A GROUNDED THEORY EXPLORATION INTO THE DRIVING AND TRAVEL NEEDS OF OLDER PEOPLE

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Abstract

The population of older people in the UK and 'western world' is increasing in number and as a percentage of the total population. This trend is continuing into the foreseeable future. In addition, changes in lifestyle as a result of increased longevity and better health and social care mean that older people are being mobile later on in their life than ever before. This research uses grounded theory and adopts an iterative approach to eliciting and generating the travel needs of older drivers through in-depth qualitative research with 26 older car drivers and 31 ex-drivers. Analyses of the findings suggest three levels of travel need (practical, psychological and aesthetic). At a primary level, *practical needs* encompass day-to-day, functional and utilitarian mobility needs. Participants were most aware of such needs and as such these tend to be met when they give-up driving. The secondary level, *psychological needs,* include a sense of control and independence, enhancing status and defining roles. The tertiary level *aesthetic needs,* involve travel for pleasure and for enjoyment. Psychological and aesthetic needs are less obvious to the participants themselves, but arguably are of equal importance as practical needs. However, less provision is made by older people in meeting these needs when they give-up driving. This has implications for design of travel services for older people to place emphasis not only on practical aspects of travel, but also on meeting social, psychological and aesthetic needs.

1. Introduction

The population of older people in the UK, as indeed it is across the 'western world', is increasing in number, and is expected to do so for the foreseeable future (ONS, 2006; Tomassini, 2004). Over the last century the population aged 65 years and over in the UK has increased five fold from 1.8 million in 1901 to 9.5 million in 2001, with the oldest age group (aged 85 years and over) eighteen times more numerous than in 1901 (Tomassini, 2004). The percentage of older people as a proportion of the total population is also increasing; in 1901 those aged over 65 years made up 4% of the population and the equivalent age group made up 16% in 2001 (Tomassini, 2004). Predictions suggest that this growth in number and percentage will continue to 12.7 million people aged over 65 in 2021, and 15.27 million people aged over 65 in 2031, representing 14.2% and 16.2% of the total population respectively (Tomassini, 2004).

Changes in lifestyle as a result of increased longevity and better health and social care mean that older people being mobile later on in their life than ever before (Tomassini, 2004). The importance of mobility has been highlighted for all segments of life and society and has been linked to life satisfaction and quality of life (Schlag, Schwenkhagen and Trankle, 1996). In addition, older people are driving later on in life and more miles than ever before (Tomassini, 2004). In the UK, 70% of adults (an estimated 32.2 million people) currently hold full car driving licences (DfT, 2006). A total of 47% of adults over the age of 70 hold a driving licence, which has increased from 32% in 1989 (DfT, 2006). In the last 30 years there has been a significant increase in drivers who are 65 years and over and this increase is most markedly found amongst female drivers – a 200% increase in male drivers and a 600% increase in female drivers over 65 years (DfT, 2001; Oxley, 1991). This rise is expected to continue, and Noble (2000) predicts that 4.5 million people over the age of 70 will have a driving licence by 2030. However, older people are the most likely group to

suffer mobility deprivation (DfT, 2001) and report most difficulties in accessing local amenities such as shops, banks and hospitals (ONS, 2004).

Reduced mobility prevents older people from carrying out their social activities as well as practical day-to-day needs. The ability to be mobile and travel serves functions including entertainment (such as travelling for travelling sake and to get out of the house), participation (in clubs and organisations), independence (in allowing older people to remain as self-sufficient as possible, not relying upon others to access vital services) and social interaction (allowing older people to socially interact with friends, not only as a means to an end, but also whilst travelling) (DfT, 2001). In addition, owning a car enables drivers to have control over their travel, giving them the potential to travel when and where they want (Webster, Gow, Gilhooly, Hamilton, O'Neill and Edgerton, 2002; Metz, 2000).

