much more interesting than bulldozers and caterpillar tractors. My advice is to use the motorway (there is now a toll payable of course) to get out into the country, preferably well to the south and west of Dublin.

An outline map of the country showing towns, roads and places of scenic beauty is all you need. Detailed maps tend to be a bit confusing and often fail to show the best roads to take; and even if you believe them you will find that the road signs won't tell you which way to go. You just have jog along, knowing that some times you will find yourself covering and enjoying the same road again but in the opposite direction. All you need is a general direction to go and enjoy yourself. My own recent six day spell started at Dublin, immediately went across due west, with a number of inviting diversions, towards Limerick. From there we went north to Galway. The contrasts between the winding roads, craggy hills and stone-age monuments of the west, and the busier straight roads on the dull eastern side of the country could not be greater.

From Galway we travelled back south and then southwest through Tralee to Killarney and round the beautiful drive around the Ring of Kerry. With typical Irish flair this is a one way circuit around some of the most beautiful scenery in Europe. The Irishness is that the clockwise one-way system is accepted by everyone without a single road sign

saying so. But if you want to go the other way round, sure you are welcome to do so. We were lucky in that it was bright sunshine all the way. If it is raining you should best avoid it with the promise to come back for it another day. It will still be there.

Cork is a large place to drive around and through, with nothing like the hustle and bustle of Dublin. But all the other towns and villages you will meet, whether on the coast or inland up a mountain, all have their own delightful degrees of pleasure to be savoured to the full before moving on.

Our final stops were at Waterford, Kilkenny and on to Dublin. We could easily have covered these in a morning; except we wandered and recommend that you do too.

Expanding your Horizons; Driving in Ireland Part Four

I have been writing for the past few weeks on the delights of driving abroad, but keeping to the same sort of rules that apply in the UK. I suggested driving round Ireland as your first travel abroad as a Better Driver because the sheer delights of driving leisurely around some of the loveliest scenery and in the company of the most placid people in Europe will always tempt you back. For those who would prefer just to visit Dublin then my suggestion is to leave your car well out of that fair city and use public transport and your feet as the best ways to take it all in.

I mentioned at the beginning of these four articles that I recommended three different ways to get there. The most obvious and one that most people probably do, is to drive across England and Wales (and Scotland too) to arrive at one of the many car ferry terminals and let your holiday start from your own home. For many people this might best be done by staying B&B overnight near to the ferry and making an early morning start.

Working upwards from south to north there are ferries from Swansea, Pembroke, Fishguard, Holyhead (Anglesey), Liverpool, Douglas (IoM) Stranraer, Cairnryan and Cambeltown. All have their delights and deficiencies. And you can arrive at: Cork, Rosslare, Dun Laoghaire (pronounced Dun Leary), and Dublin, all in the Republic, but if you prefer to go via Ulster, then you can choose Belfast, Larne or Ballycastle.

For those who prefer a longer route I would recommend the Swansea to Cork ferry, which gives you an overnight sleep in a cabin; but lets you arrive fresh as a daisy in just the right place to start your tour.

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I have tried most routes on my various trips to Ireland, but the one I took this year was slightly different. WeI accepted a local newspaper offer of a flight to Dublin from Southampton for £5. When you add taxes and things the cost of this came to £74 round trip for two people which was probably less than the petrol cost to Anglesey.

Obviously this meant hiring a car in Dublin, but as the trip only took an hour each way, and with a seven oclock flight we were at the Airport in the car just north of Dublin at half past eight.

Once we had cleared the early morning traffic queues in and around Dublin it was another hour or two, but we had the rest of the time to ourselves. Once we were free from the iron grip and motorway tolls of the M50 we headed for another lovely holiday in some of the best driving conditions in Europe.

Whether I would have felt the same had I been there on business of course is another matter. After all the greatest pleasure of holiday driving is this desire to take your time. The greatest hate of almost every business driver is following those dreadful tourists just taking their time.

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Frequently asked questions

One of the more pleasant things about writing books and magazine articles is the feed-back, sometimes because I have annoyed people; but usually because I have triggered a desire to know more about something.

When you write magazine articles in advance it is difficult to know what is going to be the headlines on the day's front pages. On the other hand, when it comes to road safety, news headlines seem to go around in circles. I received a number of queries about the use of telephones even before they were part of newly-announced legislation.

Readers asked about the safety differences between hand-held and hands-free telephones on the move. My answers were given before the recent announcement about the changes to the law in December 2003.

Nevertheless my views are still the same. The critical factor about using telephones is that the calls must be 'brain-free'. Those drivers who pick up a phone, or dial by voice, and say "*Put the kettle on, I am half a mile away*" or, "*I shall be late because I am stuck in a queue*" are probably safer than those drivers who change CDs or cassettes or smoke on the move.

I responded to the Department for Transport's White Paper on the subject at the end of last year; but even when I completed my response I could guess the DfT's eventual decision. If you ask enough people for their views you can determine the 'official' view knowing that for every argument made for something, someone else will be against.

I commented that some of the press releases and research projects which were published at the same time with regard to use of telephones in cars were misleading. The Transport Research Laboratory had produced statistics that sounded as if it was safer to get drunk and drive than it was to make a phone call on the move. This was headline material of course, but what they neglected to stress was that if you are drunk you stay drunk all the time; whereas people who use telephones are capable of keeping the calls short. I almost thought the DfT were advising those thinking of using a phone whilst driving to get drunk instead.

My recommendations were:

- If you have a hand-held phone switch off before you move off;
- If you have a hands-free kit, answer a call by saying you will call back. If the call is urgent find somewhere to pull off safely and carry on the conversation.

- If you need to make a call on a hands-free set find somewhere safe by pulling off the road and then using it.

My final recommendation was (thus far) ignored by the DfT. I recommended drivers could use a hand-held phone in the car with the engine running, when parked or in a stationary traffic queue. Yet for some reason this use of a phone will be prohibited by the new law. Am I being cynical when I suggest that this may be because this will be the easiest offence to prosecute?

A number of questions are concerned with speed cameras. They ask me "*Do I agree with the use of speed cameras?*" My answer is "Yes" for his reason. Speed limits are not targets and anything that makes drivers concentrate on the driving task is good for safety. It is not a question of being caught be a speed camera, but driving safely all the time.

