

Leisure Mobility and Mobility Problems of Elderly People in Urban, Suburban and Rural Environment

Preliminary results from the research project FRAME

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Birgit Kasper and Joachim Scheiner

University of Dortmund – Department of Transport Planning – D-44221 Dortmund

Tel. 0231 / 755-4822 – Fax 0231 / 755-2269 – <http://www.raumplanung.uni-dortmund.de/vpl/>

kasper@rp.uni-dortmund.de – scheiner@rp.uni-dortmund.de

abstract

Leisure mobility of elderly persons is characterised by manifold aspects. Mobility chances or limitations have significant impact on leisure activities and constraints. On the one hand, future seniors will be more mobile than nowadays, as the availability of driving licenses and cars heavily increases. On the other hand, age-related health problems will continue to play a major role. Access to leisure destinations decreases because of the ongoing spatial concentration of large-scale facilities. This process causes mobility limitations as soon as the loss of the fitness to drive and the dependence on facilities within the residential area sets in.

The papers presents preliminary results from the research project "FRAME – leisure mobility of elderly people". The 'demand side' is represented by a household survey in three study areas: the city Bonn representing an urban area, parts of its suburban space on the left-Rhine side (suburban area), and parts of the Eifel, a rural area west of Bonn. The presentation concentrates on activity participation, modal choice, and mobility problems (unfulfilled activity wishes).

The 'supply side' is investigated by expert interviews with representatives of leisure facilities, transport providers, social facilities and senior housing facilities in the study areas. The interviews provide substantial insight into experts' opinions and suggestions on the supply side.

1 Introduction

Future transport in Germany will far more than today be characterised by elderly people. The decline in the birth rate and the growing life expectancy result in an increasing ageing of the population. Following a forecast of the German Institute for Economic Research (DIW), the percentage of people over 60 years will increase from 22 per cent in 1997 up to 38 to 44 per cent in 2050 (SCHULZ 1999).

Due to this development, the structure of transport demand will change significantly. Firstly, because of the lack of job and business trips of elderly people, a growing share of leisure mobility in trips and distances is to be expected. Secondly, the increasing availability of driving licenses and cars among seniors will go along with continuing individualisation in the modal choice (use of transport mode). Hence, the share of people with driving license among the 61-80 year old has increased from 37 to 56 per cent between 1991 and 1998. Particularly, the share of women in this category expanded from 21 to 37 per cent (men from 67 to 82 per cent, BMV 1998, BMVBW 2000). Presently, the gender adjustment accelerates.

The leisure mobility demand of elderly people will experience a particular increase as well as structural changes in the future. Several factors are responsible for this:

- the increasing age span from retiring and the longer lasting health that goes along with the longer life expectancy;
- the comparatively high level of affluence, f.i. because of the high portion of people with housing property, which is often already paid off;
- the increasing differentiation of wants and action patterns going along with the individualisation of lifestyles, which are only partly altered by age because of cohort specific elements (WAHL 2001).

At the present time, however, the spatial mobility of elderly people is regarded as limited in comparison to other age classes. The percentage of persons who leave their flat at a randomly selected day clearly declines by age. The activity spaces of mobile seniors are comparatively limited to their respective residential area, and the modal share of foot trips is much higher than among younger people (BRÖG/ERL/GLORIUS 1998).

There are multiple causes for this observation: the high portion of non-motorised households, the absence of job trips, strong ties to the residential district (high permanence of housing) and physical impairment (HOLZ-RAU/SCHEINER 2002). Thus, the share of heavily handicapped

persons strongly rises by age, from 1.6% among children under 14 years to 26.1% among seniors over 65 years (STATISTISCHES BUNDESAMT 2000).

Strong bonds to the neighbourhood are accompanied by distinct location requirements. They can be summarised by two keywords: micro-spatial accessibility and safety (HOLZ-RAU/SCHEINER 2002). Safety is constituted by social security (from crime as well as reliability and stability in the residential area) and physical road safety (safe design of footpaths, safe traffic organisation, traffic speed etc.).

Accessibility especially relates to daily retail supply, medical supply (doctors, pharmacies), church (particularly in the old Länder), green areas in sufficient quantity and quality and potential meeting-places (see MOLLENKOPF/FLASCHENTRÄGER/WERNER 1998). Meeting-places do not only mean leisure facilities such as cafés, clubs or meeting centres. At least equally important are opportunities for informal, casual meetings, such as benches, mail boxes, playgrounds, little squares, promenades etc. Micro-spatially distributed retail also permits social contact 'by the way' and encourages seniors to leave the house. Thus, there are not merely functional, but also social qualities in supply facilities, such as weekly markets.