The need to be mobile and to travel is also related to psychological wellbeing. For instance, reduced mobility and independence has been shown to be strongly correlated with an increase in depression and loneliness (Fonda, Wallace & Herzog, 2001; Ling and Mannion, 1995). Being mobile, especially through car use, can increase feelings of self-confidence, mastery and self-esteem and feelings of autonomy, protection and prestige (Ellaway, Macintryre, Hiscock and Kearns, 2003). Driving can be linked to identity; Siren and Hakamies-Blomqvist (2005) suggest driving and owning a car is associated with masculinity, youthfulness, status and power. For older people driving can be seen as an example of staying young or warding off old age (Esienhandler, 1990) and can be linked to showing personal and financial status, especially amongst male drivers (Rothe, 1994).

The research to date shows the importance of travel and indeed of personal travel mobility for older people. However, no relative contextualisation of travel or driver needs has occurred, for example what is the relative importance between practical, social and psychological travel needs and requirements? In addition, research has not addressed how older people themselves perceive their travel needs, for example, what are the most important travel and driving issues and needs older drivers are themselves aware of? This research aims to overcome this by setting out to contextualise older people's travel and personal driving needs using a bottom-up approach to explore patterns and categories within and between individuals.

2. Methodology

Despite the important role that human behaviour occupies within traffic and transport systems, most research on vehicle driving behaviour has tended to be based on a traditional positivist framework. Indeed, epistemology (knowing what does or does not constitute as warranted knowledge) is rarely, if ever, discussed. The resulting epistemological lethargy affords a one-dimensional research framework in which many important areas of research, particularly those addressing the effects of subjective appraisal (such as attitudes and motivation) on behaviour, are not being addressed.

To overcome this, a post-structuralist approach is proposed using a modified *grounded theory approach*, where participants become co-researchers and participate throughout the research process (Strauss and Corbin, 1998; Glaser, 2001). This approach suits the nature of generating and developing knowledge and meaning from a wide variety of opinions and attitudes, without doing an injustice to their diversity and depth. Strauss and Corbin (1998) describe grounded theory as a theory "derived from the data, systematically gathered and analysed through the research process [where] method, data collection, analysis, and eventual theory stand in close relationship to one another."' (Pg. 12).

This paper reports on a two-phase research study. The first phase consists of three focus groups with current car drivers. Participants in these three focus groups took part in two waves of focus groups, a short telephone interview and a driver diary task. Phase 2 consisted of interviews with older ex-drivers who, for one reason or another, have stopped driving between six and eighteen months prior to the research. Potential participants were given information sheets explaining the

project and the whole procedure was inline with ethical codes of conduct. Participants were recruited from urban, semi-urban and rural areas in Dorset, a largely rural county in the South of England with a large proportion of older people. Dorset was chosen for ease of access to older people and as a known area with accessibility difficulties for older people. For purposes of this project older participants were defined inline with the Office National Statistics and UK government policy as being those aged 65 years of age or over (ONS, 2004, 2006).

Phase One: Participants (Current drivers)

The sample for the first phase of this research consisted of 26 currently driving individuals (18 males and 8 females), with ages ranging from 68 to 90 years old (with the mean average being 75 years old). All of the participants had a current driving licence and owned, or had access to, a car. On average, participants drove 109 miles per week, ranging from 20 to 400 miles. This compares favourably to the national statistics on driving in the UK; older drivers (aged 65 and over) drive around 102 miles per week on average (DfT, 2006). In this study participants completed 8.5 journeys by car, on average, per week. Participants formed three separate focus groups, based on proximity to where they lived - group 1 met in Dorchester (seven individuals), group 2 in Hamworthy (close to Poole) (seven individuals) and group 3 in Swanage (twelve individuals).

Phase One: Procedure

Participants took part in four waves of research – an interview and a driver diary were flanked by two waves of focus groups (lasting for an hour and a half each time). At the end of the first focus group each participant completed a background details questionnaire. Between focus group meeting one and meeting two (a period of about one month) participants completed a driver diary (around four weeks worth of driving) and took part in a telephone interview (1-2 weeks after the initial focus group) lasting for about 20-25 minutes.

