Chapter 9

Finding the way

- a scientific account of the evolution of the motorcar

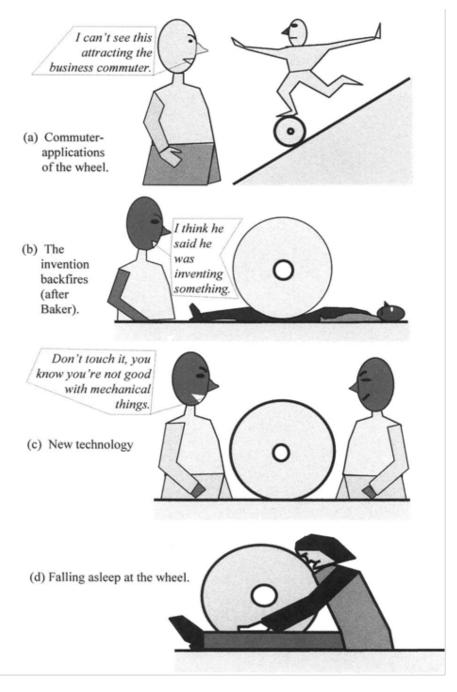
Horsepower

In man's first increment in travel technology, the fortunate journeyed on horse-back, and the moderately fortunate on ass-back. A 17th century joke tells of a judge travelling from London to Bow.¹ He meets a priest on horseback and acerbically comments "Your master the Bishop only travels on an ass." The priest replies: "Ah, but there are no further asses available, as the King has made them all judges." This topic also provides a good reason to introduce the premier horse-limerick, which correctly reminds the reader of some of the consequences of the horse as a transport mode;

A horse-riding lady from Nandi,

Became extremely bow-legged and bandy. When standing upright, She was a hideous sight, But when flat on her back, was quite handy.

To move from horseback to chariot, carriage and coach, someone had to find some wheels. Inventing those wheels was a symbolic event that has captured the imagination of many cartoonists, as illustrated below.



Four events in cartoonists' version of the invention the wheel.

With the wheel in place, the invention of the vehicle was assured. Social priorities were already well established, and so the first application was for war chariots, which appeared about 2000 BC. Whilst this was easily accepted, the possibility that the invention might be subverted to civilian use worried concerned citizens. In Greece in about 600 BC, the law-maker Solon believed that the use of wheeled transport was demoralising for men and detrimental to their physique, but that women should only leave home at night if in a carriage. In the same era, the father of Philip of Macedonia received a divine warning that led to him ordering the destruction of all carriages in his kingdom.

There continued to be something worrying about the horse-drawn coach. In 1580 a parliamentary successor of Solon had opposed the import of coaches to England, as it would cause a decline in horseback riding². Between 1662 and 1673, John Gressot of Charterhouse petitioned the English Parliament to have the coach banned for the obvious reasons that it was³:

- * destroying the breeding of good horses,
- * rendering the Englishman effeminate and idle,
- * encouraging country people to come to London merely to have their hair cut,
- * causing wives to travel with their husbands, go to plays and treats, and thus create in a family a habit of idleness and a love of pleasure.
- * damaging business, as people wore less clothing than when travelling on foot or on horseback.
- * affecting health, due to the prolonged seating, and
- * promoting fraud, by introducing commerce into travel.

His prophecy was ignored, English society is what it is today, and one can but ponder upon the consequences of ignoring his unappreciated and unapplied foresight.

The Gressot grouch nevertheless occasionally reappeared. In a curious congruence of events, the British Government agreed to permit horse racing to continue through the First World War, on the grounds that this would ensure an adequate supply of horses for national defense. The scheme failed as there were no trains available to take punters to the largely rural racetracks, and so they flocked there in newly acquired cars using scarce petrol. In 1916 the Government contemplated a petrol tax to prevent this, but the outcry was so strident that they found it simpler to ban horse racing. In January 1918, incidentally, they made it illegal to use the car for other than nominated purposes - these included visiting professional people. Henceforth dinner invitations would announce that one of the guests would be a "professional person."⁴

Perhaps finally, in World War II the Gressot grouch was reversed and it was argued in Britain that car travel should not be restricted, as this would harm the local car manufacturing industry, which was essential for Britain's survival.

Returning now to the intended theme, a major innovation in public transport occurred in 1405 when the first gilded ceremonial coach was used to carry Queen Isabeau of Bavaria to Paris. Even so, civilian travel by horse-drawn coach was far from safe. Apart from the prospects of being bogged in deep mud or robbed by highwaymen, the coaches were not all that stable. At the beginning of French aristocrat Marie de Sevigné's separation from her daughter in 1671, she implored the coachman: "I trust my daughter to you, don't overturn her." Perhaps music hall songs of the time were advising "Don't put your daughter in the coach, Mrs Worthington"? Nevertheless, we pray the coachman grasped the transport-orientation of the mother's request.

As illustrated below, stagecoach services developed rapidly on McAdam's new roads, and another perceptive English traveller noted in 1827:³ "The art of travelling has undergone great alterations in the course of the last thirty years, and these are not altogether improvements."



"Scene in a country Inn", by Hogarth in 1747. The stage coach is being hand-loaded for the next stage in its journey.

About this time, bad luck crept into driving and we all became transport-descendants of Unlucky Upfold. "Unlucky" had had an unblemished career as a coach driver on the Brighton to Southhampton run. Then, in 1831 when he was a mature 47 year-old, his luck changed.

First, his coach overturned and broke his leg. Not long after he had returned to work, an axle broke, his coach again overturned, and his leg was rebroken. Returning a second time, he left his coach in the charge of a passenger whilst he had an ale or two with an innkeeper. Looking out the window, he realised that the passenger had deserted his post and the horses and coach were in motion. He ran to stop his coach, and was kicked by one of the horses, causing yet another broken leg. Falling to the ground in agony, Unlucky was run-over by a coachwheel, breaking his other leg. Some considerable time later he was back driving coaches. His return was short-lived as his coach overturned on a bend, rolled over and killed Unlucky. A passenger said that just before the fatal rollover, he had shouted to Unlucky, "Upfold, what are you at with the horses?"

"I pulled the wrong rein" Unlucky replied.5

One of the advantages of the horse was that it was a creature of habit, which gives rise to some wonderful stories. Certainly many cart drivers were able to sleep contentedly whilst their horses followed their well-worn way. For example, the story is told of the driver in the 1950s who took over a home bread-delivery round from another driver. Towards midday of the new driver's first day, the horse stopped in a nondescript street and refused to move. Realising that it must be feeding time, the driver gave the horse his lunch via a nosebag. Whilst this was going on, the indignant young widow of the previous driver emerged from an adjacent house and suggested that the new driver had best move on, before her reputation was completely destroyed.

It is hard to now realise that before the twentieth century, the road was the province of horses, pedestrians and oxen - all with their own polluting potential. Three particular disadvantages of the horse were that it ate, defecated and died, inconveniently and to excess. The sober statistics given to this effect in my *Ways of the World* have proved the most quoted portion of that book. I hesitate to comment further on my readers' preferences. But, in case you missed them, here is a sampler of those much-loved statistics:

- * a horse eats 6 tonne of food a year and requires 2 hectares for its support,
- * in 1900, horses in New York City each day produced 1100 t of excrement and 270 000 litres of urine,
- * 20 horses died on the streets of New York City each day in 1900.

The topic continues to fascinate, for a centennial publication of the Royal Automobile Club in Britain in 1997 reminded its readers that if London were still reliant on the horse for its travel needs, the streets would be routinely covered with a 1.8 m layer of horse manure.

All these events fortuitously lead to a collection of stories about the internal dynamics of horse-drawn travel. One of the best loved concerns a State visit to Britain by General Gowon, then President of Nigeria⁶. He was riding with the Queen down the Mall in London, travelling formally in the state landau hauled by a team of Hanoverian horses. One of the horses farted mightily. The Queen turned to the General and apologised. Ever the gentleman, he replied: "Oh, but Your Majesty, I thought it was one of the horses."

Beyond the horse

Horses did not have the territory to themselves. Indeed, some curious animals were used to draw these new vehicles. For example, in A.D. 200 the Roman emperor Elagabalus for a time had his chariot hauled by naked women. However he found them unsafe and unmanageable and resorted to the more practical alternative of using trained lions and tigers.

On a par for feline incredibility is the achievement a clown called Usher who in 1818 trained four tom-cats called Tibby, Tabby, Toddle and Tot to pull his carriage over

Waterloo Bridge in London at a speed approaching a slow walk⁷. As we saw in the illustration in Chapter 8, on other occasions Usher was pulled along the Thames by his four geese, Gibble, Gabble, Gobble and Garble.

Male humans - although found in abundance and more easily tamed - provided an ineffective and under-powered source of motive energy. For public transport applications, they could only carry their riders for short distances, and were mainly employed to keep aristocratic travellers clear of any mud or cold water, rather than to extend the distance travelled. Some examples from Ando Hirashige's wonderful woodcuts of travel on the Tokaido Highway between Tokyo and Kyoto in 19th century Japan are shown below.



Woman on an open palanquin, crossing he Sakawa-gawa River, 90 km west of Tokyo (wooodcut 28).



Woman in a covered palanquin, near Oiso, 70 km west of Tokyo, (woodcut 32).

Elephants are still used in urban India for ceremonial purposes and, according to Yusuf Ali, who operated six elephants in New Delhi, they have a great advantage over the horse. If the mahout (or driver) falls asleep, the elephant is intelligent enough to keep to the correct side of the road and to stop at all red lights⁸. Indeed, this puts the elephant ahead of most humans.

Humans became practically viable as freight hauliers when the lightweight wheel was produced as one of the outputs of the Industrial Revolution. The bicycle was the first

vehicle to take advantage of these new wheels. The bike then led to the rickshaw and rickshaw making was, subsequently, the forerunner of Japan's current car industry. However, future archaeologists may be misled into believing that the evolutionary leap from the litter and sedan chair to the Rolls Royce was probably via the Korean one-wheeler shown below.



An 1879 Korean one-wheeled predecessor to the stretch limousine. Popperfoto.

Notes on Chapter 9

- 1 Ashton, J., *Humour, wit and satire of the seventeenth century*. London: Chatto and Windus (Dover 1968),1883, p2
- 2 Wilkinson, T. W., From track to by-pass. London: Methuen, 1934
- 3 Gregory, J. W., The story of the road, London: Alexander Maclehose, 1931, p167-8
- 4 Jackson, J., Man and the automobile, New York: McGraw-Hill, 1979, p60
- 5 Mountfield, D., *The coaching age*, Hale: London, 1976, p147-8
- 6 Spencer, C. & Barlas, C., Reports from behind. London: Enigma, 1984.
- 7 London Times, 4 May 1818 and Searle, M., *Turnpikes and toll-bars*, London: Hutchinson, 1930, p36.
- 8 Far Eastern Economic Review, "Travellers' tales", 15 Apr 1993, p34

Chapter 10

They're on the way

- a chapter which takes a sober and serious view of the much-alleged magic of the motorcar.

Before internal combustion

We saw in the previous chapter how the horse, along with the King James version of the Bible, played a pivotal role in protecting and preserving the best of pre-industrial society. To diminish horse usage was to tear asunder the very fabric of that society.

The modern car powered by an internal-combustion engine was not the first of the threats to the horse. A popular toy in Alexandria in 50 AD was a small vehicle driven by the reaction of steam leaving a horizontal vent. Knowledge of the toy is said to have inspired Frank Whipple, inventor of the jet engine.

But the Chinese were inevitably first, building vehicles powered by steam turbines in about 800 BC. The news travelled slowly, and when Roger Bacon learnt of the Chinese invention some 2000 years later in AD 1270, he boldly predicted similar developments would eventually occur in the West. Pope Jerome of Ascoli would not countenance the thought, and threw Bacon into gaol for 14 years¹.

The idea festered away and, in 1589 in Pesaro in Italy, Giovanni Della Porta used steam pressure to power the first water pump. He then quietly suggested to his student Solomon de Caous that he consider using steam to provide the power needed to move a vehicle. When de Caous returned to France to pursue the heretical concept, his local clergy - following the Baconian precedent - had him confined to a lunatic asylum. Due in no small part to these salutary lessons in religious rectitude, steam engines were not used to power vehicles until 1771.

Even then, the engines were not well received. Sir Isaac Coffin told the British House of Commons in 1826²:

What will become of coach-makers, innkeepers, horse-breeders and horse dealers? Is the House aware of the smoke and noise, the hiss and whirl which engines passing at the rate of 20 km/h will occasion? It will be the greatest nuisance, the most complete disturbance of quiet and comfort .. that the ingenuity of man can invent.

Little did he realise what other disturbing devices ingenious man would later put on the public road.

The next quantum jump in transport came with the invention of the bicycle, which well preceded the car. Cycles powered by the rider's feet running on the road were introduced by Karl von Drais in Germany in about 1815.³ The much greater mechanical efficiency of pedals was introduced by Kirkpatrick Macmillan in Scotland in 1839. Karl Kron, an eccentric American journalist, was the first of many loud advocates of the efficacy of the two-wheeler.⁴ In the early 1880s he coined the term *Road Hog*, and used it - not for the yet-to-be-invented car driver - but for drivers of horse-drawn vehicles: "in whose mind the mere act of purchasing a horse creates the curious hallucination that he simultaneously purchases an exclusive right to the public highways⁵."

The bicycle certainly democratised travel, but it also had a number of official uses. For example, in 1887 the British Army introduced the multicycle comprised of six pairs of bicycle wheels linked together in series.⁶ A soldier pedalled between each pair of wheels. It was claimed that the multicycle enabled a full platoon to pedal into battle, speedily and coherently. The Light Brigade could charge once more. Regrettably, there is no record of either the multicycle's military success or of its failure.



The bicycle not only freed travel, but it aided and abetted many great artists and thus had an impact on world art, as illustrated on next two pages. This series of wonderful drawings by Phil Somerville is used with his kind permission.⁷ It was also a frequentlyproclaimed environmental success. John Wootton, a former head of the Transport Research Laboratory in the U.K. enjoyed telling audiences⁸:

how the world needs a biologically-engineered propulsion system, equipped with intelligent route guidance, using natural fuels, and producing emissions that can be deposited at nominated sites.

Wootton then unveils a slide of a bicycle, whose rider presumably does not exhale carbon dioxide. Other studies have shown, incidentally, that riding a bike beside a busy road is not a good chemical experience, for the cyclist inhales far worse than is exhaled.



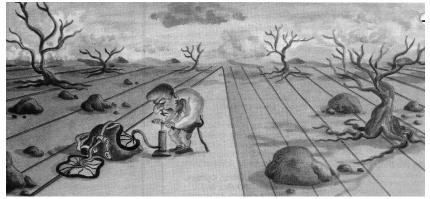
(a) Picasso



(b) Nolan



(c) Munch



(d) Dali



(e) van Gogh

The bicycle competes uneasily in modern cities. For example, cycling in traffic can be a rather unnerving pastime. Munich transport planner Werner Brög counters this concern with his bicycle-safety invention. This is a mobile white line that the cyclist places on the road to prevent cars from aggressively intervening into the bicycle's road-space. With little prompting, Brög illustrates his invention using a photo of a bicycle being ridden in a busy Munich street with a roll of toilet paper attached horizontally to the outside of the rear axle. As the bicycle travels, the line of unwinding paper is placed on the road surface behind the rider. It is alleged to stay in position long enough to protect the rider.

Practical internal combustion

Even when religious objections were overcome, powered vehicles did not have a particularly happy early history. For example, the early inventors had a lot of trouble with steering design, as the low speeds that they had normally encountered had given them little inkling of the need for an easy and responsive steering system.

This had become evident when Nicholas Cugnot produced the first practical steampowered vehicle in 1771. Its purpose was to move cannons around the walls of a fort. In Paris, a sceptical Duke of Choiseul watched the very public first showing of the device. The vehicle successfully moved a cannon but the cumbersome turning of a single heavily-laden wheel led to carriage and cannon demolishing the very fort wall that they were intended to protect. Cugnot was arrested and sent to the Bastille as a saboteur and his machine was impounded. He was later released and pensioned, but his machine was never used again and remains to this day on static display in a Parisian museum.⁹

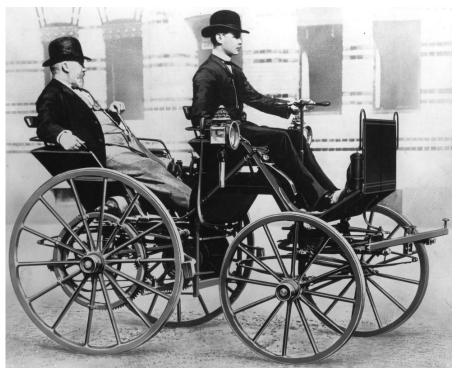
A further instance of inventors having trouble with their vehicles occurred on Christmas Eve, 1801. That afternoon, Cornish engineer Richard Trevithick had taken his new steam-powered road carriage for its first road run. When it involuntarily stopped a few hundred metres up a 5 % grade, the Christmas spirit overcame Trevithick and his helpers. They parked the vehicle in a nearby barn, and went for a meal of roast goose at the local inn. This might have been a fine thing to do with a broken-down horse, but it was not a good idea with a steam engine whose furnace was still afire. Both carriage and barn were burnt to the ground.

Various steam-powered road vehicles were built, but with little success. Basically, the steam engines were too heavy - i.e. their power-to-weight ratio was too low - for them to be accommodated on the roads of the day. They needed their own special, yet-to-b constructed, track.

Steam power involves external combustion. The alternative internal-combustion engines had been invented in the 18th century, but demanded advanced manufacturing methods, particularly for making cylinders. The armament industry developed primarily for cannon-making delivered this technology. Indeed, some of the first internal combustion engines used explosives for fuel.

Subsequently, operational gas-powered internal-combustion engines were being manufactured and sold by Etienne Lenoir in the 1860's and he even used one of his large, noisy brutes to propel a carriage slowly through the streets of Paris. In 1875 the U. S. Congress noted with great perspicuity that:¹⁰ "The so-called internal combustion engine may be used under certain conditions to supplement steam engines. This discovery begins a new era in the history of civilisation."

Nevertheless, the invention of the car occurred in 1885-6 in adjacent parts of southwestern Germany. Gottlieb Daimler and Karl Benz separately developed compact and efficient engines with good power-to-weight ratios, placed the engines on vehicles, and ingeniously connected their drive shafts to the wheels of the host vehicles.



The first Daimler car, the Motorkusche, with Gottlieb Daimler sitting in the rear, and his son Adolf driving. Daimler-Benz Archiv AG.

Their hometown newspapers viewed these simultaneous and momentous events quite sceptically¹¹:

Cannstatt Times in 1885 described Daimler's vehicle as:

a repugnant, diabolical device dangerous to the life and well-being of the citizens.

Mannheim Times in 1886 viewed Benz' vehicle as:

useless, ridiculous and indecent. Who is interested in such a contrivance as long as there are horses on sale?

The journalists failed to note that the "diabolical" vehicles of Benz and Daimler had given individual citizens their first opportunity to travel faster than by animal power.

Karl Benz had had two notable problems. First, his neighbours assumed the worst when they heard the banging and clanging associated with late-night car-inventing emanating from his workshop. They therefore reported him to the police as a counterfeiter. Second, when he took the prototype out one evening in 1885 for a surreptitious trial on the local streets, the steering prove ineffective and he crashed into the wall opposite his front gate in Mannheim. Thus, in a less than auspicious first trip, he barely managed to cross the street. Henry Ford similarly assembled his first car in a coal shed and found it was too wide to leave by the door, so had to demolish a wall of the shed. In 1888, Karl's wife, Bertha, became the first person to drive a car successfully on public roads when, without her husband's prior knowledge, she took her two young sons on a 100 km drive to visit her parents in Pforzheim. She stopped at pharmacies to buy kerosene for fuel, at blacksmiths' to straighten out the occasional buckled wheel, at cobblers' to reline the brake shoes, cleared a fuel line with a hair pin, and used her garter for insulating tape. Bertha was well aware of the operation of the machine and had worked closely with her husband, recharging batteries every night using her treadle sewing-machine.

