

THE RIPPLE EFFECT OF DRIVERS' BEHAVIOUR ON THE ROAD

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A study on drivers' behaviour
Executive Summary



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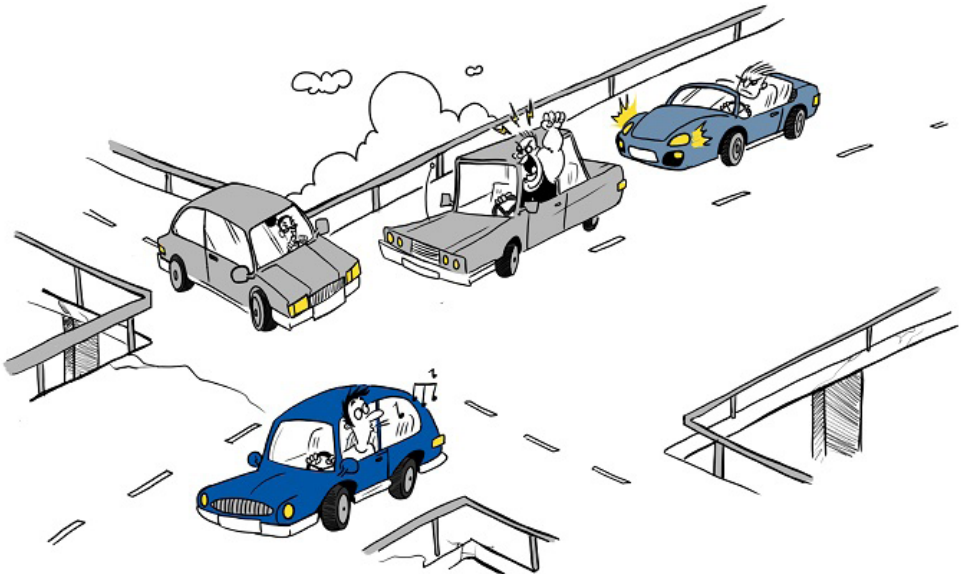
INTRODUCTION

This report examines how 'ordinary, everyday' drivers can get involved in antagonistic interactions with other drivers, in what we term 'combative driving', and how those same drivers engage in co-operative interactions with other drivers, in what we term 'considerate driving'.

When negotiating road space with others, drivers frequently apply the logic of reciprocity. Since many interactions are fleeting the reciprocity is often indirect: when one driver is helpful to you, you are more likely to help another. Whilst much less frequent, the converse can also

be true: when one driver impedes you, you are more likely to be less helpful to, or possibly even to impede, another. As a result, the very behaviours which we find provocative in others are the same behaviours we sometimes engage in as a consequence.

This research has been conducted in close co-operation with Goodyear to build on research the company has undertaken in previous years on various aspects of road safety, in particular analysing the specific issues of novice drivers and the relationship with their parents and driving instructors.



SCRIPTS

We use the psychological concept of scripts to characterise the different ways in which people engage with the task of driving. At a simple level a script might be the sequence of driver behaviours required to negotiate a roundabout. At a more general level, a script might encompass the overall orientation a driver brings to a journey, such as aggressive and urgent, or laid back and calm, an

orientation that organises many of their interactions with others on that journey. Scripts are normative guides to our own behaviour and expectations of the ways that others will behave, so that when another driver fails to follow scripted behaviour we experience this as if it were a breach of a moral code, and can become angry as a result.

RESEARCH METHODS

We used a combination of focus group interviews and survey data to research how drivers experience their interactions with other drivers. A key element has been the recruitment of members of the public to use helmet-mounted cameras to film their own driving. The films were then used to conduct structured interviews with them, and to stimulate discussion within the subsequent focus groups. The results of the interviews and

focus groups directed the survey design. We also embedded film clips in the survey to encourage realistic responses to specific driving situations rather than more general responses to abstract statements about being on the road. We recruited and interviewed nine drivers, and held five focus group discussions in the UK and Italy, with 41 participants in total. We surveyed 8,971 respondents across 15 countries.





COMBATIVE AND CONSIDERATE DRIVING

The focus group and driver interview material provides rich insights into how drivers interact with others on the road. Participants gave detailed descriptions of the situations, and their own behaviours in response to them, which will be very familiar to most drivers. With Goodyear we drew attention to some of these behaviours in an early press release. What is clear from this data is that all drivers can interact both negatively and positively with their fellow road users. While other research rightly draws attention to the challenge of identifying specific problem drivers who are prone to dangerous behaviour, our research demonstrates the need to recognise also how different contexts can make anyone drive more dangerously – even if they would normally not be considered to be problem drivers. Setting aside factors such as weather conditions or fatigue, an essential part of the context that can lead

us to drive dangerously is the interactions we have with other road users as a journey unfolds. Drivers respond to others in these interactions. Our survey data suggest that the different scripts people follow in their interactions with other road users can be grouped according to whether they are 'combative' or 'considerate'. An important element of combative driving is a possibly excessive sensitivity to contextual factors, leading to a readiness to be provoked by others' perceived failings. Use of these combative and considerate scripts was measured by scales developed from our survey. Most drivers are considerate most of the time. However, for some people the use of combative scripts is cued by the context more readily than for others. The usefulness of these scales is demonstrated by their capacity to predict how people read the video scenes presented to them as part of the survey.

