

The Direction of Travel: *Motoring from The Past to The Future*



Introduction & Aim



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Cover images: The Old Mill, Bourton-on-the-Water, today home to the Cotswold Motoring Museum and Toy Collection and cars associated with the museum.

Source of right-hand image above: Metropolia University of Applied Sciences, Helsinki, Finland.

Introduction

What a visitor may expect to see on entering the Cotswold Motoring Museum & Toy Collection (CMM&TC) is fairly evident from the name. However, the purpose of any museum is more than to just conserve objects of rarity, beauty and historical significance. The purpose is also to understand the origins of those objects; the needs of the people who invented and built the objects, the social pressures that led to their development and the impact that those objects had on their lives and the lives of subsequent generations. If our future actions can be influenced by the objects exhibited or the history of those objects, then one of the purposes of the museum has been fulfilled.

There is clearly a practical constraint (and visitor boredom threshold) around the level of detail that any museum exhibition can explore. This, together with the rationale in the opening paragraph, is the main reason that the CMM&TC has used web-based background information to exhibitions that have run at the museum since 2009. These have included:

- The Impact of Motoring on the World Today
- A History of Motoring in 10 Objects
- The Impact of the Internal Combustion Engine
- The annual, changing display, such as “The 40-year Flashback” in 2018

and were all intended to supplement the associated exhibitions with much greater detail than is possible within the museum. Generally, they survive on the website even after some of the exhibition hardware has been returned or replaced.

The purpose of this book is to focus on a few of the most significant objects in the museum and look at the role those objects have played, directly and indirectly, in both the history and the social impact of motoring. Whilst there is an element of factual detail necessary to ‘tell the tale’ the book also steps back from the objects themselves to pose questions about our dependence on the car, the wider environmental impact of that dependence and where this might be leading us; our “Direction of Travel”, as well as offering some answers to these questions.

This is not a book extolling the virtues of the car – great though these have been in social transformation over the last 130 years – to the exclusion of all else. This book attempts to take a balanced view on the benefits and threats associated with the 20th century rise of motoring and to anticipate how the historian of the 21st century may view the evolution of this most disruptive of technologies. In particular, the approach adopted is one that focuses on the vehicle owner, what are his or her responsibilities? What can we do to ensure that this convenient, ingrained method of transport can survive without threatening the future wellbeing of our children and grandchildren and, in the extreme, even the planet that we share with the rest of the natural world?

Staff and volunteers of the Cotswold Motoring Museum

Aim of the book

In 1886 Karl Benz was granted a patent for the world's first four-stroke, internal combustion engine powered car. Meanwhile, in Britain, the restrictive "Red Flag" Road Acts of 1861 and 1865 killed off any development of engine propelled road vehicles, whilst development in Continental Europe and in the USA surged ahead.

In 1895 the Honourable Evelyn Ellis MP imported a French Panhard et Levassor; the first commercially available petrol engine car to run in Britain. This car is currently in the London Science Museum. By the end of 1895 there were 14 or 15 cars on the UK roads. By 1905, nine years after the repeal of the "Red Flag" Acts, things had changed. There were 221 UK motor manufacturers, the majority in the Coventry area, and 15,895 cars (and 9,000 trucks) were registered under the Motor Car Act in that year¹. Today there are over 38 million registered vehicles, including over 31 million cars.

These are some of the most basic facts around the early years of motoring in the UK. To summarise the influence that motoring has had on our mobility, prosperity, environment and technology over the last 130 years is an exercise in deciding what to omit. Whilst the impact of the railways in the decades preceding the appearance of the car in this country would have changed aspects of life from time keeping to social mobility, arguably their effect was surpassed by that of the car.

The car has provided the freedom to travel independently for work and pleasure changing the nature of rural, suburban and urban life. Commuting to work via 40 miles of 'A' and 'B' roads may, at one point in time, have been deemed unfeasible but with the arrival of the motorways, a 40-mile commuting journey is not uncommon. The car has required and initiated an associated infrastructure, from road networks to fuel supply to sales and repair outlets in order to support its relentless progress. Toys, clothing, publications and all manner of leisure goods have followed the progress of the car. From a technological point of view, the car of today would leave a 1960s motorist open-mouthed in amazement. The rise of services around the car-centric society – maintenance, insurance, accessories - could not have been imagined 130 years ago.

