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DEVELOPMENT OF A COMMUNICATION APPROACH TO TACKLE YOUNGER DRIVER SAFETY ON RURAL ROADS

roadsafetyanalysis

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INTRODUCTION

Young drivers (17 – 24) are over-represented in road collisions; they are four times more likely to be killed or seriously injured compared with car drivers aged 25 or over. The high levels of risk are associated with inexperience, age and common behaviours associated with young and novice drivers. In 2014, 82% of young car driver fatalities occurred on rural roads (MAST Online, Road Safety Analysis, 2016). Around a third of those killed or seriously injured on rural roads were either exceeding the speed limit or driving too fast for the conditions.

THINK! has run a country roads campaign for two years that encourages drivers aged 17-35 to slow down by 'braking before a bend not on it'. From a desire to draw on current behavioural science theory, evidence and application, the Department for Transport (DfT) has commissioned this report to inform the future development of its country roads campaign.

DfT asked Road Safety Analysis (RSA) to examine 7 questions, which are tackled in this report.

1. Is a continued focus on a) speed b) the potential consequences of unexpected hazards and c) the 'brake before the bend' message the right approach for young drivers or are there other behaviours and behavioural responses that could be more effectively targeted?
2. What (if any) segment of the young driver population should be targeted?
3. What does behaviour change theory and evidence, particularly in the field of road safety, tell us about the type of messages or communication approaches that are likely to be most effective in changing a) attitudes and b) driving behaviour in the target audience? Which of these is the recommended evidence-based approach (and why)? Please consider the implications of supporting messages and other non-campaign interventions on the approach.
4. What does behaviour change theory and evidence tell us about the likely impact and effectiveness of fear and threat-based approaches to changing behaviour in the context of road safety? Please provide a summary of the evidence, particularly in relation to young drivers.
5. How might the campaign message be practically and cost-effectively reinforced e.g. through activity by delivery partners, through other channels / media? Please consider the reach and resonance of different activities.
6. To what extent can possible behavioural changes of the target audience owing to the campaign be predicted?
7. How can any behaviour change in the target audience be effectively measured and evaluated following the campaign? Can this behaviour change be attributed to the campaign? What level of investment, and over what time period, is recommended to establish a permanent behaviour change?

Due to the overlapping nature of some of the questions and the responses which they elicit, they are not dealt with through discrete answers. Rather, the authors have sought to present a flow through the evidence, answering all the questions to the degree to which the evidence allows.

The first two questions seek to clarify what is known about the risk factors affecting young drivers on rural roads and to provide a segmentation as a basis for campaign development. These questions asked "Is a continued focus on a) speed b) the potential consequences of unexpected hazards and c)

the ‘brake before the bend’ message the right approach for young drivers or are there other behaviours and behavioural responses that could be more effectively targeted?” and “ What (if any) segment of the young driver population should be targeted?” These are addressed in Section A: Who & What Should be Targeted?

The third research question asked “What does behaviour change theory and evidence, particularly in the field of road safety, tell us about the type of messages or communication approaches that are likely to be most effective in changing a) attitudes and b) driving behaviour in the target audience?” The report addresses this through an exploration of the reasons why young men speed (Section B) laying the groundwork for Section C which seeks to address the topic of “What Communications Approaches Could be Effective.” Also within this section, the authors address the fourth research question regarding the likely impact of threat-based approaches.

The fifth research question asks how the campaign might be practically and cost effectively reinforced. Section D draws together a number of perspectives on social marketing in the road safety context to highlight issues of channel selection, tone and delivery partners that are relevant to campaign delivery.

The evidence around behaviour change in road safety is not sufficiently reliable to address the sixth question about predicting levels of behavioural change from a social marketing campaign. Meanwhile the final research question looks at the issue of measurement and evaluation. This is addressed at the end of Section C as it relates to outcomes in behavioural terms. As such, this section provides recommendations for pre-testing and longer term evaluation.

KEY MESSAGES

There is a strong case for focusing the next round of rural roads campaign activity on young male drivers. This audience are disproportionately at risk of a fatal or serious collision.

The target age range should be 17 to 25 years old (as opposed to 17 to 24): there is a significant drop in collision involvement at 26, and 25 year olds are in similar crashes to the younger group.

An argument has been made for extending the age range up to 35 years, based on a one year increase in fatalities amongst 24 to 35 year olds. We strongly caution against attaching importance to small changes in collision numbers in individual years. Furthermore, when the age ranges 17 to 25 and 26 to 35 are used, there were no changes in involvement numbers in 2015, compared to 2014.

The effectiveness of a campaign will be improved by identifying key segments within the young (17 to 25) male driver population. This group is very heterogenous and there is value in targeting communications to smaller, more specific audiences.

Mosaic socio-demographic profiling identified two groups of rural residents who are significantly over-represented in rural road collisions, consistent with previous research. A further four groups of urban residents were identified as targets.

Detailed analysis of contributory factor data, including comparisons by age, gender and rurality, suggests that some of the increased risks faced by young male drivers are i) also faced by young female drivers and ii) decline with age. This suggests that these risks are functions of inexperience. As such, they are unlikely to be susceptible to change by marketing and communications.

Speeding is the most important target behaviour for young men aged 17 to 25 years, with a consistent pattern of risk that cannot be accounted for by inexperience.

This tendency to speed may also explain why young men are more likely than the adult population as a whole to be involved in collisions on rural roads at bends, on wet road surfaces, in darkness, and in single vehicle incidents; and to receive the 'loss of control' contributory factor.

The collision, socio-demographic and Mosaic analysis were combined to create six 'personas' of key target audiences. Whilst there are similarities between them (which means that some behaviours can be targeted collectively), there are also differences in background and collision involvement to be considered when devising creative solutions.

Whilst not possible with the existing evidence base, it would be useful to undertake psychographic segmentation to understand more about the motivations, attitudes, values and social context of the target audience.

Evidence suggests a number of different factors which may help to explain speeding in young men. These include:

- overconfidence, which comprises both an underestimation of the difficulties of a task, and an overestimation of one's capabilities
- an inability to regulate one's own behaviour, for instance as a result of the development of the prefrontal cortex
- sensation-seeking, or a need for feelings of control
- social factors, such as descriptive norms, injunctive norms, and risk images or prototypes
- particular uses of driving, for example as a way to develop and test one's skills, as a badge of masculinity, or as something to do with friends
- the role of passengers

A better understanding is needed of the social context of driving and speeding, and the roles played by these behaviours in larger projects and practices – such as becoming an adult, gaining independence from parents, developing an identity within a peer group, participating in joint activities such as a night out, or developing as a competent driver.

There is a lack of strong positive evidence for the effectiveness for any single approach. However, the evidence suggests there may be value in exploring 'social approaches'.

On the negative side, the evidence suggests that highlighting the risks ('threat') of killing or seriously injuring oneself or others will not be effective with this target audience; and that evocations of the threat of death may even be counter-productive.

Other kinds of risk ('threat') may potentially be more credible and personally relevant to the target audience, for example:

- Threats to mobility and freedom – as a result of losing one's licence or damage to one's vehicle
- Social threats

There is a growing interest in social approaches – which include but are much broader than 'social threats' – but as yet little evidence regarding which if any will be effective.

A wider understanding of the role of social factors in behaviour suggest an effective social approach will rest on choices about:

- Factors: social approaches might seek to influence descriptive norms (beliefs about others' behaviour), injunctive norms (beliefs about whether others will approve of a behaviour) and prototypes (beliefs about what a behaviour says about one).
- Objectives: social approaches might seek to make speeding less acceptable or desirable; *not* speeding more acceptable or desirable; or to address other relevant social behaviours, such as challenging speeding.
- Starting points: social approaches can draw attention to existing norms and protoypes, or seek to create new ones – although in practice, this is more likely to involve co-opting, amplifying and modifying existing norms and prototypes.

- Intervention functions: far from being limited to social threats, social approaches can draw on a wide range of intervention functions: education, persuasion, incentivisation, coercion and modelling.

Communications may play a vital (if indirect) role in behaviour change, by promoting the acceptability and/or uptake of other types of intervention which have a (direct) impact on the target behaviour in the target audience.

Any campaign should be i) subjected to prior behavioural testing, to explore the likely impact of the intervention on behaviour and/or the determinants of behaviour ii) evaluated to establish not just *whether* but also *how* it succeeds or fails. A clearly articulated theory of change is an essential prerequisite in both cases.

Adopting a social approach to the campaign design offers the potential for a wider array of intervention functions to be employed, in turn creating the possibility that a number of target behaviours could be addressed alongside speed. Modelling and education as well as persuasion should therefore be considered within the campaign design.

Tone would appear to be extremely important in messaging to this target audience:

- Positive emotional appeals are potentially more effective
- Authority messages might meet with defiance and denial
- Credible channels and credible voices are key to motivating change

There are reasons to believe that mass media on its own would be insufficient to deliver change:

- Mass media campaign delivery alone shows little associated change in behaviour and may even have a detrimental effect.
- Campaign messages could be significantly strengthened if they can be delivered in a way which is proximate to the behaviour concerned.

The changing media landscape means that social influencers as delivery partners could be effectively engaged as part of a social approach:

- Creating the message and then seeking to identify delivery partners fails to recognise the centrality of delivery partners in securing resonance and reach; they should be central to the design process.
- The role of social sharing is arguably the strongest element of campaign delivery for media based social marketing initiatives that are unable to deliver messages proximate to the behaviour being challenged.
- Recognising the validity of competition and the brand values of Think! may lead intervention designers to consider more credible voices to address norms, perceived vulnerability and prototypes.
- Social sharing dramatically increases the reach of a campaign as delivery is co-managed with the target audience, whilst increasing the resonance of the message as peer networks accept and give authority to the its content.

CONTENTS

METHODS

This report is the output of a brief (four week) small-scale review of evidence commissioned by the Department for Transport

Section A is based on analysis of STATS19 collision data (accessed via MAST Online). Additional data analysis was undertaken using Mosaic public sector data (Experian, 2016) and tracking data from a previous rural young driver campaign (TNS BRMB, 2016). A review of supporting literature related to segmentation of audiences was also undertaken. Full details of the analyses conducted on these data sets are provided in the chapter.

Sections B, C and D are based on a review of relevant research literature, including a number of relevant syntheses of evidence previously commissioned by the Department for Transport. No primary research was undertaken as part of this brief review.

A. WHO AND WHAT SHOULD BE TARGETED?

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Whilst not possible with the existing evidence base, it would be useful to undertake psychographic segmentation to understand more about the motivations, attitudes, values and social context of the target audience.

This section will examine the collision data to determine how young drivers are involved in injury crashes on rural roads and importantly, who the young drivers are. Understanding the target audience and the target behaviours is essential to devising effective communications.

WHO SHOULD BE THE TARGET AUDIENCE?

In order to understand who the target audience should be, the starting point has been to analyse reported injury collisions in Great Britain, as recorded in the STATS19 form, collated by the Department for Transport and accessed via MAST Online and MAST Professional (Road Safety Analysis, 2016).

To facilitate identification of the behavioural focuses for a campaign, segmentation of the young drivers involved in injury collisions was undertaken. The rationale for this approach was that identification of the target audience should then help to determine *their* specific target behaviours for change (as the alternative approach could result in different target behaviours emerging for a wider driver population). The analysis used the most recently published collision data (2011-2015) and the following filters were applied to the *drivers* involved:

- Crash location = Rural road (as calculated by the Department for Transport and defined as "major roads and minor roads outside urban areas and having a population of less than 10 thousand" (Department for Transport, 2015))
- Vehicle type = car (cars including taxis and minibuses)

The subsequent analysis therefore focuses on car drivers who were involved in injury collisions on rural roads between 2011 and 2015 and who may or may not have been injured themselves. There are several reasons for concentrating on car drivers only. Firstly, the numbers of young van drivers involved in collisions on rural roads is particularly low: there were 3,508 of them compared to 76,364 young car drivers. Secondly, the age profile of young van drivers differs from young car drivers involved in collisions on rural roads, with two-thirds of the young van drivers aged between 22 and 25 years. Lastly, the motivations for young van drivers are likely to differ from young car drivers, with a higher propensity of driving for work trips in vans, involving a different level of responsibility.

Firstly, 40% of 17 to 35 year old drivers involved in injury collisions on rural roads are female and the percentages of young men involved in rural road collisions increases with severity – only 26% of those involved in fatal collisions on rural roads were women.