Some interesting statistics were produced by the Transport Research Laboratory a few years' back. They compared the success of each of the three traditional E's of Road Safety "Engineering, Enforcement and Education" methods of making roads safer. Under Engineering, it was found that specific advance warnings of sharp bends ahead reduced car crashes at that site by 26%. Enforcement speed cameras reduced road deaths and injuries by 14%. However one system under the heading of Education looked at the success of electronically triggered signs. These are acronomically called SIDS, (your guess is as good as mine). SIDS register a vehicle's number plate and flash "*AA56 XYZ you are doing 43 mph in a 30 mph zone".* These signals embarrassed drivers to cause a reduction of 58% where they were sited. You don't need to be an educational psychologist to realise the difference and to recognise why this third one is the most successful

So when people ask me which method I prefer from the three Es of Road Safety you can easily guess which one I go for. The real danger to motorists who are not fully aware of the way in which speed cameras work is that they can drive at 53 mph along three-mile stretch of 50 mph dual carriageway, and clock up four separate camera clicks, (no flashes because they use digital cameras – and they never run out of film either), four identical letters from the local "Safety Camera Partnership" each of which demanding the owner's licence for fine and endorsement. Four times three points and drivers are banned for six months and more.

Naturally any driver who collects any penalty points in this way deserves all that is coming. But the real problem is that the camera is readily seen as an enemy. Drivers tend to ignore the safety reasons behind the speed limit and regard cameras as money-

grabbers to do battle with. As a result you can easily identify these people because they spend their lives slowing down for cameras and speeding up afterwards because that is what their game is all about.

When I took part in a recent television broadcast with experts from the "Safety Camera Partnership" I argued that surely the best results from a road safety point of view would be the fitting of "SIDS" at various places along any road where road risks are greatest; and fit the odd speed camera so all drivers know that it is not a game, but a genuine partnership of Better Drivers and road safety organisers.

I don't suppose they will, it might spoil their fun and reduce their newly found income.

A number of my email requests for help have been from drivers who are puzzled about the apparent differences between the way drivers have been taught to cope with bends, and the methods advocated by alleged advanced driving colleagues. Perhaps the most obvious difference is one where the Department for Transport's Driving Manual advises people to keep to a safety line following the left edge throughout any bend on country roads and that described in older versions of Roadcraft. This latter book was used to quote the Police methods of driving. This particular quote appeared to show how much easier it is for a driver to see round left bends by moving out to, or even across, the centre line. By taking this wider arc drivers can travel faster because their steering needs are less. Unfortunately those who have not studied the book well assume that it is safe to move out on almost any left hand bend. And this is the danger.

The only purpose of moving across the road was to allow drivers to make maximum headway: it has no real purpose in safer or better driving. However, the obvious justification for keeping to the normal safety line, as advocated by the Department for Transport and myself, is to point out that getting a better view around a bend is no help if it places you on the wrong side of the road and oncoming traffic forces you to regain a safe position. That is bad enough if the oncoming vehicle is safely positioned; but what do you do if you meet another 'white-line driver' coming towards you?

The correct path, known as a 'Safety line', is to place the near-side wheels about a door width from the left kerb – unless the road is so narrow that you have to centre your vehicle in your own lane. Where roads are not wide enough to allow two vehicles to approach with less than a door's width between them as they pass, then it is necessary to keep even closer to the left – and proportionally slower. In reasonably wide country lanes, where there is adequate room for two cars to pass, it is salutary to remember that the next vehicle around the closing bend could easily be a combined harvester. There

are two rules for positioning on approach and through bends. First keep to the left and centred in your half of the road; secondly you must be able to stop safely in the distance that you can see to be safe. However these rules apply wherever you drive.

However before you can put these rules into practice it is worth remembering how important it is to have full control of the car at all times.

The only professional way to cope with bends is to think of them in these three progressive stages, which are to:

- ensure **smoothness** of the vehicle's transmission;
- maintain equal **tyre grip** of all four wheels; and
- maximizing your **position through** each bend.

As these are the really important factors (and need to be learned well and in sequence) I shall examine these factors now; now I ask you o consider them in these three progressive stages, which are to:

Smoothness

It often amazes me how many drivers have not yet learned to control the vehicle's transmission smoothly. Every time you change gear your clutch should come up with no jerk at all. If at any time you select a new gear with a snatch or the engine speed grinds or the clutch whines, then you are not matching your engine speed to that of the road wheels. Every gear change should be smooth; and gear changes unnoticeable. The object is to make passengers and other road users completely unaware of your vehicle control.

If your car has a rev counter, it is a salutary lesson occasionally to watch the needle when your clutch pedal comes up. Any movement or snatch will show how poor the gear change was. This occurs quite often with people who say they never use the brakes to slow down: they rely on the gears. Or so they say. In practice they use the clutch plates to take up the difference in the speed between the road wheels and the engine. Not only is this bad driving practice, it is also expensive in terms of clutch and gear-box wear.

Tyre Grip

Once this smoothness is mastered the next stage is to ensure that all four tyres grip the road equally, all the time. This is essential because your tyre tread, those four tiny rubber footprints, is the only thing that keeps your car on the road. Think of your wheels in two separate pairs. The front pair usually delivers both power and steering. Any difference in grip between them makes steering quite difficult. The rear wheels are

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there more or less to keep the fuel tank off the ground. But there is another pairing of tyres even more important; this is the pairing of front and rear tyres on either side. If your car is steering round a bend centrifugal or centripetal forces alter these dramatically.

On straight roads poor tyre balance is just simply awkward. When moving through bends or on roundabouts, tyre balance becomes a life-saving factor, because this is when the weight of your car wants to travel in a different direction to the way you are turning the steering wheel. Unequal balance will allow one or more tyres to lose grip completely. This is why some people finish up in hedges instead of driving home. It could be that they are the lucky ones. The less fortunate may finish up in a coroner's report.

It is necessary to practise both of these two first stages all the time you are driving until they become second nature.

Only then can you concentrate on the final life-saving stage, which is deserving a full paragraph all to itself.

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Maximising your Position and Speed through Bends

The final stage of safe driving skill concerns your ability to position yourself centred in your own lane, safely before and through bends. Think of each bend as one that opens or closes as you approach. Now consider the vanishing point, this is the point at which the parallel sides of the road appear to meet in the distance. If it appears to be moving at the same speed that you are, then the approaching bend is a 'neutral' one, and you can maintain your safe speed.

If you can't see any further round the corner because the vanishing point remains stationary, then the bend is a 'closing' one, and you must lose speed on approach. If the view round the bend increases as you approach then this is an 'opening' bend, and you may be able to increase your speed through, round, and out of the bend. The amount of braking or decelerating on approach to closing bends, and the point at which you can increase your speed when coming through opening bends, are totally dependent upon the tightness or openness of the bend itself.

This is the secret of correct approach to bends at all times. It is not restricted to bends on country roads, of course. This principle applies all the time you are driving, and on all roads. Every road bends, and this vanishing point in the distance is always an absolute limit of your visibility, position and speed.