The new vehicles were popularly called "*horseless carriages*". In 1895 a writer to an early motoring magazine, using the nom de plume "Historicus", suggested that the first horseless carriage was actually the Wooden Horse of Troy.¹² The editor rejected the idea, unnecessarily and regrettably adding: "Troy again."

Waving a Red Flag

Britain was even less welcoming of the oncoming car. The Locomotive Act had already been introduced there in 1865 to inhibit the use of steam-powered road vehicles. This reactionary law restricted locomotive speeds on the road to walking pace (3 km/h in towns and 7 km/h in the country), and required two operators in the vehicle and a third walking ahead and carrying a red flag. This gave rise to its popular and notorious nickname of the *Red Flag Act*.

The reaction was not unique to Britain. In Prussia, a law prohibiting the use of premises located over steam boilers was used to ban the use of steam-powered vehicles¹³. Similarly, the German speed limit was also about 7 km/h.

Karl Benz soon realised that this would be quite an impediment for his new invention and therefore invited the local police chief to join him for a ride in his new car. He also quietly arranged for a lumbering horse-drawn milk-wagon to be proceeding ahead along the same route. The police chief rapidly became agitated at the delay, and insisted that the new vehicles be exempted from complying with the pre-existing speed limit.

Back in Britain, the Red Flag Act remained in force and was a great brake on the development of petrol-powered vehicles in that country. There were also legal challenges. For example, Englishman J. A. Koosen bought a Lutzmann car that was delivered on 21 November 1895. By December he had been charged with breaching the Act on the Gosport Road at Southsea in England. He argued at Fareham courthouse that his internal combustion engine was not a locomotive, as it was not steam-powered. Legal precedent was set by the magistrate who preferred the totally inaccurate technical evidence of the police who argued that it was indeed a locomotive, as the good constable had seen smoke coming from its engine¹⁴. The Lutzman, by the way, was a German car which was similar in appearance to a Benz Victoria. The reason why Koosen purchased this particular car is disclosed later in the Chapter.

Henry Hewetson was a British agent for Benz cars. He realised that the Act did not specify the size of the flag and took the alternative tack of infuriating the police by using a 25 mm square flag attached to the end of a pencil.

Looking the gift horse in the mouth

The birth-pang views of the *Mannheim Times* persisted. In 1896 the English magazine *Country Gentleman* sent a journalist to review an exhibition of horseless carriages in London. He reported:

Some of the more enthusiastic of the motor men were talking as if the horse would soon share the fate of the Dodo and the Mastodon. Do not believe it. The horse will neither be killed by the electric spark, nor will he be drowned in rivers of oil.

The pressure built and in 1896 the British Parliament debated the repeal of the Act. An opponent of the repeal told Parliament that the proposal would "ruin the horse-breeding industry"¹⁵. It was an old argument, which has been described in Chapter 9. When the Act was finally repealed in 1903, its replacement Act only raised the speed limit to 30 km/h, and this ceiling remained in force in Britain until 1930.

Not only British parliamentarians were blinkered, for in 1899 the *Literary Digest* proclaimed: "The ordinary horseless carriage will, of course, never come into as common use as the bicycle." Seven years later the *Australasian Coachbuilder and Wheelwright* journal was predicting the compromise view that the belief in the ascendancy of car was a passing phase and that: "Time will show that people will own and maintain horses and carriages as well as autos."

The luddites lingered. Osbert Sitwell recalled that in 1912 officers of his Hussar regiment were still giving lectures on "How the horse will replace mechanical means of transport".¹⁶ The end was surely nigh in 1925 when Lt-Col (ret) H. T. Tudsbery wrote in his textbook on the economics of highway engineering that¹⁷: "to say that horse-drawn transport is expiring shows a lack of appreciation of many of the most necessary activities in the life of the country as a whole."

But throughout this time of unobserved change, a few did understand just what it was that the inventors were producing, and it wasn't just technology. In 1850 future British Prime Minister William Gladstone attended a lecture on batteries given by the famous scientist Michael Faraday. He asked Faraday what uses his new invention might have. Faraday replied: "Sir, there is every probability that in a few years you will be able to tax it." The taxation idea continued to attract politicians and in 1907 Herbert Asquith, then Chancellor of the Exchequer, perceptively told the British Parliament that a tax on cars would be almost an ideal tax because the car was a luxury which was apt to degenerate into a nuisance¹⁸.

The truth was that horses and cars did not mix at all well. To manage the situation it is said that pioneer motorists in Pennsylvania were instructed that, if they saw an approaching team of horses, they were: "to stop, pull over to one side of the road, and cover their machine with a blanket or dust-cover painted or coloured to blend in with the scenery."¹⁹ I write "It is said" because others have claimed that the instruction is from a proposal issued in 1908 by the apocryphal Farmers' Anti-auto Protective Society. One of its more spectacular suggestions was that the intended path of any vehicle should be marked by fireworks ignited in advance of the vehicle.²⁰

In 1897 Joseph Mille took out French patent 3661004 for a petrol-driven horse. It looked exactly like a real horse, except for the two powered-wheels carried on shafts that protruded down from its belly. Mille said that the advantages of his petrol horse were that it²¹:

- * could easily be adapted to fit existing coaches and carriages,
- * was steered by reins, which everybody understood,
- * wouldn't frighten other horses, and
- * looked nice.

An example of the poor mix of horse and car is found in the following story, usually attributed to two farmers named Dad and Dave. They are taking a cartload of hay from a haystack to their barn, which happens to be on the other side of a busy highway. As horse and cart lumber straight out onto the road, a speeding car is forced to swerve to the rear of the cart in order to avoid a collision. In doing so, the car spins out of control and comes to rest in the haystack. Dad observes the entire event and knowingly remarks to his son: "Bless my soul, Dave, we just got out of there in time."²²

In a related Dad and Dave exploit, a neighbour comes across Dave standing bemused beside the hay cart which has rolled into a roadside ditch and is lying upside down in the ditch.

"Shouldn't you tell Dad?" the neighbour asks, "he'll know what to do." Dave dismisses the silly question: "There's no need to tell Dad, he's under

the hay."

Support from unlikely quarters

Despite the neigh-sayers, growing public support for the car came from most prosaic quarters. For instance, the horse-effluent statistics in the previous Chapter led a conference of British local-government engineers in 1898 to move formally that²³:

The introduction and efficient use of motor vehicles should be encouraged...(as they would)...contribute to the general improvement of the sanitary condition of our towns and streets.

The car's contribution to the urban environment would never again receive such a ringing endorsement. Well, perhaps it would, for in 1908 the Sydney press quoted a "well-known London doctor" who believed that the car had helped lower London's death rate because:²⁴ "the fumes of the motorcar are the finest disinfectant in the world." The paper added that this cleansing effect would: "compensate for the inconveniences that follow in the (car's) wake." This perhaps led the editor of *Horseless Age* to predict that the replacement of the horse by the car would mean that²⁵:

the noise and clatter in the streets will be reduced,... streets will be cleaner,

jams and blockades less likely to occur, and accidents less frequent. Does his ghost now wander, searching for those quiet and peaceful streets?

Into the market-place

Despite growing public interest, the conservative Karl Benz stubbornly maintained his vehicles' reputation for user-unfriendliness. For instance, the Benz Victoria introduced in 1893 still used tiller steering. To change the gearing upwards required the driver to employ one hand on the tiller to steer, one hand on a striker to move the belt drive, and a third hand to close the throttle! The 1900 Benz catalogue rejected pneumatic tyres as "they were liable to puncture".



The Benz Victoria. It had tiller steering and its single cylinder 3 kW engine drove the car via a belt clutch at speeds of up to 20 km/h. Photo: Medak at Turin via Wikipedia Commons.

Today, cars are powered by petrol or gasoline, which was originally a by-product of refining petroleum to produce kerosene, which was then in popular demand for lighting. The internal combustion engine turned the by-product into the raison d'être. The English and Australian term "*petrol*" was originally the trade name used by a British refiner - Carless, Capel and Leonard - for their version of a fuel for the new internal combustion - or "*gas*" - engines then being used more to power small boats than the occasional road vehicle. "Gas" because the original internal combustion engines had been powered by coal gas. Carless et al had taken the word "*petrol*" from the then current French word - "*petrole*" - for kerosene. "*Petrol*" in France was then known as "*essence de petrole*"²⁶.

The French Academy coined the word "automobile" in 1875 to describe steam buses and in 1895 the Academicians gave it their blessing for wider use. "Automobile" was adopted in the United States as a substitute for the term "horseless carriage" at about the same time as "motorcar" came into use. "Automobile" was attacked in a New York Times editorial on 3 January 1899 for: "Automobile being half Greek and half Latin, (it) is so near indecent that we print it with hesitation."

A more alliterative early American term was "benzene buggy", a reference to the common use of benzene (once spelled benzine) from coal distilling as a fuel in early IC engines. The word "*benzene*" came from the material's original source in the natural resin benzoin - its link to the Benz name is a coincidence. The English, for a while, favoured the word "*autocar*". The word "*car*" was taken from the name of the high-class passenger vehicles then used by the railroads.

The relevant verb to use was also an early linguistic dilemma. "*Motoring*" only became acceptable when it was seen to be a foreshortening of the more legitimate and gentlemanly "*motor touring*"²⁷.

Henry Ford completed his first petrol-engined car in 1893. He describes the driving experience²⁸:

My "gasoline buggy" was the first and for a long time the only automobile in Detroit. It was considered to be something of a nuisance, for it made a racket and it scared horses. Also it blocked traffic. For if I stopped my machine anywhere in town a crowd was around it before I could start it up again. If I left it alone even for a minute some inquisitive person always tried to run it. Finally, I had to carry a chain and chain it to a lamppost whenever I left it anywhere. And then there was trouble with the police. I had to get a special permit (to drive it) from the mayor.

His first production car in 1903 – the A model – still had strong European overtones although the stump-clearing high wheels needed in the New World were already in evidence.

It was Ford's Model T that brought the car to the people - but at a social cost. When he launched the car in 1909 Ford announced that he was henceforth only going to build one model of car using just one chassis type, and added that²⁸: "Any customer can have a car painted any colour that he wants so long as it is black." By 1916 even the brass radiator had been replaced by a black container. Black was so strongly preferred because it was the only colour then available that dried quickly. Each coat of a more lightly coloured paint took literally weeks to dry. Although the Model T was in production for 19 years, it was not without its problems - the planetary gearing was jerky, the transverse springing was clearly designed for off-road use, and the lack of four-wheel braking presented safety problems.



Ford Model T. From Bull-doser at Rigaud via Wikipeda Commons

Having invented the car, someone then had to invent the garage. "Shed" was not sufficiently sophisticated a word for the marketeers, so they took the French word for shelter - garer - and turned it into "garage". By 1910 galvanised, corrugated steel garages were being mass-produced to meet the new market. In 1925 the cheapest garage in the American Sears catalogue sold for \$119, whereas the T Model to put in the garage cost just \$290.

Customers and critics

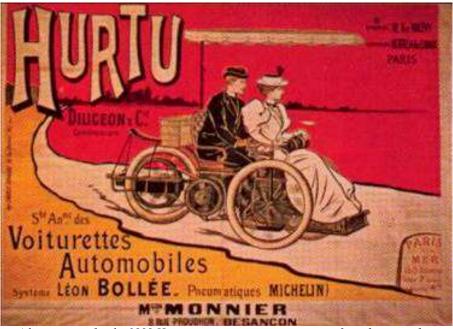
Although the first cars were invented in Germany in 1885, and the first car advertisement appeared there in 1888, it clearly had little effect on the German market as the first car purchase was made by a Frenchman, Léon Vurpillod, who bought a Peugeot with a Daimler engine in 1890^{29,30}. We met J. A. Koosen earlier. He once explained how he came to buy his first car³¹:

Early in 1895, while travelling in Germany, I saw the advertisement of a motorcar builder with an illustration of a car. My wife said she liked the look of the thing, so I ordered one. I had then never seen a motorcar, and was under the impression that you took your seats, pressed the button and the machine did the rest. (However) the letter from the maker said that to

start the thing you had to turn the flywheel towards you. The only result was a pair of worn-out gloves.....

We saw earlier how, when he finally got his motorcar started, he immediately ran foul of Britain's Red Flag Act.

Things could have been worse as he might have bought a Pennington Autocar, which came on the market in 1896.³² Despite a claimed speed of 50 km/h and a single handbrake, one passenger sat unprotected in the prow, and two sat side-saddle over the engine. Wisely, the driver sat well to the rear. Similarly, the appropriately named Hurtu (1897-8, *see below*) Tri-cars from Bollée and the Pierce Stanhope (1905) all could achieve 50 km/h and had the unrestrained passenger sitting mascot-like over the axle between the two front wheels³³. Staying on board during braking and cornering or staying alive during a collision would have been quite a challenge for the passengers.



Advertisement for the 1898 Hurtu carrying its passenger in comfort, if not in safety.

Braking certainly caught many by surprise. In Melbourne in 1903 a municipal councillor was campaigning vigorously to protect local citizens from the unsafe new cars by banning them from entering his Caulfield electorate. Russel Grimwade, an early motoring enthusiast, took the sceptical councillor for a drive in his open car to demonstrate just how safe it was. The councillor was seated on a bench seat at the front of the car. Grimwade applied the brakes firmly and his doubting passenger was catapulted equally firmly onto the roadway ahead, physically broken, but with his prejudices reinforced.^{34.} Eighty-one years later a British inventor gained a patent for brakes that a passenger could apply.

The Chinese took a broader dislike than our Caulfield councillor. In 1906 the French organised a car race from Beijing to Paris. For various reasons, the Chinese officialdom objected and refused to issue entry visas. Nevertheless, five cars arrived in Beijing ready to begin the race to Paris. The officials then relented, giving out the five visas needed to drive through and then leave China, with the explanation³⁵:

The cars would disturb the sacred peace of Beijing and cause an upheaval in the popular mind. They would spread everywhere the fatal germs of Western corruption, call forth the resentment of ghostly powers, the vengeance of ancestors, the wrath of the Gods. Better by far to speed their departure.

Their faith that the car would not return was touching and took some decades to be destroyed.

Cars were not all that common. The French artist Henri Matisse was a motoring enthusiast. When asked at the turn of the 20th century what he would do if he encountered a car coming in the opposite direction, he answered:

"Should this inconceivable event happen, I should of course halt my car, descend from it and take shelter in a nearby field until the other had gone by."

The Swiss canton of Graubünden banned cars in 1900, following complaints that the new cars made horses bolt, forced locals off the road, and caused crashes³⁶. The car owners tried desperately but unsuccessfully to repeal the ban, via ten referenda, until the federal government insisted in 1922 that through traffic be permitted, and then an eleventh repeal referendum proved successful in 1925, by 11 318 votes to 10 271.

In around 1905 Colonel Magrath recorded the following alternative solution utilised when he drove the first car into Wexford in Ireland³⁶:

I passed an elderly woman on a quiet road. When she arrived at Wexford she told everyone that she had met a carriage from the other world, with a horribly ugly demon driving it, and she knew at once that it was sent to take her to Hell, but she had made the sign of the Cross, and the carriage and ugly driver had vanished in a cloud of dust.

The reality of the *horrible ugly demon* had probably been caught a few years earlier when Henri de Toulouse-Lautrec had produced the world's first motoring print, showing his cousin protected against dust and wind.



"L'Automobiliste" - Toulouse-Lautrec's 1898 lithograph of his cousin driving an early car. Museum of Modern Art, New York.

The polluting power of the car is well publicised, and it has long been so. As noted in Chapter 4, early environmentalists complained about the dust clouds produced by each passing car. The *Melbourne Herald*, on 30 April 1904 commented with considerable perception: "The smell of petrol is over the land, and the air is split with the noise of throbbing engines."

The drivers, on the other hand, declared that the fault was not theirs but a consequence solely of the inferior roads that they were forced to use. Anyway, the dust had its merits. Rudolf Diesel, inventor of the truck engine, was also an avid long-distance motorist. In his diary he describes how he was travelling down an Italian valley and looked back to see a scene of astonishing beauty - his car had filled the whole valley with a wondrous white cloud of swirling dust³⁷. But let Rudolf tell it himself in his 1905 trip (Autoreise) diary:

What a dust storm we stirred up leaving Italy! Powdery limestone dust lay 50 mm thick on the street. Georg raced along, demanding from the car all it had to give, through the Piave Valley, and behind us there swelled a colossal cone. This white cone rose in the air and expanded to infinite proportions. The entire Piave Valley was thick with the fog, a white cloud lying over the valley all the way to the mountain ridge. We outraged the pedestrians with gas attack - their faces pulled into a single grimace - and we left them behind in a world without definition, in which the fields and the trees in the distance had all lost their colour to a dry layer of powder.

The car as art

Deliberate market manipulation via car styling began in 1919 when Cadillac hired Harley Earle, a Hollywood coachbuilder and a friend and disciple of Cecil de Mille and Al Jolson. His 1927 Cadillac LaSalle was the first production car in which appearance was the primary design objective. Such was its success that Earle was hired to head a new Art and Color department in General Motors. He was a physical giant who delighted in sprawling in a chair and using his well-clad feet to point out details on wall charts.

One of Earle's first artistic moves was to introduce the concept of planned obsolescence into car making but calling it - with artistic licence - "dynamic economy". He launched his new "dream" cars as theatrical spectaculars. His biographer, Stephen Bayley, has declared that the introduction of Earle into the staid General Motors was culturally equivalent to the decision of Emperor Constantine to convert the Roman Empire to Christianity.

The brothers Duesenberg produced exceptional cars in America. They began in 1920 making racing cars, and ventured to Europe in 1921, where they won the French Grand Prix at Le Mans - to the dismay of the French. Then, in the 1930s under the leadership of Erret Cord, they commenced production of the incredible J series Duesenbergs. Cord instructed the brothers, "never mind what it costs, build it." The result was a series of cars of unsurpassed splendour and quality - arguably the finest cars ever made, they had the comfort of a Rolls Royce and the speed and power of a Bugatti. Only 490 were built and 200 of these still exist.

Duesenberg boasted that it would be superfluous to attach Duesenberg name-plates to their cars and did not actually show the car in any of their advertisements, which instead typically described the sort of person who would own a Duesenberg. The initial customers ranged from Prince Nicholas of Rumania, who we meet again in Chapter 12, to Mae West and Greta Garbo. Garbo's Duesenberg had six separate built-in safes.

The marketing theme was developed further in 1941 by Ernest Dichter who explained to his staff at Pontiac that the sexual symbolism that was now apparent in the car itself had, as a next step, to be worked subtly and subliminally into the real world - that is, into the advertising campaign.

A variety of cars

All sorts of people have owned all sorts and numbers of cars. However, a particular pinnacle was reached during the 1970s when President Brezhnev of the USSR - a particularly hard-line leader of the Communist bloc - kept a private stable of 12 fast and expensive cars, including two Rolls Royces, a Matra, a Maserati, a Cadillac Eldorado and a Mercedes Benz convertible. Ironically, Soviet cars of the time such as the Zil, Volga and Lada were notoriously slow and unreliable³⁸. A Russian view of their cars was:

Q. What's the best way of doubling the value of a Lada?

A. Fill it up with petrol.

Car ownership reached a new high in the mid-1980s. Religious sect leader Bagwam Shree Rajneesh had had the initial modest ambition of owning a different Rolls Royce for each day of the month. When forced to hurriedly leave his sect's home in Oregon he had clearly surpassed his target, leaving behind a personal stable of 85 Rolls Royces³⁹.