FIGURE 1 – DRIVERS INVOLVED IN INJURY COLLISIONS BY AGE, PER 100,000 POPULATION (2011-2015)

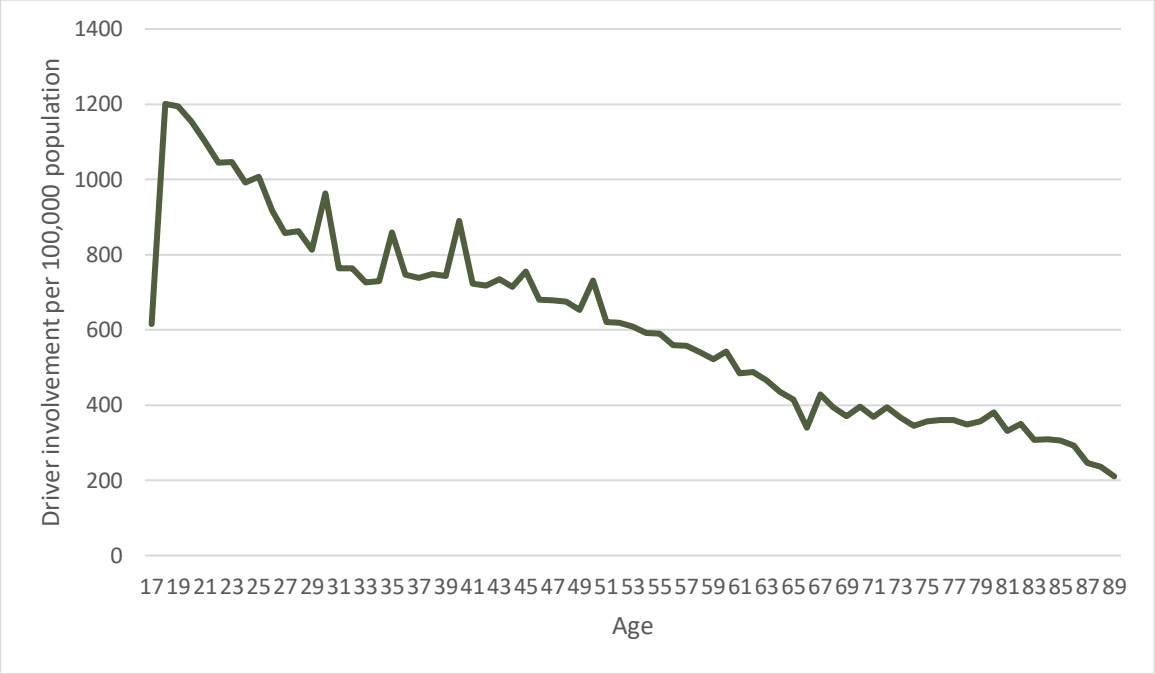
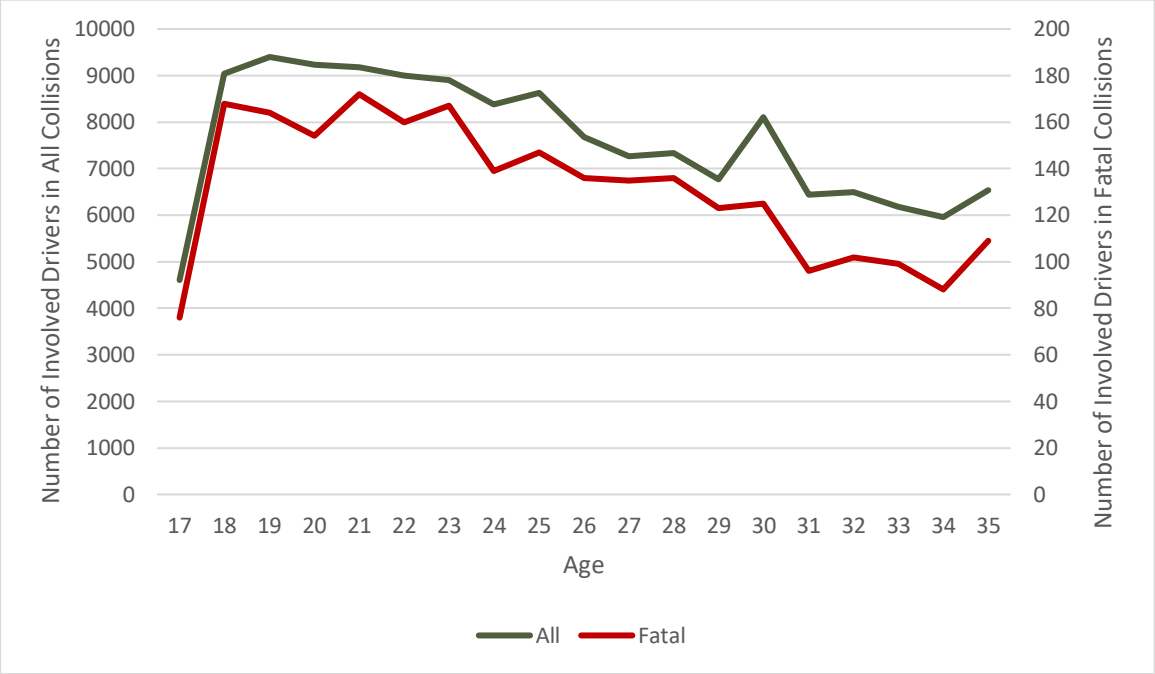


Figure 1 shows the number of drivers involved in reported injury collisions on rural roads per 100,000 population, for each age. It shows a clear peak at 18 years old, which then decreases with age. There are small peaks, every five years. These are an artefact of the reporting process where police officers estimate the age of drivers and tend to round to the nearest five years when exact age information is not available to them.

Figure 2 shows the total number of drivers involved in injury collisions on rural roads who were aged between 17 and 35 years old. It shows that the number of young drivers involved in injury collisions changes little between the ages of 18 and 23 years old and that involvement reduces more dramatically at 26 years old. Dividing young drivers into two equal groups of 18 to 25 years and 26 to 33 years shows that there were 22% fewer collision-involved drivers in the older age group than the younger.

The pattern for involvement in fatal collisions is similar to all collisions, with a peak between 18 and 23 years.

FIGURE 2 - DRIVERS INVOLVED IN INJURY COLLISIONS, AGED 17 TO 35 YEARS (2011-2015)



It has been suggested that a continued focus on 17 to 35 year olds may be required and this was based on an increase in involvement in fatal collisions on rural roads for 26 to 34 year olds in 2015, compared to 2014. Whilst this is the case, we would strongly caution against attaching importance to one year's worth of collision data, which could be subject to random fluctuation. It is advisable to use longer term trends to identify where the focus should lie. Secondly, changes in collision involvement are dependent on the cut-off age for the two groups of young drivers. If the groups used were 17 to 25 and 26 to 34 years (to coincide with the overall tends shown in Figure 2), then the collision involvements in 2014 and 2015 are similar – both groups saw an increase in fatal collision involvement; no change in involvement in serious collisions; and reductions in the numbers involved in incidents resulting in slight injury. However, as already stated, focusing on differences between individual years is unreliable.

At a pragmatic level, messaging would be weakened by having a broad age range of 17 to 35 year olds. This appears to be evidenced in research examining the effectiveness of previous campaigns. An evaluation of the 2014 THINK! country roads campaign found differences in the 17 to 35 year old age range in terms of monitored behaviour (TNS BRMB, 2016). Sixty young drivers (17 to 35 years) used a mobile phone app to GPS track and video record their driving. Most of the participants were aged 25 to 35 years and it appears that the campaign had a positive effect on this older age group's behaviour. However, it was observed that speed at corner entry for the most severe bend types increased in the Post Forced phase for drivers aged 18 to 24 years (natural exposure to the campaign was low so forced exposure was required in order to monitor effectiveness). It should be remembered that the sample size of this research is relatively low.

The findings suggest that the target age range should be reduced to reflect the collision data and to strengthen the messaging, particularly in light of the evaluation of the previous campaign where the

two age groups did not respond in the same way. There is also evidence to suggest that the effectiveness of a campaign could further be improved by identifying key target segments within the young male driver population.

Audiences can be quite selective and may have different underlying behavioural motivations. Indeed, a lack of audience segmentation and message targeting are thought to be significant factors that have contributed to the failure of health mass media campaigns in the past. Audience segmentation involves dividing the audience into meaningful homogenous subgroups based on important characteristics… The effectiveness of mass media campaigns might be increased if message content and communication channels are tailored to the characteristics of these more narrowly defined segments or subgroups. (Wundersitz, et al., 2010, p. 10)

As further analysis will show, even within a smaller age range of 17 to 25 years, there are clear differences in the types of collision and types of people involved.

MOSAIC ANALYSIS

Mosaic Public Sector (Experian, 2016) is intended to provide an accurate and comprehensive view of citizens and their needs by demographics, lifestyle, culture and behaviour. Each postcode in the country belongs to a Mosaic Group, based on hundreds of different data sources, which are used to predict the types of people who live in each postcode area. The postcodes of young drivers involved in collisions on rural roads have been analysed to see which Mosaic Groups they belong to.

Figure 3 shows the Mosaic Groups of the target audience of 17 to 25 year old males who were involved in injury collisions on rural roads between 2011 and 2015. The chart shows the numbers of young male drivers from each Mosaic Group and the red indices show how over- or under-represented these drivers are, compared to the populations of young males in each Mosaic Group. An index of over 100 shows an over-representation of that Group, compared to the population data.

There are two Groups which represent high numbers of young male drivers on rural roads and who are significantly over-represented in rural road collisions, compared to the populations of these Groups. These Mosaic Groups (highlighted in green) are:

- *Group A – Well-off owners in rural locations enjoying the benefits of country life;*
- *Group G – Householders living in inexpensive homes in village communities.*

FIGURE 3 - MOSAIC GROUPS OF 17-25 YEAR OLD MALES IN INJURY COLLISIONS ON RURAL ROADS (2011-2015)

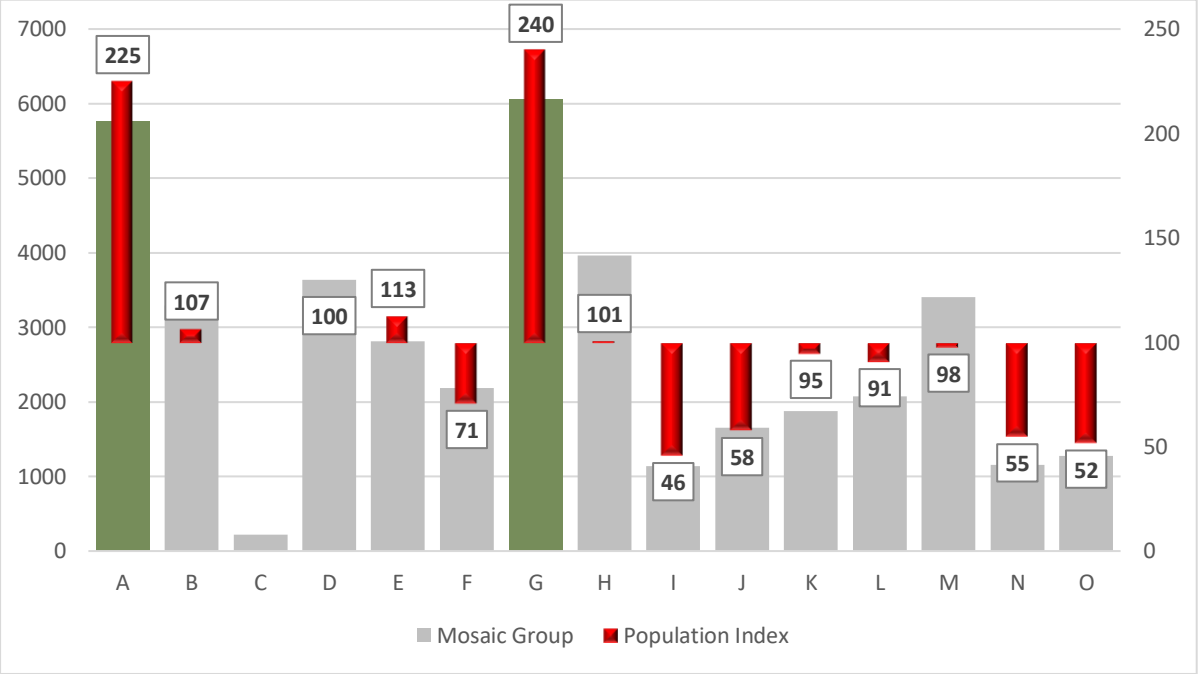


TABLE 1 - MOSAIC GROUPS

Group	Description
A	Well-off owners in rural locations enjoying the benefits of country life
B	Established families in large detached homes living upmarket lifestyles
C	High status city dwellers living in central locations and pursuing careers with high rewards
D	Thriving families who are busy bringing up children and following careers
E	Mature suburban owners living settled lives in mid-range housing
F	Elderly people with assets who are enjoying a comfortable retirement
G	Householders living in inexpensive homes in village communities
H	Younger households settling down in housing priced within their means
I	Residents of settled urban communities with a strong sense of identity
J	Educated young people privately renting in urban neighbourhoods
K	Mature homeowners of value homes enjoying stable lifestyles
L	Single people privately renting low cost homes for the short term
M	Families with limited resources who have to budget to make ends meet
N	Elderly people reliant on support to meet financial or practical needs
O	Urban renters of social housing facing an array of challenges

The Mosaic analysis suggests that home rurality is important and supports findings from an earlier study (Fosdick, 2013). This previous work compared young drivers who live in rural areas with those living in urban areas and who crashed anywhere on the network (not just on rural roads) and subsequently, a number of key differences between the two groups were identified. Firstly, per head of population, rural young drivers were 44% more likely to be involved in an injury collision than their urban counterparts. Secondly, the circumstances of collisions differed between rural young drivers,

urban young drivers and rural adult drivers. The study concluded that some of the collision factors were related to residency (and that living in the countryside increased risk because they had to use rural roads) and others were related to inexperience and behaviour (such as single vehicle collisions and providing positive breath tests, which were also over-represented amongst urban young drivers, albeit to a lesser extent). Lastly, the study found that rural young people are 89% more likely to hold a full driving licence than urban young people (based on licensure data provided by the DVLA). Rural residents pass their driving test from aged 17 whereas the peak in urban residents begins at aged 23 years and suggests that urban young drivers have less pressure to pass their test at a younger age. The differences based on rurality show that young drivers are very heterogenous in terms of motivations for driving; types of road they frequently drive on; and the collisions they are subsequently involved in.

