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Understanding Inappropriate High Speed: A Qualitative Analysis

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EXECUTIVE SUMMARY

Inappropriate high speeds are associated with increases in crash probability and severity, and we need to understand why they happen if we are to design workable interventions. Thirty-six drivers participated in four focus groups: one of professional drivers, two of drivers on a speed awareness course, who had been previously convicted for speeding, and one of motorcyclists. The method used an amalgam of qualitative approaches to thematic analysis. The principal aim was to elicit driver experiences and perceptions regarding speed choice and speeding behaviour. A second aim was to determine the extent to which the themes identified by participants could be explained using the concepts of the Task-Capability Interface (TCI) model, which was developed from its original instantiation as a result of a review of the research literature on speed choice published in the period 1995 to 2006 (Fuller et al., 2008). A third and final aim was to examine the implications of the results for the content of speed-related media safety campaigns and the identification of potential target groups.

All groups reported using their speed in order to control safety margins and to obtain a ‘comfortable’ state. Driving capability was regarded as being affected by experience, stress, age, concentration and fatigue. Driving task demand was seen to be influenced by road and traffic conditions, including familiarity with the road, vehicle characteristics, weather conditions, the behaviour of other road users and secondary tasks such as the use of a mobile phone. There was an awareness that high speeds reduced the time available to deal with contingencies and bikers in particular wanted to keep braking to a minimum to avoid loss of control. On the other hand, there was general agreement that speed could be pleasurable and could deliver an adrenaline rush and a feeling of power. Speed increases could be triggered by frustration, by pressure from others – both inside and outside the vehicle – by competitiveness and to express annoyance. There was a perceived norm of increased aggression on the roads, and drivers said that feelings of anger and aggression triggered by the behaviour of other road users could drive their speed up. For all groups journey goals included the pressure of being late. An associated motive was that of ‘get-home-itis’. Sometimes drivers wanted to beat their estimated journey time, and both drivers and bikers sometimes wanted to test their skill. Keeping up to the speed of the traffic flow was a further motive for increased speed.

Non-compliance with the speed limit is generally regarded as potentially dangerous, but not necessarily so where road and traffic conditions permit. The margin above the limit, allegedly ‘permitted’ by enforcing agencies, is regarded as authorising minor levels of infringement and there is no shame felt in engaging in this behaviour. Going over the speed limit can also happen unintentionally, especially where signs are not detected: compliance is much easier when the limit makes sense. It was mentioned that it can be difficult to recalibrate one’s speed when
entering a lower speed zone and that the distraction of frequent checking of the speedometer can be dangerous.

These themes arising from driver/rider perceptions and experience regarding speed choice can be readily mapped onto the conceptual framework provided by the TCI model and are entirely consistent with that theoretical formulation, providing a rich elaboration of instances of its key concepts.

By comparing groups on the themes they identified, there seems to be no striking difference between professional and non-professional driving groups. Bikers also talk about very similar themes as drivers. However, they also identify desirable states, such as being in ‘the groove’, and place more emphasis on the importance of maintaining concentration and an adequate safety margin.

Among the groups of participants there does not appear to be much of a knowledge gap that a media campaign might aim to influence. However, possible themes that might be targeted by a media campaign are the influence of mood state on speed choice, the influence of perceived norms, journey-time management and maintaining socially acceptable behaviour.
1 BACKGROUND TO THE STUDY

From a safety perspective, an inappropriate high speed (IHS) is a speed at which a driver loses control of the driving task. Fast-moving vehicles have a higher crash rate than slow-moving vehicles. This relationship has been described as a power function (Maycock et al., 1998; Quimby et al., 1999; Taylor et al., 2002; Elvik et al., 2004) and as an exponential function (Fildes et al., 1991; Kloeden et al., 1997, 2001). As a general rule of thumb, a 1% increase in speed is approximately associated with a 2% increase in the injury crash rate, a 3% increase in the severe crash rate and a 4% increase in the fatal crash rate (Aarts and van Schagen, 2006). Nevertheless, what might underpin the relationship between speed and crash involvement, at least in part, is not the absolute level of flow speed per se but the impact of drivers who are significantly above the mean flow speed who both raise the mean flow speed and collision frequency. Supporting this notion is the fact that, at road section level, larger speed variance has been found to be related to a higher crash rate (Aarts and van Schagen, 2006). The fundamental point, however, seems to be that those who drive fast are more likely to have recently been crash-involved (Lassare and Stradling, 2005; Lam 2003a, 2003b).

Higher speeds are not just associated with an increase in crash probability but also an increase in crash severity. Four groups of states in the US which adopted higher interstate speed limits during 1995–96 (from 5 to 15 mph) found that this led to an increase of about 17% in fatal crashes (Farmer et al., 1999). In general, for car occupants in crashes with an impact speed of 50 mph (80 km/h), the likelihood of death is about 20 times that for an impact speed of 20 mph (32 km/h), given the increases in kinetic energy and the contribution of other factors. For pedestrian victims, although there are differences of opinion in different jurisdictions (Thomas et al., 2005), it is estimated that 5% of those struck by a vehicle travelling at 20 mph (32 km/h) die, at 30 mph (48 km/h) 45% die, and at 40 mph (64 km/h) 85% die (ETSC, 1995).

Thus, in summary, higher speeds are associated with increases in the probability of crashing and the severity of the outcome. In the context of informing developments in road safety, these relationships make the understanding of the conditions for IHS a particularly compelling issue.
2 STRATEGY

In order to further our understanding of inappropriate high speed (IHS), a three-pronged strategy was adopted involving a review of the available English language literature published in the 12 years from 1995 to 2006, a focus groups study and a national (Great Britain) survey of drivers. The preliminary results of the literature survey may be found in Fuller et al. (2008) and of the national survey in Stradling et al. (2008). This report is specifically concerned with the results of the focus groups study. Before describing that study, a summary of the conclusions from the literature survey will be presented in conjunction with the theoretical developments in the Task-Capability Interface (TCI) model which were informed by the literature review (Fuller et al., 2008). This model provides a theoretical framework for understanding speed choice and will be evaluated as a basis for the thematic organisation of the results from the focus groups.
3 CONCLUSIONS FROM THE REVIEW OF THE LITERATURE

3.1 Demographic correlates

Research over the last decade or so confirms what might be called the young driver and young male driver ‘syndromes’. Young drivers are more likely to report an intention to speed and not only exceed the speed limit more but do so more excessively than older drivers. A greater proportion of their accidents is associated with driving too fast for the conditions. Their crashes are frequently the result of intentional high speed and are more likely to occur at weekends and at night.

Males typically drive faster than females and have more fatal crashes per kilometre. Young males score higher on positive attitudes towards, and actual involvement in, risky driving behaviour, such as exceeding the speed limit by 20 km/h. For this group, such behaviour and higher levels of detected offence are more likely to persist. They are also the group most likely to have speed as a collision factor and to have single-vehicle crashes. Risky behaviours, such as speeding, close-following and dangerous overtaking, tend to cluster together and are inevitably linked to higher rates of collisions and of conviction for violations.

Apart from the lack of experience, and thus opportunity to develop knowledge of the contingencies of the road and traffic environment and more refined skills of situation awareness and vehicle control, the young driver, and especially the young male driver, may simply be immature, with incomplete development of self-knowledge, self-control, social responsibility and independence of judgement. Young drivers with Attention Deficit Hyperactivity Disorder (ADHD) may be particularly at risk because of self-control challenges.

Age and sex differences are also related to traits of sensation seeking and aggressiveness. Adolescent boys report stronger tendencies than adolescent girls on both these traits, and adolescents score higher than adults. Different socialisation processes may, in part, explain observed sex differences in driving behaviour.

3.2 Distal correlates of driving speed

Normative influences appear to have an effect on driver speed choice. Drivers tend to comply with the perceived norm which is often overestimated. Young drivers are also prone to overestimate the prevalence of reckless driving in their peer group and to perceive more approval from significant others for their speeding. They also say they would drive faster with people their own age in their car. An early exit from formal education is linked to car uses other than for journey purposes, such as self-
expression, status through fast driving, competition and entertainment. Driving without a destination is also associated with driving errors and violations.