As in any family, there are various types of car. The coupe *utility* - or *ute* - is a sedan car with the rear seat area and boot replaced by a flat tray with raised sides and rear drop-down panel. It has now been somewhat superseded by off-road vehicles (because of their slowness and visual bulk, many of us wish they were actually used off the roads that we drive on).

The ute was designed by Louis Bandt for Ford Australia in Geelong in 1933. It arose from a request from a Victorian pig farmer's wife who wanted the comfort of a car and the utility of a small truck.⁴⁰ The rival local car firm disputes this claim⁴¹. In a strange twist of fate, in March 1987 the 80-year-old Bandt, who had been taking part in a television documentary, was killed whilst driving the original ute⁴².

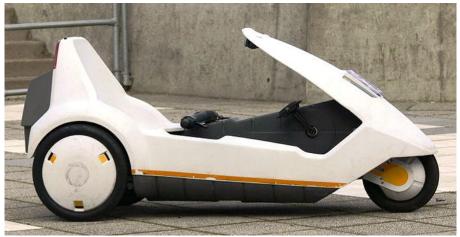
The jeep was a terrier-like four-wheel drive car first produced by the Willys company for service in World War II. Its name derives from its army acronym GP, for General Purpose. S. J. Perelman was a famous American humorist, perhaps best remembered as scriptwriter for the Marx brothers. He delighted telling of his wartime experiences driving a jeep in Yugoslavia. On one occasion he was surrounded by locals interested in his vehicle and, as he says: "He had difficulty separating the Jeep from the Croats."⁴³

Not all cars were successes in the market place. Probably the most spectacular flop of all was Ford's Edsell. Built in 1957 - but rarely sold thereafter - it was described by Time Magazine as "the wrong car for the wrong market at the wrong time". Apart from its ugly oblong radiator, its frequent faults included fires in the dashboard, randomly hooting horns, doors that wouldn't shut, and immobilised transmissions. In the ultimate test, the Edsell was indeed so bad that it was even shunned by car thieves and only one Edsell was ever reported stolen⁴⁴. One piece of market research suggested that a major reason why people didn't buy Edsells was that the radiator reminded them of a vagina. The remark is attributed to a lawyer from North Dakota, who also thought the front of the 1950s Studebaker resembled a pair of testicles⁴⁵.



The 1958 Edsel Ranger. From Huebi via Wikepedia Commons

The British equivalent of the Edsell was Sir Clive Sinclair's C5, a very small plastic tricycle powered by a motor designed for use in washing machines. It was intended to be just the thing for congested urban traffic. It wasn't, and when one Londoner won a C5 in a raffle, he was so embarrassed to be seen as a C5 owner that he drove it directly to the bank of the Thames and pushed it in. True to form, the C5 refused to sink, thus merely heightening the embarrassment of its temporary owner.



Sinclair C5s. From Gant Mitchell via Wikipedia Commons.

But perhaps the worst car of all was Canada's Bricklin. Malcolm Bricklin was a 35year-old Philadelphian entrepreneur who, in the early 1970s, convinced the New Brunswick government to go into car-making. The key to success was to be a series of advertisements in *Playboy* magazine. The copy in Playboy for September 1974 read: "You are going to drive a Bricklin, which might prove to be the first great sexual experience of your lifetime." It might well have been - but inoperable doors, a leaking 111 body, and a top speed of 60 km/h tended to delay any orgasmic delights. The car proved a financial disaster for New Brunswick whose Premier subsequently defended his decision, explaining that it had been based on "gut feeling"⁴⁶.

Another car of the time with a poor performance record was the Pantera – an Italian sport scar with a Ford V-8 motor behind the passenger seats. Elvis Presley was so frustrated with his Pantera that he took out a gun and shot the car.

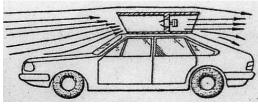
Understanding the monster

The world's first car race was staged in 1894 over 126 km from Paris to Rouen. Entrants were required to declare their means of propulsion on their entry forms. Over one hundred entries were received and the alleged power sources included gravity, the weight of the passengers moving about, compressed air, hydraulics, automatic propulsion, combining liquids, levers, and pendulums.

The myth of free power persisted. During the "*energy crisis*" in the 1970s, a Sheffield newspaper gave great prominence to a local invention which would, it said, have a major impact on Britain's energy consumption. The invention consisted of propellers placed on top of all cars. As a car drove along, the propeller whirled in the passing air. Its rotation turned a generator that was used to charge a spare battery carried in the boot of the car. When the driver reached home, the battery was taken inside and used to provide domestic power. Thus the waste energy of motoring was used to reduce the demands on the nation's power stations.

There are of course no free lunches and there is no recoverable waste energy. The domestic power inefficiently delivered by the battery had been inefficiently provided by the car's engine doing extra work against the inefficient resistance of the propeller. *We all knew that, didn't we?*

Although the preposterousness of the idea might seem blindingly obvious, in 1987 Abaka-Jackson of Accra in Ghana applied for a patent for the concept, was represented by a respectable British patent attorney, and had his idea reported seriously in a serious English journal⁴⁷. This was all the more remarkable because both patent and report openly claimed that the device "would give a car unlimited mileage at speeds of up to 150 km/h."



Drawing from UK Patent Application GB 2 182616A

The mechanics of the car have always been a bit hard for most people to fathom. In 1900 Dr Atkinson Wood was practising starting his new Stanley Steamer in the cellar of +his Melbourne house. The engine eventually started and, as it was already in reverse,

the car proceeded to smash its way out of his cellar and before running driverless down the local street, with the Doctor and his neighbours in perplexed pursuit⁴⁸. Another doctor was accused by his friends of ostentatiously driving his new car up and down the streets of the town for the whole day. He defended himself:

"Not true, it's just that I couldn't work out how to stop the damn thing so I had to keep driving till I ran out of fuel."

There are similar stories of untutored drivers steering their new car into their garage, and then realising that they had forgotten how to stop it. The car proceeds through the back wall of the garage, through the back fence and into the neighbour's property where it does considerable damage before stopping against the rear wall of the neighbour's house.

A related story is often told of the old farmer who, on returning home, always drove his car five times around his property before garaging it.

"You're a vain old man" his relatives said "driving your new car around to make sure all the neighbours can see you."

His defence was: "You don't understand, I'm just tiring it out before I put it in the stable. I long ago learnt that new colts can be dangerous if you don't take such precautions."

Many doctors were seen using their stethoscopes to diagnose the causes of their engine's poor performance. In the early days of the car this possibly gave rise to a fad amongst young boys who tried to detect the make of the occasional approaching car by placing their ear against the pavement and listening for its distinctive vibrations.

The early cars did vibrate excessively, so much so that there was continual confusion amongst bystanders as to whether the passengers were shaking from a poorly balanced mechanical system, or from fear of imminent death.

A curious event occurred in Seattle in 1954. Following press publicity concerning widespread but unexplained windscreen damage occurring to the north, the epidemic reached Seattle in plague proportions with 3000 defective windscreens reported in one day. The phenomenon was ascribed to recent H-bomb testing. The Mayor said the problem was too big for the police and the Governor appointed a special commission of enquiry. The Commission found that the actual damage was about normal, but that people had been looking meticulously for damage as a result of the publicity and their anxiety about the H-bomb⁴⁹.

Other aspects of the car are also poorly understood. After Magnamail issued a catalogue in 1982 claiming that their new telescopic fishing road could be tucked into a gearbox, they were forced to explain to purchasers unable to fully insert their rods into their car's transmission, that the catalogue had been referring to a box for fishing gear. Similarly, a motoring journalist in a Diners Club magazine in the early 1980s assured his readers that the car he was discussing: "had real horsepower, motor - not the equine type."

Martin Rowell, an ex-Jaguar engineer, recalls with glee a wonderful typist-inspired and somewhat sensual reinterpretation of his dictation of some essential engineering modifications to an Alfa Romeo. The well-remembered words wistfully read:

Old Alf the Romeo needs a new booster and his over-used crutch should have some lust protection.

Martin and I share a common associate at Siemens, who once submitted a paper headed: "Vice control for advanced user interfaces."

Breakdown

Car stoppages due to breakdowns and crashes are a source of fear and concern. It was not always so. Julian Smith, professor of film studies at the University of Florida, noted that such events occurred in about a third of the 500 films made between 1900 and 1920 and featuring cars. In almost every case, the stoppage led to a happy outcome: for instance:

- * wealthy driver meets beautiful farm girl,
- * villains apprehended after crashing their car, and
- * death of spouse in crash conveniently lets hero openly explore new romance.

A colleague, later professor of arson at a Victorian university, was in my office once when he was asked to take an urgent phone call from his wife.

"Where's the car now?" I heard him ask.

- She presumably informs him and he splutters "What do you mean, it WAS outside the phone-box?"
- Again, more information is presumably passed and then I hear "Across six lanes of traffic! What was that bang?"

He then ran from my office and soon after resigned his good job with us and became a professor.

On a visit to India in 1993, I was being driven along a two-way road in Haryana State by a driver who passed all other traffic with no apparent care for the consequences. I was almost relieved when, late in the day, the car began to splutter and then stop well short of our destination at Karnal. The driver sat stoically in the car, apparently confident that unrequested help would be sent from Karnal. Sharing neither his confidence nor his language, and noting the remarkable similarity of the Ambassador car made by Hindustan Motors to a Morris Oxford I had worked on some 30 years earlier, I climbed out of the car, opened the bonnet, and resecured the loose distributor cover.

Whether or not this fixed the problem, I was never to know, for the erstwhile driver had sprung to uncharacteristic instant action as soon as he had observed me touching the private parts of his car. In a flash of the eye, a passing car had been stopped, my belongings put on board and I had been shepherded into the rear of the new car. As we drove off I could see my former driver throwing handfuls of dust over the defiled distributor cap.

It had, incidentally, been a long journey on heavily congested rural roads. Every hour the driver had stopped by the well-populated roadside, opened my passenger door, and silently handed me a rag and a dirty bottle of water of nondescript origin. At first, I thought I was expected to clean the windscreen, but at the second stop the driver turned his rear towards me and graphically demonstrated with his hand that the bottle and rag were to assist in the essential ablutions that would follow my toilet. I henceforth handled the proffered rag with some circumspection.

The life-cycle of the car

The car is not merely a part of our life, it also has a life of its own. As a young and geometrically-inclined engineer I was very quickly enlisted by one of my draftsmen, Maurie, who was a practising astrologer. My task - despite a considerable disdain for astrology - was to help Maurie design the circular slide-rules then needed to carry out complex astrological calculations.

One of his best projects was to give advice on when to buy a new car for, if it were bought when the planets were favourably aligned, the car would lead a safe and secure life. This led to some intense lunchtime debates on when a car was actually born, astrologically speaking. For practical rather than planetary reasons it was decided that that the birth time was the instant at which the registration label (or tax sticker) was placed on some prominent part of its body.

Intending purchasers would then consult Maurie, he would consult our slide rule, and then advise his client to the second - such was the accuracy of the spirals of the slide rule - when to attach the label to the car in order to achieve a maximum level of safe driving. Given that believers in astrology are - by their very nature - not risk takers, we were on a sure thing. Astrologers, incidentally, tend to believe that Sagittarians are the safest drivers, given that these becalmed planets have similarly made them calm, steady, and precise.

Many Hindus, in an annual September puja ceremony, likewise place their cars under the protection of Vishwakarma, the God of Vehicles and Buildings. An offering is made to the God, and the cleaned car is anointed with flowers and a red spot of turmeric is applied. Given the manner of Indian traffic and vehicle maintenance, motorists would be well advised not to miss a single puja.

Registering a vehicle in some jurisdictions is an annual event and in an area like Victoria, this means processing about 100 000 applications a day. To meet customer demands, a government organisation I once worked for decided to automate the process. The registration labels had to be very carefully aligned in the new high-speed printer. Disaster struck on the first day when the printer began typing in a space 10 mm above the prepared location. Overnight panic prevailed. One team worked feverishly lowering the printer settings to accommodate the labels. Another well-intentioned team working in isolation produced a new batch of labels with the printing space 10 mm higher to accommodate the printer. Thus day two was also wrecked, with the printing now 10 mm too low.

I should have known, for I had had the same experience when producing a technical journl. We were publishing a paper by two authors, one elderly and weather-worn and the other young and handsome. Photos and short biographies of its authors accompanied the paper. When reading the galley proofs of the paper, the younger author saw that the printers had misplaced the two photos and his name was associated with the weatherworn face. He complained loudly to both editor and printer to make sure his problem was fixed. The editor reversed the text as requested and sent the galleys off to the printer for printing. The printer then did what had been demanded of him, and also reversed the

photos. The zero nett result was seen as a great moral message by all but the younger author.

The registration, or labelling, of vehicles began in 1814 when London's Hackney horse-drawn cabs were numbered to aid the retrieval of property left in them by forgetful passengers. After a hit-and-run crash in Melbourne in 1906 that paralysed a pedestrian, an influential citizen proposed that the registration number be placed as a raised set on the rear tyres of all vehicles. Vehicles would thus leave an imprint of their identity, wherever they might travel.⁵⁰

The set of alpha-numerics assigned to cars during registration is always a source of local interest. My favourite is the FU2 issued in the 1980s to the Rolls Royce owned by the radical daughter of an English bishop. The issuing bureaucrats had clearly never spoken the label as they encoded it. Then in 1998 a supporter of the English soccer club, Notts County, had his NOTT C plate withdrawn by officials in Winnipeg, Canada, following local complaints that the plate – in spoken Canadian - was a not-too-subtle euphemism for Nazi.

Car ownership

An alternative view of car-birth is that a car is born on the day it is bought by its new owner. This concept of buying a car leads us to the great maelstrom of stories about car salesmen. All are too salacious for this work so let me here provide a mere thesaurus to their unique and colourful language⁵¹.

Armstrong windows, windows that the driver winds down manually (as in: It's got Armstrong windows that are much faster than those poweroperated ones <which I sold you last year>). Breeze and ease, air conditioning and power steering. Coastal chrome, rust. Cold welding, using filler rather than panel beating to fix dints. Fast Glass, power-operated windows (as in: It's got fast glass that is far superior to those Armstrong's on your current model.) Fire and Fiddle, heater and radio. Give Jimmy Speedo a haircut, wind back the speedo. God: the owner of the business. Hamburger: a car with all the options. Lawnmower, a small car. Mexican option, manual transmission. Poverty pack, base model with no options. Racing slicks, bald tyres (as in: No, they're not old tyres, they're high quality racing slicks.) Tiger, our nightmare which, with a bit of luck, will soon become a customer's nightmare. Wood duck, a customer who gives in too easily. 4 + 80 Air: to be effective, the air conditioner needs all four windows wound down and the car to be travelling at at least 80 km/h.

Good can also be said about car salesmen. For instance, it was clearly concern for the environment and not for the parking spaces outside his showroom, that in 1994 led Tokyo car dealer Jiro Yanase to order all his staff to come to work by public transport⁵².

The leading car-sale urban legend does not even feature a car salesman. In this favourite, a newspaper printer sees a current model Mercedes advertised for \$50 in the paper he is printing. He calls the phone number, secures the deal, and is around to get his Mercedes before the paper hits the streets. As he is leaving, he says to the lady who sold him the car "I suppose you know that \$50 is very cheap for a new Mercedes?" She replies:

"Oh yes, but you see my husband has run off with his secretary and he wrote to me and said 'You keep the house, just sell the Merc and send me the money you get for it'. I hope he doesn't waste the \$50!"

Victorian Premier Thomas Bent admirably took us all into the motorcar age when in 1905 he defended his government's purchase of its first official motorcar. He said the car would:⁵³

* let him see more of the State,

* be used by the police if they were to need such a conveyance, and

* give fresh air therapy to patients in the State's TB hospitals.

His tradition continues. Indeed, his view was not so unique. In 1909 a German author advised his readers that⁵⁴:

when driving in a motorcar,... the flow of fresh air in particular must be considered, which stimulates the activities of the skin and the lungs in a pleasant manner and, in so doing, initiates an extremely advantageous unburdening of the internal organs, which are quite excessively gorged with blood.

Tommy Bent was fortunate that he wasn't being managed by Minister Sully, as was Henry IV of France in 1589. Sully made Henry share his royal coach with his wife. In a letter to a mistress, the King of France was forced to write:⁵⁵ "I shall be unable to journey to see you today as my wife is using our coach."

Nevertheless, there was some reason for Bent's claims as John Knott has recently reported the following medical opinions from the time:⁵⁶

- * Dr Dawson Turner, Scottish medical practitioner, 1901, stated that the car "had a great future in administering open air treatment to consumptive patients."
- * Sir Henry Thompson, FRCS, 1902, claimed that driving was "particularly helpful to those suffering from defective nerve power, and could fill a great want in the lives of men occupied closely with brain-work."

A heart-renting story

It is not clear where car rental would come in our astrological hierarchy. We all have our nightmare stories that remind us of our own past problems. Mine is a simple and true story told by a middle-aged tourist, John Wright, of his innocent experiences with renting a car in Honolulu⁵⁷.

My first mistake was to ask the daily rate for a "compact" car. The girl behind the counter totted up a quick sum on her calculator and said \$56. This was bad news, the holiday brochures at home had told us \$26 would be the daily rate for a small car. What I hadn't realised was that we should have asked for an "economy" car. We found this out much later. Our second mistake was not asking if they had anything cheaper.

We started looking for cheaper rental options in the tourist papers. Eventually we found one that offered cars for \$6.50 a day. Their man was very polite on the phone and said that, if we came around straight away, it was ours. Their office was on the ground floor of a hotel about a mile away.

"Are you de guy dat rang?" asked a gent with tinted glasses from behind his cluttered desk. "Meet me out the front" said our man, and promptly vanished into the building.

It was a reasonably posh pub and there was a uniformed doorman greeting guests outside. After a few minutes, this dreadfully dented rusty yellow five-year-old Toyota Corolla roared down the ramp. To our disbelief, our gent emerged from this disaster, dashed towards us, pressed the keys into my hand, mumbled "great little car, this one" and vanished.

We were in shock. The car had been sideswiped down the driver's side and I had difficulty opening the door. I was conscious of the doorman frowning at this unsavoury apparition and there were other cars waiting behind us. My wife remarked that there was no attaching bolt for the compulsory seat belt. I managed to start the car, but found it was a manual. I kept grabbing the door handle to change gears. At intersections I turned on the wipers instead of the traffic signals.

Later I turned onto the wrong side of the road, into the face of the oncoming traffic. I swerved back and became completely flustered. My wife became incoherent and we were both at the final stages of an anxiety attack. I wanted to stop but there was nowhere to park so I turned into a side street. My wife, in a strangled voice, told me I was about to hit a parked car.

I stopped the car and got out for air, grabbing the window frame to swing the door shut. The frame came away in my hand, causing great mirth amongst some watching school girls....

In memoriam

The death of a car is often far more obvious than its birth and so its burial process has attracted occasional attention. Nowhere is this more so than in an otherwise unnoteworthy wheat field owned by Stanley Marsh III on Route 66 near Amarillo in Texas. In 1974 the Antfarm Art Collective created artistic history by using the field to half bury ten Cadillacs produced between 1948 and 1962, tail fins in the air. The resulting artform was called the Cadillac Ranch and one of its creators' many interpretations described it as: "a monument to the exhilarating vulgarity of road culture grown self-conscious."⁵⁸ The use of the car, and particularly the Cadillac, as an aesthetic feature clearly caught on in the art world, for in 1979 Dustin Shuler used a crane to spike a 1959 Cadillac with a 6 m nail, in a message said to be about the energy crisis⁵⁹.

