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Driver psychology: skill deficit and attitude deficit

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TODAY'S TOPICS

A definition of driving

Ambivalence: why we love and hate cars

Why driving is difficult (and why women are better drivers)

Breaking the rules: 3 types of speeders

Behaviour at speed cameras

Two fascinating facts about the present and the future

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Driving

is a **skill-based, socially regulated, expressive** activity involving:

balancing capability and task difficulty to avoid loss of control of the driving task,

along with real time negotiation with co-present transient others with whom the driver is presently sharing the public highway to avoid intersecting trajectories,

while maintaining or enhancing the driver's mood and self-image.

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Driver Safety
WORKSHOP



drive smarter
Training Solutions for Safe Work Driving



Help!



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DRIVING IS DIFFICULT

- Strategic tasks- Activity choice, mode and departure time choice. Discern route alternatives and travel time.
- Navigation tasks- Find and follow chosen or changed route; identify and use landmarks and other cues.
- Road tasks- Choose and keep correct position on road.
- Traffic tasks- Maintain mobility ('making progress') while avoiding collisions.
- Rule tasks- Obey rules, regulations, signs and signals.
- Handling tasks- Use in-car controls correctly and appropriately.
- Speed task- Maintain a speed appropriate to the conditions.
- Secondary tasks- Use in-car equipment such as cruise control, climate control, satnav without distracting from performance on primary tasks.
- Mood management task- Maintain driver subjective well-being, avoiding boredom and anxiety.
- Capability maintenance task- Avoid compromising driver capability with alcohol or other drugs (both illegal and prescription), fatigue or distraction.

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Driver taking a short cut driving the wrong way on a 1-way street

Driver remaining in lane 2 or 3 on motorway when lane 1 is empty

Driver overtaking on the inside at speed

Driver taking the wrong lane at a roundabout, causing confusion

Driver mounting the kerb to avoid stationary traffic

P2W rider crossing a solid white line to overtake

P2W rider cutting corners on country road at speed

Driver stopped doing 51mph in a 40mph

Driver clocked doing 38mph in a 30mph

Driver changing lane on a dual carriageway without signalling, causing non-injury collision

What Do These All Have In Common?

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FAILURES
OF
INITIAL
SOCIALISATION
OR
TRAINING

Driver stopped doing 51mph in a 40mph

Driver doing

THESE PEOPLE NEED HELP!

non-injury collision

What Do These All Have In Common?

RIDE

P2W rider cutting corners on country road at speed

P2W rider crossing a solid white line to overtake

SPEED AWARENESS

Driver clocked doing 38 in a 30

Driver stopped doing 51 in a 40

DRIVER ALERTNESS

Driver taking a short cut driving the wrong way on a 1-way street

Driver changing lane on a dual carriageway without signalling, causing non-injury collision

DRIVING 4 CHANGE

Driver remaining in lane 2 or 3 on motorway when lane 1 is empty

Driver taking the wrong lane at a roundabout, causing confusion

WHAT'S DRIVING US?

Driver overtaking on the inside at speed

Driver mounting the kerb to avoid stationary traffic

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Exceeding the speed limit: extent of

- Drivers indicated **how often** they had in the previous 3 months:
- ‘Driven in a built up area (where there is a 30 mph limit)’ at
 - 35 mph
 - 40 mph
 - 50 mph
- ‘Driven on a single carriageway A road (where there is a 60 mph limit)’ at
 - 70 mph
 - 80 mph
- ‘Driven on a dual carriageway (where there is a 70 mph limit)’ at
 - 80 mph
 - 90 mph.
- Responses were made on 6-point scales from 1 ‘Most days’ to 6 ‘Never’.
- 686 respondents had driven on all 3 road types within the previous 3 months and their responses were analysed.

Exceeding the speed limit: extent of

Percent in each cluster reporting Rarely or Never exceeding speed limits

‘Within the last 3 months, how often have you ...’	C1	C2	C3
Driven at 35 in a 30 limit	81	2	3
Driven at 40 in a 30 limit	100	67	22
Driven at 50 or more in a 30 limit	97	98	76
Driven at 70 on a single carriageway A road (60 limit)	88	62	5
Driven at 80 or more on a single carriageway A road	98	96	52
Driven at 80 on a dual carriageway (70 limit)	88	60	8
Driven at 90 or more on a dual carriageway	99	97	50
Total no of exceeds (of 7)	1.62	3.76	6.09
% of sample	52%	33%	14%
‘To blame’ RTCs last 3 years	8%	10%	19%

Exceeding the speed limit: motives for

‘How likely are you to break the speed limit in the following circumstances?’

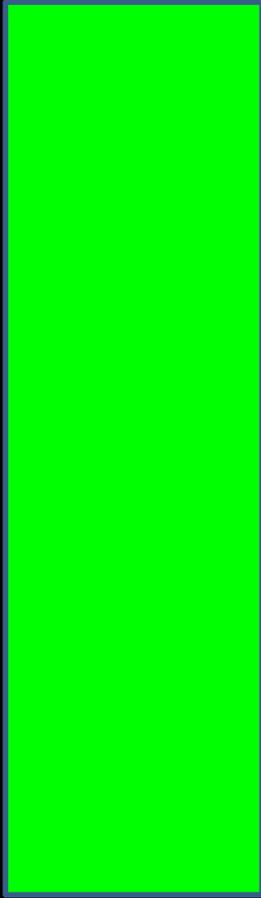
% Very + Quite likely

N=567	F1	F2
On an empty road, in the daytime	39%	
On an empty road, at night	40%	
When overtaking	63%	
Just to keep up with traffic	45%	
	55%	
When I am feeling stressed	14%	
When I am feeling angry		15%
In order to stay awake		2%
When trying to see what my car can do		7%
When someone is driving close behind me		15%
		9%