Now we come to the rules. ***You must not brake on bends***. All speed changes need to be carried out whilst on the straight stretches. Therefore on approach to any bend select the speed at which you can safely hold the same line through the bend. Whilst you are steering you need to keep the accelerator pedal firm and steady at whatever engine speed you felt was correct. However, it is essential that you make the decision about the exact and precise speed before you start to steer through the bend. Do not change your mind halfway through. If you want to go slower halfway through, it's because you were too fast to start with. Even so the safest option you have is to maintain a constant speed, keeping the accelerator steady.

Avoid any sudden deceleration, even if you do feel the need to go slower. The car is much more stable under slight acceleration than if you decelerate or brake. Hold your speed and you will hold the road. It is safer to drive through under power than to use the brakes and risk locking up or losing your line.

The final two rules are also absolute: ***Never change position on a bend;*** and ***always choose a slower speed until you can recognize exactly what speed is safe for that type of bend, on that type of road surface and camber, in that type of***

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vehicle. The logical way to think it through is to begin by driving through bends quite gently and only increase your speed through them as you gain confidence.

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Speed traps and cameras

I frequently do radio and television broadcast on the benefits of speed cameras. Apart from the presenter the only other person on the show is usually a publicity officer of the Safety Camera Partnership. So you can guess that I am not particularly in favour of the ways in which speed cameras are placed and operated. This is not because I am against speeding drivers being punished. It is that so much emphasis is placed on speed limits and not speed differentials, that the road safety message is lost.

The real problem with speed camera placement is that inevitably they only work well when there are very few vehicles on the road; and road safety is not an issue. When traffic is heavy – and crashes or injury to other road users is most likely – the cameras cannot isolate individual vehicles; worse still, most of the reported crash incidents in such cases occur at speeds below the speed limit. On the other hand, when traffic is light and it is easy to go a few miles over the limit, crash potential is reduced. My real complaint is that it would appear that speed cameras are required to operate at a profit, and the only way this can be done is to prosecute errant drivers when they are least likely to be driving unsafely.

My post bag and emails have been busy since then asking my views on how speed cameras could be made more benefit to safer roads. One or two have sought my support for the removal of speed limits completely and to have them replaced with strongly imposed regulations on unsafe driving practices. My answer to this latter view, regrettably, is that this would require even more police involvement, and would still not stop drivers keeping too close – and driving too fast for the circumstances.

It is this driving 'crime' – excessive speed for any situation – which is the one risk that all drivers must avoid; and the real cause of road crashes.

With regard to my views on the use of cameras I still support a scheme I first witnessed in Germany in 1987 and which was demonstrated on the Preston by-pass in January 1988. The Germans called it a 'Triple Light Barrier'. Cameras are placed at intervals measuring the following distances of all vehicles. Any vehicle which was closer than 1.6 seconds to the vehicle ahead for three successive shots had their details recorded by the third camera and prosecutions followed.

When you consider the improvement to computer technology been in the intervening fifteen years, I argue that a similar system would considerably reduce vehicle crash statistics, deaths and injuries. However the reason I believe in this system rather than

enforcing an absolute speed limit is that drivers will concentrate on avoiding closely following other traffic and not have their noses buried in their dashboard instruments. The current use of speed cameras actually encourages drivers to look away from the road and traffic situations at times when their attention is most needed on the road ahead.

Autumn Driving

Autumn is the season of mellow fruitfulness and of road traffic incidents galore. Long hot summers such as we have enjoyed this year result in all the brake-pad dust and rubber detritus from tyres being firmly deposited onto every road's tarmac surfaces. Constant driving has compressed this gungy mess so that at the first slight fall of rain the water stays on the surface and helps to create perfect aquaplaning conditions. You don't need ice to cause a skid; just an unhealthy watery layer sandwiched between the tyres of the vehicle and the slippery, slidy, rubbery surface that used to grip the tyres so well.

Many readers will be aware how quickly Formula One drivers get back into the pits when the rain falls. They change from their smooth slick tyres to proper wet driving treaded tyres instead. Unfortunately car and other vehicle drivers do not have this luxury of changing their tyres for each separate driving decision. Consequently car tyres are usually a compromise between gripping well on a dry tarmac surface and dispersing water through and between the treaded all-weather tyres that can safely shift a gallon of water a second when needed. However, the fact that tyres wear out reduces this water shifting property of all-weather tyres very gradually but quite noticeably over a few thousand miles: and quite drastically over fifteen to twenty thousand miles.

The minimum legal tyre tread of 1.6 mm is nowhere near safe when it comes to shifting surface water at speeds even as low as thirty miles an hour. As a result, when the amount of water to be shifted by your front tyres is greater than the tread can cope with, the potential for aquaplaning increases. A slight dab on the foot brake will stop your front wheels and lift them up onto a wedge of water and "Hey Presto, you are driving a sledge!".

If you want to check your own tyres now, try putting a ten-pence piece sideways between the treads at their lowest point. If the milled edge of the coin doesn't disappear completely from sight, then you ought to have all your tyres checked immediately. Just four tiny footprints of rubber are all that you have to keep your tyres – and your wheels, the car and yourself, and your passengers, in touch with the road surface.

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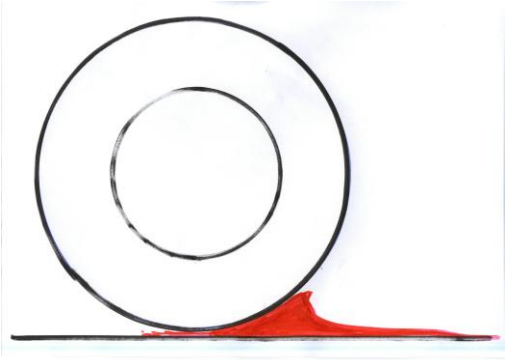
And just to cheer you up even more; you don't even need rain and surface water to create skid conditions on the road. All you need is to scatter lots of autumn leaves on the road surface instead! Wet leaves, grease, surface water, ice and snow can all create perfect skid-pan surfaces on any road on which you drive.

However, skids don't just happen; they are caused. And the only real causes of any skid are excessive braking, steering or acceleration, by the driver. Better drivers look ahead for problems and they try to 'feel' every road surface with their fingertips through the steering wheel.

Better drivers avoid skids – and they look out to avoid other drivers' skids too.



Autumn Commuting

September every year marks the return of school-run. Quite often children are starting new schools and carry even heavier school bags than in previous years. Even more of them need lifts to school. Each year the numbers of school-run drivers increase in September, many of whom have to seek out new destinations and, in some cases, find fresh routes to get there.