However, the development of settlement and spatial population structures has to be characterised by tendencies that contradict these requirements. The micro-spatial accessibility of supply and leisure facilities continually decreases since the mass motorization of the 1960s began. The main factors for this are the ongoing concentration of retail and services in ever bigger units and, quite recently, the 'ageing of the periphery', i.e. the relative shift of the elderly population in favour of urban outskirts and suburban regions (one-family house areas, satellite towns), but also rural low-density regions mainly in East Germany. While in suburbia this is corresponding with the era of construction, the over-ageing of East German rural regions is due to demographically selective migration.

In conclusion, the increasing mobility chances of many elderly people on the one hand side are contrasted by decreasing accessibility for the less mobile. Regarding leisure mobility, a significant differentiation between elderly can be stated (a) for the chances of access to leisure options, and (b) for the leisure wants and forms of leisure mobility (highly mobile vs. immobile, residential area oriented persons vs. long distance drivers etc.).

2 Project FRAME – aims and methods

2.1 *Project participants and project aim*

On the background of the outlined considerations, the research project 'FRAME – leisure mobility of elderly people' investigates forms and conditions as well as individual decision structures underlying leisure mobility of elderly people. The project lasts from October 2000 to September 2003. It is founded by the German Federal Ministry of Education and Research. Project participants are

- the Centre of Evaluation and Methods, University of Bonn (project coordination),
- the Geographical Institute (Department of Urban and Regional Research), University of Bonn,
- the Department of Transport Planning, Faculty of Spatial Planning, University of Dortmund.

Featuring the term leisure *mobility* in the project name emphasises that the research interest not only lies in the realised forms of spatial behaviour. Another focus are the *chances* of elderly people to participate in transport and thus in public life. These chances are partly limited – despite the 'young elderly' and 'new elderly' (OPASCHOWSKI 1998) which are observed (or propagandised) in lifestyle and market research.

Strategically, the 'pillars' of sustainable transport planning (reduction of travel demand/distances, modal shift, optimisation of traffic flows) have to be complemented by 'mobility maintenance'. However, there has to be distinguished between highly mobile, mostly 'young elderly' and mobility restricted persons. For the highly mobile, the same standards of assessment as for the younger population have to be applied. Regarding the mobility restricted (ill, frail, infirm and/or lonely) persons, the maintenance or promotion of an appropriate mobility participation has to be in the fore.

The project aim is to generate basic knowledge with regard to the development of environmentally friendly, socially balanced and economically solid mobility offers for leisure activities of elderly people. An action-theoretical approach to mobility shall help to avoid false paths in planning, that arise from one-dimensional and often (from the perspective of planning) purposefully optimistic assumptions on the structural determination and controllability of transport behaviour. That means that in FRAME transport demand is regarded rather as embedded in collective and individual contexts and their subjective interpretation in relation to action goals than as an effect of determining causes (SCHEINER 2002).

2.2 Project structure

The project is roughly organised in three parts, which may be further differentiated. At the beginning a structure analysis was elaborated, where seniors' requirements on transport and leisure offers were investigated. The results were concretised on the local level of the study areas. As a consequence of the frequently age-*unspecific* supply and demand, the supply analysis was broadly conceived and not limited to (seemingly) age-typical offers.

The next step will be the investigation of transport and leisure demand of the elderly in three study areas on the basis of a standardised household survey (face-to-face interviews), which has recently been finished in June 2002. The results will be interpreted on the background of the spatial structures found

in the structure analysis.

The exemplary study areas are Bonn, a city of roughly 300.000 inhabitants and the former capital of Germany, parts of its suburban space on the left-Rhine side, and parts of the Eifel, a rural area west of Bonn. Thus, three spatial categories

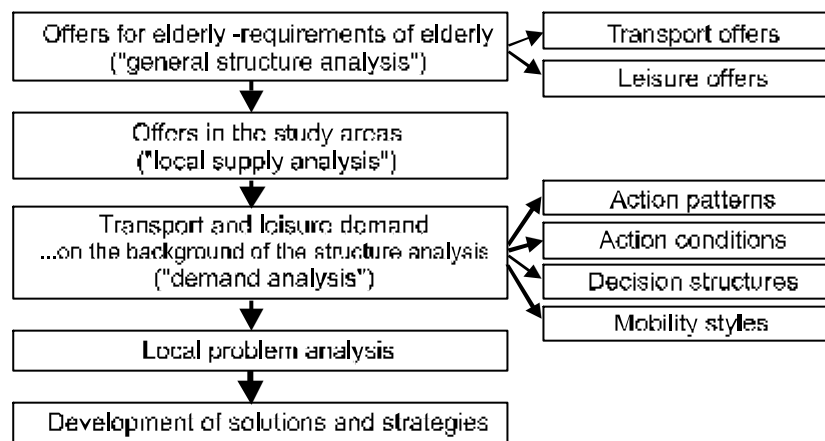


Figure 1: Project structure and main fields of analysis

Source: SCHEINER (2002)

