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Seatbelts and the dynamics of policy and practice: Revisiting successful behavioural change

Nicola Spurling and Andy McMeekin, University of Lancaster

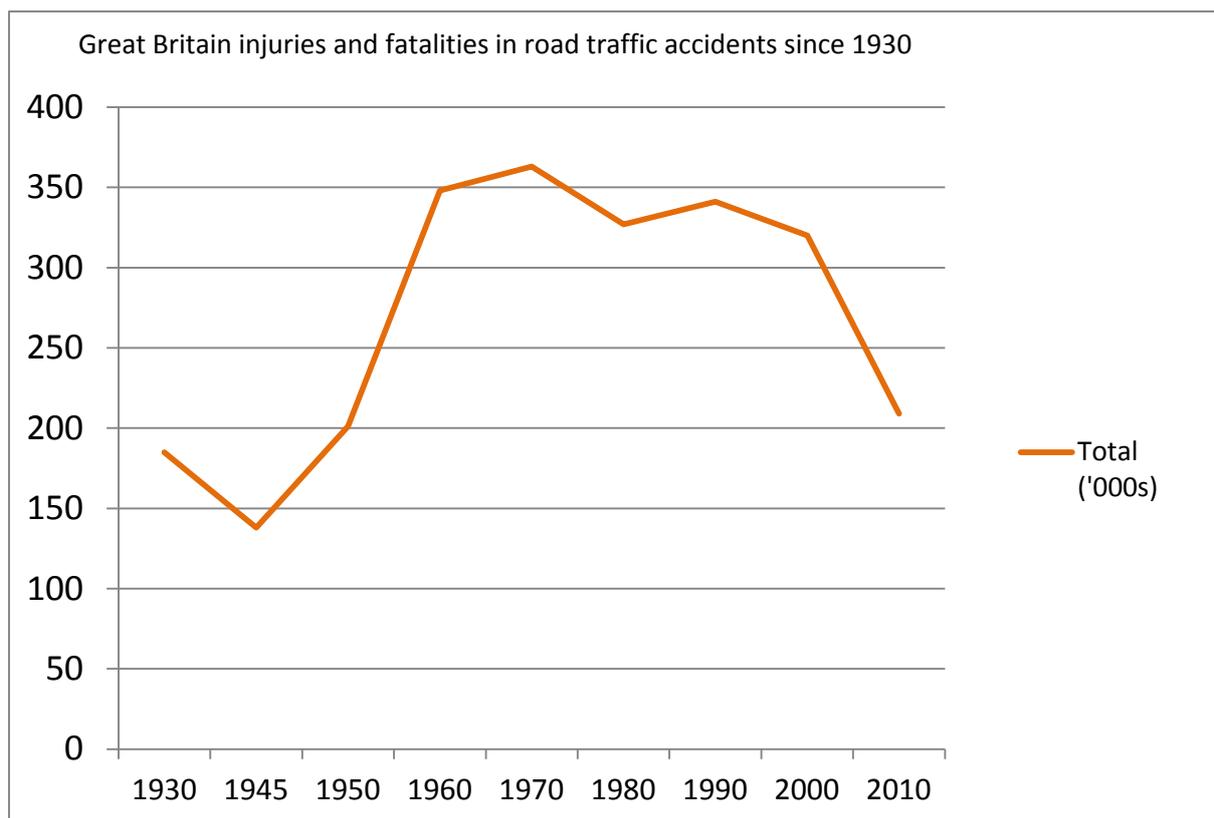
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Section 1: introduction

The central message in this section is that within the UK road safety is a policy 'success story', and that within that, seatbelts policy is a behaviour change 'success story'.

The paper presents one aspect of some work that Andy and I have been undertaking about interventions in practices. Our overarching research question is 'how might we look at intervention (differently) if we take social practices as our starting point?' In this piece of work we focus on road safety and more specifically within that, at the history of interventions related to seatbelts. We focus on road safety as it can be viewed as a 'policy success story' in which multiple interventions have shifted the practice of driving. We focus on seatbelts policy, as it is often referred to as a behaviour change success story. We wanted to dig deeper into these policy success stories and the potential explanations for them.

The chart below illustrates the success of road safety interventions in Great Britain.