There is evidence of a subgroup of socially deviant speeders for whom speeding is an expression of general social deviance and is associated with other forms of risk taking in traffic and increased collision involvement. This characteristic of defiance of the law may be linked to a lack of self-control. This group should be distinguished from default speeders who do not intentionally speed but rather simply neglect to transfer the control of speed from the perceived driving task difficulty (see description of model below in Section 3.5) to the legal speed limit.

In general, attitudes towards speeding are less negative than towards other types of moving violation and drivers are more permissive in their attitude to speeding at night. More positive attitudes towards speeding under conditions of reduced task demand are also generally associated with higher levels of speeding behaviour. These attitudes help explain the behaviour of default speeders and also the finding in some studies of a lack of relationship between attitudes and collision involvement. Negative attitudes towards obeying traffic rules in general are associated with greater involvement in risky driving behaviour, the violation of traffic rules, near-accidents and crashes.

Within the framework of the Theory of Planned Behaviour (TPB), the only independent predictor of observed speeding appears to be intention, a variable that represents a summary of the individual’s motivation for the behaviour in question. Intention may be associated with particular attitudes, subjective norms and perceived behavioural control.

TPB variables help translate demographic variables into theoretically more meaningful concepts. However, attempts to modify drivers’ attitudes have been found to produce little systematic change in either intentions or behaviour. As independent manipulation of TPB variables provides the only true experimental test of the theory, its validity remains open to question.

Personality variables are related to driver speed choice and there are profiles of different types of driver, characterised by different driving styles. One group of drivers, a high risk threshold group (see model, Section 3.5 below), are characterised by driving more-or-less continuously with a higher risk threshold relative to others. Such drivers are impulsive, have reduced self-control, are relatively poorly socialised, seek intense sensations, are willing to take risks, perceive less danger in risk-taking, experience more anger while driving and exhibit more aggression. They are prone to excessive speeding and other moving violations, and have a higher crash rate. In contrast, a low risk threshold group do not allow motives that might raise the risk threshold (such as being in a hurry) to influence them. They also actively comply with the speed limit.
3.3 Proximal correlates of driving speed

Recent evidence suggests that the driver’s emotional state can influence speed choice. Feelings of anger are associated with aggressive driving, speeding, penalties for speeding violations and crash experience. When anger is translated into aggressive driving, this may not only include excessive speed but interpersonal aggression, including chasing and speeding past the driver who was the source of the provocation. From a theoretical perspective, feelings of anger may raise the driver’s risk threshold or reduce the driver’s sensitivity to it or both.

The motivation to save time can also influence speed choice. Being in a hurry is not an unusual state and many drivers report driving faster when late for an appointment or meeting. Thus, not surprisingly, being in a hurry is associated with speeding, faster acceleration, hard braking, dangerous overtaking and tailgating. Male drivers who report driving faster when late are more likely to have had an accident in the recent past.

3.4 Powered two-wheelers

Proportionately more motorcyclists exceed the speed limit than car drivers. However, excessive speed does not appear to be a major cause of motorcycle accidents. What seems to be much more relevant is inappropriate high speed (IHS) for conditions leading to loss of control, such as on a bend. Just as with car drivers, lack of experience can reduce capability and motivation for speed can increase task demand, increasing the difficulty of the task and narrowing the rider’s safety margin. There is also some evidence of an adolescent riding subculture which reinforces high risk behaviour.

3.5 The Task-Capability Interface model

The evidence from this review can be integrated comprehensively into a developed version of the original Task-Capability Interface (TCI) model (Fuller, 2000; Fuller and Santos, 2002). In this model, a loss of control by a driver arises when the driving task demands momentarily exceed the driver’s capability (see Figure 3.1). The degree of separation between task demand and capability is what defines task difficulty. Drivers drive in such a way as to maintain the level of task difficulty within a preferred range. The driver can control task difficulty by varying task demand, with adjustment of speed being the primary mechanism for achieving this. Difficulty can also be modified by changes in effort, but within much narrower limits.

The driver’s risk threshold is the level above which risk is felt to be too great, at the upper boundary of the preferred range of task difficulty. Feelings of risk are triggered by elements of the unfolding scene around the driver and the driver’s expectations about how scenarios will develop.
An important issue for driver safety is the accuracy of calibration of perceptions of capability and task demand (and therefore task difficulty). Clearly, overestimation of capability and/or underestimation of task demand will lead to the perception that the driving task is easier than it objectively is, and may lead to a dangerous level of compensatory speed adjustment. As reported in the summary review above, such poor calibration is most typical of inexperienced drivers.

In order to fully understand the origins of speed choice, the review also makes plain that a distinction needs to be made between proximal and more distal determinants of driver capability, driving task demand and preferred range of task difficulty, and this distinction is now represented in the model (see Figure 3.2). Finally, apart from the process by which drivers choose a speed which maintains task difficulty within a range bounded by the risk threshold, drivers are also required to opt for a speed which complies with legal limits. The evidence cited above shows that there is often a conflict between these two speeds when the legal maximum speed is lower than the driver’s preferred speed. Thus the separate contribution of the driver’s disposition to comply with speed limits is also now incorporated in the model (see Figure 3.2).

In sum, for most of the time on the road, drivers choose a speed which maintains an adequate margin between task demand and their capability. Safety consequences arise, however, where the driver is poorly calibrated (i.e. in terms of underestimating task demand and/or overestimating capability), or where the driver operates with too high a risk threshold. For some drivers, a high risk threshold appears to be a trait and is associated with drivers who are immature or have characteristics of sensation
seeking, aggression, poor self-control and social deviance. For most drivers there are also situational determinants which may have the effect of raising risk thresholds by motivating increases in speed. These include an emotional state of anger and the motivation to save time. Some drivers may also be overly susceptible to normative pressures to conform to the apparent speed of others, which they overestimate.
4 SPECIFIC AIMS OF THE FOCUS GROUP STUDY

The question arises, however, as to the extent to which this theoretical formulation coincides with drivers’ own perceptions and experience regarding speed choice. The use of focus groups enables exploration of this issue, providing at the same time an evaluation of both the model’s face validity and its content validity. In order to capture a range of perspectives, four separate focus groups were established. One consisted of professional drivers, two consisted of participants who had been convicted for a speeding offence and who had opted for a speed awareness course as an alternative to receiving penalty points, and one consisted of riders of powered two-wheeled (PTW) vehicles.

Two qualitative in-depth studies have been published recently. In an exploratory study, in which focus groups were used, of the relationship between the lifestyle and driving behaviour of young people, Møller (2004) identified four psychosocial functions of driving. These were:

• ‘visibility’ (the driver attracts attention by being in a car, by the type of car driven and from a distinctive driving style);
• ‘status’ (driving confers adult identity, elicits recognition from others and enables ‘getting one over’ other drivers);
• ‘control’ (control of a powerful vehicle, risk management and control of journey choice); and
• ‘mobility’ (the car is a tool which enables freedom of movement, freedom from interference and unplanned activity).

Clearly each of these could have implications for speed choice and motivate high speed behaviour.

In a study more concerned with speed choice, Forward (2006) used semi-structured interviews to provide an in-depth exploration of responses to three hypothetical road and traffic scenarios. These were speeding in an urban area, speeding on a major road and dangerous overtaking on a rural road. Those who said they would speed in an urban area believed the outcome would be positive, whereas non-violators were more concerned with the possibility of an accident. Speeding on a major road was more acceptable to all. The dangerous overtaking scenario tended to elicit an immediate and negative affective response, which the author argues should be differentiated from decision making in low risk situations, where the response involves more considered cognitive evaluation. Finally, it was interesting to note the striking similarity with the task-difficulty homeostasis concept of the drivers’ own concept of a ‘safe driver’. Such a driver was described as ‘somebody that adjusted their speed to the environment, i.e. the traffic in general, but also the conditions of
the road, weather, the car and the driver him/herself rather than the speed limits’ (p. 416).