The realisation that the car should be a static as well as a dynamic art form, caused a competitive reaction from builders and architects, who began producing buildings that looked like cars. None are pretty sights, so are not reproduced here. The most blatant is in Kanpur in India where the top floor of a two-storey building is shaped like a minibus⁶⁰. Others, such as the pre-2005 dining room of the Victorian automobile club, were - in their architects' words - merely "evocative of the motorcar." The concept then spread to Europe, with Arman Fernandez' mighty sculpture involving 58 scrapped cars became a dominant feature of the Jouy-en-Josas sculpture park near Versailles in outer Paris.

Notes on Chapter 10

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⁵⁷ Road Constn Authority, Dandylines, Jan 1989, p10

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Chapter 11

Way out!

- a chapter in which the various forlorn alternatives to the car are described and then dismissed.

Motorcycles

Various alternatives to the car have been tried and then put aside by all but a few aficionados and counter-trendies. The most popular, the motorcycle, has now been passed in numbers by man's newest mode of travel, the golf cart. Thus it was not surprising to learn in 1994 that traffic engineers in Maricopa County in Arizona had produced a report giving rules for determining when grade-separated intersections had to be provided for golf carts.¹ No such warrants have ever been developed for motorcycles.

Given the great self-confidence of most motorcyclists, they perhaps deserve to be remembered via this story which Ben Fink found in the Palm Beach, Florida, *Post Times.*² A man in nearby Belle Glade was polishing his gleaming new Honda 750 on the patio of his house. He pressed the starter to check the engine. Regrettably, the bike was in gear and it perversely ploughed through his plate-glass window and entered the house, belatedly restrained by the owner clinging to some rearward pieces of chrome. The bike owner was subsequently taken to hospital to receive treatment for his numerous cuts. His wife meanwhile attempted to clean up the domestic mess, particularly the petrol that had spilt from the bike's open tank. She flushed the soaking paper towels down the toilet.

The wounded husband then returned home, saw the devastation wrought on both home and Honda, and was moved to visit the toilet. After a calming smoke, he dropped the butt into the beckoning bowl, unaware that it was clogged with petrol-soaked paper towels. The ensuing explosion severely burnt his exposed nether regions. The ambulance team summoned by his ever-helpful wife proceeded to remove him facedown on a stretcher. Unfortunately this occurred whilst the wife was explaining to them what had happened. Such was their raucous reaction to the incredible tale that they dropped the stretcher, breaking the erstwhile occupant's leg³.

No further reports of his progress appeared in the *Post Times*, so we can only speculate on the nature of the ride in the ambulance......However, do not seek too enthusiastically for such a follow-up as most components of this story appear in many other urban legends. Incidentally, urban legend warns that ambulances are very dangerous places to be as their occupants are very likely to either die in them or be thrown bodily from them in a road crash.

The over-confidence of motorcyclists is also reflected in their reluctance to wear helmets, despite all the research showing how much better helmeted heads retain their shape after a crash. A popular instructional urban legend was sighted in 1988 when, it is said⁴, Carmine Urciulo was being taken to a hospital in Naples.⁵ Whilst in the full flight of life-saving transit, the door of the ambulance swung open and Carmine was summarily discharged from medical care. Curiously, the ambulance arrived at the hospital at the same time as the hitchhiking invalid.

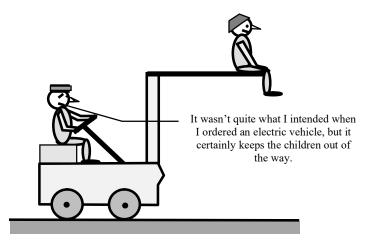
No such fear of death need trouble potential travellers in the hearses of Simla in India, for the four sides of each hearse very clearly state that the vehicle is a:⁶ DEAD BODY VAN.

In 1993 Peter Pearce was the sixth fastest motorbike dragracer in the world. He was quietly testing one of his bikes on a street in Ballarat in Victoria when he spotted a police speed-camera, and vigorously applied his brakes. This caused Pearce to fall from his bike in his first street-crash in 16 years. He then slid along the surface of the quiet suburban street at 81 km/h, if we are to believe the radar-gun speed superimposed on the police photograph of a sliding Pearce. As both Pearce and his bike had separately exceeded the legal speed limit, a prosecutional dilemma was avoided. Pearce suffered a fine, a broken bike, a cracked collarbone, and the ignominy of having the said photograph widely published and displayed⁷.

An off-told motorcycle joke tells how two nuns, driving sedately in their car, are being pestered by some hooligans on motorcycles. Sister Anne says quietly but determinedly to her colleague "Sister Ann, wind down your window and show them your cross." Obligingly, Sister Ann winds down her window and shouts crossly to the malingering motorcyclists: "Rack off!"

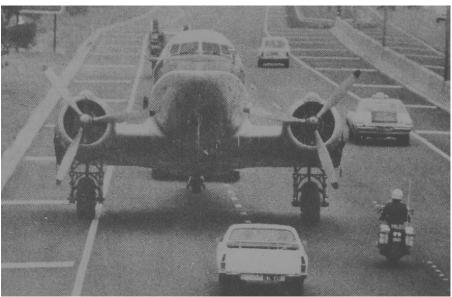
A miscellany of vehicles

In the early days of the car, genuine electric vehicles were actually more common than petrol-powered ones. They never retained their initial market lead, due to difficulties associated with conveniently storing and accessing electrical energy - a problem which has still to be overcome a century later. Nevertheless, electric-powered vehicles have found a niche market for short trips where quietness or pollution-free local operation is required. Forklift trucks operating inside building are one example, and their use is clearly spreading, as the following cartoon illustrates.



The growing market for electric vehicles.

Strange and unexpected vehicles also use the roads, as seen below. In this case the aeroplane had made a forced landing and was being towed - backwards and with its wings clipped - to its home hanger. It was still an unexpected sight for many motorists.



Aeroplane occupying an excessive number of lanes on Melbourne's Tullamarine $Freeway^8$.

The photo above always reminds me of a dream I consistently have whilst dozing on an aeroplane. The plane in which I am travelling is coming into land in heavy cloud by flying just above a suburban arterial road. At every intersection the pilot zooms up and down as - at the last minute - he sees power lines strung across the road. Eventually he must make a mistake, I realise, and shout for help. The hostess shakes me awake and I try to explain that I need neither a straight jacket nor a couple of Valium's. Just a few hours of dreamless, flightless sleep.

Passing the towed plane must have been almost as difficult as passing a caravan. A relevant urban legend concerns a policeman who stops a car travelling at night without any rear lights. The driver walks to the back of the car to check the accusation, and begins crying hysterically.

"Don't take it so badly, it's only a minor fine," says the policeman.

The driver replies: Minor fine! But what about the caravan containing my wife and baby daughter?"

The theme reappears in many stories. For motorcyclists, it is embodied in the T-shirt carrying the message on its back: "If you can read this, my wife just fell off."

A good caravan story concerns a new English emigrant to Vancouver who in 1993 had bought some hillside land and a new caravan. One day he is proudly combining the two to provide a camping vacation. Imagine his distress when he returns from a stroll to see flames licking out from beneath the van and setting fire to the dry grass that covers his land. Remembering the fire extinguisher in the engine compartment of his car, he dives for the bonnet release-lever. In his panic, he forgets that the controls were reversed in rightside-Canada, and releases the brake lever instead. Car and smoking caravan roll down the grassy hillside, followed by a trail of flaming grass, and one puffing Englishman. The car hits a large tree, wedging the bonnet shut, and rendering the fire extinguisher inaccessible. His only possession not in the now-blazing caravan is his video camera, with which he ruefully records the demise of his Canadian dream⁹.

Trucks are certainly easier to pass than caravans, and they are the hauliers of much of the community's freight needs, so deserve a little more respect. The lore of the truck is already voluminous in books and film and so we will only skirt around the subject here.

In Australia, trucks are often used to move cattle around the outback. Regulators carry portable scales to check whether the trucks are accidentally overloaded by their lawabiding operators. Curiously, the extensive effluent of the nervous cattle in their mobile pens is disgorged via drainage sumps located directly over the wheels of the truck. So effective was this design feature that regulators in scorchingly-hot outback Queensland had to be issued with complete wet-weather gear in order to carry out their weighing task.

Similarly, in 1990 the Victorian road authority's in-house journal¹⁰ reported a radio message full of implication:

"Tell Howard Ellis to use my car...I'm in his and I just found that you don't drive

past cattle trucks with the windows down."

Even with the best of equipment, weighing trucks remains quite a secretive job, as the following 1994 photograph illustrates.



"Load trials at Breadalbane, NSW" read the caption in Earthmover and Civil Contractor, March 1994, p47. The brick building is the regular truck weighing station and the cardboard box may just be hiding something.

One of the dangerous aspects of truck driving is the risk that the truck will roll over on sharp or steeply-cambered curves. In the 1980s the Australian Road Research Board was commissioned to do some research into this subject and one of its press releases was headed: "ARRB to conduct research into the provision of rollover systems in trucks." We were naively surprised when the more lurid sections of the press descended on us, expecting stories about adding love nests to the driver's cabin in order to relieve the tensions of long-distance driving. They were further inflamed when they found that the title of a paper at a forthcoming research seminar was: "The development of a rollover model for articulated trucks."

In yet another Australian application of technology to trucking, in the early 1990s cigarette manufacturers used trucks to deliver valuable cargoes over long and lonely outback distances. Such a marketable cargo was very tempting to the thieving fraternity, so one company installed sophisticated tracking devices inside the trucks to ensure that their location and status could be precisely pinpointed at anytime.

Initially, the devices successfully detected drivers who were speeding to arrive at intermediate destinations somewhat earlier than their official logs would indicate, in order to spend time in various welcoming beds. When these personal arrangements were put aside, the system proved so effective that thieves were detected in the act, the police dispatched, and the threatened truck surrounded, before the truck driver was aware that anything untoward was under way.

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Chapter 12

The way of all flesh

- a "no-punches-barred", real-life description of the average contemporary driver.

The arrogance of youth

There is a curious context to the way in which the car was welcomed by society. The railways at the turn of the last century were seen by many as enormous monoliths that were consistently arrogant, impersonal, clumsy, and monopolistic. Otto Bierbaum wrote in 1903¹:

The railway transports us - and that is the direct opposite of travelling. We are condemned to passivity - whereas travelling signifies the freest activity. A blissful prospect: never to be plagued by the fear of missing the train. We will decide ourselves whether we drive fast or slow, where we stop, where we want to pass through without delay.

People saw the newly-arrived car as providing a return to a simpler age of benign individualism, of primitive struggles against nature, and of family solidarity. Motoring offered access to the strenuous but healthy outdoor life, with participants co-operatively overcoming challenging adversity, creating camaraderie, and collectively conquering new frontiers. Travellers would roll up their sleeves and work together to overcome road obstacles. Flowery phrases indeed, but typical of the exhortations of the time².

Certainly, some good spirit prevailed. In 1901 a South Australian motorist's brakes failed and his car ploughed lethally into a flock of sheep. The drover was so shocked by what had happened that he sent the motorist a formal apology for not clearing his sheep from the road in time.

The arrogance of ownership

The scene from the other side of the fence was not so glowing. The arrogance and ostentatious affluence of the early motorists was legendary. French carmaker, de Dion & Bouton, even played on the arrogance in its advertisements³. The most famous reproduced below shows a male driver watching his female companion breast-feeding her baby whilst the car continues uncontrolled, distressing other drivers, striking animals on the road, and startling a horse hauling a cart.



Famous de Dion & Bouton advertisement. Drawing by Wilhio. Image: Neill Briuce.

The arrogance drew considerable public opposition. In 1906 *Life Magazine* in the U.S. published the following call to arms⁴:

The suggestion was recently made at a political meeting that it would help very much to make life safer in New York if a suitable apparatus could be put up in Madison Square and a dozen reckless drivers could be hanged on it. The response to the suggestion was: "A dozen? There are two or three hundred of those fellows who need hanging."

President-to-be Woodrow Wilson said in 1912 that "nothing had done more to spread socialist feeling than the automobile. To the countryman they are a picture of the arrogance of wealth, with all its independence and carelessness."

In his *Most Ruthless Rhymes for Heartless Homes* Harry Graham, a prolific write of quality humorous verse during the early days of the car, wrote: ⁵

I collided with some 'trippers', In my swift De Dion Bouton: Squashed them out as flat as kippers, Left them *aussi mort que mouton*. What a nuisance 'trippers' are! I must now repaint the car.

One of the last bastions of this elitist era must have been Rumania, where in 1930 Prince Nicholas had the ultimate in driving powers in the form of a horn with a special sound. When blown, all other vehicles had to give way to the prince⁶. On one occasion, two citizens who had failed to promptly heed the regal horn were severely and personally beaten by the pre-eminent prince. On another occasion, a lady offender was almost run over as the prince practised self-enforcement of his royal rights. Her husband, a prominent cavalry officer named Major Georgeson, smashed the window of the prince's car and began attacking the royal personage, before realising that this was The Prince. He presumably finished his career as a mascot on the car's radiator.

There were admirable precedents for the Prince. For example, the 1831 Hackney Cab Act in Britain required cab drivers to give way to their "superiors" and to private carriages⁷. The Prince's horn then set a precedent for a number of the nations of Eastern Europe, as they shook free from the shackles of communism. Prime Minister Jen Ruml of the Czech Republic, for instance, declared that all his Ministers and all Chairmen of political parties would be exempt from obeying the speed limits if travelling on official business⁸.

In democratic India in 1992, Election Commissioner T. N. Seshan had had his Black Cat commando guards pursue and capture a driver who had cut in front of the Commissioner's convoy. He summarily ordered the offender shot, but the commandos refused and subsequently reported Seshan to their commanding officer⁹. A year later, the Prime Minister was involved in an incident in which three drunken men on a motor-scooter obstructed his official convoy. When they refused to move, the guards sprayed the area around the scooter with automatic rifle fire, and then charged the three petrified men with reckless driving.

Car horns were a favourite feature of many early cars and beloved of their owners. The Boa-constrictor horn had a "long, shiny, tapering body of brass coils which lay full length along a front mudguard, and whose business end was a brass, open-mouthed snake's head complete with tongue and fangs¹⁰." Popular horns were operated by the exhaust gases. The ultimate was the Gabriel that came as a selection of organ pipes - with four such pipes it was claimed that any sound could be reproduced. The French Testaphone of 1910 could play tunes such as "In the shade of the old apple tree."

The death of the melodious horn was signalled in 1911 when the appropriately named Klaxon electric horn introduced the soul-less blast to motoring. Nevertheless, King Farouk in Egypt in the 1950s had a horn that imitated the squeals and howls of dogs being run over. Horns once had a quite different purpose. King Alfred's collection of Anglo-Saxon laws included:

If a far-coming man, or a stranger, journey through a wood out of a highway, and neither shout or blow his horn, he is to be held for a thief and either slain or redeemed.

Having moved away from a reliance on animal power, animals often were treated with little respect. *Ways of the World* recounts a number of stories of early motorists taking perverse delight in slaughtering animals on the road. Lt-Col Moore-Brabazon told the British House of Commons in 1934 that, after early motoring trips, "We used to come back with the radiator stuffed with feathers. It was the same with dogs." An Indian tourist guide published in 1913 happily declared¹¹ "It is common for ox carts to plunge off the road into an adjacent field as the car approaches and no motorist need be perturbed by this."

This motoring era and its attitudes produced some memorable verse. Permit me to end with my favourite by the inestimable Harry Graham.¹²

Once as old Lord Gorbals motored Round his moors near John o'Groats,
He collided with a goatherd And a herd of forty goats.
By the time that he got through They were all defunct but two.
Roughly he addressed the goatherd: "Dash my whiskers and my corns!
Can't you teach your goats, you dotard, That they ought to sound their horns?
Look, my AA badge is bent! I've a mind to raise your rent!"

Chauffeurs

The early cars usually were driven by chauffeurs, a French word originating from the boiler operators required on the first steam-powered vehicles. Delaunay-Bellville were French car-makers whose sales catalogues mainly featured pictures of their distinguished clients - the Tsar of Russia, the King of Greece, the President of the French Republic, etc. The racing driver Fernand Charron remarked in 1912 that: "No one ever drives his Delaunay-Belleville - it simply isn't done."

The following edited London letter of 1905 well illustrates the place of the chauffeur¹³: Sir, will you tell me if you consider that a chauffeur is entitled to an annual holiday? My man's life seems to me to be one continual round of enjoyment. Touring all through the summer months supplies him with all the fresh air and change of scenery he may require; during the winter, beyond a month or six weeks on the Riviera the car goes out but little. And yet he asked me this morning when it would be convenient that he should take "his holiday." Now, sir, do you not think this is asking too much?

Harry Graham told a tale involving chauffeurs¹⁴:

That morning when my wife eloped

With James, our chauffeur, how I moped!

What tragedies in life there are!

I'm dashed if I can start the car!

A few years earlier in 1899 he had written in Ruthless Rhymes:

"There's been an accident!" they said,

"Your servants cut in half; he's dead!"

"Indeed!" said Mr Jones, "and please Send me the half that's got my keys."

Send me the nam that's got my keys.

The enduring chauffeur story is of a dignitary repeatedly required to give a speech on the same subject at various venues around the country. The chauffeur sits in the back of the hall throughout these speeches. Both are so bored that one night they decide to swap roles, with the chauffeur giving the speech and the dignitary dozing at the back. This night the audience contains a troublemaker who asks a difficult and provocative question. The quick-witted chauffeur replies "Good heavens, that question is so simple that even my chauffeur sitting there at the back of the hall could answer it."

Another chauffeur story involves Soviet President Gorbechov who, to relieve his boredom, decides to swap places with his chauffeur and drive himself. He drives very quickly and is soon stopped by a traffic policeman. The policeman recognises the driver and instantly walks away.

His colleague is incensed "Even if he is President, you still should have booked him."

The first cop is unconvinced: "But, if Gorbechov is the chauffeur, just consider how important that passenger in the back must be."

Driver training

The replacement of chauffeurs with ordinary people like you and I meant the introduction of driver training. In 1947 the American Automobile Association produced a book called *Sportsmanlike driving*¹⁵. The text does not explain the term *sportsmanlike*, assuming that all its readers would understand the implications of fairplay and practised performance. Rather it begins with the ominous warning:

As we start out together into the Atomic Age, we may occasionally forget that however terrible it may be or however interesting a challenge it may become, we shall not live to see what happens if we do not understand sportsmanlike driving.

Is it really saying, "If the threat of nuclear warfare scares the pants of you, then you are excused for driving like a banshee"? Certainly, many saw a useful link between the car and nuclear warfare and some 20 years later the National Highway Users' Conference in the United States published the following ill-founded and, thankfully, unnecessary advice:

In the event of nuclear warfare, the car can be used as a rolling home. Persons can eat and sleep in it, keep warm and dry, receive vital instructions by radio, drive out of danger areas, and even be afforded some protection against nuclear fallout.

Indeed, one of the original justifications for taking the US Interstate system into cities was that it would allow them to be evacuated in the event of a Russian attack¹⁶. Even the simplest calculation would have shown that a three-lane highway running smoothly at capacity would have evacuated no more than 100 000 people over four hours. If such an attack had occurred, the highways would have rapidly become massive, stationary traffic jams. As indeed they did when Cyclone Katrina battered New Orleans in Louisiana in 2005. Within unusual prescience the author had correctly predicted in 2002 that the New Orleans emergency traffic plans would prove inadequate.¹⁷

Modern motoring requires only the simplest of physical skills and these are best learnt by practising rather than by training.¹⁸ The main need for change is in driver attitudes and these can rarely be improved by physical testing. Indeed, so-called advanced driver training can raise a driver's confidence, leading to increased risk-taking and more crashes. As evidenced in Chapter 10, driving instructors rarely like to hear this message and there have been times when I was in frequent conflict with the driver-training fraternity.