Focus Groups: Wave one of the focus group was semi-structured, so that the needs and issues raised came from the participants themselves. Driving experience was discussed including common journeys made by car, journeys by other modes, reason for mode choice, main barriers faced while driving and how such barriers are overcome. A card-sort task addressed the importance of functional and socio-psychological aspects of travelling and driving, with some of the psychological statements were adapted from previous research (Ellaway, Macintyre, Hiscock and Kearns, 2003 and Musselwhite 2004a, 2004b). In addition a discussion on giving-up driving and associated issues also took place. Specific areas of driving need were covered using video-clips of driving situations (various whether and road conditions, interior and exteriors of cars), where participants were asked to talk through driving needs, issues and barriers and how they might deal with them (see Figure 1).

Figure 1 Phase one, wave one focus group one taking place in Swanage, Dorset. A discussion using photo clips of the interior of the car is taking place

The second wave of focus groups used a board-game to initiate and develop a discussion about travel and driving needs and issues (see Figure 2). The game involved collecting cards concerning specific types of travel and driving issues (previously discussed in the earlier stages of data collection). As cards appeared a discussion on the issue named on the card took place. The board-game approach to the focus group allowed topics to appear in a random-order, reducing order-effect bias, and the friendly yet competitive spirit enhanced conversation and directed focus. Across the three groups a total of 24 of the 26 individuals (92.3%) attended wave 2 focus groups.

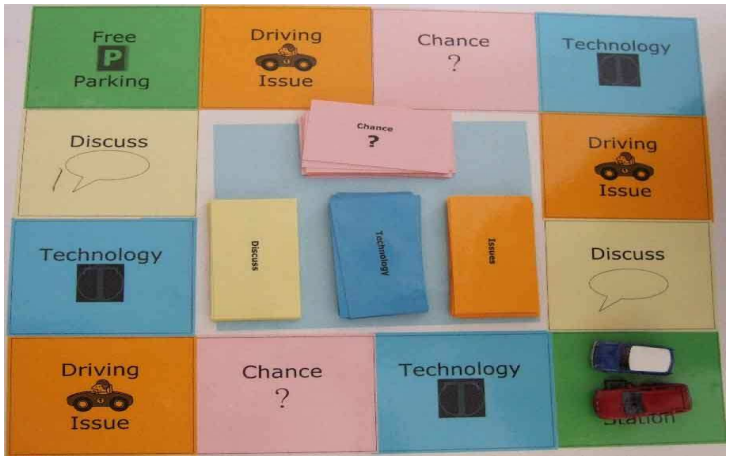

Figure 2 Board-game used in Phase 1, Wave 2 focus groups

Telephone Interviews: Nineteen (74%) of the initial 26 participants were interviewed over the telephone at a mutually convenient time. The telephone was chosen to keep participants at their ease and not to take up too much time and effort on their part. The interviews were semi-structured and involved re-visiting travel and driving needs from wave 1 focus groups and assessed barriers to meeting such needs. The interview also allowed researchers to explore the findings from wave 1 and look for individual and personal views and similarities and differences on the findings.

Driver diaries: A total of 22 (87%) participants completed a driver diary. The aim of the diary was to get drivers to record their driving, mobility and travel needs as and when they happened, rather than retrospectively as would happen in the interviews and focus groups. The diaries were given out at the first focus group and collected in at the second focus group and were discussed during the telephone interview. Individuals had a proforma to keep details of any journeys made by car (date, number of miles, number of passengers, destination etc) and the purpose for the journey and record anything unusual that happened and any particular issues or problems that arose. They were asked to keep the diary and record details for as long as they liked. They were kept on average for 19 days and covered 8.2 journeys (many of them return journeys) with an average mileage of 240.7 miles (an average of 29 miles per journey or 88.7 miles per week).

Phase Two: Participants (Ex-drivers)

The sample of participants at phase two consisted of 31 ex-drivers (18 males and 13 females), with ages ranging from 65 to 92 years old (mean = 76 years old). All of the participants had given-up driving between 18 months and 6 months prior to the interview (mean age of giving up driving = 74 years old). On average, participants drove 91 miles per week prior to giving-up driving, ranging from 15 to 200 miles. This compares favourably to the national statistics on driving in the UK; older drivers (aged 65 and over) drive around 102 miles per week on average (DfT, 2006). Average number of journeys per participant per week was reported at around 7.6.