Autumn commuters know that they will have to extend their journey times by at least ten minutes for every hour. And the reason is not so much the extra traffic as the fact that those drivers who are not normal commuters, but short distance drivers who are often looking for instant turning and parking opportunities. That is when they are not looking for road signs, street names and friends' cars, and shouting at the kids (not necessarily in that order).

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The school-run drivers also bring in a new danger to commuter time driving. More and more people seem to be buying what are known as "Chelsea Cross-Country" vehicles. These are those very large four-wheel drive cars which hold more passengers but are normally designed for off-road use. The high-up seating position and harsher steering angles often mean that drivers, especially of the smaller female kind, find handling more difficult than in their previous familiar, family Fiestas.

Naturally I am not implying that parents taking their children on short run trips are all dangerous. But drivers who are not sure where they are going, or about which route they should take, cannot concentrate on their driving tasks as they should. This includes those car commuters who listen too intently to their radios, or who plan their daily work schedules, whilst there are in slow-moving queues are just as dangerous.

Anything which distracts drivers from their driving task makes life difficult for all those around them too. Boisterous children shouting and yelling in the back seat are an unnecessary risk: this factor can be made worse by carrying other people's kids in the back. "Belt up in the back" can have a double meaning sometimes.

Another mistake that some drivers make is to believe they can catch up lost time. If it takes fifty minutes to drive to any particular place and you are held up for ten minutes, then you must accept that it will now take you an hour. However, there is a simple solution to this problem. One of my favourite phrases tells my clients that "*Good driving begins in bed! Get out of it sooner!*". That way you can start your journey in the knowledge that you have already allowed yourself plenty of time to arrive; and this removes most of the stress that could occur when you get delayed or stuck in traffic.

Now that the autumn days are upon us, expect early morning mists to delay you too. Leave a little bit earlier than normal. Expect to be held up by school run drivers. Listen to the radio and relax. But choose a station that gives out traffic information if you have the choice.

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Steering and Turning the Wheel (Part One)

Extremely involved discussions are currently taking place at relatively high levels in the motoring training and testing world concerning the various ways to hold and turn the steering wheel safely and positively. The story began seventy years ago when the Police Driving "System" was first devised as a means of combating the high levels of police car crashes and road deaths. Lord Cottenham responsible for Police Driver Training in the 1930's called upon the collective driving brains in the country to produce the first effective Police Driving Manual.

It was the implementation of this 'System', explained in this Police manual, which led to a great reduction in police crashes and made the two police driving schools (at Hendon and Preston) the safe driving by-words of the training world. Police 'Class One A' drivers (the A signified they had taken the instructor's course) became the highest recognised driving standard. However that was back in 1935. Not only have roads changed and vehicles improved, but the density of traffic on the road has multiplied out of all recognition. Incidentally more people were killed on the relatively quiet roads in 1934 than any year in the past fifty years of popular motoring, so some of the principles detailed then have obviously been extremely effective.

I shall look more closely at the "Police Driving System" and its value to today's driving styles later; but I want to look first at 'steering' and begin by discussing some of the differing viewpoints.

Traditionalists argue for holding the steering wheel at ten to two (for youngsters who can only tell the time by looking at a digital watch, this refers to the figures 10 and 2 on an analogue clock face). In this way you move the wheel around by pulling the wheel down with the left hand to commence a left turn, and slip the right hand to the bottom of the wheel to continue pushing up to keep the wheel turning. You must never take both hands off the wheel and the 'pull- push' method readily allows you to turn the wheel as far as it will go and back again. The principle of this system is that the hands do not go beyond the six and twelve oclock positions.

However, many other countries do not use this method, and the designer of the Swedish Skid-Car training vehicle, Kenneth Hassel, always referred to the 10 to 2 style of steering as British Knitting. American driving instructors usually teach their students "hand to hand" and "hand over hand" depending on the size of the steering wheel – these methods allow and encourage drivers to cross their hands as needed. And it is not considered terribly bad practice to allow the wheel to self-centre (or self-center as they put it) by letting the wheel spin back through your relaxed grip.

So who is right? And what should and could Better drivers do to be safe?

Steering not only controls the motor vehicle, but the way that drivers handle the steering-wheel has an absolute link to road safety. Before I ever even sat a client behind the wheel, I would ask how many controls a motor car had. I then surprised (and relieved) them by stating only two really mattered: those that control the speed and the position. Fortunately the good Lord provided us with a foot to control the speed and two hands to look after the position. And the good Lord was right, because the steering of a vehicle was twice as important as its speed.

Lady learner drivers took great comfort from the relationship between the accelerator pedal and the foot control of a sewing machine. Steering was a different matter. I sometimes used the analogy of shoving a pair of curtains through the needle bit of the sewing machine, but lack of genuine experience and interest in the delights of sewing soon exhausted my teaching skills.

"***Steering is simply a matter of looking where you want to go and allowing your hands to take control***" actually worked with about 75% of my clients. The rest were usually determined to do one or more of three things: bend the steering wheel inwards; tie their hands in a granny knot; or release the wheel altogether. So I devised a system they could practise at home. I did not use a round dinner plate to practise with. I made them use a small square of cardboard and instructed them to turn it one way, then the other, as quickly as possible without looking at it. With a plate you can shuffle your way around it; however, the sharp corners of the square meant removing each hand in turn to carry on the sequence. Just fifteen minute's total practice brought about perfection in steering.

Hey presto! Steering problems were resolved and I could now take them around bends, corners, and roundabouts in comfort and safety. Thus my own steering teaching practice evolved and none of my test candidates ever failed because of steering faults and, more importantly, I don't know of any who subsequently had car crashes caused by loss of steering control.

I never stressed that a normal holding position of 10-2 was essential. But none of my clients ever let their hands get lost when steering or turning the wheel. Feeling comfortable is the secret of understanding safe steering. There are two distinct functions that the steering wheel fulfils. Initially as a means of turning corners, which involves 'turning the wheel'; however 'steering' is mainly concerned with following a

curved path along a relatively straight road. This is where your eyes actually do the steering and your hands obey your instincts to move the steering wheel to keep your eyes facing the right direction.

Anything that distracts your eyes from the road is wrong and dangerous. If you look at your hands you cannot see where you are going. If steering ever feels uncomfortable: practise with a small square card – indoors!

Once they realise that 'steering' and 'turning the wheel' are two similar but separate operations for the steering wheel, better drivers can relax in their seats holding the steering wheel comfortably, knowing that at any time they can steer and turn the wheel as required without any need to grip it tightly. This makes you wonder how people can ever get their steering wrong.