Globally, the influence of the car, its operating environment and our requirements for fuel and raw manufacturing materials, such as rubber, have led to corresponding global phenomena ranging from converging global legislation on new car performance, to new political alliances, to war.

This book has been structured to address the consequences of our ownership and use of the car as they flow from the personal decisions that we all make as we go through our motoring lives. The focus is on the impact of motoring and the responsibility that we have, as motorists, to mitigate that impact on our planet. It includes, but is not limited to, the technology we adopt, the environmental implications of our choices and the usage that we choose to make of our chosen transport.

¹Figures from SMMT Centenary publication 1896-1996

The specific topic of air pollution, arising from industrialisation and the rise of motoring throughout the twentieth century, is addressed in Part 1 of this book. Whilst, in the minds of some politicians (but few scientists), the jury may still be out in the debate over the effect of increasing levels of atmospheric carbon dioxide (CO₂) on global warming and ocean acidification, there are a few undisputed facts that are relevant to that particular debate. Firstly, today the average concentration of atmospheric CO₂ has reached, and now, on an annual average, exceeds a level of [400 parts per million](#) (ppm). By comparison, pre-industrial levels were around 280ppm. Secondly, in road transport as well as other energy consuming sectors, the Earth's natural resources of minerals and fossil fuels are being irreversibly consumed. These facts beg many questions but two of the most salient are:

“Is this morally defensible behaviour on the part of a few generations of the population of the world’s most developed countries?”

and, closely related,

“Is this a fair legacy to bequeath to our grandchildren and those in less developed parts of the world?”

It is easy to assume that the response to such fundamental questions must lie with the governments of the developed world but, in fact, there are actions that we as individuals can take which, if widely adopted, can make a significant difference.

The way in which the developed world uses our natural resources such as water, minerals, forests and even the Earth's atmosphere and oceans can be critically debated across many aspects of modern life; especially in the context of a so called 'throwaway society'. Arguments could be made in many fields:

- fashion, in which goods may be produced in poor, third world conditions by people who are paid a barely living wage
- food production processes high in water usage, animal feed requirements, wasteful human consumption habits and use-once-then-discard packaging
- consumer goods where rare minerals – some from conflict zones of the world - form intrinsic components of modern mobile phones, electric motors and televisions, some of which can frequently be regarded as 'fashion' items with a life not necessarily determined by continued, fault-free operation.

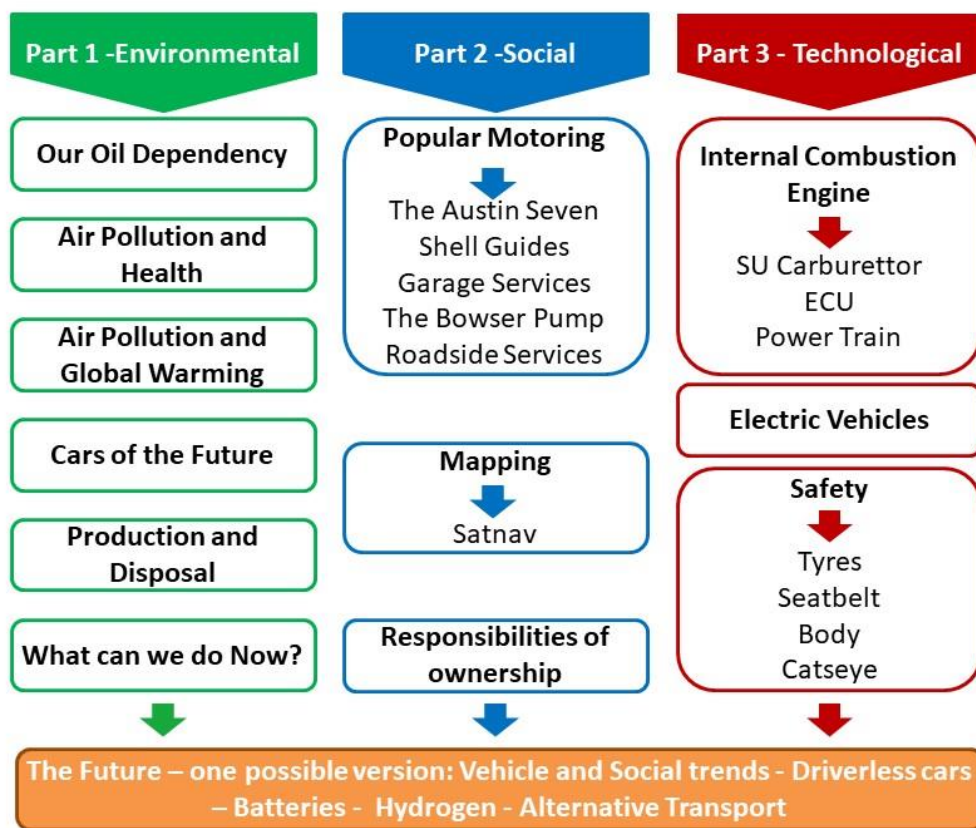
Inevitably, counter-arguments exist to each of the above bullet points. These include benefits such as employment opportunities, individual and national prosperity, improved health and life expectancy, better cross-cultural understanding, to name but a few. Common themes are readily spotted between these aspects of modern life and the world of motoring but it is motoring that is the focus of this book. Experience and lessons learned from the world of the car may well carry over into wider aspects of human behaviour and the pros and cons of more than a century of motoring will be presented, as far as possible, as a balanced view.