- Factor 1 **external pull:** 55%
- Factor 2 **internal push:** 9%

Percent of each speeder group who reported 'to blame' RTAs

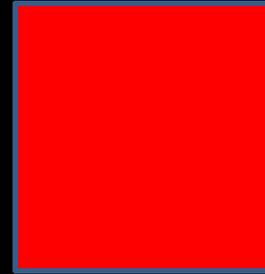
	Compliants	Exceeders	Excessives
Overall: 10 %			
Neither	6 10		7 _a %
Opportunistic speeders only	13 9	13	9 _a %
Opportunistic and reactive		16	26 18 _b %
	8 _a % 10 _a %	19 _b %	N=644
[Strongly Agree + Agree]		<u>All</u>	<u>'Worst Case' Group</u>
'I really enjoy driving fast'	20%		39%
'I think it will always be difficult for me to keep to the speed limit'		20%	78%
'When driving I like to feel at risk'	3%		16%



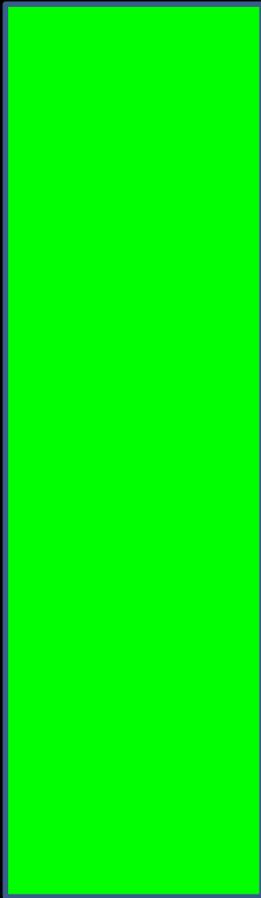
SAFE –
Ignore



REMIABLE –
Retune

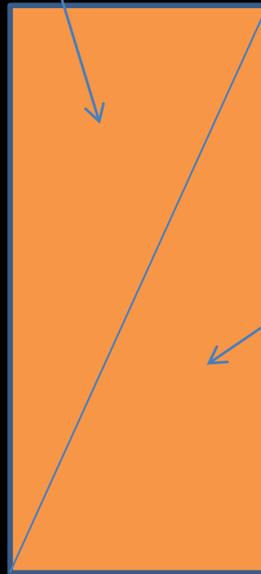


DANGEROUS –
Prosecute



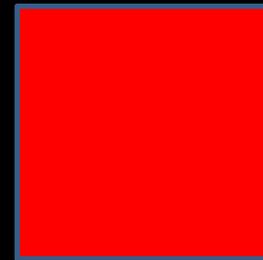
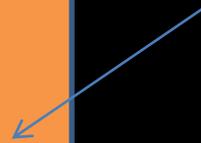
SAFE –
Ignore

SKILL DEFICIT



REMIABLE –
Retune

ATTITUDE DEFICIT



DANGEROUS –
Prosecute

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Self-reported behaviour at 30 mph speed camera in built-up area

				HUSSAR		SA	
				UK n=1,066		n=1,062	
	Before	At	After	Total		Total	
				%	%	%	%
Conformer	30	30	30	47%		24%	
Nervous conformer	28	25	28	16%	63%	9%	32%
Complier	35	30	30	11%		22%	
Late complier	35	35	30	0%	11%	7%	29%
Full manipulator	40	30	40	24%			
Partial manipulator	40	30	35	5%		5%	
Released manipulator	30	30	40	7%	26%	3%	32%
Defier	50	50	50	0.9%	0.9%		7%

Self-reported behaviour at 30 mph speed camera in built-up area

	Before			At		After		HUSSAR UK n=1,066		SA n=152	
	%	%	%	%	%	%	%	Total	Total	%	%
Conformer	30	30	30	47%				24%			
Nervous conformer	28	25	28	16%	63%			9%	32%		
Skill deficit											
Complier	35	30	30	11%			22%				
Late complier	35	35	30	0%	11%			7%	29%		
Full manipulator	40	30	40	24%							
Partial manipulator	40	30	35	5%			5%				
Released manipulator	30	30	40	7%	26%			3%	32%		
Attitude deficit											
Defier	50	50	50	0.9%	0.9%					7%	

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Car as parasite

Were the automobile an organism we would deem it as having been remarkably successful in carving out an environmental niche and in adapting the behavior of its host to its requirements. In little over a century cars have colonized the planet.

Future historians may well characterize the twentieth century as the century of the fossil-fueled car, during which around one billion cars were manufactured of which over half a billion (500 million) are currently occupying the streets, garages, car parks and grass verges of the world.

Germany: 2-3 million new cars a year

China: 20-30 million new cars a year

2 types of driverless cars:

High automation – cars with a qualified driver who can take control of the driverless car.

Full automation – vehicles where there is no need for a driver.

UK Technology Strategy Board:

“Driverless cars will improve people’s lives and the way they travel, improve the world’s towns and cities, create opportunities for the UK automotive sector and related industries, and have a large impact on the way towns are designed and engineered.”

High automation driverless cars will require
CONTINUOUS PARTIAL ATTENTION
maintaining readiness to intervene. Might be straightforward for young persons used to monitoring a variety of platforms for high valence signals; for the rest of us, forced into low engagement with the primary task of driving,
it will be
VERY TIRING and DANGEROUS.



THANK YOU. SAFE JOURNEYS.

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