The answer is simple. Not so good drivers don't always read the road correctly; they don't realise how tight a left or right turn can be; and they try to drive faster than they can steer. Position and speed are the only things that ever really matter when you are driving; and you must always confirm your safe position first and then select your speed to suit all the circumstances.

Perhaps I can be allowed to mention the German wife of a distinguished professor of my local university who wanted to learn to drive. It was obvious from the beginning that she did not possess very much in the way of hand-eye co-ordination. In fact she was so bad that I recommended she learned to drive an automatic car. I passed her over to a Henry, a friend of mine who specialised in teaching on automatics. On her first lesson with him she became very irate with Henry as time after time he rescued the wheel and recovered the situation from her disastrous efforts not to steer straight.
"I vant an automatic! I do not vant to steer!" She informed him in the end.

Another such pupil, and one who stayed with me until he passed, was a young lad in his early twenties. He chose to learn during his summer vacation from medical school. He seemed totally incapable of following a safety line along a relatively straight road. That was on the straight. However whenever he tried to turn a corner I always had to take over to avoid crossing lawns and entering strangers' front rooms. When I suggested he invested in a students' bus pass instead, he explained that as his intention was to become a brain surgeon (subsequently achieved with distinction), he really had to gain a licence. My own thoughts were that he would contribute greatly to his own workload unless he came to terms with steering safely. Eventually I get him to learn the skills of

steering, by giving a running commentary throughout his drive: just by saying where his eyes were focussed at the time.

All this brings me back to the simple single skill of steering; what you look at you hit. This is a truism that will save lives – and possibly bent metal too – if you ever get your car into a serious skid. The car will almost always go towards where you are looking; so never look at lamp posts, oncoming cars, houses or brick walls. Always look between the hazards and aim at whatever you can see is safest.

Better still avoid the skid in the first place.

Full circle now; if you excuse the steering pun. How does holding the wheel affect the way your car holds the roads on the straight and around bends and corners? The answer is that if the holding position of the hands feels comfortable and it doesn't affect the way your wheels follow the road, then it makes no difference at all. However, if for any reason your steering feels uncomfortable, then you may need to have a serious re-think about what you can do to change your hand position – or much more likely, your seat position instead.

My first lesson with any potential advanced driver usually begins with some personal questions:

"When was the last time you adjusted your seat position?"
"How many position change controls are there on your seat?"
"When was the last time you checked all of them for your comfort?"

The answers I received then dictated how I proceeded with the next stage which was to make sure they put safe steering into practice. However quite often I would give a full assessment of their driving first, before we discussed and agreed their most comfortable seating positions. The reason for this is that anyone who teaches advanced or better (or careful or defensive or excellent alphabetically ad nauseum) driving must always remember, especially with male clients, that you must never criticise their driving skills. So instead of criticism you have to offer guidance. It is not quite the same thing, because instead of direct teaching you are allowing the client to learn heuristically. (That only means by discovery, which is how two-year olds learn).

So every driver has the opportunity – any time – to increase their own learning about driving comfortably. All you have to do is to sit in your own car, except that instead of driving off, you relax for a few minutes in the car. You reach out for the various controls.

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You stretch yourself a little bit to see if the mirror is really in the right place. If it isn't still don't adjust it yet. Check your seating position first. So many drivers adjust their seat at the beginning of their journey and within ten minutes they have slumped to a more comfortable one. It is this position that you really seek.

And there are a number of ways to validate that you have achieved a good safe seating position? Can you steer comfortably? Can you reach all the controls comfortably? And can you see everything you need to know through all the mirrors? If so all you have to do is make sure you use this comfort to allow you to concentrate on the road ahead, and to allow your hands to turn the wheel around corners and steer to follow the correct safety line just be looking where you want the car to go. That is what is called auto-pilot. And you are unlikely ever to have to think about your hands and the steering wheel again.

And your passengers will enjoy driving with you too.

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The Art of the Running Commentary (Part One)

Although most better-driving practices are based around the three basic principles of "Skill, Knowledge & Attitudes" there is no doubt that giving a good running commentary is the true 'Art' of better driving.

Once drivers are able to demonstrate their newly acquired various vehicle handling skills, the next stage is to develop a perfect running commentary. This requires expert and exquisite use of something that all World War Two Spitfire pilots called the "Mark One Eyeball". Your eyes are the fundamental link between the road and traffic conditions and your brain. Better drivers can show their skills initially in that their eyes never remain fixed on any one object for more than a second or two. Minute detail can be observed and the correct perceptions are gained from only a second's worth of concentrated focus. Whilst the brain is working out what to do next, the eyes continue to move around, taking in additional information to help the brain – both the thinking part of it and the sub-conscious auto-pilot section – decide the next actions.

Expertly given commentaries need a good foundation. In this case the base is the knowledge that the vehicle is being driven safely and competently. The vehicle's relationship with all other road users with regard to a safe speed and position is perfect. The ability to see potential changes of speed or position as early as possible then becomes the beginning of all good commentary work and practice.

Beginners usually expect a professional commentary to sound something like this: "***We are driving in a northerly direction at forty eight miles an hour in a fifty-mile an hour speed limit. The road is dry and has a good tarmac surface, we are in fifth gear and following another saloon car with a safety margin of about five seconds from him; the vehicle following us is another saloon car and he is about two seconds behind us***." . However this is **not** a running commentary. This sets the scene.

Nevertheless such a statement can be a very useful tool for practice before the practice sessions actually begin: the real commentary can then start when the 'eyeball' begins to earn its keep.

"Green traffic lights ahead. Mirrors, decelerate to gain more time. Mirrors again.. Braking lightly. Lights changing. Mirrors, braking to stop. Mirrors."

This tells a totally different story; especially if the story always remains well ahead of the action. And this is a problem often encountered when people first try to think – and then say – long sentences when they practise their commentary work. There is no need

for any long sentences; or for short sentences either. Precise choice of descriptive words is all you need to see, select and say. See the hazard; identify the potential, select the most important risk and say the word.

Commentary training is divided in two distinct halves. Learning how to see more and extend your observation skills; and practising ways in which to express this potential change succinctly.

The Art of the Running Commentary (Part Two)

See more and become more perceptive

Instead of looking at vehicles, look for the drivers' faces and their eyes; if necessary, through their mirrors. Driver behaviour gives added information that can be both life-threatening – and life-saving. You will get your first clues from their faces: are they animated? Can you see where they are looking? Do they look bored? Do they look right and left at all junctions, not just those roads they are turning into? Similarly with road signs and static hazards; are these just wake-up warnings, or do they show potential for change?