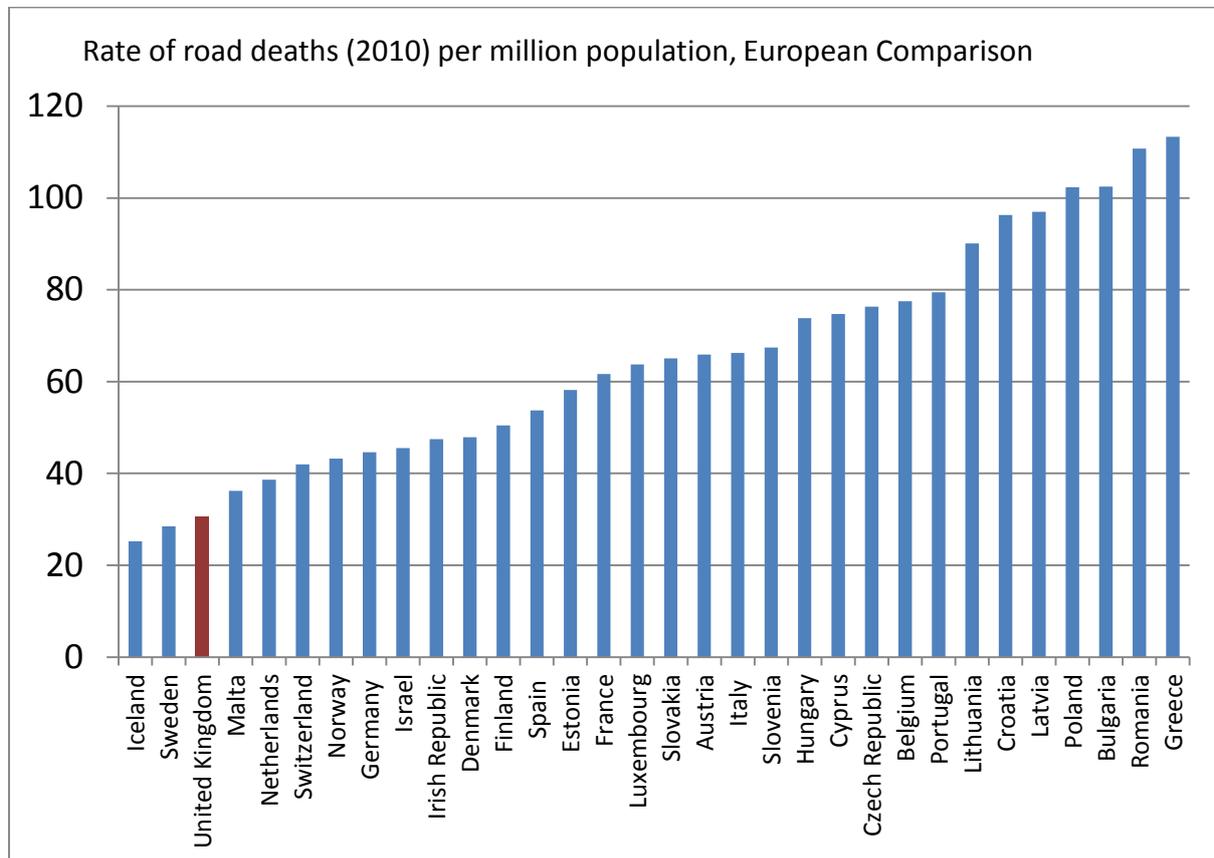


The chart shows injuries and fatalities in Great Britain since 1930 (Department of Transport Statistics). If we think about increased road distance, the number of vehicles and volume of traffic, and increased travel speeds, then we see that such a trajectory is not the only possible one, and is actually somewhat surprising. Since the 1960s injuries and fatalities have decreased – these figures

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peaked in 1966 at which time there was a big policy push to address the road safety problem – it would seem that intervention has been successful since then.

Similarly if we look at the UK in comparison to the rest of Europe, we see that the rate of road deaths in the UK is much lower. Only Iceland and Sweden have a better records than us – and driving is so different in these countries – low volumes – that we would probably expect this.