may be distinguished (city, suburban space, rural space). The net sample size (n=4.500) and the inner heterogeneity of the three areas allow a deeper differentiation as well, f.i. between central places and disperse settlements in the rural area. A particular focus lies on the micro-spatial construction of types below the communal level, because within the communes considerable differences in the quality of public transport and access to leisure facilities occur. For instance, in one commune the distance to the next station ranges from 4 to 27 km between the districts, the travel speed to the next medium central place by public transport ranges from 17 to 95 km/h (including waiting time, without access time). In addition, the sample structure in the city of Bonn (survey in the whole city with spatial clusters) allows to calculate results for the total city as well as detailed results for selected quarters.

With respect to the results of the household survey, the third step will be – in favour of a stronger focus on applicable results – a local problem analysis. In cooperation with local

experts, suggestions for exemplary solutions of identified problems will be developed and evaluated. Methodically, interviews with experts as representatives of the 'supply side' play a central role in this step. Such experts are spatial planners, transport planners, transport providers, representatives of leisure facilities, social facilities, senior housing facilities and so forth. Preliminary results from these interviews are presented in section 4.

3 Leisure mobility of elderly people – preliminary results of the household survey

Following, preliminary results from the presently available data set of n=1.911 persons in the age of 60 and more years are presented. The sample includes 53.1% women and 46.9% men. In the interpretation, the different age structure in the three study areas has to be taken into consideration. In Bonn, there are significantly more old-aged persons (> 80 years: Bonn 44%, suburban area 24%, rural area 16%). However, between the three areas there are no noteworthy differences in the subjective ratings of individual health, the contentment with health and the individual ability to move.

The following chapters focus on selected aspects of the realised mobility (activities and modal choice) in spatial examination, and on mobility problems.

3.1 Activity participation

In the survey, numerous leisure activities were asked for with regard to participation, frequency, activity place, duration, modal choice and accompaniment. Out of 21 leisure activities (without visits of relatives and friends, without travelling), on average 9.84 activities were undertaken in the 12 months before the survey. 55% of all interviewees have undertaken 10 or more activities (KASPER/LUBECKI 2002).

Table 1 shows the share of interviewees who participated in out-of-home activities within the last 12 months. Apparently, no clear differences in all activities between the three study areas can be identified. If any, the study area of Bonn differs from the rest. In Bonn, fewer interviewees visit the church, possess a garden, visit public festivals, are members of clubs, undertake bicycle tours, go dancing and visit sport events.

On the other hand, visiting museums, art exhibitions and cultural events is much more common in Bonn than in the Eifel. The values of the suburban space lie in between. Moreover, in the Eifel travelling, active sport and educational courses (adult evening classes etc.) are less common.

Altogether, in the city of Bonn those activities are less common, that presume or bring about strong social bonds to the community (church, clubs, public festivals). Instead, art and culture are dominating. This corresponds with the top-class cultural facilities (f.i. 'museum mile' Bonn). Seniors in the rural study area have to accept a high expenditure of time and distance to visit them. However, a causal relation in terms of a supply-demand-impact may not be assumed. Rather, in Bonn (and its outskirts) highly educated population groups with distinctive cultural interests are much more concentrated than in the rural Eifel. Correspondingly, in the Eifel the demand for cultural and "self-realisation" activities (education, travelling) is lower.

The high share of car excursions in suburbia coincides – compared to the city of Bonn – with the higher car availability, compared to the rural area with the typical rural walks 'from the front door', while in Bonn and in suburbia strolls are frequently tied to a motorised journey to the starting point.

When the activities are summarised in categories, it becomes apparent that out-of-home social activities were undertaken by 98% of all interviewees within the last 12 months, sport activities by 90%, cultural or educational activities by 65%, and excursions or short journeys by 83% (KASPER/LUBECKI 2002).

All activities indicate a diminishing degree of participation with increasing age (KASPER/LUBECKI 2002). The most distinct age effects appear in 'clubs and honorary posts' and in 'education and culture'. The latter may be explained by the inevitably long journey to activity places. Age-related mobility constraints make participation at