Whilst the initial Mosaic analysis supports the finding that rural residents should be a focus for road safety interventions, urban young drivers should also be accounted for. Urban residents represent a larger proportion of the population and do travel on rural roads. Figure 4 shows the Mosaic Groups of 17 to 25 year old males who are involved in injury collisions on rural roads and live in urban areas. Compared to all urban young residents, the following Groups are over-represented in rural road collisions:

- *Group H – Younger households settling down in housing priced within their means*
- *Group M – Families with limited resources who have to budget to make ends meet*
- *Group D – Thriving families who are busy bringing up children and following careers*
- *Group E – Mature suburban owners living settled lives in mid-range housing*

FIGURE 4 - MOSAIC GROUPS OF 17-25 YEAR OLD URBAN MALES IN INJURY COLLISIONS ON RURAL ROADS (2011-2015)

The Mosaic analysis reinforces the previous urban/rural analysis (Fosdick, 2013) and suggests that the target audience come from varied backgrounds. For example, young drivers from Mosaic Groups, G,

A, D and E are still likely to be living at home, whilst those from Groups H and M are more likely to be living independently. These, and other Mosaic characteristics, will be incorporated with other collision analysis to provide an insight into who the target audience are and what issues might need to be addressed.

AGE ANALYSIS

The previous rurality study focused on 16 to 26 year old rural young drivers to coincide with the membership composition of the National Federation of Young Farmers Clubs, who were a key research partner (Fosdick, 2013, p. 9). For this current work, age by rurality analysis was conducted to see if further refinement of the age group was required.

For all severities, and for both urban and rural young drivers, the peak in collision involvement on rural roads does not begin until 18 years old. This is almost certainly an artefact of the licensing process in that it takes a while to learn to drive and pass the driving test.

For rural young drivers, after an initial peak in rural road collisions at aged 18 years, there is a gradual reduction to aged 20 years. The reductions in collision involvement continue until aged 25 years.

For urban young drivers, the initial peak in rural road collisions is slightly older, at aged 19 years old and there is little change in collision involvement to 21 years, after which there is a continued trend with slight fluctuations.

The different trends between urban and rural drivers supports the licensing analysis from the previous rurality research – rural residents tend to get their licence at an earlier age and therefore experience and age are more closely associated. For urban residents, licensure is a more constant process and therefore there are inexperienced young drivers across the age group.

Interestingly, young female drivers from rural and urban areas follow the same patterns as their male counterparts for collision involvement (albeit at lower rates).

The findings lead to splitting rural and urban residents into two age groups, with a younger and older segment for each.

Four segments were identified after analysis:

- *18 to 20 year old rural residents*
- *21 to 25 year old rural residents*
- *19 to 21 year old urban residents*
- *22 to 25 year old urban residents*

HOW ARE THESE YOUNG MEN INVOLVED IN COLLISIONS ON RURAL ROADS?

Once the four new segments were identified based on demographics, analysis of their collision circumstances was undertaken to see how they are involved in incidents on rural roads. Comparisons have been made, where appropriate, with all adult drivers involved in collisions on rural roads.

The research comparing rural and urban young drivers found that rural young drivers were over-represented in collisions involving the following factors:

- *Rural roads*
- *60mph roads*
- *Away from junctions*
- *No other vehicles*
- *Positive breath tests*
- *Bends*
- *Darkness*
- *Loss of control*
- *Wet road surfaces* (Fosdick, 2013)

These factors were analysed by each age-rurality group, alongside speeding behaviour. Whilst gender was found to be less important than age and rurality in identifying the target groups, each of the factors was also analysed by gender. The focus of any campaign should continue to be young men. However, if young females are over-represented for the same factors, it could provide clues as to whether inexperience, environment or attitude are influential. The data tables for this analysis are included at the end of this section on page 20.

INEXPERIENCE

Inexperience may explain many of the differences between younger and older drivers, although this is speculative. Across all the contributory factors and collision circumstances, the percentages receiving that CF decline with age.

The same pattern applies for young women. If it is assumed that the reducing risks faced by young women are accounted for by increasing experience and skill, then this would suggest that the greater risks faced by the youngest young men may reflect an 'inexperience effect'.

SPEEDING

Speeding is the most important target behaviour for young men aged 17 to 25 years (see Table 3 and Table 4 on page 20), with a consistent pattern of risk that cannot be accounted for by inexperience.

Analysis was undertaken of drivers involved in collisions on rural roads who received a speed-related contributory factor (either 'exceeding the speed limit' and/or 'travelling too fast for conditions'). As contributory factors are subjective and are assigned at the time of the collision without extensive investigation, only collisions where a police-officer attended and where at least one contributory factor (CF) was recorded are included.

Young men in each age band are around 10% higher than young women for all collisions, and 15% for KSI collisions for receiving speed-related contributory factors. If it is assumed that the findings for women reflect an 'inexperience effect', the analysis would suggest a large and consistent risk factor for men over and above inexperience. The risks appear highest for the youngest rural drivers; but if the proposed 'inexperience effect' above is removed, the risk is in fact fairly constant across age and rurality. Attitudinal and behavioural factors could be the main influence on male young drivers who speed.

OTHER FACTORS

The tendency to speed may explain smaller differences between young men and young women on a number of other contributory factors. Young men are much more likely than the adult population as a whole to be involved in collisions on rural roads at bends; on wet road surfaces; in darkness; in single vehicle incidents; and to receive the 'loss of control' contributory factor.

However, young women are also more likely than the adult population as a whole to be involved in similar types of collision. The proportion of young men in each band are around 5% higher than young women for these factors (with the exception of wet roads, where there is no difference between men and women).

If it is assumed that the figures represent an 'inexperience effect', then much of the increased risk of young men against these factors would be explained by inexperience. The small outstanding amount might reflect additional risks taken by young men; or it might just reflect the greater risk in these contexts that result from higher speeds.

There has been a focus in previous rural roads campaigns on the potential consequences of unexpected hazards. The analysis shows that the young driver segments, especially the younger male cohorts, have significantly higher involvement in single vehicle collisions.

This suggests that the young drivers are not encountering an unexpected other vehicle around the bend. In conjunction with the high proportion of loss of control and wet road surface involvement, the dangers faced by young men could be more related to a failure to select the right speed for the road conditions. Furthermore, the evaluation of the previous THINK! Campaign suggested that there might be a need to consider reinforcing other dangers on country roads in the future to avoid too much focus on bends alone. Average speed on rural roads increased slightly after the campaign, which could be an unintended consequence of focusing on bends (TNS BRMB, 2016).

ALCOHOL

Impairment by alcohol may be an important secondary target for young male drivers on rural roads (see Table 10). Young men are twice as likely as both the adult population as a whole and their female peers to receive the 'impaired by alcohol' contributory factor. Older young rural drivers (22 to 25 years) appear to be at particular risk.

This finding reinforces analysis in the rural young driver research which found that rural young drivers were 16% more likely to provide a positive breath test after a collision than urban young drivers (and 46% more likely than rural adult drivers). (Fosdick, 2013, p. 5)

RURALITY

Rural young drivers appear to be at a slightly greater risk than their urban counterparts across many factors, although this may be accounted for by exposure. Rural young drivers are more likely to *have* to drive on rural roads, particularly in the darkness or wet, or to use roads with more bends.

The question of exposure is related to the Mosaic analysis – the over-representation of the rural Mosaic Groups is partly linked to their use of rural roads and their increased exposure to risk. It is also

related to the age-analysis, where inexperience is related to increased risk, and the earlier rural licensure.

DATA TABLES

TABLE 2 - PERCENTAGE OF DRIVERS IN INVOLVED IN COLLISIONS ON BENDS ON RURAL ROADS (2011-2015)

	Female	Male
18-20 years rural	28%	31%
21-25 years rural	20%	25%
19-21 years urban	18%	24%
22-25 years urban	15%	19%
All adults	15%	

TABLE 3 - PERCENTAGE OF DRIVERS IN INVOLVED IN COLLISIONS ON RURAL ROADS AND RECEIVED A SPEED-RELATED CONTRIBUTORY FACTOR (2011-2015)

	Female	Male
18-20 years rural	14%	25%
21-25 years rural	10%	20%
19-21 years urban	11%	21%
22-25 years urban	9%	17%
All adults	9%	

TABLE 4 - PERCENTAGE OF DRIVERS IN INVOLVED IN KSI COLLISIONS ON RURAL ROADS AND RECEIVED A SPEED-RELATED CONTRIBUTORY FACTOR (2011-2015)

	Female	Male
18-20 years rural	16%	30%
21-25 years rural	11%	25%
19-21 years urban	13%	25%
22-25 years urban	9%	25%
All adults	10%	

TABLE 5 - PERCENTAGE OF DRIVERS IN INVOLVED IN COLLISIONS ON RURAL ROADS AND RECEIVED THE LOSS OF CONTROL CONTRIBUTORY FACTOR (2011-2015)

	Female	Male
18-20 years rural	24%	27%
21-25 years rural	18%	22%
19-21 years urban	20%	26%
22-25 years urban	16%	20%
All adults	12%	

TABLE 6 - PERCENTAGE OF DRIVERS IN INVOLVED IN KSI COLLISIONS ON RURAL ROADS AND RECEIVED THE LOSS OF CONTROL CONTRIBUTORY FACTOR (2011-2015)

	Female	Male
18-20 years rural	32%	34%
21-25 years rural	21%	30%
19-21 years urban	27%	34%
22-25 years urban	21%	28%
All adults	15%	

TABLE 7 - PERCENTAGE OF DRIVERS IN COLLISIONS ON WET ROAD SURFACES (2011-2015)

	Female	Male
18-20 years rural	41%	41%
21-25 years rural	38%	38%
19-21 years urban	38%	38%
22-25 years urban	35%	35%
All adults	33%	

TABLE 8 - PERCENTAGE OF DRIVERS IN COLLISIONS IN DARKNESS (2011-2015)

	Female	Male
18-20 years rural	20%	27%
21-25 years rural	17%	24%
19-21 years urban	15%	23%
22-25 years urban	13%	19%
All adults	14%	

TABLE 9 - PERCENTAGE OF DRIVERS IN SINGLE VEHICLE COLLISIONS (2011-2015)

	Female	Male
18-20 years rural	*34%*	*36%*
21-25 years rural	*25%*	*30%*
19-21 years urban	*26%*	*32%*
22-25 years urban	*20%*	*24%*
All adults	*17%*	

TABLE 10 - PERCENTAGE OF DRIVERS IN INVOLVED IN KSI COLLISIONS ON RURAL ROADS AND RECEIVED THE IMPAIRED BY ALCOHOL CONTRIBUTORY FACTOR (2011-2015)

	Female	Male
18-20 years rural	*4%*	*10%*
21-25 years rural	*5%*	*16%*
19-21 years urban	*5%*	*10%*
22-25 years urban	*4%*	*11%*
All adults	*5%*	

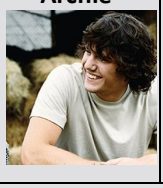
PERSONAS

The collision, socio-demographic and Mosaic analysis has been combined to create six 'personas' – summaries of the key target audiences for engagement. Whilst there are similarities between them, there are also a number of differences in background and collision involvement.

Table 11 provides an overview of the key characteristics for each persona. The names assigned to them are over-represented forenames for each Mosaic Group. Personas can be useful summaries of collision and socio-demographic analysis and aid visualisation of the target audience. It should be remembered that Mosaic profiling is based on generalisations and not all residents in a Mosaic Group will exactly match the profile.

The personas show the ranges in age, rurality, affluence, household composition and key risk factors. These summaries can be used to inform campaign design.

TABLE 11 - TARGET PERSONAS OF YOUNG MALE DRIVERS CRASHING ON RURAL ROADS

	Archie	Edward	Ben	Craig	Billy	Jack
						
Key Characteristics						
Age	18-25	18-20	19-25	19-21	19-25	19-25
Rurality	Rural	Rural	Urban	Suburban/ Urban	Urban	Suburban
Mosaic	G	A	H	D	M	E
Household Income	Low to Mid	High	Low to Mid	High	Low	Mid
Home	With parents	With parents	With partner	With parents	With partner	With parents
Risk Factors						
Speed	✓	✓	✓	✓	✓	✓
Bends	✓	✓	✓	✓	✓	✓
Wet roads	✓	✓	✓	✓	✓	✓
Darkness	✓	✓	✗	✓	✗	✗
Loss of control	✓	✓	✓	✓	✓	✓
Night-time	✓	✓	✗	✗	✗	✗
Single Vehicle	✓	✓	✓	✓	✓	✓
Notes						
	Risk decreases with age (18-20 high risk)	High fatality rate	Starter salaries	Inexperience	Limited resources	Comfortable lifestyles
	Alcohol becomes an issue as gets older	Inexperience				
	Not as affluent as Edward					

FURTHER SEGMENTATION

The groups identified in this study are based on demographic information, as recorded in the STATS19 collision form or calculated from data supplied in the form. Whilst not possible with the existing

evidence base, it would be useful to undertake psychographic segmentation to understand the motivations, attitudes, values and lifestyles of the target audience. How this could be approached is discussed in later sections.