Within this context, seatbelts in particular provide a potential example of successful intervention to change behaviour. Legislation for the compulsory wearing of seatbelts was introduced in the UK in 1983. Due to the pre-emptive compliance with the pending legislation, by February 1983, 90% of drivers were wearing seatbelts. These numbers have remained high ever since then. Models estimate that over the past 25 years, seatbelts have saved approx 60,000 lives and prevented 600,000 serious injuries. As such, within the discourse of ‘behaviour change’ that has swept through government across the past decade, the example of seatbelts is often used as an exemplar. For example, Avineri et al’s report for the department of transport on behaviour change in transport and health draws on the example to suggest that:

“The notable success of this example of behaviour change can be attributed to: clear and unambiguous legislation; clearly evident benefits; high quality media campaigns preceding and accompanying legislation; vociferous support outweighing the presence of vociferous opposition.” (Avineri et al, 2009:5)

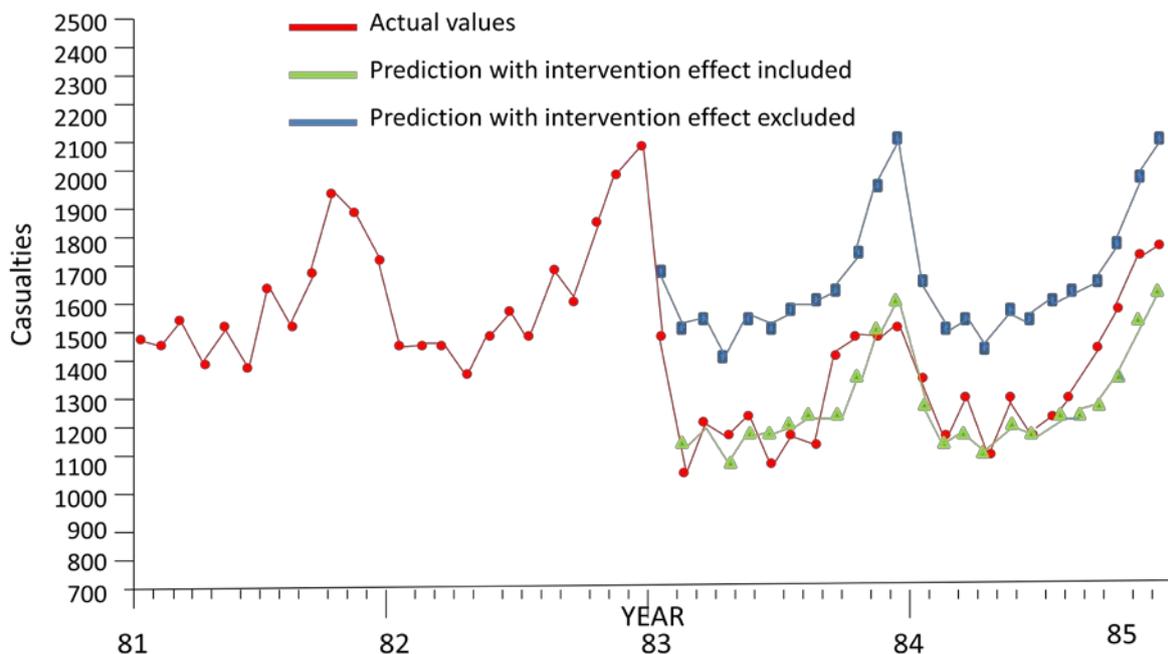
In this paper we problematise some of these explanations of seatbelt success. We revisit the case of seatbelts and ask *what other explanations are there for this large-scale, observable change in behaviour, in which wearing a seatbelt has become a normal aspect of driving a car?* So, we are

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drawing on an idea of 'practice' to frame our question, and interested in what happens when we do that.

Finally, on the point of seatbelt success, this chart below shows part of an evaluation of the seatbelts legislation. Initially the legislation for the compulsory wearing of seatbelts was temporary – it was a pilot – and the success of the legislation was to be evaluated after 3 years. There were two official evaluations commissioned by government. This graph is from one of the evaluations by Harvey and Durbin (1985). The red line shows actual numbers of killed and seriously injured, the green line shows Harvey and Durbin's model which includes the effects of the intervention, and the blue line shows the model excluding the effects. The model suggests that the reduction in killed and serious injured (actual values) is 'caused' by the seatbelts legislation, and that without this intervention KSI figures would have continued in the usual pattern (e.g. with monthly variation and a peak each January). So the main evaluation drawn on by government, reinforced the idea of seatbelt success (in terms of both changed behaviour, and of a reduction in KSI).