Phase Two: Procedure

This phase involved an in-depth telephone interview which included participants verbally completing the background details questionnaire as with phase 1. Interviews lasted between 45 minutes and 1 hour 30 minutes and took place at a mutually convenient time for the participant and researcher. The interview explored difficulties and problems associated with giving up travel and addressed changes in (travel) behaviour when people give-up driving, especially addressing practical, social and aesthetic issues.

Ensuring Validity and Trustworthiness of the Research

Checks of integrity, trustworthiness, validity and consistency were ensured during data collection and analysis. Triangulation and reflexivity were explored in order to investigate similarities and explore differences amongst the data analysis. The iterative nature of the data collection techniques allowed areas of disparity or contention to be tackled with the participants during interviews and the latter focus group. Two researchers were involved in this research both making notes (using reflexive case notes) and analysing data which were compared and discussed for consistency and contention. Areas of consistency were reported and areas of contention were discussed and debated amongst the researchers until a decision was made over their validity of inclusion in the write-up.

Data Analysis

Since the research involved an emergent and iterative design, data analysis ran concurrently with data collection. A thematic analysis was adopted to codify the answers. This involved initially analysing the transcription in light of the reflexive processes. A thematic analysis was employed to break-down and re-build the data using a process of Constant Comparative Analysis (Glaser, 2001; Goetz and LeCompte, 1981; Janesick, 1994; Lincoln and Gruba, 1985). This produced a summary of the data which was further reduced through a process of detection of units of meaning into areas of general, relevant and essential distinction. The summarised data is then addressed for patterns or connections within the data. Further data analysis occurred at the end of the data collection to supplement the process in light of new findings. Finally, independent analysis took place to establish investigator triangulation to enhance validity

3. Findings and Discussion

Travel and driving needs of older drivers

The results from this study suggest that older people travel for a variety of reasons, such as meeting appointments, going shopping and using services, social purposes, work, helping others and for the journey itself. These seem to inhabit three main categories: *practical* (primary) needs, *social* (secondary) needs and *aesthetic* (tertiary) needs. As Figure 3 shows, people's needs vary in level of self-awareness or consciousness. Participants were very conscious, or aware, of primary needs and less aware of secondary needs and even less aware of tertiary needs. The implication of this is that interventions aimed towards meeting mobility needs often only concentrate on the primary needs. As will be discussed later, ignoring secondary and tertiary needs has largely meant that such needs go unmet, particularly when private travel modes have to be foregone. The categorisation of travel needs presented here parallels with Maslow's hierarchy of human needs (Maslow, 1970). The findings suggest how important travel and mobility, and indeed the use of private vehicles, are in achieving satisfaction and ultimately self-fulfilment.

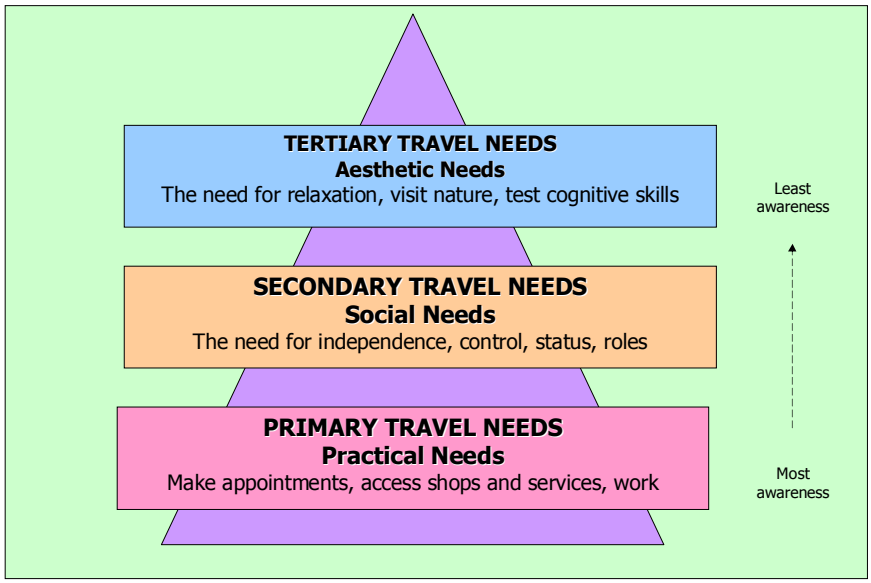

Figure 3 The three levels of mobility needs of older drivers by self-awareness of the need