UNWRITTEN RULES

All jurisdictions provide detailed definitions of the right of way between interacting drivers, but in practice road users apply these flexibly to respond to varying circumstances and expect others to do the same. In the survey we asked: 'Do you think there are unwritten rules about how one should behave towards other drivers? By 'unwritten rules' we mean shared expectations of how one should behave, which are not included in formal written driving laws'. 88% of respondents said yes. Most agree that much of the content of these unwritten rules is 'etiquette', but they also encompass the flexible versions of the codified

rules of the road that we apply all the time: e.g. in slow moving traffic, even though it is your right of way, you might well allow another driver to join the flow of traffic, and the other driver might well expect you to do so: afterwards, you would expect them to make a gesture of thanks. These 'unwritten rules' are another example of the scripts we follow as drivers. Important sources of conflict on the road arise from misunderstandings when drivers follow different scripts (e.g., when they interpret the written rules differently), and when there are difficulties in communicating which scripts they are using.

CHANGE THE SCRIPT, CHANGE THE DRIVING

These results suggest targeting interventions to encourage drivers to follow considerate scripts in situations where it might be easy to follow combative scripts and so begin a chain of antagonistic interactions with other drivers. Building on Goodyear's interest in improving road safety by improving driver education and encouraging lifelong learning, we believe there is much scope for interventions that get drivers to see interactions on the road from multiple perspectives, for example by using video of simple interactions from the perspective of all participants. This would make the range of different possible scripts more evident

to them. Combative driving goes hand in hand with a narrowing down of the driver's focus to their own perspective alone. Drivers who agree that we all have a part to play in keeping the traffic flowing safely often forget this when they are impeded, and focus instead on the personal insult they feel they have suffered. Multiple perspectives can remind drivers that their own combative driving imposes the same insults on others, and opens up awareness of more considerate scripts. Such methods could encourage the reduction of antagonism by meeting a combative script with a considerate script.

CHANGE THE SCRIPT, CHANGE THE DRIVING

Both in the focus groups and the survey, drivers expressed a readiness to consider refresher driving courses. Making these available widely online to improve accessibility and reduce costs, and incentivis-

ing take up by, for example, reductions on insurance premiums, would all help. We propose analysing the use of video-based courses that encourage taking the perspective of other road users.



DRIVERS ARE WARY OF THE PROSPECT OF DRIVERLESS CARS, FOR THE MOMENT

Since we were asking our participants about their interactions with other drivers, we also explored how they felt about the prospect of autonomous, or driverless, vehicles. Such vehicles, by definition, would be unlikely to have the flexibility needed to respond to unwritten rules. For the moment a majority are still wary, prompted by a generalised concern about the reliability of machines, and a generalised belief that machines do not understand humans well enough to interact with them. Such wariness

is common with new technologies that require substantial social change. However, about one third of all drivers (32%) say they would already be comfortable sharing the road with autonomous vehicles. These supporters give their principal reason as a concern about the reliability of humans as fellow drivers. This suggests that people might be persuaded in favour of driverless cars, since we all share awareness of the potential for human error.

COUNTRY DIFFERENCES

Our report details some of the differences across countries in the survey responses. Countries where the road infrastructure is less developed, and mass access to road transport is more recent, are likely to afford more challenging and stressful driving contexts, encouraging more combative responses from our survey respondents. Some major cities do the same, with respondents from London,

Istanbul, Rome, Prague, and Paris measuring considerably more combative than the average for the rest of the respective country. There are of course multiple factors behind the driving culture in different places, but to the extent that we can develop interventions to nudge the driving culture in a more considerate direction, these might most usefully be targeted at these environments.



CONCLUSION

This research demonstrates the importance of trying to improve the quality of 'ordinary, everyday' interactions between drivers. We propose the testing of initiatives to encourage greater awareness of the perspectives of the other drivers we interact with. Drivers themselves create the very environment they often find stressful and to which they can respond combatively: more considerate driving would generate more considerate driving. Just as combative driving can generate a chain of indirectly reciprocal provocations between drivers, considerate driving can create a ripple effect of safer journeys.



**To receive a copy of the full report,
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ABOUT GOODYEAR

Goodyear is one of the world's largest tire companies. It employs approximately 66,000 people and manufactures its products in 49 facilities in 22 countries around the world. Its two Innovation Centers in Akron, Ohio and Colmar-Berg, Luxembourg strive to develop state-of-the-art products and services that set the technology and performance standard for the industry.

ABOUT LSE

The London School of Economics and Political Science (LSE) is one of the foremost social science universities in the world. LSE is a specialist university with an international intake and a global reach. Its research and teaching span the full breadth of the social sciences, from economics, politics and law to sociology, anthropology, accounting and finance. Founded in 1895, the School has an outstanding reputation for academic excellence. 16 Nobel Prize winners have been LSE staff or alumni. The School has a cosmopolitan student body, with around 9,500 full time students from 140 countries. LSE has a staff of over 3,000, with about 46 per cent drawn from countries outside the UK.