Remember that a set of traffic lights will always change, and your skill is to arrive there when you want to and not just as they turn red. Remember that late braking actions may cause a nose-to-tail crunch; whereas early deceleration followed by brake-lights, and then heavier braking will keep your tail safer. A real skill in driving is never causing a following car to do anything suddenly.

Look at road surfaces for all kinds of warnings: changed surfaces will affect braking distances or sometimes create skid potential. Recognise closing bends and adjust your speed to suit the safe braking distance that you will need. Never let your speed exceed your vision. Or, if you want to turn that into a more positive statement, always know that you can stop safely and easily in the distance you can see to be safe; and so can the chap behind you. Identify everything that could cause a change of speed or position, make a mental note and think through the various options. Once your driving is totally under your control, your commentary keeps it going.

Practise your vocabulary

With regard to the choice of words go back to the examples on the previous page. The first example used 66 words just to explain a static situation. The second used only 21 words to demonstrate the reasoning and methods to explain why a change of speed became necessary. Think safe; think short phrases; say single words.

Avoid the use of descriptive or flowery language altogether. If it becomes necessary to comment on a series of developing hazards you can change verbs too. Such as in this example:

"There is an oncoming vehicle approaching on my side of the centre white line. I shall need to use my mirrors and then brake gently to give him time and room to get back in."

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Becomes:

Car, mirrors, gently braking, safe again.

Thirty-five words become six. Ten seconds are reduced to three or less; so that instead of having to think and say out loud a complete copper's note book of comments, you just say the trigger words that matter.

Just starting to think about a running commentary makes you plan further ahead – because it keeps your eyes and your brain fully focused where it matters. The practice of saying the words aloud will concentrate your brain on the driving task. On your own you don't even need to speak them. But you must think them.

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Lies, Damned Lies and Statistics (Part One)

During my fifty years as both an academic researcher and an amateur observer of road crash statistics I have been made very aware of the peculiarities of some of the published crash statistics. These can apparently demonstrate the benefits of speed cameras, of road humps, of pedestrianised areas and of all the various road safety changes which are made from time to time: or not, depending on how you view the results.

If you read all the various reports you could find whatever you want from what has been researched. I recently shared a television platform with a gentleman from the regional "Safety Camera Partnership". Although I quoted the most recent statistics from the government's Transport Research Laboratory he did not concede any difference between breaking speed limits as a factor in only 7% of all crash deaths and 'excessive speed for the traffic conditions', below speed limits, as a factor in 72%. The income from speed cameras pays his salary; therefore they work for him.

If publicity specialists, don't fully understand these statistics what chance do ordinary motorists have? The real problem is that unless drivers are consciously reminded of the dangers of what they are doing, it is very difficult to change their own approach. For example, recent statistics about motorways showed that the ***average*** speed in the outside lane (lane three) of motorways is slightly more than seventy-two miles an hour. Lane two drivers often travel at such speeds too.

This appears to prove that most motorists in lane three don't expect to be caught for speeding. Nor do they expect to be involved in road crashes. The worst feature of this is that the drivers most at risk of motorway crashes are those in lanes one and two, who are perhaps only driving at about 65 mph, but are much too close to both the vehicles ahead and behind.

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Being a law abiding driver, I always stay within legal speed limits; but being a safe driver I know that whenever I leave a genuine safe following distance in the left hand lane this gap will soon be filled by an overtaking driver, who often wishes to turn off at the next exit. When he brakes quite firmly I face a predicament. Do I try to move out into lane two which is often full of trucks driving too close to each other, or do I brake gently enough to keep the driver behind off my exhaust pipe?

The need for safe following distances also tells me to get out of lane one on the approach to any motorway exit and entry; and to adjust my speed —and safety gap — to suit the traffic I am joining. This means I need to drive at their speed to stay safe. Logic tells me that no policeman would penalise me for this action. But cameras, especially the new digital ones, connected directly to DVLA at Swansea have no such judgement.

Lies, Damned Lies and Statistics (Part Two)

Last week I looked at the peculiarities of published research statistics. These are often used to demonstrate the benefits of whatever particular project has been employed, and what they were expected to prove. In order to understand the logic which attaches to road safety research programmes and statistics it might be better to look a bit deeper into what they really say.

What, why and how research is carried out depends on what those who are paying for the research wish to discover. This is fine, and indeed it is the whole ethos of academic research everywhere. Every university professor and academic researcher dreams of receiving a small fortune to discover which haricot seed produces the most tasteful and desirable baked bean; or any similar project. They plan programmes of research, employ dozens of students to carry out the dreary tasks of interviews and investigations, and the researcher writes it all up. However, and regrettably, it also means that the more money thrown at research, the longer it takes to come to a conclusion. It is often overlooked that someone probably wants the results to prove what they always believed. So I always look to see who promotes any piece of research and wonder what use will be made of the results.

I have no complaints with the way proper research is carried out. However I regularly cringe at the ways that some of the more dramatic results are so easily separated from the whole package and thus become national headlines. In some cases these headlines are misused by hotheads to further their personal campaigns. This is how the "***Speed Kills***" message completely overshadowed the genuine results of the road crash statistics which actually confirmed that the over-whelming single cause of vehicle crashes was '***Following too closely to the vehicle ahead which results in drivers being unable to stop in time***'. However, as that doesn't conform to dramatic headline material, and because various pressure groups failed to accept that ' ***Excessive Speed for the Traffic Conditions***' is also a good theme to sell, we are deluged with messages to accept the generalization that if no one breaks the speed limit no one will be killed in vehicle crashes. Worse still, some speed protagonists believe that obeying speed limits will eliminate crashes too.

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How sad, and how untrue. In a very short survey of road deaths carried out in my own county for the past two years we discovered that 75 were killed in eight months this year, compared with 52 in the same period last year. Almost all occurred in local residential areas where no speed limits were broken.

The only way for readers to reduce their own risk potential is to drive or ride at a speed at which they can always stop safely in the distance they can see to be safe. If you find you are closer than four seconds to the vehicle ahead, slow down and drop back.

This takes a lot longer to say than '***Speed Kills'***, but it will be much more effective.

Lies, Damned Lies and Statistics (Part Three)

Last week I quoted current statistics in Hampshire and the Isle of Wight demonstrating almost 50% increase in road deaths between January and August 2003, compared with the same period in 2002. The actual numbers killed in road collisions were 75 this year and 52. What is most damning about these statistics, however, is that it also confirms that the increase is a national one.

Over the past years the number of road deaths has decreased quite dramatically. I often quote that in 1934, the year before town speed limits and driving tests were developed, more than four thousand people were killed on the roads. When you think how few vehicles there were in those days the figure of 4,400 as a percentage against vehicle/miles driven the mind boggles.