Practical needs: It is important to consider the practical and utilitarian aspects of driving and the car as a *primary* mobility need. This includes fulfilling practical travel needs, such as meeting appointments, visiting shops and services, visiting friends, attending social events, going to work and helping others. It is these practical needs that have the primary articulation in discussions – in other words, when conceptualising travel and mobility these are thought of and spoken about first. In particular, the most important reasons for travel amongst the participants was that it helped them meet hospital, doctors and dental appointments and enabling shopping to occur. Though travel for 'work' declined amongst the participants it did not mean travel for 'work' does not occur at all; indeed many of the participants were very much actively involved in many (often voluntary) working pursuits. However, participants work much less often than they used to and have the ability to be flexible over choosing days and times to do so. Almost all participants said their driving had reduced since retiring from full-time employment. The practical needs fulfilled by travel has been well documented in previous research (see Davey, 2007; DfT, 2001; OECD, 2001 for for discussion).

Social needs: Almost all journeys created a social aspect of driving in addition to the practical issue. These aspects were related to the need for companionship that the journeys provided. Indeed, the participants make many journeys with a passenger (67% of all journeys in the driver diaries were made with at least one passenger). Moreover, although the ultimate need for travel seems largely practical – to go shopping, to go to work, to meet an appointment etc – the social interaction that takes place at such venues is arguably equally important. Thus, travel is reducing social isolation and increasing social interaction. The reduction of social isolation that driving provides is vitally important; more complex travel patterns that driving affords allow a more rich and diverse social network for any group, but is vital to older people who again may have more difficulty accessing other means of travel (either physically or geographically).

The importance of strong social networks must be reiterated at this point. Research has shown that belonging to groups (regardless of age or generation) enables (an informal arrangement of) mutual practical, emotional and physical support which can reduce stress (Cobb, 1976) and even illness (Cohen and Wills, 1985; Jung, 1984). It has also been shown that a higher quality of life amongst older people is linked to a rich and diverse social network (Duck, 1991). Not only does travel allow people to visit friends and family and attend events, the social consequence goes beyond this. For example, many older people travel with passengers, so the journey itself creates a time for social interaction that may not otherwise occur.

It was also felt during the research that accessibility to travel created a sense of control over one's own life. In particular being able to drive and having access to a car provided a sense of independence, supporting previous work by Ellaway et al (2003). This suggests that being able to drive means primary mobility needs can be met with relative ease and with minimal preparation. Amongst our sample, older people felt safe in the knowledge that they could go anywhere at anytime should the need arise. In particular, emergencies and unplanned events can be travelled to with almost immediacy. Previous research has highlighted how important this sense of control over mobility is to older people. For example, Webster et al., (2002) cited the ability "to go where you want to" as one of main advantages of cars and driving for older people. Metz (2000) refers to the importance of *potential travel*, which he describes as the knowledge that a trip could be made even if it is not actually undertaken. Independence that travel affords has been well documented (e.g. Burns, 1999; Kostyniuk, Shope and Molnar, 2000), but the additional sense of control the car creates is important as control is vitally important to people's health and happiness (Langer and Rodin, 1976). A lack of control over life can lead to learned helplessness and depression (Seligman, 1975; Schulz and Hanusa, 1978).