Car drivers killed and seriously injured from Harvey and Durbin, 1985:206



Section 2: Methodology

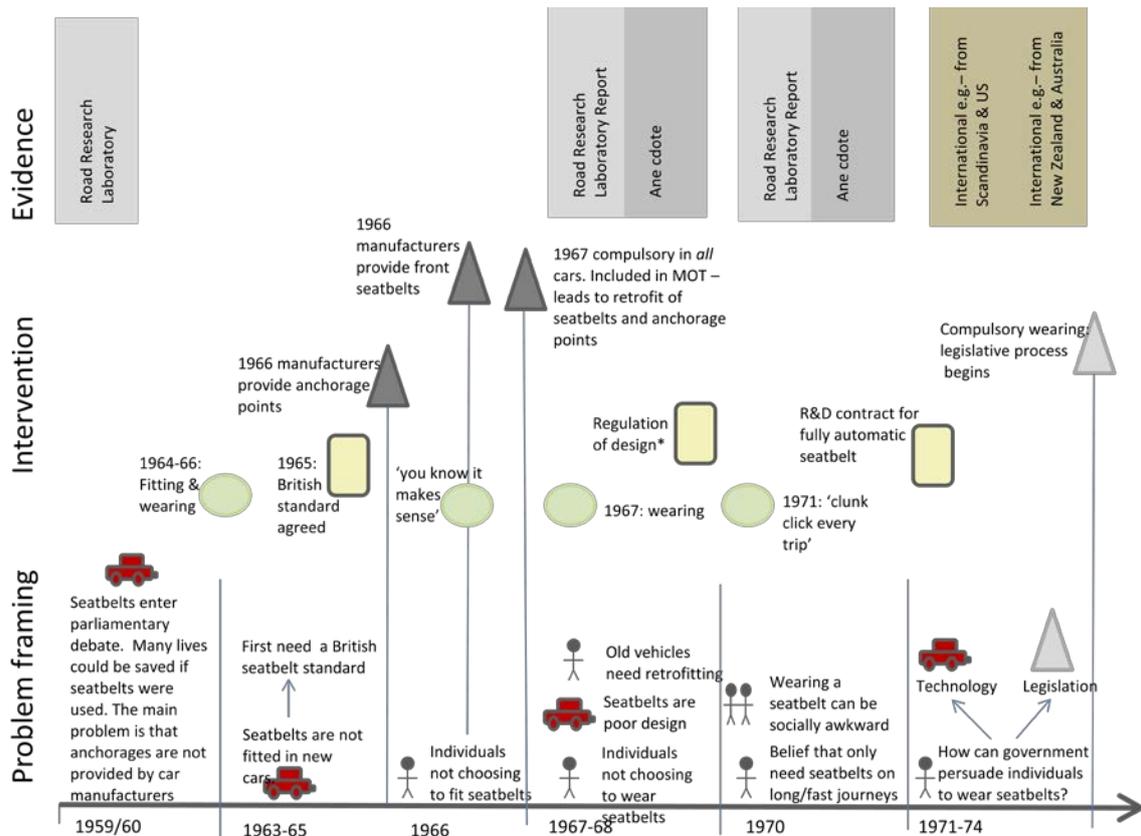
Within this context we have been working with three research questions: what happened in the case of seatbelts? (the relation between policy debate, intervention and the practice of driving); What were the implications of this intervention for other practices? (the connections between practices and how this mediates the intended effects of intervention), how do 'behaviour change' interventions fit into road safety intervention more broadly? (types of intervention and the scale of change). Our data collection has focussed on the parliamentary papers database (we have looked at the journey of seatbelts through parliamentary debate), the literature on road safety research and road safety policy, the other interventions (of varying type and scale) that happened across this