B. WHY DO YOUNG MEN SPEED?

KEY MESSAGES

Evidence suggests a number of different factors which may help to explain speeding in young men. These include:

- overconfidence, which comprises both an underestimation of the difficulties of a task, and an overestimation of one's capabilities
- an inability to regulate one's own behaviour, for instance as a result of the development of the prefrontal cortex
- sensation-seeking, or a need for feelings of control
- social factors, such as descriptive norms, injunctive norms, and risk images or prototypes
- particular uses of driving, for example as a way to develop and test one's skills, as a badge of masculinity, or as something to do with friends
- the role of passengers

A better understanding is needed of the social context of driving and speeding, and the roles played by these behaviours in larger projects and practices – such as becoming an adult, gaining independence from parents, developing an identity within a peer group, participating in joint activities such as a night out, or developing as a competent driver.

This chapter provides an overview of the various factors which have been linked to speeding by young men. Understanding why young men speed is a critical first step in developing approaches to tackle that behaviour. We need to understand why people do things so that we can then ask *what needs to change* for their behaviour to change.

Given their over-representation in collision statistics internationally, it is perhaps not surprising that, as OECD (2006) note: "The young driver problem has drawn the attention of many traffic psychologists in recent decades and a vast amount of research is available." From the research emerge a multiplicity of possible explanations of risk-taking behaviour, and speeding in particular, by young male drivers. These can be categorised in a number of different ways: for example, automatic *versus* reflective, or individual *versus* social. For the purposes of this brief overview, we distinguish:

- Deficit explanations – which highlight the *lack* of a factor or mechanism which might have *prevented* speeding
- Motivation explanations – which highlight the *presence* of a factor or mechanism which *drives* speeding

It is worth stressing at the outset that the explanations reviewed here are not mutually exclusive. Speeding in young men may be a product of many of these explanations operating in parallel. Moreover, different patterns of explanation may apply to different groups of young men.

DEFICIT EXPLANATIONS

Deficit explanations highlight the *lack* of a factor or mechanism which might have *prevented* speeding.

A good example of the first kind of explanation is provided by the idea of **overconfidence**. Fuller's task-difficulty homeostasis model (see for example Fuller et al, 2008) provides a useful framework for understanding how overconfidence may lead to a failure to regulate speed. In this model, a driver varies their speed to maintain a constant 'perceived task difficulty', which is itself a product of the 'perceived task demand' and the driver's own 'perceived capability'. Overconfidence represents a lack of accurate calibration of this system: perceived task difficulty is underestimated, perceived capability overestimated, and as a result the perceived task difficulty is underestimated and speed increased accordingly. A number of studies have suggested that young drivers, male drivers, and young males in particular are prone to this kind of overconfidence (for reviews of evidence see Cestac et al, 2011; Fylan et al, 2006; Fuller et al, 2008; OECD, 2006). As Fuller et al (2008) put it:

Unfortunately this combination of misperceptions appears to be a prevalent characteristic of young, inexperienced drivers who typically overestimate their capability relative to other drivers (i.e. poor calibration) and underestimate the demands of the driving task, for example by rating potential hazards as less risky than more experienced drivers. Thus they are prone to driving in a manner which is closer than they realise to the limits of their capability, unaware of their vulnerability to an impending loss of control

Many models of behaviour highlight the role that **social norms** play in shaping behaviour. For example, the Theory of Planned Behaviour proposes a link between subjective norms, based on beliefs about what relevant others think one should do, and intentions. Social norms are often thought of as *driving* behaviour, through mechanisms such as 'peer pressure'; and we return to this topic later. However, it is important to remember that norms can also operate as *regulators* of behaviour. For example, perceptions that speeding is unacceptable to relevant others may constrain speeding behaviour. By the same token, the lack of such perceptions would remove this constraint. There is some evidence that this may be the case for young male drivers: for example, in their scenario-based study with young drivers, Conner et al (2003) found that males reported "less moral norms not to speed" than females. In a similar vein, Yagil (1998) found that "younger drivers and male drivers express a lower level of normative motivation to comply with traffic laws than do female and older drivers".

Norms such as these, which reflect beliefs about what relevant others think one *should* do, are called **injunctive norms**. Behaviour can also be influenced, however, by **descriptive norms**, based on beliefs about what relevant others actually *do* do. Descriptive norms too can act as regulators of behaviour; and this regulation too can fail if the norms are not accurate. For example, Fuller et al (2008) cite evidence that "adolescents overestimate the prevalence of reckless driving among their peers and this overestimate predicts greater compliance with the perceived 'norm'."

As noted above, the Theory of Planned Behaviour proposes that norms have a direct effect on intentions. In a model developed specifically to address discrepancies between intentions and risk behaviours in adolescents, Gerrard et al (2008) propose a different route to behaviour, via the construct of **behavioural willingness**: "Adolescents often find themselves in situations that facilitate (but do not demand) risky behaviours (e.g. an unsupervised party where alcohol and drugs are available). Once in these situations, it is frequently not a reasoned decision making process, but rather their willingness that determines their behaviour." To put the point another way, behavioural willingness represents a *deficit* of regulation: even if they do not plan to speed, the willing young male driver may nevertheless do so, of their own volition, when placed in a situation that facilitates speeding. As a dual process model, the Prototype Willingness Model proposed by Gerrard et al (2008) attempts to account for a broader scope of behaviour than the more limited Theory of Planned Behaviour, (which, as the name suggests, offers an account only of *planned* behaviour). Unfortunately, the construct of behavioural willingness has received little attention in the research on young drivers and speeding.

The deficit explanations considered so far in this section all assume that the same basic regulatory mechanisms are in place in young men as in other drivers. The failure of regulation is traced to one of the inputs to that mechanism: the perceived task demand; the driver's own perceived capability; beliefs about what others think one *should* do; or beliefs about what they actually *do* do.

Some deficit explanations, however, propose that it is the regulatory mechanism itself that is deficient in young men. In particular, the ongoing development of the **prefrontal cortex** is often mentioned in this respect. OECD (2006) usefully summarise a number of studies which demonstrate that "beyond the age of 18, the human brain is still developing, especially those areas in the frontal lobe that deal with 'executive' functions like planning, impulse control, reasoning and the integration of information (i.e. 'thinking before action')."

Other studies highlight **ADHD**, which may also be understood as kinds of regulatory failure. See, for example, Fuller et al (2008), for example, who review evidence that: "ADHD young adults are cited more often for speeding, are involved in more crashes and in more injury crashes than controls matched for age, sex and educational level." Fuller et al (2008) also note evidence that failures to regulate **emotions**, such as anger, may be a factor in speed, alongside **aggression**. Smart & Vassallo (2005) report, on the basis of a longitudinal study running into early adulthood, that "differences between those who had been detected speeding on multiple occasions (multiple speeding violation group) and other drivers were evident from late childhood (9-12 years)", with risk factors including hyperactivity, aggression, lower self-control and lower task orientation.

MOTIVATION EXPLANATIONS

Motivation explanations highlight the *presence* of a factor or mechanism which *drives* speeding

For example, a significant body of research has drawn attention to the importance of **sensation-seeking** as a driver of risk-taking in general, and speeding in particular (for reviews, see Cestac et al, 2011; Fylan et al, 2006; OECD, 2006). First proposed by Zuckerman (1979), sensation-seeking describes "a trait defined by the need for varied, novel and complex sensations and experiences and the

willingness to take physical and social risks for the sake of such experience." Driving at speed may provide exactly this kind of sensation and experience.

Fuller et al (2008) draw attention to the potentially fatal interaction between sensation-seeking and overconfidence. They note evidence that, as well as opting for a higher level of task difficulty or risk threshold than other drivers, sensation-seekers are "also less likely to take account of impaired capability in managing task difficulty". As such, they argue: "the sensation seeker is perhaps doubly disadvantaged; on the one hand disposed to seek the thrill of operating close to the threshold where the level of task demand meets the upper level of capability, and at the same time making no adjustment in task demand to compensate for impaired capability. High sensation-seekers perceive less danger in risky driving behaviour."

Studies suggest that sensation-seeking peaks in adolescence, especially in young men, and then declines with age. OECD (2006) argue that this pattern may have a biological basis, noting that "sixteen year-old boys have about 20 times more of the sex hormone testosterone in their body than they had just before puberty", and citing studies which show "a positive correlation between sensation-seeking and testosterone levels, providing one very basic explanation for why men are more prone to risky behaviour patterns than women." This pattern could also help to explain why young men are at greater risk than older men.

Cestac et al (2011) offer another interesting perspective on the role of sensation-seeking over time. In their study, they note that sensation-seeking also has a declining influence on intentions to speed: "This factor influenced speeding intentions for the least experienced young drivers, but not for those with more than one year of driving. The average level of sensation seeking was similar in the three groups, but its influence on intention declined with experience." They hypothesise that, as drivers become more experienced and driving becomes more familiar, so too driving at speed ceases to deliver the kind of "varied, novel and complex" sensation sought by sensation-seekers.

Varied, novel and complex sensations and experiences are not the only benefits that driving at speed may offer. For example, drivers may take pleasure in feelings of **control** that come with the ability to drive fast; and Hammond & Horswill (2001) found that "drivers with a high desire for control intended to drive at faster speeds and were willing to pull out into smaller gaps in traffic". Cestac et al (2011) offer evidence from their study that, for more experienced young drivers, the pleasure of control replaces the waning thrill of speed: "with the driving experience, drivers are more motivated to break the rules due to the control they feel they have over the situation, and less motivated due to their desire to experience sensations".

The importance of control, and the **skill** that makes it possible, is also highlighted by Rolls & Ingham (1992), who note a subtle and important difference in the ways in which 'safe' and 'unsafe' drivers evaluated their own driving: "Generally, 'safe' and 'unsafe' drivers defined a 'good' driver in different ways. More of the 'safe' drivers took this to be a driver who was safe, considerate and courteous and did not get in the way of other drivers. On the other hand, more of the 'unsafe' drivers tended to define a 'good' driver as one who was highly skilled, who could handle the car well, was positive in their actions and had quick reactions."

As well as being a way of experiencing feeling control, speeding may for some young drivers be a way of **developing and testing** this skill. Rolls & Ingham (1992), for example, also note that: "Many of the 'unsafe' drivers tended to 'test' their abilities and car capacities on or off-road to a much greater degree than did 'safe' drivers." Rural roads may be a key location for this kind of skill development. For example, Collins et al (2008) found that: "Younger males in the focus groups generally saw driving on rural roads as an enjoyable activity in comparison to urban driving, and an opportunity to test out their driving skills. This was reflected in the way they drove on rural roads, which was generally more carefree and at higher speeds." Similar distinctions between conceptions of good driving are drawn in the segmentation of young drivers proposed by Christmas (2008).

The examples of control and skill remind us that the benefits of driving may go beyond immediate sensations and experiences. Driving can also be an **expressive act**, and the way that one drives can play an important role in constructing and maintaining an identity. Moreover, the extent to which it is seen as such may have an impact on risk-taking: for example, Rolls & Ingham (1992) found that: "Many 'unsafe' drivers recognised the *practical* (i.e. functional) side of driving but also viewed driving as an *expressive* activity, to a larger extent than did the 'safe drivers'."

As an example of the expressive function of driving, a number of researchers have drawn attention to the connections between driving and **masculinity**. Morphett & Sofoulis (2005), for example, point out that "driving is a highly social and gendered practice, with the most risky extremes linked to displays of adolescent masculine identities within particular cultural sub-groups". Unfortunately, masculinity is also linked to risk-taking across a wide-range of behaviours. For example, Courtenay (2000) argues that: "social practices that undermine men's health are often signifiers of masculinity and instruments that men use in the negotiation of social power and status". As a result: "A man may define the degree of his masculinity, for example, by driving dangerously or performing risky sports – and displaying these behaviours like badges of honour." Not surprisingly, Fylan et al (2006) cite evidence that "Speeding is seen as a male attribute, and men who believe themselves to be more 'macho' are also likely to speed."

It is too easy to assume that dynamics such as those proposed above involve reflective, intentional motivations. For example, in the quote above it sounds very much as if the man is *consciously* defining his masculinity and displaying his badges of honour. In fact, **automatic motivation** may play a critical role here. In a study of priming effects, Mast et al (2008) assigned young men to masculine, feminine or neutral priming conditions (involving exposure to sets of words associated with each category. "Results showed that when the concept of masculinity was activated by priming, participants' driving speed increased significantly from the beginning to the end of the driving simulation as compared to the neutral and the feminine condition."