Expanding on this, the symbolism of driving is important. Research into travel mode choices are starting to shift from the utilitarian research approach towards a more non-instrumental motives to travel mode choices, such as symbolism (e.g. Steg, Vlek and Slottegraaf, 2001; Steg, 2005). In particular the current research found that participants saw the ability to drive as something that keeps them in-tune with society. Although they may differ in terms of physical ability to younger people, their ability to drive keeps them actively engaged in society and on a level-footing with younger individuals,

"It is the one thing that allows me to compete with youngsters. It is something I can probably still do as well as when I was a young man. I feel able to be part of society" (Male, focus group 1)

To some extent driving can be seen as ageless (an activity that can be enjoyed by young and old people) and as such do not make people feel 'old'. Eisenhandler (1990) suggests driving is a way of "warding off old age identity". This is particularly the case for men, where driving is linked both to personal and financial status (Rothe, 1994; Webster et al., 2002). Research into the symbolism of the car suggests that driving is associated with masculinity, youthfulness, status and power (Siren and Hakamies-Blomqvist, 2005). Traditionally the love of driving and the love of owning a car has typically been associated with younger drivers (see Rolls and Ingham, 1992), but it is very much part of older people's lives (especially for males). It seems older people are just as likely as younger people to mention that they enjoy driving and owning a vehicle. Those that are attached to their car often view it as an extension of their personality, similarly their driving ability and style is linked to who they are. So to a certain extent, one could suggest that giving up driving is like giving up who they are!

Aesthetic needs: The importance of mobility to enjoy the journey itself was consistently mentioned by the participants. There was a great deal of *mobility for pleasure* discussed, in particular reference to driving for its own sake. The participants did not have such restricted time as they once had earlier on in their life and hence tended to have more time to appreciate the journey itself. It was a common theme that participants mentioned they enjoyed the journey. On occasion it was common for older people to choose certain routes or certain roads to travel or drive down to be view certain scenery. Specifically, driving afforded the possibility for older people to view (particularly) natural scenery such as forests, trees and the sea,

"Until I moved into my [retirement] flat, I loved looking at my garden, how it changes throughout the seasons. With my car, at least, I can still visit parks and the forest regularly to watch them change" (Female, current driver, interview)

"We go down to the coast regularly to see the sea. I love being by the sea. We couldn't do it if we didn't have a car." (Male, current driver), interview)

"Sometimes I take the long way round to drive past the forest and see the trees, especially in Autumn" (Male, current driver, interview)

The need for human contact with nature, termed biophilia, has been well-documented (see Kellert and Wilson, 1993). Research suggests that interaction with certain types of nature can create restorative responses and as such can reduce stress (Ulrich, 1979), anxiety (Ulrich, 1986) and improve health (Ulrich, 1984). Since reduced physical mobility to engage with nature is more apparent in older people, travel by car allows these important interactions to take place. Participants talked about how driving also allows escapism and relaxation through fulfilling such

aesthetic needs, which are also important for good mental and physical health (Driver, Tinsley, and Manfredo, 1991; Weissinger and Iso-Ahola, 1984).

Travel and driving needs of older people who have given-up driving

Unsurprisingly, there had been much change in travel behaviour amongst participants who had given-up driving. As was predicted from the findings of phase one, people generally found their practical needs were met, but felt their social and aesthetic needs went generally unmet.

Practical needs: These needs were again most prevalent are normally late or early and whether it is practical to carry shopping home. in participants' minds. They were of primary concern both during the time they were thinking about giving-up driving and after they had given-up driving. Anxiety surrounded the feeling that they would not be able to go shopping or go to hospital or attend doctor's appointments without huge planning and inconvenience. Although in all cases a great deal of time was spent planning, this time was reduced after a while when information on a new way of getting to services was acquired. Information was acquired about bus services including location of bus stops and bus times. In addition, new schemas of transport were developed and processed cognitively. In particular, a variety of informal heuristics were developed including such issues as whether there is a seat at the bus stop, whether buses

Social needs: It was certainly the case that giving-up driving had detrimental effects on social and psychological issues. Participants tended to mention feelings of depression, anxiety and annoyance. These were certainly worse for those who had not planned to give-up driving and had been 'forced' to do so following advice from others or following an unforeseen negative incident. Feelings of isolation and feelings of 'not being part of society' were common,