What influences our decision when we go out to buy a new car? It is generally true that once make, model, performance, colour, comfort and affordability are selected, rationalising a choice of new car based on emissions of carbon dioxide (CO₂), oxides of nitrogen (NOx) or particulate matter (soot) have not until recently, figured too highly in our priority list. We will assume (for now) that all new cars comply with the ever-increasingly stringent levels of emissions legislation. If the model 'A' produces 160g/km of CO₂ whilst model 'B' produces 130g/km of CO₂, but 'A' has alloy wheels and Bluetooth connectivity, the chances are 'A' is going to win our hard-earned cash. Even if the question fleetingly passes through our mind, then a balanced view to 'put this into perspective' would run something like:

- my decision isn't going to make much difference
- anyhow, in the transport sector, car transport isn't the biggest polluter, what about all those lorries? [[Car transport *is* the biggest polluter – there are just so many of them](#)]
- and the transport sector isn't even the biggest polluter, how about manufacturing, power generation, agriculture? [[Actually, in the UK, transport has now overtaken all those listed as the largest generator of CO₂](#)]
- western Europe has targets for reducing pollution; it *is* going down, what about developing countries aren't they much worse offenders? [[True globally, but the adverse health impact of particulates and oxides of nitrogen are as close as your local high street or school playground](#)]
- if man-made CO₂ is one cause of global warming, this isn't all bad news. A little bit of warming will bring benefits [[but life-changing problems for others](#)]
- and so on

So, model 'A' it is then!

The above is just one, slightly flippant, example of a choice that the motorist may make at one or more points in their life. Individual choices in motoring are much more extensive and frequent than this. Is it possible that responsible choices on the part of the motorist *can* contribute to mitigating the effect of modern motoring on our environment and if so, is it enough to warrant the effort? Does exercising such choices just make us feel virtuous, like flicking the light switch off when we leave the room, or can it really make a difference? If so, then what are the areas where we, as consumers, can make that difference? Lots of questions! This book attempts to have a stab at some answers.



Topics from the Contents diagram, shown above, form chapter headings throughout the book.

Looking at the contents of the book, there are clearly many topics that could have been selected for a debate on the impact of motoring but the three main parts of the book, Environmental, Social and Technological are almost guaranteed to feature in any debate. The associated topics (shown below the arrows) are not essential to the continuity of the book but provided an extra insight into a main theme, such as the Internal Combustion Engine.

The Cotswold Motoring Museum and Toy Collection is not just about cars. Toys that our parents and grandparents played with as children, everyday artefacts from the Victorian and Edwardian era plus an insight into the social history of the village of Bourton-on-the-Water and much more can be found in the Old Mill, alongside the River Windrush.