One way of understanding the links between masculinity and driving is in terms of **social norms**, and what individual young men believe relevant others think they *should* do *as a man*. As we saw earlier, social norms can act as a regulator of behaviour; but they can also drive behaviour. A number of studies have suggested that speeding by young men may be driven to some extent by social norms. Conner et al (2003), for example, found not only that young men reported "less moral norms not to speed" than young women (see earlier), but also that they reported "significantly greater normative

pressure to speed." Similarly, Cestac et al (2011) found that: "injunctive subjective norms had a significant effect on men's intentions but not on women's. […] it seems that men perceive more social pressure to speeding than women do." This, they suggest, may be linked to the more competitive nature of relationships between men.

Gerrard et al (2008) propose a more substantive concept than social norms, the **prototype** or risk image. According to the Prototype Willingness Model, these are images of the *kind* of person who engages in a particular behaviour. As such, they go beyond mere beliefs about whether relevant others will approve or disapprove of a behaviour, and indicate what that behaviour will *communicate* about the person who performs it. The substantive, multidimensional nature of prototypes – as opposed to injunctive norms, which can easily be represented as unidimensional +/- scales – makes them difficult to operationalise in practice. To the extent that researchers have studied them, there is some evidence that prototypes of the kind of person who speeds may play a role in speeding by young men: for example, Gibbons & Gerrard (1995) found that prototype perception was related to risk-taking in college students for four behaviours including "reckless driving" – and also, worryingly, that risk-taking led to a more favourable prototype, especially in those who engaged in more social comparison. More recently, Cestac et al (2011) found that "perceived similarity to the typical deviant" was one of the two factors (alongside attitude) that had the strongest impact on speeding intentions (after past behaviour). This, they argue: "substantiates the assumption in the Prototype Willingness Model that intentions are determined both by reasoned components (attitudes) and spontaneous elements (social reactions)." In fact, the model originally proposed that prototypes and social reactions would *not* affect intentions, but would instead operate via behavioural willingness. In line with this, questions remain about whether prototypes operate as goals (driving behaviour), or by regulating (or failing to regulate) behaviour.

Social factors, such as social norms or prototypes, do not only operate when other people are actually present. Conner et al (2003), for example, note that: "Normative pressure was a stronger predictor of intentions for men compared to women when driving alone." Nevertheless, the presence of others as **passengers** may have a significant effect on how and to what extent social factors operate. A large body of evidence suggests that the presence of passengers can influence the behaviour of drivers in general and young male drivers in particular; and that the presence of other young men in the car is especially problematic (for a review, see Husband, 2010; Fylan et al, 2006). Collins et al (2008) argue, on the basis of qualitative research with young male drivers in Scotland, that the presence of passengers can in many cases be a moderating influence, with the risk of endangering others one that was "very much to be avoided". However, they note:

The exception was the presence of similarly-minded young male friends in the car. This often led to more extreme driving behaviour, either through encouragement from friends to take risks, or the driver's desire to show off. This was a potent mix, especially in the evening when roads might be quieter. It was apparent that there was not the same feeling of responsibility for the safety of 'mates' as there was for other passengers. In this case, everyone was in it together, with shared responsibility for the extreme driving behaviour. However, it is worth noting that younger drivers did not necessarily need encouragement to drive fast and were equally likely to do so when on their own. Indeed, being alone was the main opportunity for fast driving for those who were slightly older.

The nature of interaction with passengers may, as Bird & Tapp (2008) note, reflect the special role the car plays for young people as a **social space**: "a place for social interaction, independent of parents, [which] may be the first truly personal space for those living at home." In this respect, it is interesting that Collins et al (2008) found that, for the youngest drivers (aged 17 to 21) driving could be a **social activity** in its own right: "Many younger drivers saw driving as a form of entertainment and a distraction from boredom, particularly in rural areas where there was less alternative entertainment available locally than in the cities. Going out for a drive in the evening, either with friends, or to see them, was viewed as a way to pass the time. Since the objective was driving for entertainment rather than to reach a specific destination, this had implications for the attitudes and behaviour of drivers on these occasions." Fuller et al (2008) report evidence that driving without a destination is associated with driving errors, 'aggressive violations' and 'ordinary violations'.

Cestac et al (2011) suggest that social factors are at their most important in shaping intentions to speed in the period between one and three years after gaining a licence, after the sensations of speeding have waned (see earlier) and before the pleasures of control predominate (see earlier). Their results lead them to propose "a three-stage motivational process in the intention to drive at 110 km/h on a road with a speed limit of 90 km/h. At first, (i.e., for *novices*), speeding appeared to be influenced more by sensation seeking. In the second stage normative aspects predominated among *beginners*, which suggests a social comparison phase. Lastly, as a third step, *more experienced drivers* would be more motivated by the feeling of control, the most influential factor in the intention to break the speed limit."

SOCIAL CONTEXT, PROJECTS AND PRACTICES

The importance of social factors such as norms, prototypes and the direct influence of passengers reminds us of the extent to which speeding behaviour may be influenced by the broader **social context** of a driver. Social context will influence the roles played by social factors as both regulators and drivers of behaviour. For example, social context will determine the identity of the 'relevant others' whose views on what one should do underpin social norms. Fuller et al (2008), for example, note that: "The norm of particular demographic groups may create a need to display deviance"; while Bird & Tapp (2008) suggest the norm of driving fast and aggressively is specifically linked to "deprived areas". Differences in norms may reflect underlying different patterns of exposure to the views of others: for example, Rolls & Ingham (1992) found that "'Unsafe' drivers were more influenced by, and more exposed to, unsafe driving by their parents and peers than were the 'safe' drivers." Alternatively, they may reflect different levels of importance attached to the different views to which one is exposed. At the most detailed level, the speeding behaviour of young male drivers will be shaped by the **idioculture** of the immediate peer group – the shared knowledge, behaviours, norms and practices of the group. As OECD (2006) note: "the young person's driving behaviour not only reflects individual aspects of his or her life, it also reflects the lifestyle and social context within which the driving behaviour is executed."

No less important are the various **projects and practices** of which driving is part and to which it contributes – some of which have already been touched upon. Bird & Tapp (2008), for example, highlight "the role of the car and driving in expressing adult identity; their role in expressing masculinity; individuality and independence from parental control; the car as social and personal

space; driving as an outlet for aggression". In line with this, OECD (2006) highlight the need for "knowledge about the role and function of driving in the youth's life when trying to understand driving behaviour", and point out that: "Youth is a period during which one undergoes a number of processes that make life more intense, and various sequences follow the same pattern seen in crash involvement, such as the over-estimation of abilities and breaking (traffic) rules. This is part of development and the process of 'breaking free', whereby young people want to test the limits and prove their ability to manage on their own. It is important to realise that driving a car is only a form of expression of a small part of these over-riding, far more complex phenomena related to coming of age." The continuation of these processes into adult life may also be implicated in a subsequent decline in risky behaviour: for example, Rolls & Ingham (1992) found that 'safe drivers were more likely to have partners/girlfriends, while 'unsafe' drivers spent more of their time with male friends.

Unfortunately, notwithstanding the "vast amount of research" on young drivers, we know surprisingly little about what driving means in the lives of young men. A relatively rare example of a study focused on addressing this question is provided by Møller (2004) who, in a qualitative study with young drivers in Denmark, sets out to explore "the psychosocial function of driving as well as the process through which a relationship between lifestyle and driving behaviour is established", and identifies four broad categories of psychosocial function – visibility, status, control and mobility – each with several dimensions. There is some overlap here with the high-level model of motivations to drive proposed by Steg (2004), which distinguishes instrumental, social and affective motivations.

C. WHAT COMMUNICATION APPROACHES COULD BE EFFECTIVE?

KEY MESSAGES

There is a lack of strong positive evidence for the effectiveness for any single approach. However, the evidence suggests there may be value in exploring 'social approaches'.

On the negative side, the evidence suggests that highlighting the risks ('threat') of killing or seriously injuring oneself or others will not be effective with this target audience; and that evocations of the threat of death may even be counter-productive.

Other kinds of risk ('threat') may potentially be more credible and personally relevant to the target audience, for example:

- Threats to mobility and freedom – as a result of losing one's licence or damage to one's vehicle
- Social threats

There is a growing interest in social approaches – which include but are much broader than 'social threats' – but as yet little evidence regarding which if any will be effective.

A wider understanding of the role of social factors in behaviour suggest an effective social approach will rest on choices about:

- Factors: social approaches might seek to influence descriptive norms (beliefs about others' behaviour), injunctive norms (beliefs about whether others will approve of a behaviour) and prototypes (beliefs about what a behaviour says about one).
- Objectives: social approaches might seek to make speeding less acceptable or desirable; *not* speeding more acceptable or desirable; or to address other relevant social behaviours, such as challenging speeding.
- Starting points: social approaches can draw attention to existing norms and protoypes, or seek to create new ones – although in practice, this is more likely to involve co-opting, amplifying and modifying existing norms and prototypes.
- Intervention functions: far from being limited to social threats, social approaches can draw on a wide range of intervention functions: education, persuasion, incentivisation, coercion and modelling.

Any communications approach would benefit from a better understanding of the social context of driving and speeding, and the roles played by these behaviours in larger projects and practices

Communications may play a vital (if indirect) role in behaviour change, by promoting the acceptability and/or uptake of other types of intervention which have a (direct) impact on the target behaviour in the target audience.

Any campaign should be i) subjected to prior behavioural testing, to explore the likely impact of the intervention on behaviour and/or the determinants of behaviour ii) evaluated to establish not just

whether but also *how* it succeeds or fails. A clearly articulated theory of change is an essential prerequisite in both cases.

Building on the overview, in the last chapter, of what is known about why young men speed, this chapter considers which communication approaches, if any, could be effective in tackling this behaviour.

APPROACHES BASED ON THREAT AND FEAR

The default option for road safety campaigns – and indeed public health campaigns more widely – is an approach based on threat and fear. Hoekstra & Wegman (2011) argue that: "Judging by the number of road safety campaigns that make use of fear appeals, there is a firm belief in the ability to 'scare people straight'": while Lewis et al (2007) note that: "Of the health issues that have utilised threat appeals, road safety is particularly renowned for its use of physical threats in which drivers and passengers are often shown to be injured and killed as a result of unsafe and/or illegal behaviour."

The widespread use of threat-based approaches does not, however, reflect evidence for their effectiveness. Lewis et al (2007) describe "a large body of literature characterised by issues of long-standing debate and inconsistent findings", and argue that (at the time they were writing): "The prevailing viewpoint among some behavioural scientists and health promotion professionals and practitioners is to avoid threat appeals or to use them with great caution".

In particular, questions have been raised about the effectiveness of threat-based approaches with young male drivers. On the basis of their review of evidence, Lewis et al (2007) conclude that: "despite often being the intended audience of many advertisements, young males appear to be less persuaded by appeals involving physical threats."

Concerns have also been raised about the effectiveness of this kind of approach with sensation-seekers. Lewis et al (2007) note that "despite their increased risk (and greater personal relevance with the behaviour), evidence derived from HIV/AIDS advertisements as well as road safety advertisements indicates that threats of injury or death are not effective with high sensation-seeking individuals." As we saw in the previous section, there is evidence to suggest that sensation-seeking plays an important role in speeding in young men.

MODELLING THREAT AND FEAR

Why do threat and fear appear not to work with young men? Before addressing this question, it is useful to pause and consider how these approaches are *supposed* to work, as there is often confusion about the components of this approach, their relation to each other, and their role in producing a desired outcome. Wundersitz et al (2010) usefully distinguish:

- The stimulus: *threat* – "A threat appeal refers to the undesirable consequences of certain behaviours that are contained in a message."
- An emotional response: *fear* – "fear refers to the emotional reaction from the audience in response to a threat"
- A cognitive response: *awareness of danger*

There is in fact little clarity about how the emotional element, fear, is supposed to contribute to behaviour change. As Carey et al (2013) note: "despite detailed theoretical models and numerous experimental studies and reviews, the role of fear in the threat appeal literature remains unclear". They review the literature to test the simple idea that "threat elicits fear, and fear results directly in behavioural avoidance or modification", and find that "threat appeals can lead to increased fear arousal, but do not appear to have the desired impact on driving behaviour." They suggest that an "overly simplistic" way of thinking about the causal relationship between emotion and behaviour may be at fault. Lewis et al (2007) point out that many threat-based campaigns may elicit emotions other than fear (disgust, for example), which may have different behavioural consequences.

In fact, as is often pointed out, fear can be counterproductive from a public health perspective. Wundersitz et al (2010) cite studies which have shown that:

exposure to fear appeals can elicit maladaptive responses, that is, responses that do not try to control or remove the threat implied by the fear message but attempt to cope with unpleasant feelings that result from the advertisement. Such maladaptive responses might include defensively avoiding or ignoring the message, failing to process the threatening part of the message and denying the personal relevance of the message. It may also promote reactance against a message such that individuals view the message as a challenge and increase the undesired behaviour. In other words, the message is rejected or regarded as ineffective. All of these responses are dangerous because they can reduce the threat without reducing the actual level of risk.