Since then, there is no doubt that many thousands of lives have been saved by changes to road design; even more deaths have been reduced to serious injuries; and serious injuries reduced to minor ones through changes to vehicle design ranging from ABS to the development of air bags and the like. However I claim that the greatest single step forward in the overall reduction of road deaths, injuries and damage has been through the greater depth of driver education. I will remind readers that my doctorate was gained in advanced driver education But this is based on fifty years total involvement. I remain convinced that better training and better testing are the greatest causes of Britain's excellent road safety record compared with the rest of Europe. Better road design makes it easier for drivers to be aware of traffic priorities and control. Better car design reduces the risk of occupants, and occasionally external casualties, from more serious damage. However, Better Driver Education creates correct behaviour, which leads to avoiding the incidence of most road crashes and deaths in the first place.

There is no argument that the British driving test is the most thorough and searching in the European Union. The British training system is also very good, but it could be even better if structured training and progressive licensing became a regular part of the system for gaining a licence to drive unaccompanied. The one

gap in our present driver education system is that government is reluctant to make training and post test training as compulsory as the test.

The current Driving Standards Agency's plans for Log books for new drivers, and Pass Plus training for those who have just passed their test, fall down because they are only used by those who know what is needed. All new drivers should expect to gain their licences in a planned and progressive way. They should earn their freedom to drive by showing they have learned to play their part in all aspects of driving, not by passing a simple beginner's test of skill. Driving is not a right; it is a privilege that must be earned. And like all other qualifications, the harder it is to gain, the more value can be placed on it.

Lies, Damned Lies and Statistics (Part Four)

In this four-part series on road crash statistics I have tried to look through the headlines and shock tactics, and even the threats to driving licences, by looking at how safe our roads really are. British Road Casualties for 2002 confirm 3,431 people were killed. Although this is a one percent drop over 2001, early figures for the first half of 2003 show a considerable increase..

Much blame for this has been attributed to the dramatic lack of police vehicles on the road as they are replaced by speed cameras. Enforcement appears to have been delegated to the camera. When working in parallel, Enforcement and Education can combine to ensure that drivers will reduce their risk-taking behaviour. I was driving on holiday in the south of France earlier this year and I compared the dramatic 'learning effect' on me of seeing eleven cardboard cut-out silhouettes depicting the five men, three women and three children who had died on that area's roads in the previous twelve months. The effect was much more pronounced than the occasional local sign that says

"Take Care – Three people killed in the past three years".

Among all the thousands of road signs which overload our vision this just gets lost. Human silhouettes are more heart-stopping. And this is what driver education is all about. The sight of a police car is not seen as a threat to most drivers, but as re-assurance that they will reduce stupid drivers and other road users carrying on with their dangerous practices. Tactics like tail-gating, crossing double lines, unsafe overtaking and other examples of road rage are all greatly reduced when traffic division coppers are around. Enforcement cameras are limited to catching speedsters, traffic light jumpers and illegal bus-lane huggers; but they cannot differentiate between those who are just being awkward, and those who are guilty of driving behaviour likely to cause death or injury to themselves and other road users around them. These are the road users who need to be curbed. These are the road users who cause an average of sixty-six people every week to lose their lives, and six thousand road users injured,

Every individual car crash, piece of bent metal, broken leg or head, and road death is a terrible personal tragedy; it ill-behoves any Transport Secretary or Roads Minister to sit back and applaud Britain's road safety record in Europe. The only

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acceptable figure must be nil. And just as the personal effect of a crash is total, so is the opportunity to avoid being included in any other road user's crash. It is not enough to drive safely; it is not enough to avoid breaking speed limits or contravening road traffic regulations and laws. Better Drivers need to be aware of the whole responsibility of driving tasks. They need to watch their road ahead much further; they need actively to look for potential risk from other road users and they need to concentrate 100% on their own driving task at all times.

Avoid vulnerability – make your involvement in road risk as low as possible.

"Better driving" has been defined as
"Concentrating on the driving task through the application of a practical and consistent system of vehicle control and road procedure".

During the past twelve months that I have been writing this series of being a better driver I have been very conscious (and have been occasionally reminded by some readers) that driving is a very personal activity. The theme of my Better Driving articles has been very simple. Any driver who thinks about what they are doing will automatically become a better one. Not so good drivers are usually identified by the

fact their brains are not engaged in the driving task, and more on what is happening inside their head instead of what is happening up ahead.

Car crashes are caused by road users making stupid driving errors. However if the driver coming the other way is the one making the stupid error, you can become involved in their crash simply by making a little or minor error. For example if you are approaching a crossroad, but looking the wrong way first – and another driver is too fast, or too wide – then a crash can occur because you were not able to react in time. Think about your driving and you will stay safe.

Better drivers recognise the risk potential before it gets out of hand because they are looking and planning for anything that can be a potential hazard. The secret of Better Driving is always to be looking further ahead than those around you.

All incidents must begin with **vulnerability**. Most drivers make themselves vulnerable all the time they are driving. If two road users each make themselves vulnerable at the same time — and in close proximity — they create a **con-frontation**. Better drivers can usually resolve the confrontation by looking and planning; without this the confrontation can become a **crisis**.

If this is not coped with instantly the final step must be a **crunch**.

Dare you rely on the skill – or luck – of the oncoming driver to save your life?

There is a logic in this that is so simple that Better Drivers can put it into practice all the time.

- Never make yourself **vulnerable,** and
- you cannot have a **confrontation**.
- If you never have a confrontation you can't have a **crisis**.
- If you never have a crisis you can't have a **crunch**.

If you want to be a Better Driver it is easy to practise this safe driving system and avoid making those simple driving errors which could so easily become stupid or dangerous ones. Get out of bed early. Start sooner. Drive slower in vulnerable situations.

- See what is going on all around you.
- Tell other road users what you are going to do.
- Adjust your position and speed to suit your immediate needs.

- Keep a 'safety cushion' around you at all times.
- Keep your vehicle in good condition.
- Keep yourself in good health and fit to drive — safely at all times.

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How do you measure your driving skills?

One of the questions about safe driving that no one ever seems to answer is how can you possibly compare your own safe driving abilities with those of your work colleagues or family and friends?

You can't! Well not in any conventional sense. Driving is not like golf or darts or tennis where you can measure your own personal abilities quite simply. Because of an accepted standard scoring system it quite easy to make comparisons with every other player – even those who have never met or played with each other.

So what aspects of driving can be measured? The first answer is that if you arrive home alive every day you are doing well. However, the alternative is a bit of a bind. Nevertheless there is a scoring system that any driver can use. Although it will not compare your own skills against everyone else's, you can certainly measure your own driving skills today, compared with the way you drove on the same journey on previous occasions: or tomorrow's journey in relation to today's. As a bonus a suitable scoring system will make you think about your driving.