The aim of this study was to extend this in-depth exploration of driver perceptions and experience in relation to speed choice, to focus in particular on the conditions for inappropriate high speed (IHS) and to determine the extent to which the results fell within the range of convenience of the Task-Capability Interface (TCI) model. A further aim was to determine whether the findings might have implications for the content of speed-related media safety campaigns and the identification of particular target groups.
5 METHODOLOGY

5.1 Qualitative research philosophy

The term ‘qualitative research’ refers to a diversity of approaches to enquiry in the health and social sciences that address the meaning of verbal text in verbal rather than numerical terms. More fundamentally, qualitative research is more subjective than quantitative research; more exploratory than confirmatory; more descriptive than quantitative; more interpretative than positivist (see Denzin and Lincoln, 1994). It is predicated on the assumption that subjective experience is at least as important as ‘objective’ reality.

Nonetheless, interpretative research requires a trail of evidence throughout the research process to demonstrate credibility and trustworthiness (Koch, 1994; Aroni et al., 1999). Distinctive features of qualitative research (Elliot, 1999) include:

• an emphasis on understanding phenomena in their own right (rather than from some outside perspective);
• open, exploratory research questions (versus closed-ended hypotheses);
• unlimited, emergent description options (versus predetermined choices or rating scales);
• the use of special strategies for enhancing the credibility of design and analyses (see Elliot et al., 1999); and
• the definition of success conditions in terms of discovering something new (versus confirming what was hypothesised).

These considerations were at the forefront of the research team’s approach to developing the qualitative component of this study. In their recent review of descriptive-interpretive qualitative research methods, Elliot and Timulak (2005) recommend adopting a ‘generic approach that emphasises common methodological practices’.

The guiding theoretical framework underpinning the methodology was a humanistic-phenomenological one. This approach was congruent with the focus group facilitators’ style and the research quest for understanding and appreciation of the participants’ conscious experience and expressed views on speed choice and speeding behaviour, without reference to the question of whether what was experienced was ‘objectively’ valid. Social phenomenology takes the view that people living in the world of daily life are able to ascribe meaning to a situation and then make judgements.

The process of analysis outlined below provides a method for demonstrating transparency in how thematic findings were derived from the participants’ original
transcripts. Their personal reflections, conveyed in their own words, strengthen the face validity and credibility of the research (Patton, 2002). Thus the thematic findings are frequently supported by a sample of direct quotes from the participants.

5.2 Thematic analysis

Thematic analysis is a search for themes that emerge as being important to the description of the phenomenon under study (Daly et al., 1997). The process involves the identification of themes through careful reading and re-reading of the data (Rice and Ezzy, 1999). It is a form of pattern recognition within the data, where emerging themes become the categories for analysis.

5.3 Participants

The participants whose voices are represented in this study comprised 36 drivers (9 women and 27 men), ranging in age from 18 to 50 years. They were from a convenience sample selected partly to provide homogeneity (all adult drivers) within each focus group, as recommended by Morgan (1997), and partly to ensure diversity in the range of ages and the types of driving experience, as well as to include people (both male and female) who had previous convictions for speeding. A group of riders of powered two-wheelers (PTWs) was also included for their potentially unique perspective. Thus four focus groups were established: one consisted of professional drivers (professionals) from three public and private-sector organisations, two consisted of participants who had been convicted for a speeding offence and who had opted for a speed awareness course as an alternative to receiving penalty points (COSSACS – COnvicted Speeders on Speed Awareness CourseS), and one consisted of riders of PTW vehicles (bikers).

No attempt was made to obtain a sample that might be representative of the UK driver profile. The participants were sourced through professional contacts or groups of people accessible to the research team and were invited as volunteers to attend one of three venues in Scotland and England. None of the participants were known to the group facilitator or identifiable to the researchers during the process of data analysis except through a designated identification number.

5.4 Procedure

Data were collected through four focus group sessions (for a detailed description of focus group interviews as a research method see Morgan, 1997; Bers, 1987; Krueger and Casey, 2000). According to Wilkinson (2005) the relatively free flow of discussion and debate between members of a focus group offers an excellent opportunity for hearing ‘the language and vernacular used by respondents’ (Bers, 1987; p. 27). Focus group researchers view the method as providing an opportunity for ‘listening to local voices’ (Murray et al., 1994), for learning the participants’ own language instead of imposing the researcher’s language upon them (Freimuth
and Greenberg, 1986; Mays et al., 1992) and for gaining an insight into participants’ conceptual worlds, on their own terms (Broom and Dozier, 1990).

The same procedure was followed for all groups, which involved a loosely semi-structured interview guide covering broad themes that were compiled from a discussion among the research team (see Table 5.1). All groups were audio taped and lasted approximately one hour and forty-five minutes. At the beginning the facilitator introduced the topic in general and requested that the participants exchange their views and opinions. Agreement or consensus was not a goal of the discussion. The group was encouraged to expand on topics through the use of open questions and validating prompts, such as ‘that sounds interesting, can you tell me more about it?’ or ‘does anyone have an alternative view to this?’.

<table>
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<tr>
<th>Table 5.1: Broad themes discussed during the focus groups</th>
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<td><strong>Interview themes</strong></td>
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<td>Speeding adjectives</td>
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<td>Attitudes to speeding</td>
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<td>Factors influencing speed</td>
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<td>Speed reduction influences</td>
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<td>Factors relating to speed-limit compliance</td>
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<td>Control and loss of control</td>
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<td>Road traffic accidents/collisions</td>
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<td>Speed choice</td>
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<td>Speed and legal issues</td>
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<td>Bike/car issues</td>
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<td>Causes of speeding</td>
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<td>Causes of slowing</td>
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<td>Speeding stereotypes</td>
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<td>Consequences of speeding</td>
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<td>Spontaneous recommendations from group</td>
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<td>General driving behaviours influencing speed</td>
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</tbody>
</table>

The main themes that emerged during the discussions were reflected back to the group in order to check that they had been fully and accurately heard and to provide an opportunity for the participants to either clarify or expand on their views of the topics raised.

5.5 Ethical considerations

After a welcome and introductions to the group facilitator, co-facilitators and note-takers, participants were briefed as follows:

- the purpose of the research (to gain their individual views regarding speed choice and speeding behaviour);
- the agencies involved;
- rules about participant engagement (as in the importance of taking turns when
speaking in order to hear each person clearly as they expressed their views – it was suggested that interviewees should discuss their own honest opinions rather than reach a consensus or agreement within the group);

- voluntary participation (participants were informed that they could skip any item asked or withdraw from the study at any time without prejudice);

- the reasons for audio-taping, note-taking and transcribing the group process – participant confidentiality and anonymity was assured;

- in accordance with the Freedom of Information Act, data storage procedures were described (consent forms were stored separately from the data – data were stored in a locked filing cabinet and each participant was assigned a code known only to the research team, preserving anonymity); and

- participants were each paid £50.00 (sterling) for taking part and each signed an informed consent form.

5.6 Method of analysis

The method chosen was an amalgam of qualitative approaches to thematic analysis; it incorporated both the data-driven inductive approach of Boyatzis (1998) and the deductive a priori template of codes approach of Crabtree and Miller (1999). Data were analysed systemically, initially using a modified version of the Editing Analysis Style (Miller and Crabtree, 1992; Malterud, 1996). Subsequently, a further examination of the emergent themes was completed through a process of cross-checking of the data and themes between researchers. This reliability check was completed by replicating the process of distilling the transcripts into the essence of what had been said and by comparing the results to find consensual agreement. It was important for the researchers to utilise the resources within the team effectively and to provide multiple perspectives from a variety of people with differing expertise.

Once this stage had been completed, the findings were placed in an overarching organising structure. This was completed initially by two of the research team, who independently clustered the themes and then attempted to organise them in accordance with the concepts of the Task-Capability Interface (TCI) model illustrated in Figure 3.2. The data that were collected and analysed independently in this way were subsequently compared, and any points of divergence were resolved through discussion.