Research has identified a number of other factors which influence the response to a threat appeal. Witte's (1992) Extended Parallel Process Model (EPPM) builds on the earlier Parallel Response Model and Protection Motivation Theory (see Lewis et al, 2007, for an overview of the history of attempts to theorise the role of fear in persuasive communications) and seeks to accommodate these factors and explain the mixed results achieved by threat appeals, and the role played by fear in both success and failure. Key elements of the model (see Carey et al, 2013, for a more detailed summary) are:

- Perceived threat, which has two components
    - Severity – beliefs about the magnitude of the threat
    - Susceptibility – beliefs about how likely the threat is to impact one *personally*
- Perceived efficacy, which also has two components:
    - Response efficacy – beliefs about how effective the recommended behaviour will be
    - Self-efficacy – beliefs about one's own ability to perform the recommended behaviour (compare perceived behavioural control' in the Theory of Planned Behaviour)

Three types of response are envisaged, depending on the relative levels of these factors. If both perceived threat and perceived efficacy are high, then an individual may take steps to mitigate the risk (danger control) – the desired outcome. If perceived efficacy is low, however, the individual may instead take steps to reduce their fear (fear control) – the maladaptive responses noted earlier. Finally, if the perceived threat is low, then there may be no response.

The EPPM provides a useful framework for an overview of evidence regarding the effectiveness of threat-based appeals in tackling speeding in young men.

SEVERITY

Road safety campaigns have often focused on the severity dimension of the EPPM: for instance, by displaying the negative consequences of collisions in graphic ways. In stark contrast, Lewis et al (2007) argue that "a growing body of research has highlighted the relatively greater importance of susceptibility and efficacy." Reflecting on the literature reviewed, they state that: "The most consistent and definitive conclusions appear to be in relation to the importance, not of fear arousal but, of relevance (i.e., vulnerability) and provision of coping strategies and recommendations that an individual can effectively enact to avoid or prevent a threat from occurring (i.e., efficacy)."

Specifically in relation to young men, the tendency of campaigns to focus on severity is especially puzzling. There is no evidence in the literature to suggest either that young men lack an understanding of the potential severity of the consequences *if* they were involved in a collision, or that their propensity to speed can be explained in terms of such a lack. In short, if graphic depictions of the consequences of accidents were not already a default for road safety consequences, it seems unlikely that anyone would propose using them on the basis of the available evidence.

In fact, there is evidence to suggest that focusing on severity – and in particular on the risk of death – may not only be ineffective but harmful. Of particular concern in this respect are a series of studies that suggest that, among those who derive self-esteem from their driving, increasing the salience of the risk of death may actually lead to *greater* risk-taking (see Carey et al, 2013, for a review). Given the important role that driving may play in young male identities, these findings raise serious concerns about the use of graphic imagery of death and injury with this audience. At the very least, rigorous behavioural testing would be need for any approach based on such imagery to ensure that it would not in fact *cause* harm.

Alternative threats – i.e. risks other than death and injury – may not raise these concerns. Some possible candidates for alternative threats are considered below.

SUSCEPTIBILITY

There is substantial evidence to suggest that young men underestimate their susceptibility: not what would happen *if* they were to be involved in a collision, but the likelihood of this happening to them *personally* as a result of speeding. An underestimation of susceptibility is a direct consequence of the overconfidence discussed in the previous chapter, involving both an underestimation of the difficulty of tasks and an overestimation of one's own capabilities.

Collins et al (2008) describe exactly this pattern among young men in their study of driving on rural roads in Scotland, describing how the young men they spoke to "simply did not see any problems arising from their driving, […] Such is their self-belief in their skills that they see minimal potential risk in their driving behaviour and are confident that 'it won't happen to me'."

Collins et al (2008) also note a significant problem which this pattern poses for communications: "Communications that challenge young male's own self- belief in their driving are likely to be ignored." Whereas communications can communicate the severity of consequences *if* one has a collision, it is not clear how they might set about persuading an individual young male driver either that driving was harder than he believed it to be, or that he personally was not as good at driving as he thought it was.

Moreover, it is easy to see how such attempts might prove counterproductive – if, for example, they were perceived as a kind of challenge. These risks would be further exacerbated if, as suggested by Christmas (2007), overconfidence is to be understood less as a cognitive failure than as a purposive positioning of oneself in a social context.

The inherent difficulties – perhaps impossibility – of challenging low perceived susceptibility has led a number of authors to suggest that campaigns should instead focus on alternative threats (other possible negative outcomes of speeding) to which young men might feel more susceptibility. Lewis et al (2007), for example, argue that:

the key to behavioural change lies in creating susceptible threats as opposed to relying on fear arousal to motivate change. This notion of identifying personally relevant threats for particular target audiences is consistent with market segmentation which suggests that different audiences are likely to respond more or less effectively to particular threats. Moreover, it acknowledges the fact that individuals fear different threats and to varying extents. Consequently, for a threat appeal to be effective it is essential that the optimal type of threat is utilised. Whilst, road safety has tended to rely heavily upon physical threats of injury and death, threats may also be social, psychological, or financial.

It is worth noting that the "Helpful Hazards" campaign could can be understood as an example of this strategy, in that it focuses on a risk (unexpected hazards around a bend) which is commonly experienced in everyday driving, and to which drivers may therefore feel more personally susceptible – as opposed to the more severe but comparatively rare risk of a serious collision (see for example the discussion of 'comparative optimism' in Cestac et al, 2011). The "Moment of Doubt" campaign is another example of a communications approach which highlights risks with higher personal relevance and susceptibility.

Some possible candidates for alternative threats are considered below.

PERCEIVED EFFICACY

At first sight, perceived efficacy does not appear to be an issue in respect of speeding: after all, the recommended action is, surely, to take one's foot of the accelerator, a behaviour for which both response efficacy and self-efficacy ought to be assured.

A number of commentators have, however, drawn attention to an oddity here. For example, Hoekstra & Wegman (2011) note that: "it is not really possible to suggest alternative ways to deal with the dangers that speeding presents, other than to just not engage in this particular behaviour". Lewis et al (2007) offer as a contrast the example of drink driving: "appeals focusing on the behaviour of drink driving have the opportunity to focus on a range of coping strategies (e.g., designated driver, taking public transportation); by contrast, few strategies are available in relation to speeding (i.e., the main strategy to avoid speeding is not to speed."

In fact there is an important difference between these two examples. The coping strategies identified as alternatives to drink-driving allow the potential drink-driver to gain the benefits they are seeking (being able to drink in a location to which they need transport) while avoiding the risks: "the consumer can satisfy both wants (drinking and transport needs) by adopting an alternative mode of transport

besides being the driver" (Tay, 2005). The 'coping strategy' of taking your foot off the accelerator, by contrast, is just a way of avoiding the risks, one which "fundamentally contradicts with the desire and need of many drivers to speed due to a variety of personal and social influences" (Tay, 2005). The benefits which speeding may bring are simply ignored: and, as Fylan et al (2006) note: "the benefits associated with driving fast, perhaps the thrill, excitement and social kudos that speeding generates, may be sufficient to maintain the behaviour despite the threat of negative consequences."

Benefits such as these, argue McKenna & Horswill (2006), are often overlooked in health promotion. "When benefits are considered, then, it is more often the case that it is the perceived benefits of the recommended health action that are considered rather than the perceived benefit of the risk taking itself." Indeed, they argue, the concept of risk-taking may in itself presuppose a perspective which is not that of the 'risk-taker': "From the perspective of those either observing behaviour or reviewing the aggregate outcomes of behaviour, the term risk taking may have considerable appeal. However, from the perspective of the participant engaging in the activity, it may be rather less meaningful."

A similar point may be made about the construct of response efficacy in the EPPM. Response efficacy reflects beliefs about how *effective* a recommended behaviour will be. But effective in achieving what? From the perspective of those making a threat-based appeal, the answer may seem to be: effective in reducing the risk identified in the threat appeal. By contrast, the challenge for the individual faced by that threat appeal is NOT just to reduce their risk: it is to reduce their risk (as much as possible) while maintaining (as much as possible of) the benefits which they derive from the activity.

For the young male sensation-seeker, for example, the challenge is not just to avoid the risk of death or injury: it is to achieve a sought after thrill while, if possible, minimising that risk.

Once the effectiveness of a response is understood in this way – from the perspective of the participant – then it is easy to see why taking one's foot off the accelerator *lacks* response efficacy for many young men. Seen in this way, anti-speeding campaigns typically fail the perceived efficacy requirement for anyone who derives positive benefits from driving fast.

Recommended actions which meet the requirement of perceived efficacy need to be rooted in an appreciation *from the perspective of the target audience* of the challenge posed by a threat appeal to that audience. This in turn means understanding what the risky behaviour in question means to that audience. In the case of young men and speeding, this means understanding – as already noted in the last section – more about the social context in which driving and speeding take place, and the projects and practices of which they are part and to which they contribute.

ALTERNATIVE THREATS: MOBILITY AND FREEDOM

As noted above, the evidence around severity and susceptibility suggests that, in the case of young men and speeding, threat appeals might be more effective if they focused on threats other than the risk of death or injury. Two broad classes of threat have been identified in the literature:

- Social threats – these are covered as part of a broader review of social approaches in the next section.
- Threats to mobility and freedom – which are discussed here.

Wundersitz et al (2010) cite evidence that "young people appeared most affected by threats to their freedom or mobility," suggesting that there might be potential in a campaign focused on the risks of losing the use of one's licence or (as a result of damage) vehicle. This risk might resonate with rural young drivers in particular, given their greater dependence on their car.

Unfortunately, in their research in Scotland, Collins et al (2008) found that susceptibility may be low for this risk too, with "little perceived threat of receiving penalties on one's driving licence" and the risk of damage to one's own vehicle a "minor concern". Indeed, they note that rural roads raise a specific challenge in relation to susceptibility: "The younger men in the focus groups perceived risk on rural roads differently to risk on other road types, due to lower levels of vehicle and pedestrian traffic, and a lower police presence. The perceived consequences of risky driving did not include incurring penalty points on their driving licence".

In this respect, it is worth noting findings which suggest that anti-speed campaigns: i) may be more effective if they contain enforcement messages which "provide information about enforcement procedures, laws or rules (e.g. information on fines, roadside checks) and outline the negative consequences associated with the behaviour" (Fylan et al, 2006); ii) may *only* be effective if couple with enforcement activity (Tay, 2005). The credibility of a campaign focused on threats to freedom or mobility could conceivably be enhanced by parallel enforcement activity – as is typically the case with drink driving campaigns. On the down side, it is important to remember that a drink-driver cannot sober up for those *parts* of journey where detection is a more credible risk, whereas a speeder can easily slow down where necessary, and speed up again wherever they feel detection is unlikely.

Appeals based on threats to mobility and freedom would also struggle to address the issues identified above regarding perceived efficacy. To a large extent, the potential for such an approach would depend on the mix of benefits delivered by driving and driving at speed: for example, to what extent does risk of losing of one's licence constitute a social threat (see below)?

SOCIAL APPROACHES

Growing evidence of the ineffectiveness of the threat of death or injury as a way of tackling speeding in young men has been matched by growing interest in the potential of what might be called social approaches.

Often these approaches are characterised in terms of social *threat*. Bird & Tapp (2008), for example, use this term in citing evidence from the fields of smoking preventing and encouraging safer sex. Lewis et al (2007) describe the threat of losing one's licence in these terms, and notes that: "evidence that social threats (e.g., threat of losing licence and the social stigma attached to licence loss) may be an effective threat appeal alternative, particularly for younger individuals (including younger drivers), is accumulating." On the other hand, there is an argument to be made that characterising all social approaches in terms of 'threat' is misleading. In this section, we will use the broader term 'social approaches'; we return to the question of 'threat' at the end of the section.

Unfortunately, interest in the potential of social approaches has not yet been matched by a body of evidence comparable to that which exists in relation to threats of death or injury. There have been relatively few campaigns using this approach: of the 45 anti-speed campaigns reviewed by Phillips &

Torquato (2009), for example, only 7 are classified as using social content; and the classification of some of these 7 campaigns (e.g. the Northern Irish "Thump" campaign) is surely open to question. In their review of road safety campaigns, Phillips et al (2011) note that evaluations frequently fail to consider "whether social norms where accounted for by a campaign, which may be particularly important". Where campaigns do explicitly take a social approach, a lack of robust evaluation may make it hard to establish what has been effective and, just as important, why: such is the case, for example, with the "Pinkie" campaign in New South Wales. Among experimental researchers, meanwhile, there has been a focus on testing the effectiveness of the fear- and threat-based approaches which still predominate in road safety: with the unfortunate consequence being that we know more about what will *not* work than about what will work.

Nevertheless, drawing on a wider understanding of social factors in behaviour and the evidence presented in the previous chapter regarding the role of social factors in explaining speeding in young men, it is possible to propose a simple framework for thinking about the kinds of social approach that could be considered. This framework covers four key choices which need to be made in developing a social approach:

- Factor(s)
- Objective
- Starting point
- Intervention function(s) and theory of change

FACTOR(S)

Social approaches can seek to change behaviour by targeting any of the different kinds of social factor identified in the previous chapter.