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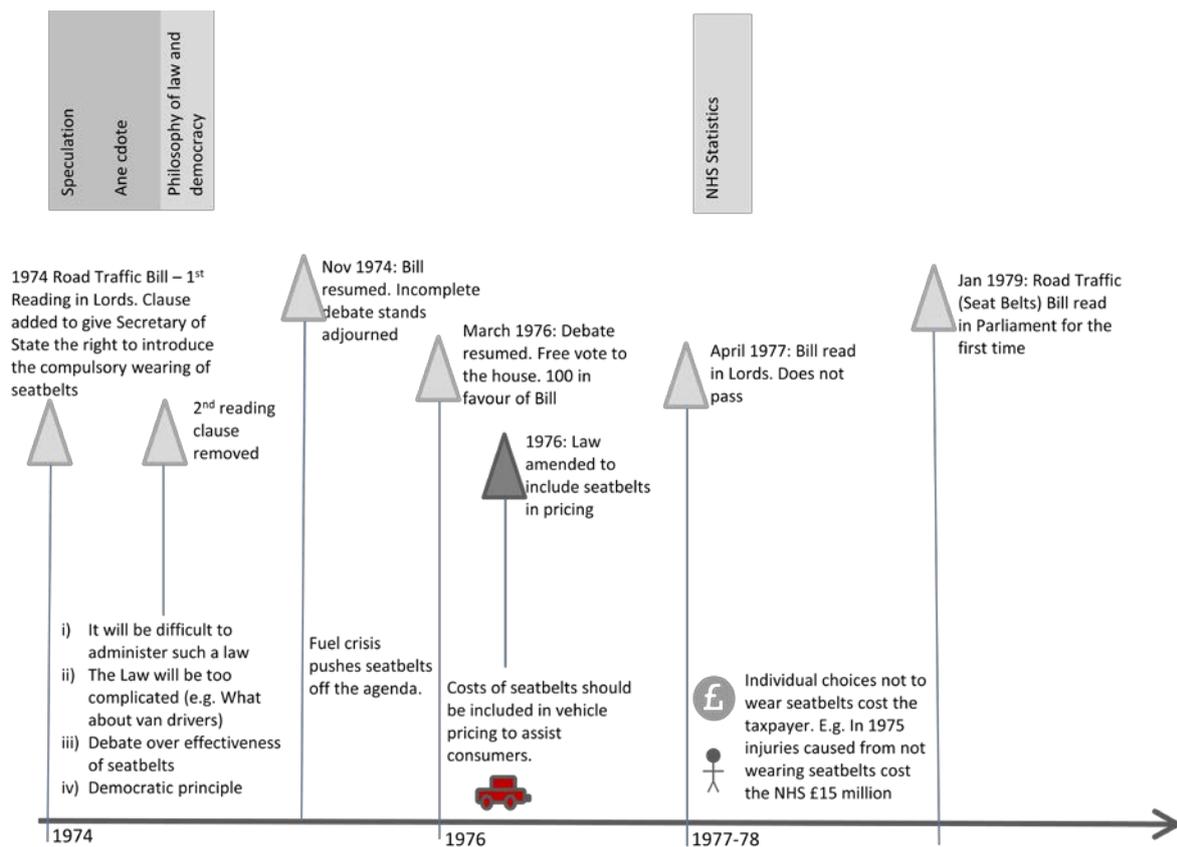
period, road safety statistics – the changes in accidents, fatalities and injuries of different road users across the period.

Section 3: The journey of seatbelts through UK parliament.

The images below summarise the journey of seatbelts through UK Parliament. Several key points emerge from this analysis. Firstly, each time that seatbelts is raised in parliamentary debate the problem is framed in different ways, that is, problem framings shift across the period of seatbelt debate and intervention. Secondly, and partly related to this, different evidence is drawn upon in parliament at different times. The third point is that the combination of problem framing and evidence has implications for what are seen as plausible and possible interventions.



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For example, in 1959 seatbelts enter parliamentary debate. In the late 50s lots of data – and more detailed data than previously– is collected about RTA's (including the appointment of photographers to photograph accidents). This is brought together in a report by the Road Research Laboratory, seatbelt anchorage points are a recurring theme and seen as the main problem. In 1966 legislation for the compulsory fitting of anchorage points by car manufacturers is introduced.