Thus the data that emerged from the focus groups facilitated the themes to emerge from the data using inductive coding of the phenomena. The step-by-step process is outlined in Figure 5.1.
Identify units, essence of what was said

Collate audio tape, text and transcribe

Research team
Research concept

Develop categories and verify

Interpretatively determine connections and create clusters

Verify and cross-check

Finally report findings

Integrate into template

Report to research team

Cross-check and support with direct quotes
6 RESULTS

Of the four focus groups, one consisted of professional drivers (identified as P, when attributing quotations below), two consisted of participants who had been convicted for a speeding offence and who had opted for a speed awareness course as an alternative to receiving penalty points (identified as C1 and C2 below), and one consisted of riders of powered two-wheeled vehicles (identified as PTW below).

In the results, the statements made by individuals belonging to a particular group are identified by group but should not of course be taken as necessarily representative of all group members. Nevertheless, there was frequent open agreement and little dissent occurred. Words in bold were particularly stressed by the participant. Non-italicised words in parenthesis are added for clarification. Emergent themes are organised in relation to the key concepts of the Task-Capability Interface (TCI) model.

6.1 Task-difficulty homeostasis

As reported in the study by Forward (2006), all groups made some reference to using speed as a means of maintaining a desired state:

Well, I could control the safety margins with the speed, I feel quite happy doing 80–85, but if something, if the weather..., if conditions got worse, if the rain gets heavier, then I would slow down, I would kinda back. (PTW)

This desired state was referred to by some professional drivers and bikers as a ‘comfort zone’:

I think your body knows you’re outside your comfort zone. It just registers something and you say ‘back again’ instantly, to whatever speed you’re comfortable. (P)

And again it was on the motorway, nobody else about, did it (high speed) for a couple of minutes, stopped whenever there was anything looking like it was getting too close. Just a bit too much sensory input for me, and a little bit too quick, even though feels like an empty road, it doesn’t feel comfy. (PTW)

The desired state may be informed by feedback from the engine/car:

I would say the same with all the cars I’ve had if you’re in fourth gear it would be more comfortable to do more than 30 (mph), generally, or the car would be kind of struggling, shaking and it doesn’t sound that good in
third gear so that does tend to make you speed a bit so you can get a smoother journey. (P)

The way that technology’s moved on the speed limit in comparison with the technology should be like 90–100 (mph) on a motorway because that’s what cars are comfortable at. (P)

And the driver’s/ rider’s sense of control:

The fastest I’ve ever been on a bike is 130 (mph) and that is 15 mph short of what the current bike can do, but I shut it down for various reasons: one, I suddenly realise what the hell happens if someone catches me; but two, it was starting to get busy in front of me as well, traffic was coming towards me at a hell of a fast rate, and I just wasn’t prepared to take a chance. Umm, if somebody gave me carte blanche and a fairly empty bit of motorway, sure I would wind it on and see: a) what the bike could do; and b) what it felt like. But, to be frank, I don’t find it that enjoyable because I wasn’t overcoming any problems. As it’s been said, it was so easy. You just sit there, wind it on and just bend down behind the faring, you know. Whereas, you know, it’s just been said, take it round some challenging corners and get it neat and precise and accurate and do it safely. Under control, that is much more satisfying. (PTW)

Bikers made specific reference to the idea that the safety margin is up to the rider. Despite this, there may be a sense of just being unlucky if something goes wrong:

Shit happens, dunnit? And y’know, and I’m not advocating speed, it’s just sometimes, you’re just unlucky if something goes wrong, is how I feel . . . (C1)

Related to this is a somewhat fatalistic attitude:

When you listen to the (radio safety) advert you’re thinking at the time, you know . . . It’ll never happen to me
– Yeah
but I believe in like, final destination, where it’s, it’s not your turn
– That is actually so true! It is, I reckon (laughs)
I mean I’ve skidded and that, when people have cut me up and I’ve spun me car around once . . . and nothing’s come of it. (C1)
6.2 Human factor variables which may influence capability

Professional drivers observed that experience enables higher speeds because of its effect on capability:

*I think the longer you’ve been driving the more . . . umm . . . apt you feel and you tend to take more risks because you feel as if you’re more aware of what’s around you so you tend to say ’aah 30 (mph) now it’s too slow I’ve got the ability to be able to cope at a higher speed’. (P)*

Having the opposite effect, stress can be a distractor which undermines capability:

*. . . you do tend to drive into situations when you’re stressed out, thinking of other things. Something you would spot normally, you drive straight into it and you think ’I shouldn’t have done that’ and might be lucky to get away with it. (P)*

Older drivers cope by driving more slowly. Bikers mentioned the importance of loss of concentration:

*The only time I had a crash on the bike, in sort of 29 years of riding, was I had taken the bike out, err, I had been setting up the suspension, after being down to the bike show, late in the afternoon, slowed down to 60 (mph), having been going a little bit faster, testing things out, and I just lost concentration and went into a corner, woke up about 10, 12 yards from the corner and went ’shit’, going far too fast, hit the brakes, drifted wide, and ended up in a ditch, luckily I walked away from it with just cuts and bruises. OK, that was because my concentration had switched off because there was not enough to think about, having been going quickly for two or three hours. (PTW)*

They also mentioned that concentration may suffer at low speeds and that recovery from fatigue after a break enables riding at higher speeds.

6.3 Factors that may influence task demand

All groups referred to road design and other road characteristics, and to traffic conditions, as influencing speed choice:

*I always ride at a speed appropriate for conditions, and it will not necessarily be the speed posted on the signpost, there is so much disparity between 30 (mph) limits, 40 limits. Well 30 limits could well be 40 limit, and on some roads 30 is fine, it is not a problem, on other roads it depends on the conditions at the time, and they’re not always necessarily appropriate. I think they should be more variable. . . . (PTW)*
...middle of the night and no one else is out, just me, big empty motorway, 70 mph just definitely feels too slow. (C2)

Depends on the road conditions, and where you are on the road – schools and the likes of that, where there’s possibility of lots of pedestrians, or compared to urban motorways/dual carriageway, more likely to speed on the open road . . . (PTW)

Also the distance you can see as well, that umm . . . decides your speed as well. There is no point in hammering something if you can’t see what’s ahead of you. (PTW)

Some bits you go because you know you can go . . . test yourself and the bike, without necessarily going too fast, but its challenging, there are other bits where you can go where you can just go bloody fast. (PTW)

Related to this, professional drivers and bikers indicated that familiarity with the road was also a factor:

If you travel on the same road day in and day out you think ‘I know this road, I know where the bends are so I know that I’ve done that bend at 40 or 50 (mph)’ you know? Because you know the road. But everyday can be different, you don’t know what’s coming the opposite way, but a lot of people, because you get stuck, go ‘It’s the same road, I ken this road, I do this week in and week out, I know what speed I can go on here’ and that’s why people put their foot down. (P)

There is also a factor as well with roads that you are familiar with; you are probably going to drive, or ride, quicker on them than on roads that you don’t know. Its just because you have a reasonable expectation of driving down this road, if you do it this sort of speed most of the time you will have no problems, you try doing it on, probably an identical piece of road that you are not familiar with and its like, ‘what’s round this corner’, ‘what’s happening here’ – so there is an element of that. (PTW)

All groups referred to the characteristics of their car/bike:

...if you’ve got a bigger car like a 1.6 to a 1.1 it’s like you could be doing 70/80 (mph) and not realising. If you’re in a smaller car and doing 80 mph and the car’s bouncing all over the place, eh? So it can go with what kind of car you’ve got. (P)
They also noted the influence of weather conditions:

– If you’ve got a decent road, you’ve got a decent car
  Yeah?
– and it’s decent weather conditions, then you speed. (C1)

If it’s in the summer, I may well ride faster than I would in the winter; in the winter time, certainly when it’s getting round about the freezing, I will be concerned about the possibility of ice and slowing down. (PTW)

All groups also referred to the dangerous or inconsiderate behaviour of other drivers. COSSACS (COnvicted Speeders on Speed Awareness CourseS) mentioned that additional tasks, such as the use of a mobile phone or entertainment system, could raise task demand:

... a close friend had a terrible accident several years ago because the oncoming driver was changing his tape in the car. (C1)

6.4 Dispositional and proximal factors which affect the range of acceptable task difficulty and risk threshold

At a dispositional level, all groups saw high speed as dangerous and scary and have a fear of crashing:

For me it’s actually fear. I don’t like actually going too fast, I don’t want to crash so, basically, when I do realise I’m actually speeding I slow down. (P)

I went about 120 (mph) then I started feeling that I wasn’t in control, a sort of feeling ‘anything could happen here’ that sort of scared me. (P)

COSSACS explicitly stated that the time opportunity to respond at high speed is lessened and bikers particularly noted the desire to keep braking to a minimum.