Perhaps the following instance justifies my perceived perverse stance. In Leicester in England a married couple working as driving instructors were convicted of (a) racing each other in their L-plated cars, (b) driving on the wrong side of the road, (c) exceeding the speed limit, and (d) driving under the influence of alcohol. As a result of this salutary experience in private initiatives, they left their jobs as driving instructors and set up their own driving school.¹⁹

As we saw in Chapter 10, steering is one of the tougher parts of driving. We have all heard driving experts tell drivers: "If your car starts to skid, you should steer into the skid." What the hell does this mumbo-jumbo mean? If do find yourself skidding, will you have time to finally solve the semantic riddle of which way you should turn the wheel in order to steer into the damn skid? Far better of course if you had been advised how to avoid altogether the occasion of skidding. Similarly, market research has shown that many new-car purchasers thought it would be better to buy a car with over-steer - after all, you thus get more steering per dollar, don't you?

Similarly, we all learn from watching Formula One races on TV that to go very quickly around a curve you should brake hard, turn late, and then accelerate hard. Just don't try it on a normal road, especially a winding country road with reasonable camber or you may end up in hospital - as Nigel Mansell did in 1992 soon after he switched from uncambered Formula One road circuitsto banked Indy racetracks²⁰. At the best, braking hard, etc may have taught you whether your car under- or over-steers.

Driver testing

After the driver training comes the driving test. The *Guinness Book of Records* gives the "most tests" title to a Miriam Hagrave of Yorkshire who passed her test in 1970 after 212 lessons and 39 unsuccessful attempts, although a Fannie Turner of Arkansas failed her written test on 103 occasions, before passing that hurdle in 1978.²¹

The stories surrounding novice drivers attempting their test really are legend, and it is unnecessary to repeat them here. Perhaps readers should just sit quietly and recollect these stories, prompted perhaps by a recording of Bob Newhart as a driving instructor teaching Mrs Webb, or by their own shattering experience.

Or else you might ponder on the event that occurred in Warrnambool in Victoria in 1994 when three driving testers were in two cars whilst being tutored by their senior brethren in how to administer a new driving test. Does it surprise you to learn that their two cars collided at a busy intersection²²?

My own experience occurred when I went to Pennsylvania in the 1960s as a selfassured graduate student. Although I had an Australian driving licence and had competed on the amateur motor-racing circuit, that was insufficient for the good Pennsylvanians and I had to attend a special driver-testing facility operated by their State police. I thought I drove superbly on their test track, keeping exactly to the speed limit and doing a minimum of braking. The State Trooper thought so to, complimented me on my driving skills, but then said he would not be recommending me for a licence as I had made one mistake.

"What was that?" I asked in disbelief.

"You drove the entire test circuit on the wrong side of the road" he replied.

I didn't think it wise to suggest that the left side was for me the right side, or try to explain it away as an Antipodean quirk. When I subsequently successfully completed this practical test by driving on the right side of the road, young hawk-eye was sent inside for the mandatory eye-test. Self-assurance now restored, I chose to read the smallest line.

Testing Officer: "First letter?"

Me: "A."

T.O. "Wrong, its not A."

It is important to now translate this dialogue out of Australian and into the phonetics of spoken American and spoken Australian, if you are to understand my dilemma.

Testing Officer: "Farst lettar?"

Me: "Eye."

T.O. "Wrong, its not I."

Me "I know its not I, its eye - as in Ipple!"

T.O. "What's an Ipple?"

Me: "I'm saying eye. It's the first letter in the Ilpabet."

T.O. "What's an Ilpabet?"

Without waiting for me to expound on Ilpabets and dies of the week, she reached for a wooden stamper from a rack and qualified my licence with the red instruction

MUST WEAR CORRECTIVE LENS.

I would later try speaking whilst I wore the spectacles that I bought at the 5 & 10 to see if they really did change my Orstralian accent. I was subsequently reassured to read in the research literature that no driving test yet devised is any more effective than the one I did in Pennsylvania. Car-racing champion Stirling Moss once remarked that the two things that a man won't admit to doing poorly are making love and driving. Fortunately, I was not required to wear corrective lenses in bed.

This is not to deny the importance of good vision to the achievement of safe motoring, despite a seemingly innocent suggestion in 1987 that design standards for vehicles should be changed to add braille symbols to the control devices used by the driver.²³ This

suggestion may have been inspired by news from New Delhi a year earlier. Random eye tests on Indian truck drivers had shown that 40 percent needed glasses, 20 percent had trachoma, 15 percent had eye infections, and five percent had cataracts - leaving just 20 percent with reasonable vision²⁴.

Passing the driving test leads to the student being given a driving licence. The idea of needing a licence to drive began with drivers of horse-drawn carriages in Paris in 1867, but Chicago issued the first licence specifically for car driving in 1899. The bureaucrats only slowly saw the employment prospects of the new system - for example, in Perth in Western Australia the first driving licences were issued by the local Dog Inspector²⁵.

Passing the test and getting the licence is not enough. In 1990 Eugene Smith of Pennsylvania was stopped by police and told his car registration had expired. A further check showed that his licence had been revoked after he had died. The 33-year-old Smith was unwilling to accept this official diagnosis. Two years later, the bureaucracy had still not restored his licence. He had, however, discovered that, following the loss of his wallet in 1988, his licence had been used by an oft-convicted thief and persistent traffic violator, who had then been killed in a traffic crash²⁶.

Driver incompetence

In most countries, drivers must give way to other vehicles on their right. This practice exists, irrespective of whether driving is on the left or the right, and applies at intersections without traffic signals or stop or give-way signs.

Such order does not always reign supreme. Christopher Armstrong tells of his two maiden aunts who took up driving in England after the First World War, one in a Wolseley and the other in a Rover.²⁷ Having come from a genteel background, both continued to assume that at any intersection, male drivers would automatically give way to a car driven by a lady. To dissuade them of this startling belief which was being reinforced by the charitable citizens of their own village, he took them on a driving holiday in Scotland, where drivers were notoriously less couth. The sisters also stayed in top gear, finding the continual effort of gear changing to be far too troublesome.

This story reminded me of my experience as a poor graduate student. A University librarian, passing me walking to the campus, kindly offered me a regular ride in her Chevrolet. After a few trips dominated by crashing gear changes made without her foot even approaching the clutch pedal, I tactfully suggested that the journey would be much smoother and quieter if she depressed the clutch pedal whilst changing gears.

"No, I can't possibly do that" she said.

"Why not?" I asked.

"Well" she replied "my legs are too short to push the pedal down, so I've taught

myself how to change gears without relying on the pedal."

It was at this stage that I started taking an interest in vehicle ergonomics.

To balance the gender bias in these recent stories, let me tell you of Clive, an engineering friend who asked me to tell him why the engine in his car had stopped so completely and abruptly. On examination, I found that all the pistons had completely

seized in the cylinder block. Questioned about the absence of oil, Clive said that that was probably a coincidence. However, further intense questioning revealed that the previous weekend he, a mean person and a mechanical illiterate, had decided to change the oil himself. He had found the sump plug and removed an inconveniently large amount of oil. However, the "filling aperture" - which I later found to be the dipstick sleeve for the gear box - had, in Clive's words:

"been so tiny and inconvenient that it had been necessary to use an eyedropper to put the new oil in. It took a long while and I didn't get more than a pint in. Could this have anything to do with why my engine stopped?"

Another friend of the time had a Volkswagen that he lent to a fellow student who was attending an end-of-term party. After the party the over-indulged student drove home in the early hours of the morning, vomited his over-indulgence into the back of the car, and staggered away to sleep. The next day was very hot and the hermetically sealed Volks had been parked unprotected in the strong sunlight. Our partygoer did not wake until late afternoon. By this time the remnants of the night before had been so thoroughly cooked into the very fabric of the Volks that it was never again possible to drive in it without sucking on a strong peppermint and keeping all the windows permanently open.

Every Asian traveller has had a nightmare experience in Bangkok traffic. For instance, in 1995 Nury Vittachi reported that a taxi driver taking a Chinese visitor to the airport noted that the road ahead was jammed with unmoving cars, as far as the eye could see.²⁸ However the carriageway from the airport to the city was almost empty. The tempted driver crossed to the unused inbound road. To avoid any semblance of law breaking, he then faced his car citywards and drove his startled passenger to the airport at high speed and in reverse gear.

The Thais are not the only nation to be the butt of driver jokes. In France they tell of the Belgians, particularly of a Belgian en route to his first skiing holiday in the French Alps. For hours he travels backwards and in reverse gear up the narrow, winding mountain road to the ski resort, followed by an enormous queue of increasingly impatient and irate Frenchmen.

Defending his actions in the resort car-park, he explains that there were no roads like this in Belgium, and it was so narrow and steep that he had been afraid that he wouldn't be able to turn his car around at the top and so, when he left that night after a day's skiing, would have to reverse down the mountain in the dark. He concluded convincingly:

"Thus I applied the sort of forward planning for which we Belgians are famous and did my reverse driving in the daylight."

Nevertheless, that same evening the same Belgian travels down the same road, still driving backwards and in reverse gear and leading another queue of fuming Frenchmen. When he finally stops at the foot of the mountain, they surround his car.

"Quoi?" they cry.

He answers admiringly: "You French are so clever. Why, at the top of the mountain you have actually built a loop of road so that you don't have to worry about turning around at all, and before you know it you're on your way down again."

On their way

Drivers other than Belgians also sometimes drive for long distances in reverse. In 1995 the Melbourne press reported how a driver, whose car had become caught in reverse gear, had driven 25 km home backwards through heavy traffic to save the cost of a tow.²⁹ The trip ended when his car overheated and stopped just short of its intended destination. He told reporters that he had a sore neck, stiff back and tired arms, but was otherwise unscathed.

The *Guinness Book of Records*, nevertheless, gives the longest trip undertaken in reverse as a 5375 km journey by two Americans, Charles Creighton and James Hargis, in 1930 when they drove their 1929 Ford Model A backwards from New York to Los Angeles without once stopping the engine. After a short break, they then reversed back to New York. The round trip took 42 days³⁰.

People on long distance trips need maps. However, drivers do have trouble with maps. This is not surprising as it is the universal experience of all travellers that, when navigating a car, the map is never the right way up and the current location is always on the bit between two maps. When taking a distress call, as many drivers will declare that they are at the intersection of two parallel roads. Thus, callers are often asked to go and check the name on a nearby street sign. On their return, their typical offerings as to the street name are:

- * I'm in One-way street.
- * I'm at the corner of Walk and Don't Walk Streets.
- * You wouldn't want to know the name on the sign because that street's nowhere near where I am.
- * A bull chased me before I got near enough to read the sign.

One help-seeker said he was outside a railway station. When asked to check its name, he said "The Met", which happened to be the name of the whole railway system.

A stranded motorist in Melbourne at least knew the road she was on, but as it was 20 km long, the telephonist needed just a little more data. Unfortunately the motorist could see nothing to distinguish her location.

"Well, where did you come from?" said the telephonist, hoping to piece together a likely route.

"Singapore" came the ethnically accurate reply.

The car as a social aid

The use of the car as part of modern mating practices is so well understood that just a few examples here will suffice. To begin, there is the infamous line from "In my merry Oldsmobile" - the best-selling hit of 1905: "You can go as far as you like with me in our merry Oldsmobile." Such attiudes did not please Henry Ford who deliberately shortened the length of the T Model's rear seat to 970 mm to prevent its use in mating rituals³¹. Because of the height of the T Model and the irrepressible needs of its occupants, this seemingly led to a preference for vertical postures.

A survey of American women reaching sexual maturity between 1915 and 1925 revealed that 38% had had their first sexual encounter in the back seat of a car. Curiously, despite Henry Ford's attitudes, the U.S. car industry during this period had begun making cars with large sofa-style rear seats and open roofs

This does bring to mind the oft-told story of the lady who had been pestering her husband for some weeks to fix the leek that was allowing oil to drip from their car onto their new driveway. Returning home from a shopping trip, she was therefore pleased to see the pair of legs protruding out from under the family car. She stooped and gave her husband a rewarding caress. When she entered the house she was stunned to find her husband inside. He explained that he had been unable to stop the drip and a friend, a car buff, had offered to don the husband's overalls and have a look. Soon after the friend was at the door, bleeding profusely from a wound on the forehead. He explained that he had lifted his head rather quickly.

The deliberate tendency of the English to buy small cars probably says much about their predilections. The noted English social commentator Benjamin Elton remarked that it was sad that so little could be done in a Vauxhall³². However, in 1959 a Constable McLennan in London observed the "sideways movement of a parked car on its springs." He arrested a Mr Selby and Miss Firman who were in the car at the time and charged them with "committing an act of a lewd, obscene and disgusting nature." The defendants, who were not convicted, had an automotive engineer testify that there was insufficient room for Miss Firman to have knelt on the floor and acted in the manner so explicitly described by the Constable.³³

Given the apparent frequency of the initiating event, it is probably not surprising that there are many urban legends concerning couples making love in the unnaturally confined spaces of a car. In a common version, the lovers becoming irremovably fixed in their passionate but confined embrace - possibly by one or both suffering a spinal dislocation. They attract the attention of a passer-by, who calls a tow-truck operator. This decoupling expert finds that the only solution is to remove the roof of the car in canopener style, and then lift the entwined couple from the car with his crane and hauling chains. When he asks for payment for services rendered, the woman involved refuses to pay until the tow-truck operator furnishes a story that she can use to explain to her husband why the roof had to be removed from the family car and why there were deep chain-induced dimples on her body.

In another version, the vigorous activities dislodge the handbrake and the car rolls slowly from its secluded nook and into the traffic, where it is hit side-on by another car. The crushed sides of the car lock the couple in a loving and semi-naked embrace. The busy footpath beside the smashed car provides moral instruction to thousands of passersby. These car-couplings have been well recorded in limerick lore:

There once was a fellow named Brett Loved a girl in his shiny Corvette: We know it's absurd But the last that we heard They hadn't untangled them yet.

Legal confirmation of this major use of the motorcar came in Italy in 1990 when a motorist issued a personal damages claim against a driver who struck his parked car. The

crash had caused only minor damage to the car but, he alleged, the impact had caused him "to lose control" and this resulted in his companion becoming pregnant³⁴.

Death and the car

Before touching on death, it would be wise to seek some religious protection. The New World in the nineteenth century was replete with stories of "circuit" preachers who serviced a circuit of small congregations in lonely, isolated towns, travelling at best in a small horse-drawn cart. With the advent of the car, there was a dramatic change. Model T Fords were converted to mobile chapels, complete with spire, organ and stained glass windows³⁵. Now the church could literally be brought to the people.

But the car soon became more than a conveyor of religion. In 1928 W. P. Chrysler of Chrysler fame proclaimed with missionary zeal that: "it devolves upon the United States to motorise the world." Thirty years later Lewis Mumford was able to observe "that the sacrifices people are prepared to make for the religion of the motorcar stand outside the realm of rational criticism."³⁶

Many urban legends involve cars carrying corpses. Typically, to meet the deathbed wishes of an old aunt, her body is somewhat illegally being driven back to her birthplace in the family car. En route, the car is stolen with the dead Aunt hidden under a rug. When the car is recovered a week later, the body is gone. In Australia the story usually involves a family travelling across the Nullabor Plain, and the legend provided the basis for a U.S. movie.

My personal experience with bodies in cars concerns an elderly neighbour - let's call him Uncle - who died whilst mowing his front lawn. Another neighbour driving past saw Uncle's body on the lawn and thought that its ruddy appearance indicated that Uncle was alive and should receive medical attention. My wife and other neighbours were enlisted to place Uncle's substantial and lifeless body in the back of a small car, in order to take him to the local medical centre. After such close contact with the body, most of the helpers now thought Uncle was dead, but the minority view held by an ex-nurse prevailed - she argued that he should be given one last chance to finish his lawn-mowing.

The neighbourhood's combined efforts then only succeeded in placing half Uncle's stiffening body in the car - handling a dead body being far more difficult than indicated in the movies. By now even the ex-nurse was convinced that Uncle was dead and the group decided that either an ambulance or a hearse should be called, no one at the time being sure whether ambulances collected properly-dead bodies.

While waiting for the ambulance, some of the neighbours thought it better to restore Uncle to his original position near his lawn-mower. It proved even harder to remove Uncle from the car than it had been to partially-insert him. Another neighbour driving by offered to help, tactfully avoiding asking why Uncle's dead body was half in and half out of someone else's car. Eventually, the scene was restored to that which had prevailed at the time of death. At no time did any casual passer-by raise any sort of alarm over these various very public manoeuvrings of a corpse and the associated blatant re-establishment of vital evidence. A somewhat related urban legend is usually set in Tokyo, where drivers over a number of consecutive days notice a car travelling in the heavy traffic, and literally bouncing off both the roadside guardrail and other nearby cars³⁷. They report the vehicle to the police, who verify the driver's dinting and denting behaviour. The driver ignores the police when they signal to pull over and the police finally have no alternative but to physically force his car off the road and wedge it against the guardrail.

The driver stubbornly refuses to leave his misshapen car and when the police finally fling open the car door they discover that he has very obviously been dead for some days. During that time his car has been automatically shunted around the Tokyo motorways by the force of the never-ending traffic.

At the other extreme, when 37-year-old oil heiress Sandra West died in Beverly Hills in 1977 her will stipulated that she was to be buried in her Ferrari, wearing her lace night gown and seated comfortably. Heiress and car were then to be covered with a 3 m thick slab of concrete³⁸.

Another common urban legend is most commonly attributed to the Philippines. A truck driver delivering an overnight load of coffins gives a couple of friends a ride. "Hop in the back and have a nap in one of the padded coffins" he suggests. Later on in a heavy rainstorm he takes pity on some hitchhikers and offers them a ride in the rear. They are quite noisy and wake the encoffined friends, who raise the coffin lids to investigate. This simple event causes the hitchhikers to jump screaming from the moving truck and tumble back into the heavy rain.

A truly frightening story, which nevertheless brings many of our themes together, occurred in Bangkok in 1994. Terrorists had decided to cause a major explosion there, of the magnitude of the attacks on the Israeli Embassy in Buenos Aires in 1992 and on the World Trade Centre in New York in 1993. The terrorists hired a truck from a local vehicle-rental business and took it to a car-park near many embassies. There they built a massive truck bomb, using six bars of C4 plastic explosive surrounded by a tonne of ammonium-nitrate fertiliser and diesel fuel. All went well for the terrorists until they drove their suicide truck out of the car park and into the Bangkok traffic. The unplanned inevitable then took over.

Immediately outside the car-park, the truck had an unexceptional Bangkok-style collision with a motorcycle taxi. The terrorist-cum-truck-driver deigned not to stop and share gesticulations, as he had higher things on his mind. The taxi driver however, had not finished his conversation with the truck driver, so he pursued the truck and caught it at the next traffic jam. The foreign truck driver spoke no Thai and offered the increasingly indignant taxi driver some foreign money. Faced with the terrible wrath of one perpetually used to rejecting out-of-hand all foreign money other than US dollars, the intended suicide driver fled the scene, leaving the truck-cum-bomb abandoned in the road.

Aside from the contents of the truck, all this was fairly normal for an hour in the life of Bangkok traffic. The traffic police eventually drove the abandoned truck to their station, where it remained untouched for a week. When finally someone noticed a strange smell and looked inside, they not only discovered that they had been working beside a mammoth live bomb for over a week, but that the hire truck also contained the decaying body of the driver who had delivered it to the terrorists³⁹.