"It's hard to explain I suppose. You just don't seem like you belong. I suppose yes there are feelings that you might be ready for the scrapheap now. The first step to it, you know" (Male, gave up driving at 76)

Some individuals took it better,

"To be honest I'm not sure it's mattered as much as I expected it to. I haven't changed as a person. I'm still me. I thought it'd be awful." (Male, gave up driving at 79)

Others found that as they adapted, probably between 3 months and a year, depending on the individual, they grew happier with their new situation,

"You get used to it. You realise you're not alone and there is help to get you out and about from a variety of sources" (Male, gave up driving at 78)

It was common for participants to begin to see real benefits in not owning and relying upon a car, especially financial benefits,

"Well, you know, I realise how expensive it was just having a car sit there, let alone use it. I certainly save money now" (Female, given-up driving at 72)

Meeting needs at this level, was therefore, a mixed picture for the participants. Certainly, planning ahead helped reduce psychological and social problems.

Aesthetic Needs: This level of need was hardly met at all when individuals gave-up their driving. The only exceptions were where individuals had family who took them 'out for a drive' to see countryside or the sea. Most individuals, however, rarely got to go for a 'drive' to see nature or for its own sake. They felt reluctant to ask other individuals,

"You can't ask other people to take you out for "a drive". They'd think you'd lost their senses. Anyway they have got better things to be doing with their time, then ferrying me about just for the sake, like" (Female, gave-up driving aged at 80)

Also, they felt they could not justify the cost on public transport,

"You can't really go on a bus just to go for a ride. It doesn't seem worth the cost" (Male, gave-up driving at 82)

And that buses and trains were not really there for just going on a journey,

"The bus doesn't really go where you would want. The route isn't pretty. It just does the houses and the shops. The views are ordinary" (Female, gave-up driving at 80)

This is despite overwhelming support for buses and trains amongst older people, but this was always as part of a ride to somewhere else,

"I enjoy going on the bus to the shops. They are fun. You get to go out, see people, chat to people, see the world going round" (Female, gave-up driving at 72)

Indeed, this is an aspect of change in travel behaviour that most participants saw as really negative,

"Driving allowed me to go where and when I wanted to, even if that was just for a drive about. We can't do that now." (Male, gave-up driving at 72)

It was also mentioned how the act of driving itself was missed,

"I miss actually the act of driving. I always enjoyed that" (Male, gave-up driving at 80)

Overall, this seems to be a level of needs that requires some extra consideration. There seems to be a need for older people to be able to (feel confident to) use public transport or ask for lifts to take them out on a journey for it's own sake or to get out and about and see life.

5. Conclusion

This research suggests that mobility is not only important in fulfilling essential day-to-day practical needs, but also in enhancing social networks and social interaction, creating a sense of control and independence, enhancing status and role and helping people interact with nature and explore cognitive skills. Driving a car helps fulfil practical needs to a maximum and fulfils social and aesthetic needs that would not otherwise be met. As people give-up driving they rely on either public transport or other people for lifts and help with their travel. With this in mind, both social and aesthetic needs are no longer met through travel (Davey, 2007). This illustrates how giving-up driving can lead to depression (e.g. Fonda, et al., 2001; Ling and Mannion, 1995) and isolation (Johnson, 2002) since many *social needs* are no longer met. To add to this, giving-up driving is also linked to depression and isolation through *aesthetic needs* no longer being met**.** Such journeys are often perceived as unnecessary and as such people do not feel they are able to ask other people to take them on such journeys or endure the additional cost and effort, to go on such journeys (Davey, 2007). Interventions aimed at encouraging older people to consider alternatives to the car need to be aware that support is required above and beyond satisfying practical needs and needs also to concentrate on meeting the social and aesthetic needs discussed in this paper. Further exploration of travel and driving needs of older people and in particular how technology might help meet such needs are discussed in Musselwhite and Haddad (2007).The categorisation of the travel needs of older people points the development of toolkits which will assist citizens and responsible professionals in managing reductions or proactive expansions in personal 'mobility capital' (Flamm & Kaufmann, 2006).

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