For example, Hoekstra & Wegman (2011) discuss the potential role of **descriptive norms** in a social approach to behaviour change, for example: "by presenting people with an example of the way we would like them to act rather than showing them how they should not. This is because we humans have a very strong tendency to mimic the behaviours we see in others." Fylan et al (2006) draw attention to the role played by descriptive norms in the provision of personalised normative feedback, in which "one's own behaviour is compared to a normative standard and this can trigger a self-evaluation process." OECD (2006) present evidence that the use of descriptive norms "has been shown to be successful in changing young people's behaviour with respect to seat belt use and drink-driving": "young people tend to overestimate the frequency with which their peer group engages in dangerous behaviour. Thus safe behaviour is encouraged by communicating to young people that dangerous behaviour, in fact, is not 'the norm' among their age group."

Injunctive norms were explicitly targeted by the "Foolsspeed" campaign in Scotland, which was structured explicitly around the Theory of Planned Behaviour. One of the three advertisements developed, 'Friends and Family', was designed to address the subjective norms component of the model, and highlighted the mismatch between the driver's own view of his behaviour and how passengers – a female partner, a male work colleague, and a young child – see it. Unfortunately, evaluation of the campaign (Stead et al, 2002) suggested that this creative execution failed to change

subjective norms, leaving open the question of what the impact on behaviour would have been *if* the campaign had succeeded in this respect. (For further discussion of the ways in which this execution may have failed to change subjective norms, see Stead & Eadie, 2007.)

Development of the "Pinkie" campaign in New South Wales lacked a comparable theoretical underpinning, and as such it is open to question which of the social factors it is seeking to address. Nevertheless, an argument could be made that, by seeking to promote an unfavourable image of the kind of young male driver who speeds, the campaign is targeting risk images or **prototypes**.

A social approach does not need to focus on just one of these factors. Indeed, even where the explicit focus is on just one factor, consideration needs to be given to possible unintended consequences in other areas. This is especially the case with regard to campaigns which highlight negative behaviour, which may inadvertently affect descriptive norms in an adverse way. As Hoekstra & Wegman (2011) note, there is a risk that a presentation of negative behaviour "suggests that the behaviour portrayed is something that a lot of people already do, and therefore may act to normalise the very behaviour that it attempts to discourage."

OBJECTIVE

Social approaches that aim to change a particular behaviour, such as speeding, may approach this aim via a number of different objectives. For example, the approach might seek to:

- Reduce the acceptability or desirability of speeding. For example, Watsford (2008) describes the objective of the "Pinkie" campaign as being "to undermine the perceived pay-off young men feel from speeding".
- Increase the acceptability or desirability of *not* speeding. For example, Bird & Tapp (2008) argue that "peer pressure/peer approval of speeding is so endemic that young males would be seen as 'wimps' if they do not drive aggressively": a campaign might seek to challenge this situation, and make *not* speeding more acceptable in these groups.
- Address social behaviours with a direct impact on speeding, such as challenges by peers. For example, the "Legend" campaign in New Zealand seeks to encourage young men to challenge their friends not to drive when drunk.

STARTING POINT

Campaigns may differ in the extent to which they:

- Draw attention to existing norms or prototypes. For example, the social norms element of the "Foolsspeed" campaign sought to make the (assumed) disapproval of 'Friends and family' more salient for it's target audience.
- Seek to create new norms or prototypes. For example, the "Pinkie" campaign could be seen as setting out to create a new prototypes, along with an associated gesture.

This distinction should probably be seen as one of degree rather than an either/or one. In practice, it may be impossible for communications campaigns to create entirely *new* norms or prototypes. But they may be able to co-opt, amplify and modify existing norms and prototypes in creative ways. "Pinkie", for example, arguably taps into a widely held perception that macho behaviour in cars is

compensatory, an attempt to prove masculinity that is in question. The widespread term 'boy racer' is an example of another, pre-existing prototype which might be co-opted creatively, for example in a campaign that focused on immaturity.

Creative co-option of this kind still needs to start from a good understanding of the material it has to work with: an understanding, that is, of the **social context** of the target behaviour and its meaning to the target audience as part of wider **projects and practices** (see previous chapter). An example of this kind of approach to social norms, with a similar audience if in a different domain, is provided by Drinkaware's "Wouldn't/Shouldn't campaign", which was developed on the basis of a detailed analysis of the social context of drunken nights out in Christmas & Seymour (2014).

INTERVENTION FUNCTION(S) AND THEORY OF CHANGE

Michie et al (2014) define intervention functions as "broad categories of means by which an intervention can change behaviour". Of the nine intervention functions identified in their framework, five can be delivered through communications and marketing:

- Education – increasing knowledge or understanding
- Persuasion – using communication to induce positive or negative feelings or stimulate action
- Incentivisation – creating an expectation of reward
- Coercion – creating an expectation of punishment or cost
- Modelling – providing an example for people to aspire to or imitate

Approaches based on threat and fear assume the use of two of these intervention functions: coercion (the threat element) and persuasion (through the elicitation of fear – although, as seen earlier, the effectiveness of eliciting fear in stimulating action is questionable).

Social approaches, by contrast, may use the full range of these intervention functions. For example, an approach based on descriptive norms might combine education (increasing knowledge of real patterns of behaviour among peers) and modelling (thereby combining different examples for people to aspire to or imitate).

As noted at the beginning of this section, social approaches are often characterised in the literature in terms of 'social threat'. In fact, as the above example makes clear, the intervention functions deployed by social approaches may not in fact involve threat at all.

A focus on threat, moreover, may lead to an unhelpful focus on planned behaviour and intention. (The same is true if a single process model, such as the Theory of Planned Behaviour, is used.) Once again, this should not be assumed. For example, a social approach might in theory have an impact on speeding by reducing **willingness** to engage in this behaviour, but without having an impact on **intentions**.

A clear theory of change – outlining not just what an approach is supposed to achieve, but also *which* intervention functions are being used, and *how* they are expected to achieve the desired outcome – is essential as a basis for both the design of an effective campaign and subsequent evaluation and

learning. This is true for all campaigns, and is of particular importance for campaigns employing innovative and novel approaches.

COMMUNICATIONS IN SUPPORT OF OTHER INTERVENTIONS

As Hoekstra & Wegman (2011) point out: "speeding in general is a notoriously difficult behaviour to influence through campaigning". There is reason to believe that speeding in young men may be even more difficult to influence in this way. Indeed, to the extent that this speeding is a consequence of factors such as overconfidence and sensation-seeking – factors which influence risk-taking by young men across a wide domain of activities – it may be that approaches other than communications are needed if any meaningful progress is to be made in tackling risk-taking behaviour and its harmful consequences.

Those other, non-communications approaches are beyond the scope of this report. It is important to note, however, that communications may still play an essential role in supporting the delivery of these approaches – specifically, in securing their acceptability, uptake and correct use.

This is not the traditional territory in which *Think!* has operated. Specifically in relation to young men's speeding on rural roads, however, it may represent the best value for money for investment in communications.

TESTING AND EVALUATION

A key theme of this chapter has been the lack of strong positive evidence for the effectiveness of any single communications approach. As Hoekstra and Wegman (2011) note: "Because reports on the evaluation results of road safety campaigns are few and far between, there is still little insight available into the effectiveness of campaigns in general, let alone which ingredients have proven to be successful, and which have not." Indeed, the strongest conclusion to be drawn from the evidence is a negative one: that a threat-based approach which highlights the risks of killing or seriously injuring oneself is unlikely to be effective with this target audience; and that it may even be counter-productive.

However, the existing evidence does suggest potential value in exploring what we have called social approaches. Developing approaches in this area would require, not the application of 'tried and tested' methods, but innovation and experiment. Over and above opening up possible routes to achieving the target outcomes, this kind of innovation and experiment could also yield important lessons for the wider road safety community – and indeed for public health communications more widely.

However, the innovative nature of social approaches also puts a spotlight on testing and evaluation. These are discussed in turn below.

TESTING

By definition, an innovative approach involves a higher element of risk than a 'tried and tested' one. If an approach has been tried before, and shown to work, we may have a degree of confidence in it working again – confidence we *cannot* have for an approach which has not been tried before.

Testing and piloting provide ways of mitigating and managing this risk. Specifically, they provide an opportunity to test out the theory of change underpinning the campaign, and to explore the likely impact of the intervention on behaviour and/or the determinants of behaviour identified in that theory of change. As Hoekstra and Wegman (2011) explain:

Pretesting can take on various forms depending on the specific characteristics of the intended campaign, but in general it refers to a small-scale study where the campaign concept or individual aspects of it are tested experimentally (i.e., comparing the behaviour or behavioural intentions of people who were presented with the campaign to the behaviour of people who have not been presented with the campaign; comparing the behaviour of people who have been presented with different concepts of the same campaign) to determine if the campaign strategy has any hope of influencing people's behaviour. If the chosen method of influencing behaviour proves successful in an experimental setting, this may be taken as an indication that it's worth trying on a larger scale. If the method does not prove to be effective experimentally, the results of the pretest may prove useful in figuring out how to improve the campaign at a point when it is still possible to make such an overhaul.

This *behavioural* testing should be carefully distinguished from the kind of testing of communications that is usually done, for example in workshops with members of the target audience. Testing of the latter kind plays an important role in the development of a campaign, for example by confirming and enhancing the power of materials to *engage* the target audience, and its importance and value are not in question. However, methods such as these can not deliver insights they are not designed to deliver: in particular, responses in a workshop tell us little or nothing about how the target audience will *actually behave* in response to the campaign. As Hoekstra and Wegman (2011) point out, the task of behavioural testing is to establish the effectiveness of the proposed campaign: "not just in terms of how people experienced the imagery, but rather of what most road safety campaigns are actually trying to accomplish, namely, a change for the better in terms of behaviour".

An example of the potential divergence between these two kinds of testing is provided by the evaluation of the "Helpful Hazards" campaign. TNS BRMB (2009) note that: "The speed that drivers enter corners is somewhat subconscious; amongst those who claimed there had been a change in their driving behaviour there was no effect, but amongst those who said there had been no effect there was a decrease in corner entry speed for the sharpest bends." That is, members of the target audience were unreliable in predicting the impact of the intervention on their own behaviour. This unreliability, we would suggest, extends to many aspects of behaviour: for example, most of us are very poor at identifying accurately who and what influences us.

As well as being undertaken during early pilot phases of a campaign, behavioural testing can be embedded in the development of the campaign through formative evaluation mechanisms. However, this is only possible if appropriate evaluation measures are in place as discussed in the next section.

EVALUATION

The need for more and better evaluation is a recurring theme of reviews of road safety campaigns. For example, reflecting on an international review of 45 anti-speed campaigns, Phillips and Torquato (2009) observe that: "None of the campaigns were evaluated with respect to effects on observed driver behaviour or accident counts. Self-reported data were available for 20 % of the campaigns and

tend to show reductions in the share of drivers admitting to speeding behaviour. It is difficult to compare campaigns because of differences in measures used. The report therefore recommends that speed campaigns place a greater emphasis on evaluation in the future." Specifically in relation to social approaches, the lack of a proper evaluation of the "Pinkie Campaign" means we know neither whether nor how this interesting innovative approach actually worked.

Guides to good practice in evaluation exist (see for example Delhomme et al, 2009), and it is beyond the scope of this review to recapitulate their main points. However, it is worth highlighting one point which is often overlooked in evaluation and which is of particular importance in the evaluation of more innovative approaches: that the purpose of evaluation is to establish not just *whether* an approach succeeded or failed, but also *how* it did so.

Consider, for example, the evaluation of the "Foolsspeed Campaign", and specifically of the 'Friends and Family' advertisement. If the evaluation of this component of the campaign had not been based on a clear theory of change and subjective norms measured independently – if, that is, we knew only that behaviour had not changed in response to the advertisement – then we would not be able to tell whether i) the advertisement had failed to change subjective norms, meaning a different creative approach to changing subjective norms would be worth trying or ii) subjective norms were changing but this was having no impact on behaviour, meaning a different creative approach to changing subjective norms would *not* be worth trying. In fact, as noted earlier, the campaign was properly evaluated on the basis of a clear theory of change: Stead et al (2002) found that this creative execution had failed to change subjective norms, meaning that a different creative execution would in fact be worth trying.

Another example of the importance of evaluating *how* an approach succeeds or fails, as well as *whether* it does so, is provided by the "Helpful Hazards Campaign". The evaluation of this campaign used innovative approaches to track the impact of the campaign on actual behaviour (and made useful recommendations on how these approaches could be further improved); and using these approaches, TNS BRMB (2016) identified that the campaign did not seem to be having the desired impact on the behaviour of younger male drivers (aged 18 to 24). However, because the campaign lacked a clear theory of change, and because the determinants of behaviour specified in such a theory of change were therefore not also measured, we are unable to say *how* and *why* the campaign failed with this audience – just as we are unable to say *how* and *why* it succeeded with older male drivers (aged 25 to 34).

Unless a theory of change is clearly specified, ideally refined through testing (see above), and then used as the basis for evaluation, the opportunity to learn from innovative approaches will be lost. Critically, even if these approaches succeed in changing the target behaviour, they will not have delivered best value for money, as it will be impossible to transfer the learning from that success to other contexts, other audiences, and other behaviours.

D. PRACTICAL & COST EFFECTIVE RESPONSE

Key Messages

Adopting a social approach to the campaign design offers the potential for a wider array of intervention functions to be employed, in turn creating the possibility that a number of target behaviours could be addressed alongside speed. Modelling and education as well as persuasion should therefore be considered within the campaign design.