Stolen vehicles

Car thieves neither deserve nor create any whimsy. May ill fortune befall all of them. One truck thief who was singularly unsuccessful was a 19-year-old Melbourne man who stole a bread truck in 1991, but forgot to close the rear door left open by the breaddeliverer. The police were therefore able to follow a fresh trail of loaves to the thief's home some 4 km away⁴⁰. The event risks becoming an urban legend, as in 2002 some thieves high on cocaine stole a Krispy Kreme donut truck from a US parking lot. They too left the rear door open and were traced by a 24 km trail of donuts.

There are reliable reports of at least two tanks being stolen and used on the road. At Tidworth in England in 1990, a lovesick soldier stole a 57 tonne Chieftain tank in order to visit his girl friend some 13 km away in Burbage. The trip destroyed lighting poles, road signs and roadside verges. Hampshire police prosecuted the soldier for driving without displaying Learner plates⁴¹.

The publicity given the ease with which the errant soldier literally drove through the barracks gates must have spread to the East. As gangsters were gaining ascendancy in the old Soviet Union in 1991, they stole a tank from the Omsk Higher Army School.⁴² However, Ensign Sergeyev realised that the tank was stolen and cunningly dropped a cover over its periscope as it trundled past the guardhouse. The sightless tank lumbered blindly through some kilometres of the local street system before being intercepted in the midst of terrified traffic.

These tank-takers had clearly not been trained in Chile where an abortive right-wing military putsch occurred in June 1973. The putsch had a lot going for it as it included the army's tank regiment. Unfortunately for the surprise element of the coup, between leaving their barracks and arriving at the Presidential palace, the tank drivers scrupulously stopped at all stop signs and red lights, did not jump their place in any traffic queues, and probably helped little old ladies across the road. One tank commander even stopped at a fuel station to refuel where he was refused service by an uncooperative attendant who said: "There's a fuel shortage, you know." Patriotically, the tank crew abandoned their tank and proceeded to their coup on foot⁴³.

Notes on Chapter 12

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Chapter 13

The way to go

- a levelheaded debate on whether public transport has any place in modern society.

Car-sharing

As the car grew in popularity, so did the practice of travelling by hitchhiking. To hitchhike, the intended traveller stands beside the road and uses a pointed digit to indicate to passing vehicles that a ride is sought. In recent years this procedure has led to the punning alternative name of *digital commuter*. A variant of the hitchhiker has arisen with the introduction of transit lanes, which provide priority travel to vehicles with two or more occupants. Some Western entrepreneurs have provided passenger-like blow-up latex models. The requirement that they be clothed meant that the existing blow-up stock could not be used.

In other countries, unemployed youth offer themselves as Professional Passengers. Thus, in Indonesia traffic police are empowered to establish the travel bona fides of any suspect passenger. Transit lanes are well used in California, so it is probably not surprising that in 1987 a woman fined with violating the law, on appeal, had her penalty revoked by a judge who ruled that her 5-month-old foetus was a child and a legitimate passenger under Californian law.

Of course, no one should need to use a car. We should all go by public transport. Or at least our neighbours should, and thus leave the road free for our more deserving use.

Ride-sharing (or carpooling) was introduced in an attempt to let the car play a greater role in public transport. It involves some commuters travelling as passengers in private cars. Car-pooling has never really caught on as a way to go. We can none of us understand why our neighbours don't make use of this excellent idea - we, of course, couldn't carpool as our needs are too unique to match those of other travellers. In addition, surveys show that we have four distinct concerns about travelling with our neighbours:

- * They are patently far worse drivers than we are, and we are petrified for most of the trip.
- * Their timekeeping is appalling, despite the fine example that we set them.
- * Their cars are always dirty, forcing us to bring our own seat covers.
- * They never take the best route, despite our tactfully-given advice.

A history of buses

The private car and the truck are not the only users of the road. Buses are major road customers and form a key part of many transport systems. They are a very French innovation, with the first bus service operated in Paris in 1662 by the famous philosopher, Blaise Pascal. The scheme was initially very popular, but after Pascal's death the government banned common folk from using the buses and the service lapsed in 1675. Buses disappeared for another 149 years, until Jaques Lafitte reintroduced them to Paris.

The word "bus" originated in 1823 when Stanislaus Baudry began operating a horsebus service to some hot baths in Nantes in France. His route passed by a hat shop whose owner, Omnès, had a punning sign on his premises which read *Omnès Omnibus* (Omnès for all). The words caught Baudry's eye and he adopted *omnibus* for his own vehicles. The word must have also caught the customers' eyes, for by 1828 Baudry was operating twelve bus routes in Paris. The horror words *embus* and *debus* were invented in 1918 when buses were used to transport Allied troops to the defence of Amiens.

The horse bus was often simply an open wagon with seats. In French this is *char-à-banc* - and the British later used the word *charabanc* to describe a very stretched limousine with up to a dozen rows of transverse bench seats. The charabanc was used predominantly for holiday outings, and was completely or partially open in the peculiar expectation that British holiday weather would always be dry and warm.

Passengers have rarely been the central focus of a bus operator's attention. The first, horse-drawn buses picked up and deposited passengers in the middle of the road, requiring their erstwhile patrons to fend for themselves among the thick traffic and even thicker mud and slush. In London⁷, the practice was not banned until 1867.

Bus operations began in New York in 1825, when Abraham Brower provided a service using a horse-drawn bus. Passengers signalled that they wanted the bus to stop by pulling on a cord tied around the driver's leg. The technique was obviously effective, as in 1831 a British law required Hackney cab drivers to have a cord attached to their hand that their passengers could pull to attract the driver's attention.

Marvels of the modern bus

The bus has never been accepted into our consciousness in the way, for instance, that the train has taken an almost Freudian significance in many of our transport fantasies. As W. J. Turner wrote (as Henry Airbubble in 1936), the bus has little magic:

You cannot cuss

The motor bus

And brilliant wit Is lost on it. A. D. Godley was similarly gloomy when he wrote in 1926: What is this that roareth thus? Can it be a motor bus? Domine defende, nos Contra nos Motores Bus!

To reverse the common view that passengers needed the Lord's protection and Einstein's intellect to successfully use a bus, London Transport for a while ran a *Billy Brown* series of posters, telling people how to be better bus passengers. One piece of poetic advice displayed at bus stops told how to hail a bus:

Face the driver, raise your hand -

You'll find that he will understand.

To which a graffittist added, using some over-worked rhymes¹:

Yes, he'll understand, the cuss, But will he stop the blasted bus?

fut will lie stop the blasted bus.

A story attributed in Australia to Canberra in 1946 recounts a passenger rendered momentarily speechless when his morning bus arrived at the scheduled time². The situation was recovered when the driver, taking the astonished passenger's fare, said: "Don't be too surprised Sir, this is yesterday's bus." A widely told U.K. story, set in either Sheffield or on the Hanley to Bagnall route in nearby Stoke-on-Trent, recounts how in 1976 the buses there often failed to stop to pick up passengers.³ To rub salt in the waiting wounds, the drivers of the near-empty buses would usually wave to the would-be passengers as they passed them by. After some weeks of this treatment, the passengers lodged a formal complaint. The bus company's written reply informed its customers that: "it is impossible for the drivers to keep to their timetables if they have to stop for passengers."

In Victoria, a Doncaster to Melbourne bus route turns right at a busy intersection beside a large regional shopping centre. In 1984 a new driver on the route was carrying a full load of morning commuters. He mistook the signalised entrance to the multi-story shopping-centre car-park for the intended right turn, and instantly found his bus well within the car-park and immovably hemmed in by the cars of early morning shoppers. Rapidly deserted by his passengers, the new driver was left to ponder how he would break the news to the bus-scheduling department.

Soon you will learn of Philadelphia motorists using the wrong entrances. But perhaps the pinnacle of this set of stories occurred in Sydney in 1992 when a Mrs Bull mistook the pedestrian entrance to Bondi Junction railway station for the motorcar entrance to an underground car-park.⁴ Her doubts must have begun as she and her Renault joined the afternoon peak-hour rush and bounced down the pedestrian stairs. The doubts were undoubtedly confirmed when she drove onto the station platform, along with a crowd of travellers awaiting the next train.

The event was widely but variously reported. In one version, when railway officials offered to have the car towed back to street level, the resolute Mrs Bull insisted on performing the penance of driving herself back up all those stairs. In another ending, a tow truck took an hour to drag her car backwards up 12 steps.⁵ No one, fortunately,

suggested that the event bore any resemblance to that wonderful scene in *The Italian Job* where the Mini Minors flee down the stairs of a Turin shopping arcade.

Bus crashes

Once you are on board a bus, things may still not be all that perfect. Buses do have a propensity to crash and there is a certain oddity about these crashes. We may not think bus crashes to be all that common, but an allegedly authoritative source records that half of the vehicles in the Rio de Janeiro bus fleet had been involved in a road crash in 1975. This amounted to ten bus crashes every day.⁶ "Only ten?" all old Rio hands will ask. Further confirmation comes from the fate of Leonardo de Castro who was travelling in a Brazilian airliner on 9 July 1997 when an explosion left a gaping hole in the side of the plane. Many passengers were sucked to their death, but de Castro miraculously survived. On 12 July he was run over by a local bus⁷.

The Red Line buses in New Delhi have a similar reputation. It is popularly believed that the routine omission of the driver's door from their vehicles is not for air conditioning, but to allow the driver the quickest possible exit if chased by either passengers or crash victims. When a local newspaper attempted to shame Red Line in 1995 by publicising a daily list of citizens killed or injured by its buses, the Company reacted by changing the colour of the buses⁸.

New Yorkers in particular would not have been surprised by these revelations as a 1981 survey⁹ had shown that, for the previous ten years, the New York Times had been filling spare paragraphs of space in its pages with stories of horrendous bus crashes, often in South America. A Times sub-editor was clearly fixating on a vision of plunging buses, with a sample of his headlines reading (the bit in brackets is my translation of the headline and article):

- * Japan bus plunge kills 15 (plunged 50 m)
- * Indian bus plunge kills 19 (plunged in the Himalayas)
- * Chilean bus plunge kills 13 (plunged in Andes)
- * Cairo bus plunge kills 15 (plunged into Nile)
- * Fatal bus plunge in Pennsylvania (plunged 15 m down embankment)
- * 35 killed in bus plunge (pensioners plunge down West German embankment)
- * Bus plunge kills 30 in Iran (plunged into a deep gorge)
- * Brazil bus plunge kills 14 (plunged off bridge)
- * Quebec bus plunge kills 13 (plunged into a ravine)
- * Tanzania bus plunge kills 9 (plunges 100 m into crater)
- * Bus plunge in Java kills 45 (plunge 7 m off road)

and the height record was:

* Yugoslav bus plunge kills 7 (plunges 300 m into a canyon)

How convenient for the sub-editor that buses kept plunging whenever the Times had a space to fill in. But perhaps we do the sub-editor an injustice, for buses continued to plunge in the Andes, with truly tragic human consequences. On the 6th January 1997, Reuters reported that¹⁰:

* A bus plunged down a deep ravine in the Colombian Andes. 37 people - all members of a single extended family - died in the crash.

The worst bus crash was probably in 1983 on the Yungas Road in Bolivia which we discussed in Chapter 3. Over a hundred people were killed when a bus went over a precipitous edge.

As illustrated below, buses also have a penchant for falling into large holes in the road, so bus travellers beware. One such partial disappearance occurred in Norwich in England in 1988, when a double-decker slid backwards in to a large 5 m deep hole. A similar event then occurred in Munich in the 1990s.



The case of the disappearing double-decker. Scene: Earlham Rd, Norwich, England. Photo: Eastern County Newspapers.

Bus passengers

Bus passengers have their own problems. A Californian study of public transport users in the early 1980s showed that giving them a map shortened the time they took to undertake complex trips, but giving them a map and a timetable actually lengthened their journey time, mainly due to misuse and misinterpretation of the timetables.

In 1987 Qantas Airlines gave its customers an anthology of the great fictions of business travel¹¹. Not surprisingly, the list included:

* It's easy to get around on the local bus system.

and - just to be even-handed,

* All the taxi drivers speak English.

In our poetic pursuit of the prosaic bus, it can be reported that the following British limerick from the 1930s didn't help the image much:

There was an old man from Darjeeling Who boarded a bus bound for Ealing. He saw on the door "Don't spit on the floor" So he stood up and spat on the ceiling.

This is not the only strange thing to have happened on a bus. The Edmonton Sun reported in the 1980s that a British schoolboy had irremovably jammed his head in a vase. His mother rushed him to hospital in a bus. Not wanting to attract attention - or perhaps in deference to strict school rules - she carefully attached his school cap to the top of the vase.

These were perhaps lesser problems than those encountered by South African bus passengers as that country struggled out of the mire of apartheid. In September 1986 the Johannesburg City Council introduced a project to phase-out separate bus services for blacks and whites. It was only a very small first step, as the following pamphlet issued by the City's PR office illustrates: ¹²

Fares on buses will be unchanged. The buses for whites, previously charging a higher fare, are marked in blue and the higher fare is applicable to all who use them. The buses previously used on services for blacks are marked in yellow, and the lower fare previously paid by blacks is applicable to all who use them. The blue buses only stop at stops painted white while the yellow buses only stop at stops painted black.

Nevertheless, the West Wales Guardian announced the ultimate fate for the bus traveller in banner headlines¹³: **BUS ON FIRE - PASSENGERS ALIGHT**.

Trams (or streetcars)

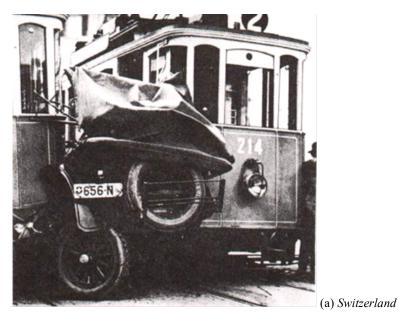
The tram also has a love-hate relationship with its customers. An 1899 textbook for tram operators included the following recommendation¹⁴:

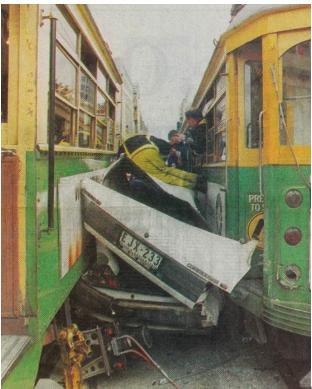
Throwing a passenger off a car often results in serious complications, and should be

avoided, if possible. It is much better to have a police officer remove him.

The tram also uneasily shares its roadspace with the car, and many tram systems around the world have fallen to the voracious appetite of the automobile. Nevertheless, there are a few stories of how the tram has fought back. For example, the fight gives rise to one of Philadelphia's favourite transport legends. In the 1960s, the city of light had a tunnel some kilometres in length and used exclusively by trams. The inside of the tunnel was unlit, with only the steel rails and intermittent wooden sleepers for a riding surface. Large signs told car drivers not to enter. Nevertheless, drivers would regularly and inadvertently do so, only to experience a horrifyingly dark, dank and bumpy trip. It was worsened by the delight that tram drivers took of firstly calling the local radio station and then tailgating the drivers through the tunnel with bells clanging from their darkened, clattering monsters. The radio station ensured that the trembling motorists were interviewed live-to-air when they eventually emerged at the other end.

Trams do have a habit of devouring unsuspecting cars, as the photos on the next page illustrate. It all began in Switzerland in 1929. A similar event occurred in Melbourne in December 1992 when a car carrying a journalist and photographer for a local newspaper. The injured photographer - John - valiantly struggled from the car to photograph the event, before being taken to hospital by ambulance. The photograph made the front page of the Melbourne Age on 12 December. Strangely, however, the Age and the photographer can no longer locate a copy in their otherwise excellent files. Instead, they offered a photograph of the photographer being loaded into an ambulance. Is even the press unable to admit to a driving flaw? The version shown in the photo is copied directly from a Victorian State Library archive of the newspaper.





(b) Melbourne

Squashed between two trams. The events occurred (a) in Switzerland in 1929¹⁵ & (b) in Melbourne in 1992,¹⁶ photo: Melbourne Age

In 1905 Maurice Hare sadly and wistfully realised the inherent drawbacks of a tram, or at least I suspect he did, when he almost said:

There once was a man who said: "Damn!

Borne along, I'm know that I am,

By an engine that moves

In predestinate grooves,

It's not quite a bus, it's a tram."

A famous anonymous response to this limerick is:

Young man, you should stay your complaint,

For the grooves that you call a constraint

Are there to contrive

That you learn to survive.

Trams arrive, buses may or they mayn't.

Cabs (or taxis)

Like the truck, the lore surrounding the cab, its drivers and its passengers, produces anthologies of their own. Everyone knows at least three good cab stories. This book, with continuing wisdom, does not trespass into this Runyonesque territory. Except, of course, to tell you a little of their essential history.

The word *cab* is a shortening of *cabriolet*, which was the name of a two-wheeled horse-drawn passenger cart introduced into London from Paris in 1805. The alternative word for cab is *taxi*, which comes from a distance-measuring device, the taxameter, invented in in 1894 and used for calculating passenger fares (i.e., a tax on passengers).

The taxi became the first motor vehicle used in World War I when, in 1914, French general Joseph Galliéni requisitioned and hired Renault taxis to take his troops to the first battle of the Marne. Galliéni at the time was military governor of Paris and his drivers included such literary luminaries as Jean Cocteau and Gertrude Stein. The tactic allowed the general to launch a successful surprise attack on Alexander von Kluck's German troops at Meaux, and thus halt their advance on Paris. It is clear from their subsequent behaviour that taxi drivers have never forgotten how they once stopped the entire Imperial German Army.

Notes on Chapter 13

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- 6 True Facts, National Lampoon, 1981
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Chapter 14

At the wayside

- a chapter which alerts us all to the plight of the pedestrian as a threatened species.

Pedestrians as people

In desperation, if all else fails to supply our need to travel, we can join the ranks of the pedestrians and do some walking along the wayside. But take care, for pedestrians are a strange and mixed lot, hardened by adversity. It has ever been so. A diarist in Melbourne in 1840 wrote of:¹

the unpaved roads, famed for gutters that meander from side to side; purposefully neglected in order to instruct the population in leaping during the day, and to furnish broken limbs for the advancement of medical science.

Driving to the airport at 5:30 am one more recent Melbourne morning, I saw a naked woman strolling happily along the footpath. I didn't have the presence of mind to stop, but, being a cautious soul, that evening I told my wife. The next day she met a local newspaper columnist, Lawrence Money, at a social function. Lacking my caution, she recounted the story which consequently appeared in his column the following day, with the gratuitous remark that I had found a better field to research than some of my previous efforts.² The newspaper paragraph provoked various ribald remarks from colleagues, including a letter asserting that: "my observation could not have been based on any body of fact."

The internationally-recognised pedestrian joke is of the policeman who, one wet and windy night, finds a drunk on his hands and knees beneath a street light. When asked to account for his actions, the drunk says he's looking for his wallet. The good-natured policeman offers to help. Some ten minutes later, the soaked policeman says to the drunk that they should stop searching, as the wallet is clearly not there. The drunk acknowledges the wisdom of the decision: "You're right, officer, I dropped it further down the road, but its far too dark to look there."

There are many good drunken pedestrian stories. Another favourite is of the drunk who had tried unsuccessfully to cross a busy road on three dangerous occasions.

Helpful bystander: "Sir, can't you see there's a pedestrian-crossing just down the road?"