More immediate influences which tended to raise risk threshold for all groups were to enjoy the pleasure of speed and to get an associated adrenaline rush:

Well, why do people drive motorcars? It’s a sport, if you will – there is an adrenalin rush out of that. So it would be foolish to say why have fast cars on the road. There is a pleasure in driving at a speed which is above the speed limit . . . (C1)

The – the thrill bit, it’s like being on a rollercoaster or fast ride. (C1)
I love being in a car that’s speeding. (C1)

You do get a buzz... you do get a buzz out of speeding. (C2)

... (speeding) gets the adrenaline pumping and I must admit when I was younger I probably got that the first time doing 70, 80 (mph). Christ mind you 80 mph isn’t as fast these days cos we didn’t have the roads. But there was this fighting with it, and braking and taking about half a mile to stop. I don’t think there’s any problem with somebody with a proper vehicle and proper roads doing 90 or 100 mph. (P)

Well they’re (motorbikes) like missiles on two wheels aren’t they? Summer day, get on the open road and you’ve just got this machine under you that’s capable of 150 mph and you’re just vroom and it’s such a buzz, it’s a drug so you don’t need much to get you to speed on a motorcycle these days. (P)

Yeah, it is, it’s a great feeling. Your head feels empty, you’re just scooting along and you’re going ‘this is the business’. You know a bit of speed and the first time you do it, whohoo, look at me! You know. (PTW)

That is the biggest thing that I have noticed. ‘Cause it is, you’ve got that exhilaration feeling, you’ve got wind rushing past you. It’s great, isn’t it? You don’t experience that in a car. (PTW)

Also the desire to experience a feeling of power:

Just the sheer feeling of power. I mean you get somebody high-size (indicates somebody short in stature) everybody else in the world is bigger than you, stronger and all the rest of it, suddenly you’ve got 5 litre car capable of 150 mph, you put them in their place. It’s a fact of life. You know it doesn’t matter how stupid or how thick you are as long as you’ve got that driving licence and you’ve got enough pounds to put on the counter, there’s not many people who can, you know, you can get there quicker, you can get there faster; you can do this, you can do that, you can do it. I’m not saying that it’s... even people are aware of that. It makes everybody... not even a level playing field, because the person with a bigger and faster car can go even faster. (P)

Other influences which tended to raise risk threshold for all groups were to see how fast the vehicle could go:

Every bike I have had I’ve taken it to the limit at some point. (PTW)
You're going to go find a road at 4 o'clock in the morning and try it. You're going to find out what that car can actually do. (P)

... on one occasion I drove fast when I had the opportunity to drive the company accountant's car – I can't remember what it was... I can remember getting into it and thinking, how big it was... and just thought well, I'm just gonna see how fast it goes. I'm not gonna go mad, but I will see what it feels like to go 95 (mph) or something. (C1)

Do you not think though as well, if we're that concerned about speed and safety, that car manufacturers and the Government could do more to control the performance of vehicles? What's the point of being able to buy a Ferrari that's able to do 200 mph when you're only ever supposed to go at 70 on our roads in this country? Why have that facility? Because if you provide a facility for someone to be able to drive at 200 mph they're going to find out about that 200 mph at some point. (P)

Speed increases can also be triggered by frustration or to express annoyance:

Frustrations and that, getting held up by cars, trucks and buses, want to get past them to a bit of clear road and will do the speed needed to get past them. (PTW)

If there's a lot of traffic and you're queuing for a long time then you become annoyed and irritated and then you want to actually put your foot down because you're becoming late or you're fed up of having been queuing. (P)

Also pressure from other drivers/riders:

... when we were driving at the correct speed, you'd look in the mirror and there are angry faces (agreement and laughter) in the car behind you thinking 'what are they doing driving at ...!'... you know, particularly as a woman, you know, silly women, women drivers yet again... you get that sort of feeling don't you. Yeah its very hard, very hard. (C2)

You normally get, it normally works out that the person who is going the fastest ends up at the front and everyone else is playing catch-up, and it takes a certain amount of self discipline to say 'No, I don't want to go that fast', and a lot of young, younger people become croppers without the experience, they get into a group of people and think that they have got to keep up, and nobody said to them 'Look, we'll wait for you'. (PTW)

You know the kind into speeding, at the top that's going to be the kind of weekend warrior types with the one-piece leathers and the state-of-the art
sports bike. And the pressure is on them ‘cause they’ve got a point to prove. (PTW)

Drivers also mentioned perceived norms of aggressive driving:

– It’s much more aggressive driving now isn’t it . . . Yeah it is.
– . . . much more aggressive. I can’t believe how mouthy people are on the road . . . (laughter) . . . it’s not good though is it?
It’s true though, innit?
– . . . yeah, yeah. It’s rude, there’s a lot of rudeness out on the road, isn’t there? (C2)

Pressure from others in the car:

Pressure. Pressure from other people in the car like from your partner or anyone else who’s in the car . . .
Facilitator: What kind of pressure?
Like saying ‘why don’t you go a bit faster’ or ‘you know, you’re only going at whatever, 28 (mph) or something’ (C2)

Competitiveness and a desire to impress:

When I was actually younger it was a competition, who would drive the fastest, who would get a car, and so forth. (P)

When you start competing you never know who you’re competing against. It could be a worse driver, it could be a better driver. His car could be better than yours, his tyres could be better than yours, you just don’t know. Again because you’re so busy concentrating on him, you’re maybe not concentrating on what’s happening round about you, an innocent third party gets involved in it. I think if you’re talking about competitive speeding, it should be done on a closed circuit or a track or something. I think that’s a dangerous sport. (P)

Feelings of anger:

You might have had an argument that can make you speed . . . well it makes me do anyway . . . ‘cause you’re in a bit of a mood. (C2)

I’ve done it when I’ve had an argument with my girlfriend. You know it’s like, your like aah just hit the boot and later on you’re like ‘why did I do that?’ you know because really it was stupid to do it but it’s just anger because you’ve been arguing in the car or whatever. (P)
Feelings of aggression triggered by the behaviour of other drivers:

*It’s an automatic reaction. Nine times out of ten you control it but the tenth time you don’t and you end up chasing them down the road and flashing your lights and he’s giving you two fingers and that or even she for that matter and I think most of us after about a mile you think ‘this is bloody stupid, it’s dangerous’ and you slow up.* (P)

Also the direct influence of fast music was also identified:

*I’ve noticed myself it can go with whatever you’re listening to music-wise as well. You know if you’re listening to a tape or an album and it’s a sort of fast playing album you can look down and you’re like ooh (look of surprise as if looking at the speedometer) cos your going along with the beat of the music.* (P)

Professional drivers and bikers both pointed out, however, that one’s reaction to events and behaviour depends on the prevailing mood you happen to be in (‘mood-of-the-day’):

... *(the speed I drive at) depends on my mood depending on, umm, whether I’m yeah relaxed or if I’ve had kind of a bad day or anything, stuff like that. That actually definitely influences it.* (P)

*It’s a lethal weapon we’ve got in our hands. It depends what mood you’re in and how you feel behind that lethal weapon that’ll kill anybody, and kill you if you want to really try.* (C1)

*But then again to be honest, it depends how I felt, if I was in the mood, I would maybe take it up a bit faster, then again depending how I feel I might go a bit slower, you know, just how I felt on the day.* (PTW)

All groups mentioned that seeing an accident (and also in the case of COSSACS, seeing flowers on the roadside) had the effect of lowering their speed (and therefore their risk threshold):