Tone would appear to be extremely important in messaging to this target audience:

- Positive emotional appeals are potentially more effective
- Authority messages might meet with defiance and denial
- Credible channels and credible voices are key to motivating change

There are reasons to believe that mass media on its own would be insufficient to deliver change:

- Mass media campaign delivery alone shows little associated change in behaviour and may even have a detrimental effect.
- Campaign messages could be significantly strengthened if they can be delivered in a way which is proximate to the behaviour concerned.

The changing media landscape means that social influencers as delivery partners could be effectively engaged as part of a social approach:

- Creating the message and then seeking to identify delivery partners fails to recognise the centrality of delivery partners in securing resonance and reach; they should be central to the design process.
- The role of social sharing is arguably the strongest element of campaign delivery for media based social marketing initiatives that are unable to deliver messages proximate to the behaviour being challenged.
- Recognising the validity of competition and the brand values of Think! may lead intervention designers to consider more credible voices to address norms, perceived vulnerability and prototypes.
- Social sharing dramatically increases the reach of a campaign as delivery is co-managed with the target audience, whilst increasing the resonance of the message as peer networks accept and give authority to the its content.

In seeking to address the question of how the campaign message might be practically and cost-effectively reinforced, it is necessary first to consider in some further detail the nature of the message that is being delivered. The previous section highlighted the potential for social approaches to draw on a variety of intervention functions within a campaign design, this section will explore ways in which reach and resonance might be achieved whilst being faithful to the behavioural approaches previously discussed.

SOCIAL MARKETING APPROACH

As already identified in Section C, many road safety campaigns have limited themselves to the use of persuasion (often seeking to induce a negative feeling) or coercion. Delivery through mass media often restricts a campaign to carrying a single message. The application of a social approach may offer the potential to broaden out the messaging, placing the necessary emphasis on speed, but also including associated risks (loss of control, crashing on bends, alcohol) through the employment of additional intervention functions. These intervention functions can be associated with a variety of behaviour change techniques (BCTs).

Given the emphasis on norms and prototypes, previously discussed, the use of education and modelling, alongside persuasion, to address the mismatch in perception between the target audience and typical driver behaviour is certainly worthy of further consideration. As Bird & Tapp identify: "*The first, central task for a social marketing programme would be to attack the current 'norm' that reckless driving is something to be admired. These behaviours are socially embedded.*" (Bird & Tapp, 2008)

If any proposed campaign is going to integrate the modelling of alternative positive behaviours, which young males will aspire to and imitate, then this will demand the use of more authoritative voices. As Smith points out *"Messages which motivate change are heard, more than once, over credible channels, from credible spokespersons."* (Smith, 2001)

Having already explored the wide range of physiological and psychological reasons for young males to speed, it is questionable whether the Think! brand can carry messaging with the required credibility to motivate the necessary change. This was also identified in the Country Roads presentation (AMV BBDO, 2016).

The wider array of intervention functions that could be employed within a social approach, especially when combined with the segmentation from Section A offers social marketers significant freedom to develop a wide array of campaign messages and deploy to a varied selection of communications channels to target behaviour change.

POSITIVE TONE

Social marketers are recognising the need to adopt a positive messaging approach, backed by data on social sharing of campaign outputs and supported by research findings that indicate a positive effect on outcomes.

A study by content marketing and research company, Buzzsumo (Rayson, 2015), identified the dominant emotions in widely shared articles online.

Positive Emotion	Negative / Neutral Emotion
Awe (25%)	Anger (6%)
Laughter (17%)	Sadness (1%)
Amusement (15%)	Other (15%)
Joy (14%)	
Empathy (6%)	
Surprise (2%)	

And this is not only applicable to the population generally, but it appears to have specific resonance with the target group identified: "*Emerging evidence suggests that positive emotional appeals are potentially more effective than traditional negative, fear based approaches for males, a high-risk group*" (Wundersitz, et al., 2010)

The same study identified that campaign content which was both emotional and rational had greater validity than seeking to deliver messages which only included a single strand.

The engagement of positive messaging could assist in reducing the challenge of 'defiance and denial' that Bird & Tapp suggest is problematic in the response of "young males to authority sourced campaigns to reduce speeding" (Bird & Tapp, 2008). Additionally, messages that are framed with a positive tone might reduce the risk of stigmatising the audience in such a way that the effect could be counter-productive.

"In a social dilemma-like situation, safety campaigns that demand a drastic change in behaviour from drivers who feel personally confronted or even stigmatised by the message, can fail to produce expected results or even produce counterproductive results. This is especially the case when drivers notice that others are equally unwilling to conform to the norms or standards encouraged by the campaign." (Goldenbeld, et al., 2008)

One further consideration that should be given to positive messaging is that it may have greater longevity. As discussed in Lewis et al: "whilst negative appeals incorporating threats of physical harm may have a diminishing influence over time, positive appeals may actually become more persuasive over time." (Lewis, et al., 2008)

PARTNERS & CHANNELS

Addressing the question of practical and cost effective reinforcement now broadens out in the question of delivery partners and channel selection. It is not feasible to consider these two aspects of campaign delivery without first being willing to critique the current predominance of delivery through mass media channels. Even where social media channels have been used as the mechanism for distribution, campaigns have still largely orientated around the creation of an advert.

RE-EVALUATING THE MASS MEDIA CAMPAIGN

In the light of the literature reviewed, there is a significant question mark over the validity of mass marketing campaigns and the degree to which they could be effective at changing either attitudes or behaviour on their own. Where media campaigns are shown to have the greatest influence, it is the coefficient effect (Phillip, et al., 2011) of mass media channels in conjunction with intervention delivery that is more proximate to the behaviour which is being addressed; especially roadside delivery.

The findings in 'Meta-analysis of the effect of road safety campaigns on accidents' on the application of mass media marketing initiatives post 2000 should be born in mind for intervention designers too: "*after 2000 and combined mass media were uniquely associated with a detrimental effect of campaigns on accident levels."* (Phillip, et al., 2011). Unless there is reasonable justification to

conclude that the proposed intervention will reliably function differently, then this approach cannot be considered to be justified by the evidence.

The combination of mass media delivery with messaging which is largely based around the use of threat appeal, even where the threats are social threats ("Moment of Doubt"), not only physical threats ("Split Screen") can also reasonably be called into question.

In recent years, the mechanism of delivery has changed with a move away from heavier investment in television, radio and cinema advertising, towards use of digital delivery through social media platforms. The creative concepts, however, have continued to convey a threat message at the core.

The evidence suggests that communication-only approaches will only succeed with large budgets over extended periods, and may be rebutted by hard to reach groups. (Bird & Tapp, 2008)

In other areas of public health social marketing (diet, exercise, alcohol consumption, smoking cessation) there has been a distinctive move to embrace an alternative form of messaging and utilise a wider array of intervention functions to motivate behaviour change. These policy areas have recognised that the catalytic effect of a media campaign is valuable only in so far as it provides routes to alternative behaviour not only the demonstration of negative behaviours.

PROXIMITY TO BEHAVIOUR

One of the challenges of delivery through mass media channels is that the behaviour which is modelled or described is too far removed from the act of driving and the target audience's participation as active road users. This is articulated in the following excerpts from Phillip et al., (2011):

"…delivery of a persuasive message in the context of the road user behaviour (i.e. at the roadside) can create cues that activate desirable attitudes within the immediate context of the target behaviour.

And *"Overall the results are consistent with the idea that campaigns can be more effective in the short term if the message is delivered with personal communication in a way that is proximal in space and time to the behaviour targeted by the campaign."*

CHANGING MEDIA LANDSCAPE

It is uncontroversial that the media marketplace has changed dramatically in recent years resulting in a lag between the emergence of pioneering social marketing practice and a robust evidence base that provides assurances that a particular approach is likely to be reliable.

Despite these rapid changes, there is also plenty of opportunity to explore within the new media landscape novel ways of addressing some of the social approaches already discussed and to reflect the best practice recommended that *"message designs should be built on the micro-cultures of the people you want to influence."* (Bird & Tapp, 2008)

The role of social media influencers could be considered here as offering a potential solution for both the presentation of alternative and improved norms as well as providing more credible voices within distinct micro-cultures.

Social media influencers are increasingly being recognised for the power they can have on audiences of young males (Bacon, 2016) and the manner in which they set the trends for the rest of 'crowd' online (Zhang, et al., 2016). Recent research from Twitter has confirmed the role that these social media influencers play, highlighting that 49 percent of consumers seek purchase guidance from this group.

The art of selecting an appropriate influencer is being transformed into a science by companies such as Tubular Labs (tubularlabs.com) and Neoreach (neoreach.com) who are creating platforms to enumerate potential social influence and analyse reach; meanwhile specialist agencies are emerging to support the creation of brand partnerships with influencers.

Selecting social media influencers will require a brand to consider not only the segment it is determined to reach (for which platform metrics on subscribers and view counts will be highly informative) but also the question of brand alignment. For example, a number of the most popular Youtubers with young males are also renowned for their purchases of high performance cars with extensive modifications. This might be regarded as aiding credibility with the target market but could equally prevent them from being seen as authentic in promoting road safety messaging; something that could only really be reconciled by working actively with influencers to identify how they will embody brand values not only communicate brand messaging.

DELIVERY PARTNERS

Against this backdrop the identification and selection of delivery partners may require a step away from some of the traditional local authority and emergency service partners as the primary supporters for delivery. In order to increase the reach and resonance, with the target audience in particular, may require investing in some less conventional relationships with online content creators in arenas such as football, gaming and vehicle modifications.

Social video is facilitating convergence between these categories. For example, co-creation of content between celebrity gamers and footballers builds the reputation and reach of both, hence the increased volume of content that features professional footballers with celebrity youtubers, including sponsored product tests and charity football matches.

REACH & RESONANCE – SHAREABILITY!

Looking at the reach and resonance of existing Think! content, with the exception of the "More reasons to be paranoid" advert most videos are attracting relatively modest view counts, with only 8, 498 subscribers to the YouTube Channel (as at 18 December 2016). In contrast, a number of high quality content creators targeting a young male audience (e.g. The F2, Rhett & Link or Dude Perfect) are regularly achieving 20-30 million views on individual videos and subscriber counts running to several million.

WHAT CAN WE LEARN FROM SOCIAL MARKETING EXEMPLARS?

Having examined a wide variety of campaigns, principally in the social marketing segment, there are a number of concepts that emerge as being of value for campaign designers.

- **Persuasion: Positive Messaging to Create Virality – "Embrace Life"**
  Whilst the research on the outcomes from the Embrace Life campaign is particularly limited, the campaign showed remarkable shareability and reach. Surprisingly, despite targeting initially being focussed on males aged over 25, the early growth in views on YouTube was among teenage males. This may be a factor of the channels penetration with the teen market, however, it still demonstrates the susceptibility of the young male audience to social messaging that is laden with empathy and positive implications.
- **Modelling: Social Empowerment – "This Girl Can"**
  Developed by Sport England, This Girl Can campaign was born out of insight which showed that 75% of women say they would like to exercise more, but refrain from doing so due to a fear of judgement. The campaign seeks to use persuasion, modelling and enablement to create increased social empowerment for women to engage in physical exercise.
  Part of the campaign execution included the use of social media influencers who would connect with young females on topics such as body image and self-acceptance.
  Sport England are now reporting that an additional 1.6m women have started exercising because of the campaign and the number of women playing sport and being active is increasing faster than the number of men (Sport England, 2016).
  The gender gap between men and women who exercise regularly has also begun to narrow – from 1.78m to 1.73m – a sign that the campaign's approach of focusing on the target audience as individual consumers is starting to pay dividends.
  The increase in the number of women playing sport has driven an overall increase in the number of people regularly playing sport. This stood at 15.74m in the 12 months to the end of September 2015, up by 245,200 compared with the previous figures published in June.
- **Modelling: Endorsement, Influence and Celebrity – "#ALSicebucketchallenge"**
  In 2014 the ALS Ice Bucket Challenge became an internet phenomenon as scores of celebrities including Mark Zuckerberg, Oprah, Tom Cruise and Bill Gates posted videos of themselves being drenched. At the time there was a good deal of scepticism about the hype that was created and whether it was delivering genuine social benefit. Later it became clear that the results were quite significant. The Amyotrophic Lateral Sclerosis (ALS) Association in the US received around $115m in donations. In the UK the MND Association, pre-ice bucket, would receive on average £200,000 a week in donations; from 22 to 29 August, it received £2.7m. According to data company Dataviz, from 1 August to 27 August this year, the ALS Wikipedia page had 2,717,754 views. This compared with the 1,662,842 people who had visited the page during the whole of the preceding 12 months.

CONCLUSIONS

There is plenty of scope within road safety communications to adopt an alternative approach to threat appeal using a social approach. The developing perspective that positive communications through credible voices will have greater traction should be borne in mind through the design process and the role of social influencers as both a delivery partner and communications channel is worthy of consideration for the young male audience. This blend of positive messaging with a role for influential voices is being utilised elsewhere in public health campaigning and could offer a plausible alternative as part of a social approach.

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