Next, the problem becomes framed as one in which seatbelts are not fitted. Manufacturers are unable to fit because there is no standard. Resources are then invested in this, the standard is agreed in 1965, and in 1966 it becomes compulsory for individuals to fit seatbelts. Individuals do not choose to do so, and so there is a public information campaign 'you know it makes sense'. Lots of time is then spent trying to explain why people do not choose to fit seatbelts. For example, one explanation – based on anecdote – is that the design of seatbelts makes them difficult and hazardous/ cumbersome to use (1967), in 1970 there is a discussion about the role of cultural conventions and the general belief that they are only needed for long journeys – this leads to the 'clunk click for every trip' campaign. In 1971 there is a discussion about how individuals can be persuaded – by technology (transferring the Scandinavian model, in which cars won't start unless seatbelts are fitted) – a large R&D contract is set up for this. Or via legislation (as in New Zealand and Australia).

In the 1970s there is also an underpinning discussion of the 'nanny state' and just which aspects of an individual's life and 'behaviour'/ choice the government should intervene in (whilst still maintaining principles of a liberal democracy). The big move in this debate is to reframe the problem

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so that it is no longer an individual issue/ risk, but a public problem costing the taxpayer £15 million per year via the NHS on potentially preventable injuries.

Section 4: How interventions are evaluated.

In looking at this trajectory, an aspect that really interested us was that each time the issue is discussed in parliamentary debate it is raised as 'new', and the interventions are developed and evaluated as 'one-offs'. Here I focus on two examples to explore the implications of this approach in more depth. The first is the compulsory fitting of seatbelts by manufacturers in 1966 – which is surrounded by a discourse of 'un-success' – because there was no observable change in behaviour. Secondly, the compulsory wearing of seatbelts in 1983 which is surrounded by a discourse of success.

The compulsory fitting of seatbelts in 1966 is surrounded by a discourse of 'un-success' because there was no direct impact on fatalities and serious injuries. In terms of reconfiguring the practice entity, including seatbelts as a material element of the practice is a pretty major shift – the practice is actually once and for all reconfigured, though this is not yet observable in the performances of drivers (but the performances of manufacturers is changed once and for all). Looking at the trajectory overall, it's obvious how important this moment is – that seatbelts need to be installed before they are worn is obvious. The point here is that if we were designing policy from a practice perspective, installation (rather than 'installation that is observable in behaviour change) might have been the aim, and would therefore be within the frame of evaluations – so some 'success' could be allocated to this 'stage'.

The 1983 legislation is similarly evaluated as a one-off. This too is problematic because practices are dynamic, and because there are often multiple interventions in a practice at any moment.

Taking the first of these points, the Harvey and Durbin model assumed that driving was static – that all other aspects of driving, and the interconnections of driving to other practices would remain the same. However, meta-analyses of the seatbelt case (e.g. Adams, 2006) show that the practice of driving changed – seatbelts and the 'risk compensation' they afforded meant that driving became faster, associated less with awareness and care, and more with speed. This is reflected by the 'redistribution' of fatalities from driving to rear seat passengers, cyclists and pedestrians following the legislation. This was actually noted in the Harvey and Durbin report:

"Taking those indirectly affected by the law, our model gave an increase of 27 per cent for rear seat passengers, 8 per cent for pedestrians and 13 per cent for cyclists." (Harvey and Durbin, 1985)

And has subsequently been discussed by Adams (2006):