... *something can trigger it off as well. I mean you could be driving along at 90 (mph) and see something, maybe a car off the road been crashed or something like that, and immediately it sort of triggers something off ‘ooh, that could have been me, what am I doing, slow down here’ stuff like that.* (P)
However, driving alone, not having responsibility for anyone else in the car, can raise the threshold:

*You do it on your own ‘cause you’re not endangering anyone else, don’t ya?* (C1)

*I think another thing that influences your driving speed is if you’ve got passengers or not. If you’re by yourself you can maybe say to yourself ‘whatever happens’. Obviously there’s a third party if you hit another car. If you’ve got passengers, you’ve got family, you restrict your driving habits.* (P)

### 6.4.1 Factors affecting journey goals

All groups referred to the pressure of being late:

... well, I must admit, if I’m speeding I’m probably late to get somewhere. (C1)

... say if I was late for appointment or job interview, I’d push it. (C2)

*Because you can’t make progress because there’s that many cars that can therefore trigger off anxiety and frustration and you ... because you’ve got to get to your employer on time or you’ve got to get to an appointment and if you’re falling behind on time you will take that extra little bit of gamble, you will make that little bit of speed and perhaps inappropriate speed as well, you know?* (P)

*Part of the business is if you are trying to get to somewhere for a certain specific time, and you have been held up or whatever, it’s like yeah, I am going to try and get there, umm, not always a sensible decision, but it happens, so you may have the pressures of making an appointment, or whatever, and I’ll, you know, drive faster that I probably really want to.* (PTW)

Also drivers specifically mentioned the phenomenon of ‘get-home-itis’, the motivation to get home quickly:

*If I was on my way home from a long day at work, I’d push it.* (C2)

*Its not like I go to go speeding, but if I’m finished my job and it’s, it’s 9 or 11 o’clock and it’s obviously home time, I get in the car and I’m thinking about driving home. So I’m looking out and the roads looking more empty the more I concentrate on it, I can see the gaps a bit more ‘cause I’m*
concentrating on what’s going on and my foot goes down, ‘cause I can make that gap, I know I can and . . . thinking about it, I do it. (C2)

If you’ve got a job and it’s job and finish, you know it’s like delivering whatever and it’s like ‘hang on a minute if I can get all them delivered by 2 o’clock, I away home but really I paid till whatever’. You know it’s like, but I can be away, it’s job and finish, what you going to do? You’re not going to say ‘I’ll go down this street at 20 mph, and I’m not going to go home till 4 o’clock’. Whereas if I go down this road at 35 mph I’ll be home at 2 o’clock. (P)

COSSACS added that improved time-management can reduce exposure to these pressures, but suggested that, nevertheless, you sometimes want to beat your estimated journey time. And keeping with the traffic flow is a common immediate influence on driving goals, reported by all groups:

. . . but certainly at the bottom end of the M1 or something, in a car everybody, and someone was saying just now, is doing 85, 90 mph, in a, like a train, and if you do less then you are getting in everybody’s way, and it is, in my mind, becoming more dangerous. I wouldn’t actually want to be on a bike in that sort of a train, because I would feel that if anything went wrong I am meat in a sandwich. (PTW)

Also for both COSSACS and bikers a further goal may be to test one’s skill:

. . . testing your, your abilities, so that’s an obvious (laughs) natural reason why you would speed. (C1)

There are occasions when . . . when you go out . . . to, sort of, test yourself, almost, and you sort of say I am just going to go a wee bit faster around that bend, biking is all about going around bends. (PTW)

Professional drivers were the only group to identify specific manoeuvres which demanded momentary increased speed, such as a need to overtake.

6.5 Factors influencing compliance with speed limits
6.5.1 Dispositional influences

It is generally agreed that drivers should comply with speed limits and that non-compliance could lead to a dangerous loss of control:

. . . if you continually drive too fast on the road, if you don’t prepare yourself and ignore those kinds of danger signals, sooner or later you’re gonna get caught out. You might not just be caught speeding, you might
**kill** somebody. So, every time you get in the car and you stick to the speed limit, you’re focused on the road and you’re **minimising** the probability – that’s what it is – of having an accident. (C1)

. . . well I think we’d all agree with and accept, is that there are bad drivers on the road and everyone is a bad driver at some point in their career (general agreement) . . . so everybody goes through bad patches of driving but if you can appreciate that there are bad drivers on the road, can’t you appreciate that if you’re going a little bit faster than you should be, any accidents that may happen you’re gonna make them worse than if you were going at the speed limit. (C2)

Enforcement is commonly regarded as encouraging levels of compliance:

. . . the police pulling in a car and you see the flashing, somebody’s been pulled in. That’s another trigger again. (P)

You stop, you slow down and for the next four or five miles you probably stick to the speed limit and right ‘OK, he’s not going to get me’. Foot down again. (P)

*I am aware that if I was caught speeding then it involves penalty points and I drive for a living so that keeps me on a much more sort of even keel, you know . . . (PTW)*

*I think there was a comment earlier about losing your licence, I mean, I’m sure most of us rely on our car licences for our jobs, you know, so need our licence for our job, and that is always kinda in the back of your mind as well, I think there is today that there are more opportunities to be caught for speeding than the old days, and it would not take too many of those events for you to lose your licence now. So as for me that is always a factor in the back of my mind. (PTW)*

Some COSSACS say that speeding is selfish:

*It’s selfish. Trying to get quickly from A to B and yet putting other people’s lives at risk really. (C2)*

Also that it does not gain much time. Along with bikers, they also indicate that compliance enables avoiding feelings of guilt and shame:

*Well I feel guilty about speeding, I feel guilty about you know, the fact . . . what the impact I could have at any one time on other people. I feel guilty ‘cause I’m being bad, I’m not doing what I should be ‘cause I’m very . . . you know, you like to think you are law abiding don’t you . . . (C2)*
... on the open road I will do what I think is acceptable, I am always concerned about the image, impression I given to other people about the rate at which I go, so I am more likely to speed when there’s nobody around. (PTW)

On the other hand, COSSACS and bikers state that non-compliance is not necessarily unsafe:

Well it can be safe at times, can’t it? To break the speed limit? (C1 – five group members immediately agreed)

If they expect you to slow down using your common sense, why not go faster using your common sense? (C2)

... when it was busy, 40 (mph) limit, past road works... even when maybe there weren’t many people working there, most people were respecting the speed limit. Seven o’clock at night, quiet, no not much traffic, nobody around, everybody was thinking ‘what the hell are we doing 40 (mph) for?’, and they are all doing 50 (mph), and it was perfectly safe, umm. People were prepared to take the chance because they thought that at that time of night it was most unlikely that there would be anyone standing there with a ‘hairdryer’(speed gun)... (PTW)

Also both drivers and riders agree that speeding is more acceptable on motorways. Some COSSACS also state that they have been taught to drive marginally above the speed limit, that the margin permitted by police implicitly authorises it and that there is no shame in this behaviour:

I think its almost accepted across the board that going at 34–35 (in a 30 mph limit) doesn’t really matter, I think its not just my own opinion, but its pretty much just accepted that people aren’t doing anything wrong if they are going three or four miles, five miles above whatever the speed limit is. (C2)

... if I got done for speeding then I wouldn’t mind telling my colleagues or anything, I don’t see... I’m not ashamed of it I suppose. I got done at 36 and everyone was saying ‘och, that’s ridiculous’ so its more sympathetic than anything else. (C2)

A further interesting view which emerged in all driver groups is that they consider driving below the speed limit to be wrong when conditions do not make this necessary.
6.5.2 Proximal influences

All groups agree that speeding is easy and can be unintentional:

Modern cars are moving further and further toward being high-speed living-rooms. (PTW)

... sometimes if I’m in traffic and in a big car, you sometime don’t notice what you’re doing sometimes. (C2)

... if I go from my house I – I will be travelling about 20 (mph) because it’s a residential road, but when I get to the main road which is still in town, I turn right and by the time I look down at the, em, at the speed, I’m probably doing 35 (mph). (C1)

... you don’t really realise how fast your going in that missile, until a situation arises and you have to pull up all of a sudden or whatever. (P)

All groups also agree that they may not comply when the speed limit is perceived to be too low for the road characteristics: the speed limit needs to make sense. COSSACS point out that non-compliance occurs where there is inadequate signing of the limit:

You don’t always know what speed to do (agreement from all). You know, if you’ve got a dual carriageway and its restricted then you might not know until half a mile down the road. (C2)

This is where I get confused on speed limits ‘cause it’s like the centre of town, but it’s a dual carriageway ... so ... and I can’t see any little repeater signs on the traffic lights ... lamp posts, so its probably 40 (mph) but I don’t know. (C2)

They also indicate that it can be difficult to recalibrate one’s speed when entering a lower speed zone and that the distraction of frequent checking of the speedometer can be dangerous:

When you’re on a road, particularly if like it’s a road that you don’t know very well that you might find somewhere, you know, it’s dangerous to keep your eye focused on the speedometer all the time ... (C1)

I would be concentrating on the road. As it’s been said there is no point in taking your eyes off what could happen because somebody could pull out in front of you or swerve from the hard shoulder into the central reservation and you want that extra tenth of a second. You don’t care about the speedometer, it’s nonsense, what you are caring about is, you’re
caring about is getting there safely and avoiding any potential hazards.