Frustrated drunk: "Is there? Well, I hope he's having more success than I am." In life, policemen and pedestrians are often closely coupled, and so the strong survival of the following old music-hall line is not surprising:

Prosecutor: "Did you see any pedestrians in the area of the alleged crime?" Policeman: "No, just a lot of people walking along the footpath."

A somewhat different slant to this story began in Los Angeles in the late 1920s. An Englishwoman staying at the Beverly Hills Hotel was walking in nearby Benedict Canyon. She was arrested for suspicious behaviour - namely, being a pedestrian. Your author, a regular visitor to the U.S. over the years, has frequently had pleasant informative chats with the local police as he attempted to walk off the effects of jet lag.

A study of pedestrian problems in Dakar in Africa in 1982 recommended that Dakar's most urgent action should be to prevent cars from using the footpaths. Parisian and Roman drivers should take note.

Today the pedestrian mall has restored some dignity to the occasional pedestrian. However, there is ongoing confusion as to how the word *mall* is pronounced. English antecedents such as Pall Mall and The Mall clearly indicate that it rhymes with *bell*. However, there are those unfortunates who believe it rhymes with *shawl*. One such person was interviewing a visiting expert on Brisbane radio soon after that city opened its first mall in Queen Street in the 1980s.

Female Interviewer: "Do you like the mall?" *Lecherous expert*: "Come a little closer and I'll find out."

In 1970 Japan opened its first pedestrian mall. Located near the Ginza in Tokyo it was based on a successful New York mall. However, the word *mall* doesn't translate too well into Japanese and so became Pedestrian Paradise in Tokyo, whereas Osaka later opted for Pedestrian Heaven. One hopes the translator had a theological degree and could distinguish Paradise from Heaven? Nevertheless, today Pedestrian Paradise still revels in its original name. Research into the behavioural patterns of its users revealed that they had "a queer mix of feelings of superiority and exhilaration, along with quiet stealth or caution." The Japanese have predictably been ever courteous to their pedestrians. In 1989 a Tokyo car rental company was issuing its foreign customers with the following instruction³:

When passenger of foot heave into sight, tootle the horn.

Trumpet him melodiously at first but if he still obstacles your passage, then tootle him with vigour.

Similar translation oddities occurred with two navigation products displayed at the 1995 Tokyo Motor Show - one was called the *White Elephant* and the other the *Gorilla*. Inquiry of the staff at the stands indicated that *White Elephants* were very lucky and that *Gorillas* would always be stronger than their opposition. Indeed, any country that can successfully sell a car called a *Cedric* deserves our respect. Another successful Japanese car was the *Colt*. When the overseas offices of the company were asked to nominate an English name for its successor, the word "*stallion*" was universally accepted. We all understood when the new model arrived dutifully called the "*STARRION*".

Pedestrian safety

Pedestrians are notoriously at risk of damage by vehicles. It has long been so. For example, it would seem that the first hit-and-run driver to be jailed for killing a pedestrian was the Duke of la Meilleraye in Paris in 1723. His horse-drawn carriage had knocked down and killed an old woman. Louis XV was urged to grant pardon, as it was clearly a case of a nobleman inconvenienced by a nobody. The King, reportedly suffering from a hangover, nevertheless ordered the Duke thrown into the Bastille⁴.

This legal precedent had little effect and the horse-drawn carriages continued their relentless urban speeding. In 1865 the city fathers of Melbourne passed a law requiring vehicles to cross intersections at walking pace, in a valiant effort to prevent pedestrians being injured by "furious driving"⁵. In 1889, signs at London intersections instructed carriages to: "Walk over crossing".

It is not my intention to have my immortal soul cursed for telling stories about the Irish, however there is one veritably genuine one in this field that deserves the telling. The first cars came as much a surprise to the leprechauns as they did to the larger folk. Indeed, in those troubled times, a poor Irish pensioner found a leprechaun lying in a ditch beside the road, bleeding profusely after being struck by a passing car. There were no suitable bandages in sight, so the Irishman forced the leprechaun's gaping wound together with his fingers and sat in the ditch for three days, nursing the leprechaun and heroically and unrelentingly holding the slowly-healing wound together with his aching, bare hands. The leprechaun eventually recovered and gratefully reminded his Irish rescuer that anyone who saves a leprechaun's life receives three wishes.

"And what would yours be?" he asks.

The Irishman is parched and hungry after his three days in the ditch. "First, I'll

have one of those bottles of whisky that never runs dry" he answers.

There is a quick flash and just such a bottle appears in his hands. For the next few days he strenuously and successfully tests the ability of the bottle to refill itself with quality whisky after each fulsome drink. Meanwhile the leprechaun becomes impatient to return to his family.

- "Please make your last two wishes so that I can discharge my obligation to you" he pleads.
- The Irishman replies: "That leprechaun whisky is so good that one bottle will never be enough, so I'd best be having two more."

Many drivers do see pedestrians as insignificant and unimportant. Inventors in the early days of the car produced patented pedestrian-catchers which were attached to the front of a car and ensured that, if it were struck by an unobservant pedestrian, the catcher would scoop the pedestrian up and ensure that the impact did no damage to the car.⁶ One drawback was the need to retrieve the pedestrian from the catcher before the driver could proceed on, as forward vision might otherwise be obscured.

Typical of the regard in which motorists hold pedestrians is the following story told by motorists of the pedestrian knocked down by a hit-and-run driver.

"Did you see the number?" asks the policeman?

The pedestrian, proud of his powers of observation in the face of adversity, replies:

"Yes, there were three of them - two men in the front and a woman in the back."

The pedestrians and their friends do sometimes fight back. For example, it was far from wise to stop after striking a pedestrian in Papua New Guinea, as local practice in many areas was to summarily inflict similar injuries on the offending driver. In more than one case, an immediate roadside beheading seemed to the locals to be the simplest way of obtaining both an eye for an eye and a tooth for a tooth.

As another example of a pedestrian uprising occurred in Paris in the early days of motoring. A car struck Hugues Le Roux and, although he suffered no injury, he informed police and press that he would henceforth carry a handgun to deal with marauding drivers. His decision caught the public's attention, and the world's first car magazine - *La Locomotion Automobile* - responded by suggesting that, in self-defence, motorists might be forced to arm themselves with machine guns⁷.

In the 1980s Belfast was the scene of an incredible multi-vehicle crash. It began when a taxi hit a pedestrian named Bob Finnegan. As he dragged himself to his feet, a second car hit him. A crowd gathered round to give first aid to the unfortunate Finnegan. A van ploughed into this crowd, injuring many, including the then-floundering Finnegan. The crowd scattered, leaving the forlorn Finnegan alone on the pavement, where - inevitably he was soon struck by another passing car.

Pedestrian crossings

Pedestrian crossings painted on the road surface were introduced in Detroit in 1911. Many pedestrians are unwilling to use the crossing facilities so thoughtfully provided for their use. To ensure their compliance with the traffic engineer's intentions, it has become common to install fences along the kerb at places where pedestrians wish to, but - for their own good - should not cross. The fences herd the flocks of pedestrians to spots where it is deemed safe to cross.

The approach was notably extended in 1984 when engineers in the London Borough of Hackney used the fences to prevent gainful access between the local streetwalking prostitutes and their customers cruising past in their cars⁸. The engineers acted, not through moral pedestrian imperatives, but because the cruising cars had created a major traffic problem.

When I visited a large NSW country town in the early 1980s as a road expert, the Mayor insisted on seeing me and personally describing a problem the city was having with a pedestrian crossing outside a school. Indeed, it had regrettably featured in the previous day's local paper and there was an election imminent. The problem was that parents depositing their children at school were temporarily parking on the crossing in a very dangerous manner. A serious injury had already occurred, and the Council had erected large signs, but the parents were ignoring all official advice. I was to come to the site with the Mayor and his engineer and instantly fix the problem.

Next morning we drove to the site, and as we were settling in to observe parental behaviour, the very first mother parked her Jaguar in an appallingly dangerous manner, putting both her own and other children at severe risk. The Mayor appeared to suffer a fit

of apoplexy. As it seemed a slight over-reaction to what was apparently a routine event, I offered medical help. Recovering his breath and powers of speech, he gasped: "But that's my wife."

A somewhat similar event occurred in Victoria in 1997, when the Education Minister and local parliamentarian arrived to inspect traffic problems caused by inappropriate parking at Berwick Secondary College. Both are reported to have parked illegally, precisely demonstrating the School's concerns⁹.

Of course, there is an urban legend relating to pedestrian crossings. In one version, a visiting soccer fan limps into an English police station, complaining that he was struck by a car whilst using a pedestrian crossing. The policeman tells a colleague that he'll go out and measure the skid marks. "Don't bother," says a colleague "no local would brake for that lot." We move rapidly out of this dangerous territory, as other versions of this story are distinctly more specific.

Car insurance companies from time to time publish lists of the excuses their customers give for being involved in a crash with pedestrians. My favourite is:

The pedestrian crashed into me, and so I had to run over him.

Variants to this popular pop-a-pedestrian theme are:

- * The pedestrian was staggering all over the road and I had to swerve a number of times before I hit him.
- * To avoid hitting the car in front, I struck the pedestrian.
- * The pedestrian had nowhere to go, so I ran over him.
- * The pedestrian altered his mind, so I ran over him.
- * The slow-moving, sad-faced pedestrian bounced off the bonnet of my car, dinting it severely.
- * I was sure the old fellow wouldn't make it to the other side of the road, so I ran over him.
- * The pedestrian hit me, and went under the car.
- * It was the pedestrian's fault as he had already been run over before I hit him.

As one who believes that the only way to know an area is to walk its streets, I trust you don't ever have occasion to use these excuses.

Finally, cars injure people who could not be categorised as pedestrians. This causes nightmares for insurance actuaries and crash statisticians. Here are two examples of these thoughtless people. On the visit to the city of Wagga Wagga immortalised earlier in this Chapter, the author complimented accompanying officials on the closely-mown grass in what had previously been an unkempt path between the road and a lake.

"We had no choice," came the reply "it's a favourite spot for late-night lovers and

recently a couple whose horizontal position left them obscured by the long grass,

were run over by a car seeking a quiet place to park."

My suggestion that the Council learn from bicycle safety and issue mating couples with red flags on long poles was not adopted - perhaps they were unsure as to where to advise the couples to place the flags.

A year later the press reported on a further serious car-related injury that had occurred off the road. The victim had been repairing the roof of his house.¹⁰ To avoid falling off, he had tied a rope round his waist, thrown it over the ridge of the roof, and secured it to the tow bar of his car parked on the other side of the house. Eager to return to his rooftop

task, he had forgotten to inform his family of his safety measure. Whilst he was still on the roof, one of the family drove off in the car.

Notes on Chapter 14

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- 5 Brown-May, A. "The highway of civilisation and commonsense: street regulation and the transformation of social space in 19th and early 20th century Melbourne". Australian National University, Urban Research Program, Working Paper 49, April 1995, p13
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- 10 e.g. Melbourne Herald, 5 Feb. 1983

Chapter 15

You're in my way

- shocking revelations of the reality behind road crashes.

The history of road crashes

The oldest known road-safety measure was the practice of the Aestyi to wear the insignia of the wild boar when travelling. The Aestyi were a Germanic tribe who lived in the millennium before Christ and who prospered by gathering and distributing amber¹. They had found that wearing the wild-boar insignia allowed them to travel everywhere in safety, even in time of war. The boar is not exactly the most peaceful of animals, and one suspects that it might have been the mysticism of the amber, rather than the symbology of the boar, that bestowed safety on the traveller.

Aboriginal tribes in Australia distributed and traded in a narcotic drug called *pituri*. The traders used sacred body-paint, staffs, or tuffs of feathers to indicate their peaceful status as traders. One body sign used three stripes of red ochre painted across the abdomen. When there were doubts as to the acceptability of the insignia or the friendliness of the next tribe, tribal juniors were sent ahead to test the effectiveness of the system².

Today, many Roman Catholics carry a St Christopher's medal to protect them when travelling, although the good saint's forte was carrying people across rivers, and it may be asking a little much to expect him to also keep an eye on road safety.

In the past tmes we have just been discussing, the main risk of travel came from evildoers lurking at the roadside. However, one of the major downsides of travelling on today's road system is not the prospect of being attacked from the wayside by unfriendly locals, but the number of on-road crashes that occur between travellers, often with tragic consequences. Such incidents were rare in the low-speed days before the car. Horse-drawn coaches, for example, were more a threat to their occupants and to pedestrians, than they were to other coaches. Indeed, the previous Chapter ended by describing the ways in which vehicles damage pedestrians, a species that was at risk well before the car was invented. In urban areas people were particularly prone to being hit by U-turning carts and carriages. Indeed, Francis I banned vehicular U-turns in France in 1540, pointing to the particular dangers of this practice for children³.

One of the most-quoted statistics in my *Ways of the World* demonstrates that - in terms of fatalities per distance travelled - the car was far safer than the horse. Furthermore, there were some worrying features of injuries suffered in horse-riding. The Wiltshire historian John Aubrey in a 17th century autobiography catalogues a series of five closely-spaced falls from a horse culminating in the entry:

Monday after Christmas: was in danger of being spoiled by my horse, and the same day received laesio in Testiculo that was like to have been fatal.

There was also a certain cold-bloodedness about the crash reporting. In 1770 the Earl of Pembroke wrote⁴:

I found in the middle of the turnpike, a dead boy, not yet cold, with his head crushed literally as flat as a flounder. He slipt, it seems, from the shaft of the waggon on which he was sitting, under a broad wheel that went over him. I hear he is a Salisbury boy.

Author John Bond delighted in such stories, telling of the epitaph inscription in Prendergrast churchyard in Dyffed, which read:⁵

Here I lie and no wonder I'm dead

For the wheel of a wagon went over my head.

When Benz & Co. issued the world's first car advertisement in 1888 (see page opposite), they proclaimed that their patented motor car was: "comfortable and totally safe" and, indeed, 12 years were to pass before the first road death involving a car on a public street. This tragic event occurred in South London in August 1896 when Mrs Bridget Driscoll, who was crossing the road at the time, was struck by a passing car. The driver had seen Mrs Driscoll and had shouted, "Stand back" and rung his bell quite loudly. What more could he have done? The coroner expressed the clear wish that such an event would never be repeated.



The first car advertisement, issued by Benz and Cie. in 1888 for Model III of their Patent-Motorwagen. From the top the words read:

Patented in all industrial countries!

New! Practical! Gas-operated by petrol, benzene, naptha, etc. Always starts immediately! - Comfortable and totally safe! Nevertheless, a decade after the coroner's "clear wish", legislatures were beginning to ring with citizen protest over the mounting death toll from cars. For example, London was by then averaging about 250 traffic fatalities per annum. It had therefore been with some foresight that Mother Shipton predicted in 1561 that:⁶

Carriages without horses shall go

And accidents fill the world with woe.

The crash legacy of the car

As the acceptance of the car gained momentum and Mother Shipton's prophesy came to pass, legislators too often mistakenly believed in the power of their law to solve the problems the car had created. Indeed, a stroke of the legislative or judicial pen has often been seen as a simple way of avoiding larger responsibilities. In addition, newspapers persistently have trouble reporting crashes, which they curiously prefer to call *"accidents*", although only 1% could properly be described as such⁷.

But let us enter the car era on a less pretentious note with the best of the oft-told stories surrounding road crashes. A country boy who has made his fortune in the city returns to his hometown driving his new Mercedes. He gives an admiring relative a ride. The relative, unaccustomed to expensive imported cars, is puzzled by the three-pointed star insignia at the front of the car.

"What's its purpose?" he asks.

"It's a gunsight that I use to line up pedestrians. I'll show you how," the owner says jokingly as he swerves in a feint towards a pedestrian. Easily avoiding the pedestrian he is surprised to still hear a thud. "What was that?" he asks.

The relative replies: "You'll have to send this car back to the dealer as that gunsight is badly aligned. If I hadn't opened my door, we wouldn't have got him."

Other urban legends include the following two stories. A driver stops at traffic signals, only to find an undesirable attempting to climb into the back of his car. He slams the door shut on the undesirable and drives away at high speed. When he arrives home he opens the rear door to get his brief case, and four fingers drop onto the ground from near the door handle.

As my second offering, a man in a small yellow car is driving behind a circus procession. When the car stops, a circus elephant sits on the car, killing the man. At the inquest it transpires that in the circus the elephant has been trained to sit on a yellow stool which just happens to be the same colour and size as the car⁸.

Next, some more items from the car-insurance catalogue of seemed-splendid-at-thetime excuses that we introduced at the end of the last Chapter:

- * I drove into the wrong house, and collided with a tree I don't have.
- * The telephone pole was approaching and struck the front of my car.
- * I collided with a stationary vehicle coming in the opposite direction.
- * I was stationary, and a cyclist ran backwards into my car.
- * I glanced at my mother-in-law and headed for the verge.
- * A Stop sign suddenly appeared, but I was unable to stop.
- * The crash was caused by a guy with a big mouth in a small car.
- * An invisible car appeared out of nowhere, struck my car, and then vanished.

* I turned sharply to avoid an invisible car.

* My feet bounced from brake to accelerator, and the car jumped into the trunk of a tree.

* I had been driving for forty years before I fell asleep and had this crash.

* I only realised the side window was up when I put my head through it.

* On removing my hat, I found I had a fractured skull.

* I don't remember what happened as I was found by some stray cows in the ditch beside the road.

In 1996 I found myself on the board of a car insurance company. Parts of the industry had a policy where they did not dispute each other's small crash claims. This was called the Knock-for-Knock policy. A few months after withdrawing from this agreement the Board received a paper that began:

The benefits of withdrawing from the Kock-for-Kock Agreement are now becoming apparent...

An eye-for-an-eye had a long tradition, but this seemed to be going a little too far.

It is worth recording at least one first, in case someone mistakenly uses this text as an authoritative source. It can be revealed that the world's first true head-on collision occurred in heavy fog on a narrow road in rural Italy in the early 1980s. In order to better detect the way ahead, two drivers, Gaetano Regoli and Aristide Goffi, had wound down their driving-side windows and leant out so that they could steer by following the painted centreline, just visible on the pavement below the window. Travelling in opposite directions on the same road, they were taken to hospital after their two heads collided⁹. Another outbreak of this legend occurred at Gutersloh in Germany¹⁰.

Fog stories abound, and are mostly centred on one driver following closely behind another for guidance and protection. When the randomly-selected lead driver stops and extinguishes his lights, the following driver discovers that he has followed his erstwhile leader into a domestic garage.

A unique head-on collision occurred in the vastness of Arnhem Land in northern Australia in 1962. At the time there were only two registered vehicles in the whole area and they managed to collide head-on in the small town of Gove¹¹. The event was not without precedent. In 1895 there were only two cars in the very large State of Ohio – and yet they also managed to collide. An internal view of Italian head-on crashes was proposed in 1988 when a commentator remarked¹²:

In Italy, when there is a head-on collision between two cars, it is assumed that they were both making for the same pedestrian.

To push the Italian theme a little harder, there is an oft-repeated but unsubstantiated story from the 1970s of the Maserati driver tootling along an Autostrada when he was unconscionably passed by an inconsequential Fiat. Seeing the Fiat stopped at the next toll barrier, the Maserati drew alongside and its driver leant out and shot the driver of the Fiat. At the subsequent court case, the Maserati driver was acquitted as the judge saw his action as an excusable "crime of passion".

Not all crashes happen on the road. A tragic off-road crash occurred in Auckland in 1995 when a light plane and a helicopter sent to assess the consequences of a motorway crash, themselves crashed in mid-air, with fatal consequences.