The way it is done a simple tick list against which you can score every drive you make. The resultant 'plus or minus' totals can then be compared against any similar drive. This marking system works best for those journeys that are fairly repetitive and yet involve most of your time driving on "auto-pilot".

Oh I forgot to tell you; the best way to mark this score sheet is not to rely on your own judgement of your driving abilities and skills. The ideal person to score is perhaps a young son or daughter or any regular passenger; but probably not your spouse. The writer does not wish to be held responsible for any domestic mayhem that may ensue.

The way the marking system works is for you to take a regular journey – perhaps to the shops or to visit family or friends who live twenty to thirty miles away – and to give the attached marking sheet to your son, daughter or other selected colleague. Without making any comments out loud, they simply make notes each time you deviate from what is shown as a 'safe, steady, competent and pro-active drive'. The initial intention is to arrive with a mark that is well on the plus side. Subsequent drives on the same or a similar route should show some signs of improvement. This means you always have a target to beat. We have all read that no one yet has ever made the perfect drive.

Naturally any drive which results in a negative score is a cause for alarm. One that constantly produces positive scores shows you are doing well – for now!

The benefit to professional driving instructors of a simple marking scheme like this can be quite positive. Initially introduce the system to your own pupils; particularly perhaps to those with parents who show extra interest in their

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children's progress and who might benefit from some additional professional training themselves, but there is no simple way to get them to accept it – yet.

Drives taken over similar routes and timings should eventually begin to show a rise in the total of positive marks scored. Nevertheless it can prove quite interesting to see how your scores change when external circumstances have the potential to cause adverse effects on your performance.

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POSITIVE marks are scored as follows:

Creating a situation where another road user noticeably says thank you for an action you have taken: 5 marks

Creating a situation where another road user has cause to be grateful for an action you have taken: 2 marks

Allowing another road user priority in an evenly balanced situation: 2 marks

Successfully anticipating a hazard situation ahead and avoiding a serious vulnerability arising: 3 marks

Successfully easing off the accelerator early enough to avoiding harsh braking. 2 marks

Anticipating a change of traffic conditions to avoid heavy braking 2 marks

Arriving at a slow down situation without any noticeable braking 1 mark

POSITIVE Total _____

NEGATIVE Marks are scored for:

Creating a situation where another road user noticeably criticises you for an action you have taken: Minus 10 marks

Creating a situation where another road user has cause to be upset by an action you have taken: Minus 5 marks

Failing to give another road user priority in an evenly balanced situation: Minus 3 marks

Failing to anticipate a hazard situation ahead and creating a serious vulnerability situation. Minus 3 marks

Failing to ease off the accelerator early enough so creating a harsh braking situation Minus 3 marks

Failing to anticipate a change of traffic conditions resulting in heavy braking Minus 3 marks

Unnecessary acceleration followed by a period of braking Minus 2 marks

NEGATIVE Total _____

GRAND TOTAL

_____

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And finally … …..

If there is one single thing which any and every driver should do to extend their driving life by many years it is this:

Awareness Points

Reading the road.
Search for early indications of potential for change or concern.
Knowing what to look for: this makes the search pattern easier.
The following are four main areas of search:

1 **Location** - road signs, markings, junctions, bends, road surfaces.
2 **Other road users** - coming towards, or overtaking - or vulnerable.
3 **Time** - night, glare, schools, peak traffic conditions, holidays,
4 **Weather** - rain, sunshine, glare, fog, snow, ice, wind.

Train your search skills to give you maximum information.

The 'Smith -Cummings-Sherman' system is one way to practise.
There are five features of the system:

- **Aim high in steering;**
- **Get the big picture;**
- **Keep your eyes moving;**
- **Leave yourself an out; and**
- **Make sure they always see you.**

Remember the need for concentration and planning.
Driving Commentary practice is an aid to training observation;
Learn to see causes of interest; say one word of identification;
Say a further short sentence if needed about the actions you may take
Then move on to the next item ahead; don't let your focus hit your bonnet.
Proper observation leads to perception of risk.

Know when to use lights; and what are the restrictions when driving at night.
Full and proper observation means knowing what to look for.
Filtering out those things not required.

Avoid distractions - identify change or potential risk.
Recognise and cope with anything that will cause you to change direction or speed.
Inform others of your intentions.
Keeping pace with, and space from, all other road users.

Summary.
See and be seen; whilst being able to stop safely at all times.
You can only read the road if you concentrate on the driving task
LOOK SEE OBSERVE PERCEIVE.

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Safe Driving Begins in BED … the Rules of Three - Seven & Six

People who are late are more at risk. They take more chances. However if you make sure you get out of bed just that little bit earlier, you won't be late. Your journeys won't be rushed and you won't need to take risks.

Planned driving is safe driving. Those who think about what they are doing rarely get taken by surprise. Those who look far enough ahead can dictate the road and traffic situation to their advantage.

No one knows all there is about driving. Indeed no one can ever produce the perfect drive. But by trying to do so you can achieve a degree of advanced driving that will make you safer - and that is what advanced and defensive driving really mean. "Being safer, and keeping others safer, than before".

Part of your knowledge starts with knowing what creates crash risk.

We are talking about Hazard Awareness; then recognition and finally Hazard Avoidance. **See, Identify and Avoid Hazards**

The first step is called Hazard Perception.

The first **three** main driving errors that are made by most drivers all the time must eventually lead to loss of control or a collision - one day, maybe soon.

1. **Following other vehicles too closely.**
2. **Turning right or taking bends unsafely.**
3. **Trying to overtake without enough room.**

There are **seven** other main reasons, and in descending order of occurrence: they are;

1. **Travelling faster than the main stream of traffic.**
2. **Driving too fast into bends.**
3. **Swinging wide on bends.**
4. **Driving too close to slower moving or stationary vehicles.**
5. **Failing to give way when required.**
6. **Giving wrong signals or none at all.**
7. **Making wrong assumptions about other road users' intentions.**

However there are **six** simple rules that will always keep you safe.

1. **See what is going on all around you.**
2. **Tell other road users what you are going to do.**
3. **Adjust your position and speed to suit your needs.**
4. **Keep a safety cushion around you at all times.**
5. **Keep your vehicle in good condition.**
6. **Keep yourself in good health and fit to drive - safely at all times.**

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THE END; but actually this just the beginning – I hope – of a brand new chapter in your Driving Life. As A MUCH Better Driver than you were before reading, learning, UNDERSTANDING, and putting into practice all you have Learned from this mall collection of HINTS to keep you safe well into your 80's or more.

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