(PTW)

Being given feedback about one’s speed can be helpful in inducing compliance with the limit:

*I find a very helpful thing just now that if you’re coming into a country village for example, er, where you have the 30 mph sign telling you to just ease down from your 50 or 40 (mph) and you cruise through it certainly above 30 (mph) but now they’re actually displaying signs showing you your speed . . . That’s a deterrent because you know. You know you’re doing 35 (mph) or something.*  

(P)

Sometimes other motives may result in speeding and sometimes drivers just do not think about the consequences. Professional drivers pointed out that speeding can be useful in an emergency.

6.6 Group comparisons

All groups agree that speeding is easy and can be unintentional. Influences which raise speed include pressure from others, keeping with the traffic flow, seeking an adrenaline rush and in response to frustration or annoyance. Vehicle size or type and seeing how fast the vehicle will go can also induce increased speed.

Excluding bikers, drivers report that speeding is common – everyone is in a hurry. The speeder stereotype is of a young driver:

*I think there are consistent speeders, yeah. I think, at the risk of type-casting, that a lot of young people speed a lot, and I say that because I did when I was 21, 22. I was rushing around everywhere.*  

(C1)

The speeder stereotype may also be typified as the ‘boy racer’. Influences which raise speed are feelings of anger or aggression and perceived norms for driving selfishly or aggressively, competitiveness, the experience of a feeling of power, fast music and ‘get-home-itis’. Seeing an accident has the effect of lowering speed. Drivers think that if it is possible to drive at the speed limit, drivers should do this and they get annoyed when they do not. They also think that speed limits that are too low for the road segment lead to non-compliance.

COSSACs think that training can change attitudes. They see the driver as being in control of whether or not he or she kills someone through inappropriate high speed (IHS). In addition to ‘boy racers’, they include in their speeder stereotype older men in high-performance cars. They see as general influences on speed choice ‘common sense’ and the time available to respond, weather conditions, fear of mechanical failure at high speeds and concurrently engaging in additional non-driving tasks.
which may ultimately be life-threatening. Influences which raise speed are other people, the desire to impress and seeing oneself as a good driver. Other influences are trying to beat estimated journey times, feelings of anxiety and escaping from dangerous others. Interestingly, they report that slowing down is also a way of dealing with dangerous others and of facilitating overtaking by other drivers. Awareness of the consequences of high speed has a speed-limiting influence.

COSSACS think that non-compliance with the speed limit is not necessarily unsafe. Some feel no shame if they drive marginally above the limit. They regard the margin permitted by the police as a kind of authorisation for marginally higher speeds and they feel aggrieved if penalised for a marginal breach. Others feel that the wish to avoid feelings of guilt and shame motivates compliance, and that speeding is selfish and does not gain much time anyway. Compliance is reduced, however, by motives for speed and it can be difficult to adjust speed when moving from a faster to a slower road type.

The influence of media messages on this group seems to go both ways. Some say they do respond to safety campaigns:

*I think adverts play a big role as well, you know those adverts there showing where if you doing 35 (mph) if you hit someone its like 80% chance you’ll kill them but at 30 (mph) there’s an 80% chance they’ll live. But I think things like that really bring it home to you, that like you know your … even if it’s not your fault if they stepped out, you’d still feel really bad that you were doing over that.* (C2)

Others say they have no effect. What is needed to slow down is better time management.

Professional drivers see older drivers as slower. They refer to opting to drive in a ‘comfort zone’ and say that going too fast can be scary. Nevertheless, this ‘comfortable’ speed may be over the speed limit. Familiarity with a road can thus enable you to go faster. Speeding can be fun and enjoyable but this is partly dependent on the driver’s mood. Feeling stressed, which professional drivers see as a distractor, can precipitate higher speed. Certain manoeuvres also trigger high speed, such as overtaking and the need to get into the right lane. Speeding can also be useful in an emergency and non-compliance is more acceptable on motorways.

Bikers see most riders as sticking to the speed limit. Like the professional drivers, they refer to riding in a ‘comfort zone’ but also talk about ‘getting into a groove’ and being ‘at one’ with the bike. Speeds which induce this state may be over the limit:

*… you get into, emm, a sort of close relationship with the bike and what you are doing. And everything becomes sort of semi-automatic and its*
going well and that can make you forget about the speed limit because you are just enjoying it so much and the experience that you just ride the bike and you suddenly wake up, ‘oh, what was that, I’m going fast’. And you’re going fast against the speed limit, not against what’s possible. All right, but, the, ehh, ehh, what keeps you doing that is it’s just bloody enjoyable. You know you get a great deal of pleasure out of doing that. And you get a sense of satisfaction and achievement as well. Emm, which you don’t normally get in a car. Because it is not so controlled, not so adaptable and not so flexible, emm, as a bike is. (PTW)

It’s like the sweet spot on a golf club or a tennis racket. (PTW)

Like the COSSACS, bikers think that exceeding the speed limit is not necessarily unsafe.

They are more likely to comply when the limit makes sense. They see ‘common sense’, the time available to respond, weather conditions and fear of mechanical failure at high speeds as general influences on speed. The avoidance of feelings of guilt and shame similarly helps motivate compliance. Also in similar vein to the COSSACS, bikers may be influenced to go faster by others and the desire to impress with a demonstration of skill. Speeding can be fun but is also mood dependent.

Bikers say that low speeds can impair concentration. They recognise that the safety margin is up to the rider and leave space to enable avoidance actions if necessary, try to keep braking to a minimum and slow down to deal with the dangerous behaviour of other road users. They are aware that bikes are less stable than other vehicles, are not so easily seen and that riders are particularly vulnerable:

_Awareness of what can go wrong, the penalties of getting it wrong, you are much more aware of what is going on around you, because on a bike if you miss a potential hazard it can kill you, if you miss it in the car it will dent the car and maybe knock you out, there is a significant difference in the penalty for getting it wrong on a bike, and you tend to be that much more aware._ (PTW)
7 DISCUSSION

From the main content of the participants’ comments it may be seen that the themes can be readily mapped onto the conceptual framework provided by the Task-Capability Interface (TCI) model and no theme emerged that could not be accommodated by the model. For this reason the results were presented using the model’s framework. Influences on speed choice are easily translated into the guiding theoretical concepts of driver capability, driving task demand, driver task difficulty and risk threshold and disposition to comply with speed limits. In fact the only dimension of the model not specifically identified by the participants’ comments was that of effort motivation. All groups reported using their speed in order to control safety margins and to obtain a ‘comfortable’ state. This might be informed by feedback from the engine and a sense of control. Nevertheless, some participants expressed a fatalistic attitude regarding the consequences of a loss of control.

Through their influences on speed choice, capability was regarded as being affected by experience, stress, age, concentration and fatigue. Task demand was seen to be influenced by road and traffic conditions, including familiarity with the road, vehicle characteristics, weather conditions, the behaviour of other road users and secondary tasks, such as the use of a mobile phone.