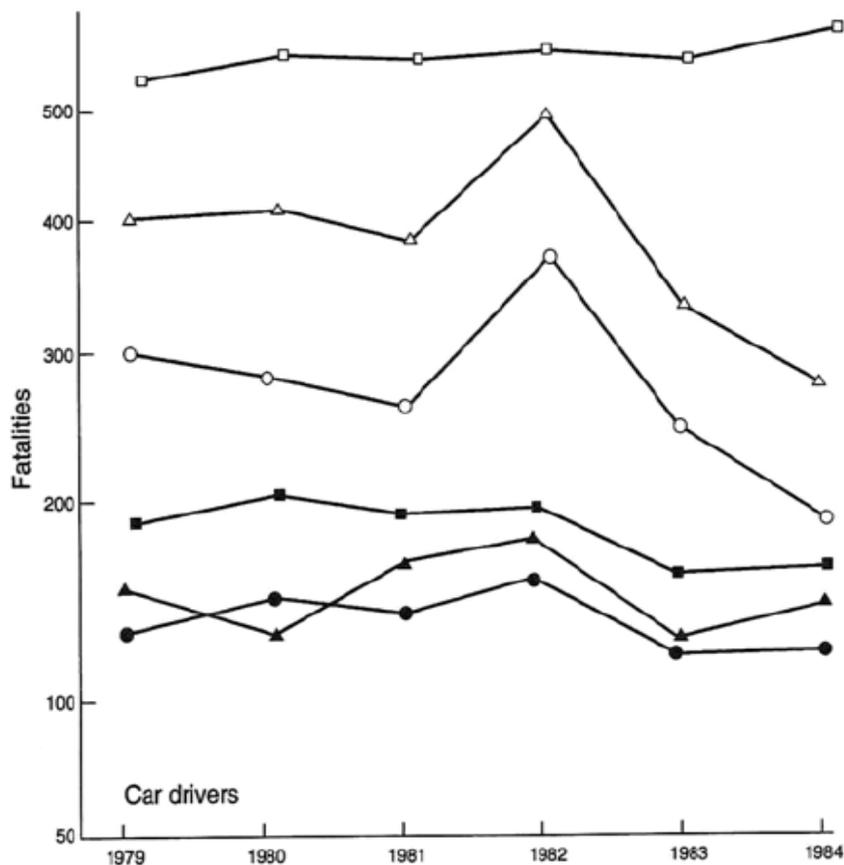
"...the law had no effect on total fatalities, but was associated with a redistribution of danger from car occupants to pedestrians and cyclists" (Adams, 2006:145)

Focussing on the seat-belt legislation as 'one-off' and 'stand-alone' also hides from view the other interventions that were shaping driving practices at this time. In the same year as the seatbelts legislation there was another major change in road safety –related law: drink-driving. A meta-analysis of the changes in fatalities by Adams (2006) (shown in the chart below) shows that the main

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decreases in fatalities were in the drink-drive hours and in non-built up areas. Leading him to conclude that:

“...The decrease in road deaths between 10 at night and 4 in the morning was 23 per cent, while in all other hours it was only 3 per cent – in line with the prevailing trend” (Adams, 2006:143).



The point here is that when we take the practice as the starting point, we might have considered the interconnections between driving, cycling, pedestrians, and thus evaluated the impact of seatbelts legislation on all these practices. Also the method of focussing on the practice and studying the interventions in the practice across time would bring to the fore multiple interventions – like seatbelts and drink driving legislation, which have effect at the same time.

In a slightly more in-progress aspect of our research I am delving into the research and evidence in relation to problem framings and plausible and possible interventions. The figure below shows in summary the focus of DoT research across the period of this study. We can see that there is a shift in this focus from materials, road design, vehicle design and then to behaviour change in the 70s onwards. This is a reminder that though seatbelts is plucked out as an example of successful behaviour change, this example is itself part of a much bigger picture of road safety interventions. It is important to remember this when focussing on this solitary case as an exemplar to justify a focus on ‘behaviour change’ in other policy areas; there is a danger that taking the seatbelts case out of this context distorts the potential of focussing on individuals versus all the other forms of intervention that might be applied to a focal practice.

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Figure 1

A very brief history of government road research/intervention:

1935-1945	1945-1965	1965-1975	To be contd...
Road materials	Road Design	Vehicle Design	
-skidding	-- road layout	-- Anti-locking brakes	
-dust	-The width of streets	-- fitting safety harnesses	
-road quality	-- curvature and gradient of road	i.e. seatbelts	
	-- quality of surface	-- recognised importance of vehicles for injuries.	
	-- flow/speed of traffic	Road Design	
	-- pedestrian crossings	--effects of street-lighting	
		--removal of skidding accident black spots	
		-- building bypasses	
		-Improving junctions	
		-Effects of speed limits	
		Individual	
		-- effect of drink driving	

Conclusion

So in conclusion, framing road safety and the seatbelts case as interventions in practice highlights:

- Intervention isn't 'one-off' but has a before and an after within the dynamics of practice.
- Intervention doesn't only affect the 'target practice' but also the other practices with which the target practice interconnects.
- That the behaviour change success of seatbelts legislation was a small part of a much bigger picture that included road engineering, road planning and design, vehicle design, as well as individuals' performances

We might bear this in mind in evaluations of 'success' – focussing on practices might lead to different kinds of evaluation that take stock of different aspects.