Crashes have their limerick lore, personified by:

A mother was driving her car When her daughter said "Mamma, If you drive at this rate We are bound to be late, Drive faster!" She did, and they are. Another version of this limerick begins: *A novice, when driving his car* There are also infamous epitaphs such as: He passed the policeman without fuss, He passed the cart of hay, But when he tried to pass the bus, He quickly passed away.

and

The manner of her death was thus: Driven over by a bus.

Ogden Nash's apocryphal epitaph to John Brown is saved till Chapter 18.

Crash causation

Driver error or misjudgment causes the vast majority of road crashes. For example, technically, the primary cause of most crashes can be ascribed to human behaviour with about 80 percent of crashes due to human factors rather than to the car or the road.⁷ A graffiti rejoinder to this claim was to remind readers that: "80 percent of humans were caused by accidents."¹³

However, there may be other factors at work. We are all ghoulishly concerned with the intimate details of local crashes. There but for the grace of God go I....Entranced by this theme, Ray Bradbury tells a wonderful short story in which a man begins to realise that, in every photograph taken at the scene of a crash, a few faces consistently re-occur in the crowd of people gathered around to gasp at the gore and destruction. He researches the issue further, checks the new and old newspaper sources over decades, has the photos enlarged, and meticulously compares the suspect, re-occurring faces. Indeed, not only do they re-occur, but they appear to also be the people who move the victims, despite all contrary first-aid advice.

Now convinced of the correctness of his incredible conclusion, he puts the damning file of photos in his brief case and hurries to the nearest police station. Halfway across the road, a large truck strikes him and he is thrown onto the road. As he lies bleeding on the pavement, he realises that his spine is badly damaged, looks up and sees the self-same recurrent onlookers in the crowd. Two of them lift him, causing agonising pain, another says, "Is he dead yet", and a fourth picks up his incriminating file. Our heroe dies as the ambulance arrives.¹⁴

The story really ends with an unanswered question: how did Bradbury manage to deliver his manuscript?

Incidentally, have you ever met anyone who was actually responsible for a crash? All my friends and relatives are consistently the innocent party in their crashes. I'm beginning to think that crashes are being caused by cars driven by beings from outer space, plotting to end civilisation as we know it.

Some participants don't even want to debate their innocence, as with minor crashes – bingles – in parking lots where the bingler sneaks away with quiet anonymity. There are two versions of this event. In the commonest, if the bingler sees there are witnesses then he/she ostentatiously leaves a note on the windscreen of the damaged car. The would-be witnesses are not to know that the note says something unhelpful like "the people watching me think this note contains my address." The second variation and more morally correct version involves the bingler surreptitiously leaving the scene of the crime without realising that his/her vehicle numberplate has remained hooked on the body of the bingled car¹⁵.

Crash statistics show that the young have the highest crash rate and that the rate rises again in old age. Males under 25-years-of-age universally have the poorest crash record. This can be attributed to their propensity to take more risks, to underestimate the risks they do take, and to be oblivious of the consequences of those risks. Young men are behaving like young men always have.

The data can be seen more positively. A well-known U. S. road safety expert wrote in the early 1980s:

The fact that the crash rate is lowest for middle-aged drivers constitutes, so far as I can determine, the sole advantage of being middle-aged.

On the other hand, the *Guinness Book of Records*¹⁶ notes that two 104-year-olds have held driving licences, and that one of them had been prosecuted in California for driving at 95 mph in a 55 mph zone when in his 104th year.¹⁷

The human factor

But there is a darker side to all this. The typical young man involved in a crash will have had a less-than-average education, and will be earning a less-than-average income. He may well come from a family known to social-welfare agencies.

A 1978 New Zealand study, which was quickly swept under various carpets, concluded that data from NZ and many other countries showed that the serious motoring offender was also likely to have a criminal record for other forms of serious, violent, anti-social behaviour.¹⁸ For such reasons, attempts to create traffic officers outside the police force have usually failed because such officers frequently encounter traffic offenders who display extreme violence. Thus there is no surprise in a 1995 report that one quarter of all assaults in public places in affluent suburbs were caused by an aggressive driver reacting after a road crash.¹⁹ If you are in a crash, let your lawyer do the arguing, as the other driver will probably be more skilled at violence than you will ever be.

There is increasing evidence that the risk-takers in our society do have a raised crash level on the road. Who are these risk-takers? Following the above themes, they are typically young, unmarried males, but recently a new group appeared on the scene as Atlanta medical researchers reported that lowering cholesterol levels made people more aggressive and more likely to take risks²⁰. So take lots of butter and chocolate before your next car trip.

A more likely cause of aggression is indicated by a study of driver psychology suggesting that car drivers might see themselves as "higher animals"²¹. This perception leads to three dangerous driver attitudes:

- * drivers subconsciously expect lesser beings such as pedestrians and cyclists to be subservient to them,
- * because drivers sense their own invulnerability, they also assume this applies to the cyclists and pedestrians, and
- * when a driver senses even a small act of aggression in another driver, the primitive instincts may take over and lead to an exaggerated response.

We all have observed this last attitude in the phenomenon now widely known as "road rage". A 1997 New Zealand study showed that 73% of apprehended road-ragers had had previous criminal convictions²². This is consistent with the other NZ study mentioned earlier with respect to the propensity of traffic offenders to have criminal records.

Road rage is not a new phenomenon and George Lafferty has pointed out that civilised behaviour and transport have never been good companions.²³ As evidence, he quotes Jerome K. Jerome's account of a boating trip on the Thames in the 1880s.²⁴

Of course we got in the way of a good many other boats, and they in ours, and, of course, as a consequence of that a good deal of bad language occurred. When another boat gets in my way, I feel I want to kill all the people in it. A young lady who was naturally of the sweetest and gentlest disposition imaginable swore like a trooper when on the river, and would succumb to violent fits when the boat refused to perform as intended.

Chapter 21 recounts the driving behaviour of the otherwise inestimable Toad, and will be seen to demonstrate similarities to Jerome's boaters. Jerome, incidentally, is best remembered for his wonderful line:

Work fascinates me, I could sit and watch it for hours.

And then there is a wonderful stream-of-consciousness piece which the British humourists, Fougasse and McCullough, produced in 1935:²⁵

- Of course, most of the trouble on the road would be avoided if people would only cultivate a sense of proportion and stop driving much too fast in the hope of saving five minutes....
- And then they would be able to drive a perfectly beautiful machine along a perfectly wonderful road in perfect peace and toleration, as I am doing now.....

Instead of thinking they've got to roar about and hoot and risk everyone's lives by cutting in like that fellow in the blue car in front....

- Which only makes them get into a filthy state of nerves...
- And if half-baked louts like this man in front didn't glue themselves to the crown of the road and make one hoot at them till one's completely deaf...

And if half-witted pedestrians like that one didn't simply hurl themselves under the wheels whenever one appeared suddenly around a bend.....

And if this type of lorry-driving fiend didn't lumber about the roads hiding everything in front so that one has just got to trust blindly to luck every time one cuts in front of them on a corner....

And if absolute raving lunatics like this one didn't hurtle at full speed along a main road quite oblivious of the fact that we might be dashing suddenly out of a side road......

And if everything else on the road didn't take a perfectly hellish delight in getting in one's way and making one lose precious minutes and

Blast you! Will you get out of my......CRASH!

The human component of road crashes is replete with tragedy and pathos. But it does have other aspects and impacts. The *Los Angeles Times* has yet to live down its reporting of one of Clark Gable's many crashes during the leading man's long period of stardom:

The extent of his injuries is not known; however, the area in which Mr Gable was injured is spectacular and scenic.

The ways of women

The Jerome K. Jerome story above also draws attention to the little-known fact that women are not immune to irrational behaviour. Indeed, rasher male writers sometimes discuss the driving ability of women. This text is not so adventurous, but merely quotes without comment from a joint paper by two academics from China and Japan. They wrote in 1991²⁶:

From the point of view of phycology (?psychology), female lacks of decisive judgement and dealing with information.

While driving they concentrate on steering wheel and often forget other actions, e.g. forgetting indicator when turning.

Advancement of the community attracts more and more women to step into social activities - this could result in more female victims of traffic accidents.

The earliest surviving road atlas of the U.S. is a 1926 *Rand McNally*. Its section on "Things worth knowing" includes the following timeless advice²⁷:

Women drivers of motor vehicles should be given special consideration - and watching.

To counter these regrettable views of women drivers, consider the case of the Italian male driver charged with dangerous driving on an autobahn near Munich in 1993. His defence was that he took his hands off the steering wheel to investigate whether God could drive his car. God had not accepted the offer and the car had crashed. The judge sentenced the Italian for psychiatric treatment, but took no action against God²⁸.

Dame Nellie Melba was one of Australia's best known opera divas and is still one of the most famous women in Australian history. Writing in an Australian woman's magazine called New Idea in 1926 the good Dame wrote:

I honestly believe that the average woman is not fitted by nature to drive a car. Constant driving ... makes a strain on the nervous system too great for the feminine temperament. Study the face of the confirmed woman motorist ... Her eyes are staring, her forehead is puckered, her hands are often unsteady. I have seen faces flash past me on the road which seemed indeed to be the faces of mad women.

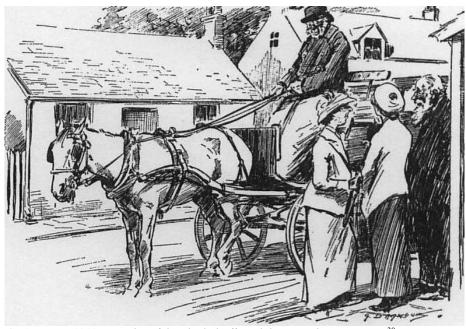
Returning to the matter of driver behaviour, recall that we learn most of our attitudes across the kitchen table or in the family car. In the 1980s the Victorian road agency, VicRoads, ran a public prize for people who submitted useful road safety initiatives, and I - reluctantly, but as an obedient employee – became one of the judges. I tried desperately to think of a way to give one of the prizes to an elderly lady who quite correctly recognised the behavioural factor in road safety and properly deduced that we drive as we live. Her solution was therefore to rectify faults in our ordinary living that would then be reflected in improvements in our driving.

So far so good, but her remedy was just a little impractical. She had observed, as we all have, that the worst traffic behaviour occurs - not on the roads - but in the aisles of supermarkets where the shopping trolleys become chariots and the shoppers are all close genetic descendants of Boadicea. She envisaged that the trolleys would henceforth have training wheels running in grooves in the floor preventing irregular steering. More importantly, priority and give-way rules would be reinforced by small electric shocks sent back through the trolley to anyone who wrongly attempted to take traffic priority in either the aisles or the checkout queues.

This Pavlovian conditioning in the supermarket would lead directly to better driving in the car-park, and even on the road, she thought. Parents might note that another contestant was certain that the Bible categorically ruled out giving driving licences to people under the age of 20.

Alcohol and crashes

Alcohol has long played a major role in crash causation. A pillar beside the A40 between Trecastle and Llandovery in Wales commemorates the death in 1835 of seven people who were killed when a drunken driver steered his stagecoach over a 40 m precipice²⁹. The Punch cartoon from 1913 gives further evidence that the problem is well-entrenched.



 G. Armour's 1913 reminder of the alcohol-affected driver in the pre-car era³⁰. The nervous tourist asks "Are you sure the driver is a sober man. He doesn't look like an abstainer." Landlord: "Well, there's no abstainer about the place, Ma'am, but he's the next best thing to it. You can't fill him full."

In Kyneton in Victoria in 1996 a police car drew behind a horse and rider, wandering dangerously and aimlessly across a busy highway. When the horse slowed, the police driver turned on his sirens and flashing lights. The petrified horse reared and fell backwards across the front of the police car. The car suffered far more damage than the horse. To even the score, the rider was charged with being "drunk in charge of a horse."

Some drivers clearly have a drinking problem rather than a driving problem. In 1991 a former Victorian truck driver was charged with his 14th offence for driving with an illegal alcohol level - indeed, his reading on this occasion was 3.1 gram of alcohol per litre of his blood, whereas the legal limit was 0.5. For many people, the 3.1 level would prove lethal. Not surprisingly, the man was also on his 11th charge of driving whilst disqualified. In his defence, his daughter said he never drove whilst sober.³¹

In Queensland, police in 1995 successfully prosecuted John Forno - a Brisbane skateboard rider - for riding under the influence of alcohol. He was tested at three times the legal limit whilst out to get a Big Mac hamburger. The 19-year-old did not hold a car-driving licence, so thought the prosecution was petty³².

However, he should not have been surprised for, in 1991, a Brisbane nightclub manager was prosecuted for riding on roller skates whilst drunk and wearing a tutu. His

alcohol level was an unhealthy 2.2 gm/l. The prosecution argued that a pair of roller skates was a vehicle³³.

This unrestrained spread of police powers within Australia continued and in 1997 Darwin police successfully charged a man in a wheel-chair with disorderly behaviour³⁴. Jeffrey was a paraplegic and one Sunday night he had been travelling down the road in his motorised wheel-chair. It was an act of some skill, as the chair was not designed to operate in traffic, and as Jeffrey was drinking alcohol from a can, whilst balancing a carton of beer on one knee and his de facto wife, clad only in her flimsy night-gear, on the other. The police arrested Jeffrey and were quite aggrieved when he gave his name as Donald Duck.

If police are not equipped to test a suspected driver for alcohol level, they will usually charge the driver with some form of dangerous driving. The classic defence is to deny dangerous driving and for the driver to counter-claim that, knowing he was being followed by a police car, he was naturally driving very carefully, as would anyone in that situation. Passengers in the car corroborate this story of beatific innocence. The following is one successful attempt to break this well-tried pattern of defence.

Prosecutor to passenger: "When did you first see the following police car, given that you did not have access to a rear-vision mirror."

Passenger: "Oh, that's easy, I saw the police car the very first time I put my head out the window to vomit."

Drinking and driving is not funny, so just one story. A drunk is driving precariously down a road, swinging wildly from one side of the pavement to the other, mounting kerbs, and proceeding more diagonally than longitudinally. A policeman stops him.

"Get out of your car, you're drunk" shouts the policeman.

The relieved drunk replies: "Thank God, I thought the steering had failed."

Well, perhaps two stories, as this one should strike fear into the liver of any potential drunken driver.

One Friday evening in the late 1980s, a Manhattan officeworker had heartily farewelled a colleague at a local bar. Somewhat inebriated, he left at about 10 p.m. and proceeded to drive home to New Jersey. In light snow, he brakes heavily on the busy turnpike. His car spins wildly, but is undamaged. However, his precipitous action causes a pile-up of ten or twelve following cars. Although nobody is seriously hurt, there is traffic chaos and the road is a mess. When the State police arrive, our man is leaning on his car, dazed, drunken and bewildered. A trooper tells him to "move out of the way and stand over there." "There" he stands, totally ignored, whilst the police concentrate on clearing away some of the more seriously damaged vehicles. No one asks for his personal details or takes any interest in his undamaged car. Impatient and forgotten and realising that he can sneak clear of all the fuss, at an opportune moment he quietly goes to the car and drives home, unrecorded, unnoticed and unimpeded. He puts the car in the garage and goes to bed.

Next morning at about 8 a.m. the police come to his door.

"Are you Mr Thomas and do you own a 1984 Lincoln, license plate RB724?"

"Yes" he answers.

- "Were you on the Turnpike at 10:30 last night?".
- "No" he answers smugly, "I arrived home at about 8, as I always do."

"Do you mind if we inspect your car?"

"Go ahead," he says confidently, "it's in the garage."

Together they walk to the garage, our hero flings open the door, and there - safe and secure - is a proudly-badged patrol-car of the New Jersey State Police.

Penalties for driving under the influence of alcohol are usually quite severe, but in some jurisdictions "severe" is an understatement, as the following 1994 list illustrates³⁵:

- * El Salvador offenders executed by firing squad for first offence
- * Bulgaria offenders executed by firing squad for second offence
- * Malaysia offenders jailed and, if married, wives are also jailed
- * Russia licence revoked for life
- * Turkey taken 30 km out of town and forced to walk home.

Ireland introduced strict drink-driving laws in 1994, leading to a significant drop in the number of road crashes. At the same time Dublin hospitals began noticing an increase in injuries suffered by people walking home from pubs. The Meath Hospital reported that³⁶:

More cases of late night falls and trips are coming in here though, thankfully, most of the injuries are not serious.

Crash prevention

Not everyone thinks road crashes are undesirable. In 1984 the NSW Law Reform Commission, perhaps intent on protecting the income of lawyers in small practices, produced a report entitled³⁷ "A transport accidents scheme for New South Wales."

Technically, crash prevention measures are often justified on the basis of the number of lives that the measure would save. This is a line of reasoning that is not widely understood. Thus, a public claim by Victorian Transport Minister Tom Roper in March 1986 that his Blackspot program had already saved 35 lives, prompted one Melbourne reporter to write³⁸:

Knowing the Roper talent for self-promotion, many parliamentary observers are now waiting for him to introduce the 35 lucky souls to the public at a media conference.

Politicians sometimes have a Canute-like view of road safety. In 1978 the Victorian Parliament unanimously passed a resolution calling on all motorists to make the next weekend "death free" on the roads. The Police Chief and the Anglican and Catholic Archbishops added their public support. Nine people were killed on the roads that weekend, compared with six and five in the previous weekends³⁹.

This event possibly marked the end of the era in which road safety campaigns were based on appeals to Christian virtues and gentlemanly behaviour. In this middle of that era, the NSW motorists' club (NRMA) in 1933 had given its solution to a growing road safety problem as⁴⁰: "Let us have as many gentlemen on the road as possible." Well, it got its wish, but not its solution.

This is perhaps the time to explore national driving differences a little further. B. J. Campbell, one of the world's leading road safety experts, committed the following indiscretion in no less a place than the *Journal of Traffic Medicine*, so it must be true:⁴¹

I am always reminded of a study of seat belt usage rates carried out in Switzerland a few years ago. Though the law was, of course, the same throughout the country -and one would assume the enforcement was too (though I am in no position to know that), one is still amused by the fact that belt usage rates were highest in the German part of Switzerland, next highest in the French part, and lowest in the Italian part. How is it that this specific behaviour somehow corresponds so well to the cultural stereotypes?

Of course, all experts are dangerous, not the least road safety experts. Recall that studded tyres are used to improve driving in snow conditions. After taking advice from a European expert, one of the main objectives of the 1982 road safety program in equatorial Gabon was to introduce regulations encouraging the use of studded tyres.

And being a road safety expert does not guarantee immunity from road crashes. Professor Brian Fildes was the RACV Professor of Road Safety at the Monash University Accident Research Centre. In May 2000, Brian was hospitalised with five broken ribs after having been hit side-on by another car that had driven through a set of red lights. The car was fitted with side air-bags. The Director of the Centre said:⁴² "We expect our staff to be dedicated, but not that dedicated."

A number of road safety studies which have shown that people who don't wear seat belts are more likely to have a crash than those that do. This is nothing to do with the seat belt, but reflects the fact that most crashes are caused by driver attitudes. An attitude that leads a driver to not fasten his or her seat belt, is also one that leads to driving at high-risk levels. A comedy line from the 1960's ran: "Seat belts are a waste of money - I had them fitted and I still kept having accidents."

Nevertheless, be reassured that seat belts have had a major impact on the severity of crashes. As evidence, in the early 1980s an Irish coroner ruled that the injuries suffered by a person killed in a road crash would have been much more severe if the victim had not been wearing his seat belt.

Another successful crash-prevention measure relates to the elimination or protection of road-side objects. In the early 1980s I argued in an Australian engineering magazine that roadside poles should be removed as they were a safety hazard for drivers who ran off the road.⁴³ Letter writers subsequently decried my suggestion – "errant drivers deserve everything they hit and, besides, the poles protect pedestrians." Spot at least three errors in this claim.

Notes on Chapter 15

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