Through their effects on risk (feeling) threshold, very high speeds were avoided. There was an awareness that high speeds reduced the time available to deal with contingencies and bikers, in particular, wanted to keep braking to a minimum to avoid loss of control. On the other hand there was general agreement that speed could be pleasurable and could deliver an adrenaline rush and a feeling of power. At some point some drivers would also want to see how fast their vehicle could go.

Speed increases, and therefore an increased risk threshold, could also be triggered by frustration, by pressure from others, both inside and outside the vehicle, by competitiveness, and to express annoyance. Drivers indicated that there was a norm of increased aggression on the roads and admitted that feelings of anger and feelings of aggression triggered by the behaviour of other road users could drive speed up. Listening to fast music could have a similar effect. Higher speeds were seen as more acceptable when driving alone, but in general the disposition for higher speeds depended to an extent on the driver’s and rider’s mood.

Seeing the results of an accident or flowers on the roadside had the reported effect of lowering speeds and therefore the driver’s risk threshold.

For all groups, journey goals, which also feed into the determination of the road user’s level of acceptable task difficulty and risk threshold, included the pressure of being late. An associated motive, mentioned by drivers, was that of ‘get-home-itis’. Sometimes drivers wanted to beat their estimated journey time, and both drivers and
bikers sometimes wanted to test their skill. Those participants who had just completed a speed awareness course suggested that improved time-management could reduce time-saving pressures for increased speed. However, a common immediate influence on driving goals was keeping up to the speed of the traffic flow.

Non-compliance with the speed limit is generally regarded as potentially dangerous, but not necessarily so, for example on motorways or where road and traffic conditions permitted. Indeed, the margin above the limit, allegedly taught to some drivers and ‘permitted’ by enforcing agencies, authorises minor levels of infringement and there is no shame felt in engaging in this behaviour. Going over the limit can easily happen unintentionally because of the low level of prevailing task demand and when signs are not detected: compliance is much easier when the limit makes sense. It was mentioned that it can be difficult to recalibrate one’s speed when entering a lower speed zone and that the distraction of frequently checking the speedometer can be dangerous. Hence being given feedback about one’s speed can be helpful in inducing compliance, for which enforcement is commonly regarded as being a powerful motivator. Nevertheless there are times when other motives take over and drivers lose sight of the possible consequences.

Thus the conclusion has to be that the evidence arising from the focus group content is adequately captured by the model and is within its range of convenience. Drivers’ own perceptions and experience regarding speed choice are entirely consistent with the theoretical formulation and provide for a rich elaboration of instances of its key concepts.

In addition, the focus group method enabled the capture of the narration of dynamic episodes, in contrast to the unitary responses typical of questionnaire surveys. For example, consider this narrative about ‘putting down’ other motorcyclists:

*I can think of two or three friends, I’m not actually a good enough driver to do this very much I don’t think, but I certainly got two friends who got old, old and British bikes and trigger for them is someone with something newer, faster, bigger, more modern, and they go ‘ah, look at that’, and especially if it is someone who has fairly obviously recently just passed their direct test, and got a big sporty bike and you can just see that they are a little bit wobbly on the corners, it’s let’s just show them what they have wasted seven or eight thousand pounds on, and it’s not clinical speeding, this will tend to be single-track roads ... umm and you can just see them (the two friends) disappear into the distance, and you see them 15 miles away with a big smirk on their face, and I’ll kinda try and maybe stay with these bikes but, but they will be determined to overtake, and wave goodbye to them. That’s just a statement of fact, which is kind of childish but, there is a lot of smirking going on in this room. (PTW)*
Also consider this exchange concerning an aggressive response to another driver’s behaviour:

– … he was winding me up, like … annoying me, flashing me, and like eventually, actually, I ended up behind him, so I kind of flashed him … well, I put my full beam on for about five minutes, you know just to …
Facilitator: You what?
– I put my full beam on, like slapped it on, just to irritate him
Facilitator: But how does that help? You know …
– Makes you feel better! (laughs)
– It works well, doesn’t it?! (laughs)
– It does, it does (four others nod agreement)
– Turn it off and he thinks ‘phew’ - and then turn it back on again! (laughs)
– Yeah! (C1)

Comparing groups on the themes they identified, there seems to be no striking difference between professional and non-professional driving groups. Both identified factors that could influence speed choice through affecting task demand, driver capability and risk threshold. Furthermore, both recognised that driver mood could mediate different responses to the same situation. Both also mentioned that compliance with speed limits is, in part, a function of their perceived appropriateness and that non-compliance is not necessarily unsafe. Convicted speeding drivers, however, were more likely to suggest that the tolerance of speeds marginally above the limit by enforcing agencies has the effect of authorising them. Indeed, they are generally more forthcoming than others about factors which influence levels of compliance.

Bikers talk about very similar themes as drivers. However, they additionally identify desirable states when motorcycling, such as being in ‘the groove’. Furthermore, because of their particular vulnerability, they are more expressive of the importance of maintaining concentration and of consciously maintaining an adequate safety margin which, for example, minimises the requirement for excessive braking.

What are the implications of these findings for the identification of themes and target groups for possible media campaigns? Irrespective of group, these participants appear to be aware of the relationship between vehicle speed and the statistical risk of collision and severity of consequences. They appear to be aware that many factors can increase task difficulty or decrease their capability. They seem to be aware that there are many conditions that can raise their risk thresholds, as well as lower them. Also they seem to be aware of influences on their disposition to conform to speed limits. At times they are motivated to exceed these by excessive amounts, but they exploit this possibility in the context of an otherwise low task difficulty and a low probability of being detected and penalised. At other times they marginally exceed limits as a natural adjustment to a limit that may be a legal
requirement but is otherwise a rather imprecise guide as to what the safe upper limit actually is at that moment in time. Thus there does not appear to be much of a knowledge gap that a media campaign might aim to influence.

However, one possibility that might be targeted by a media campaign is the potentially dangerous influence of mood state on speed choice. We know far more today about how mood state can be managed, and this knowledge might usefully be passed on to drivers to help minimise the negative influence of mood state on decision making. A second possibility has to do with the establishment and influence of perceived norms. Inevitably a driver’s attention is captured by marked deviations rather than the norm, but such selective attention may lead to the development of an inappropriate bias in the driver’s perceived norm. As drivers are influenced in the direction of conforming to perceived norms, this bias can lower the quality of the driver’s behaviour and that, in turn, may feed back into contributing to a further decline in the actual norm. The consequence is a slow deterioration in the underlying driving culture of the community. A media campaign presentation of appropriate actual norms might help counteract this process, indicating, for example, that by far and away the majority of drivers do not speed excessively, do not cut other drivers up, do not tailgate, do not overtake dangerously and are not aggressive in their interaction with other road users.

All groups identified time pressure as a key motive influencing increased speeds. Providing advice on time management to avoid this influence might be productive. On the other hand, counteracting the use of speed to obtain an adrenaline high may be much more intractable. Perhaps emphasising the consequences of this behaviour for others might encourage seeking such highs in alternative and safer ways.

An emergent theme that was frequently visited was the inherently social nature of driving: social in terms of perceived norms of behaviour, including speeding; social in terms of temporary skirmishes (aggressive exchanges of varying degrees of intensity and duration); social in terms of the pressures exerted by others both inside and outside the driver’s vehicle; and social in terms of the inability to communicate effectively with other road users and the deindividuating condition of the cocooned anonymity of the driver:

... person to person you can say ‘excuse me’ or smile or do something and it diffuses the situation. (In a car) I don’t think it can happen ... somebody gives you a wave or a nod or something and you accept they know they’ve done something wrong, but in a car they don’t. They just keep their eyes straight ahead or something like that and the personal contact doesn’t diffuse the situation. (P)

Driving is also social in terms of the opportunities for status in vehicle ownership, style of driving and competitive engagement. These social variables are of interest because they not only drive up speed and risk thresholds but they are essentially
independent of driver/rider mobility goals. Perhaps, then, a media campaign might focus on this area by inculcating more socially acceptable behaviour. One could be forgiven for concluding that all groups of participants studied in this report admitted to behaving at times in ways that surely fit in with the concept of regression to a less mature state.
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9 REFERENCES