	Bonn	Suburban space	Rural space	All
walk	85.0	85.5	86.1	85.5
graveyard visit	81.7	85.8	87.7	84.6
visit of relatives	80.6	88.7	86.3	84.2
visit of restaurant or pub	83.3	87.6	80.7	83.3
visit of friends / acquaintances	74.2	78.8	72.8	74.6
church visit	64.9	76.1	78.7	72.0
garden	53.9	88.8	83.9	71.6
travelling	74.1	76.8	64.8	71.5
visit of a café	65.9	60.8	61.6	63.3
shopping	62.8	62.9	58.8	61.4
car excursion	53.2	69.1	52.8	56.4
museum or art exhibition	61.4	54.5	32.1	49.8
member of club	40.3	54.5	58.1	49.4
two or more clubs	16.7	22.5	27.6	21.7
public festival	40.8	56.3	55.6	49.2
cultural event	54.5	50.9	38.4	48.1
active sport	44.4	49.4	37.3	43.0
hiking	28.6	35.4	36.7	32.8
senior meetings	31.0	35.2	30.7	31.8
bicycle tour	18.5	32.1	27.7	24.5
organised excursion	23.7	23.7	19.8	22.4
Honorary post	18.7	21.1	21.8	20.3
two or more honorary posts	4.6	6.1	5.1	5.1
Educational course	17.1	16.2	10.8	14.8
Dancing	11.3	16.6	16.9	14.3
sport events	8.2	19.8	17.7	13.9
number of interviewees	847	394	659	1898

Table 1: activity participation in the past 12 months (in per cent)

Source: FRAME household survey

these offers more difficult. Honorary posts and club membership, however, are usually located close to the site of residence. Missing age-specific offers or simply the withdrawal of the elder ones from civic engagement might be responsible for the decline of the degree of participation.

3.2 Modal choice

For the most important transport modes (without 'on foot'), the frequency of usage was asked for a defined period of time. The results are shown in table 2.

According to this, the private car is the most frequent transport mode in all study areas. The use of transport modes differs more significantly between the study areas than the participation in activities. While in Bonn the frequency of use of all public transport means (taxi, regular bus, tram, underground, local train) is considerably higher than in the suburban and rural space, in the latter areas the private car is disproportionately often used. The bicycle is used quite regularly in Bonn as well as in the suburban area.

The frequency of use of the own feet was not inquired. However, the high portion of foot trips in Bonn can be shown by constructing 'regular users' for all transport modes (table 3). In doing so, for every means of transport a threshold value has to be defined, from which on a person counts as a 'regular user'. Because of the necessity of different thresholds (f.i. car vs. touring bus), the transport modes must not be

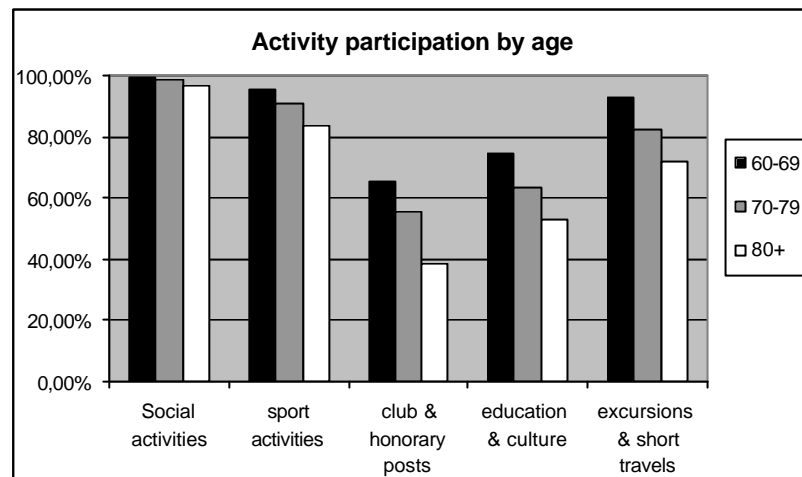


Figure 1: Activity participation by age

Source: KASPER/LUBECKI (2002) (FRAME household survey)

	Bonn	Suburban space	Rural space	All
car (driver)	8.9	15.1	13.0	11.6
car (passenger)	4.2	6.0	4.7	4.7
bicycle	3.1	2.9	1.2	2.4
regular bus	5.1	1.4	0.2	2.6
tram, underground	3.5	0.7	0.2	1.7
train	0.4	0.6	0.4	0.4
touring bus	0.1	0.1	0.1	0.1
taxi	0.6	0.3	0.2	0.4

Table 2: Frequency of use for different transport modes within four weeks (without 'on foot')

Number of days with usage of the respective transport modes
In the survey, it was referred to different periods of time depending on the transport mode (f.i. touring bus and taxi: last six months; car: last two weeks). In the table, all results were calculated for four weeks.

Source: FRAME household survey

compared, whereas the study areas may well be compared.

As the results indicate, in Bonn there are much more interviewees than in the other study areas who regard their own feet as their most frequent transport mode. For public transport a remarkable portion of 20.6% of the senior citizens use it regularly (i.e. at least seven times in two weeks). Even the taxi has a high share

of regular users among the Bonn seniors.

The train and the touring bus reach about the same share of regular users in all study

areas. The private car is least used in Bonn and most frequently in suburbia.

Remarkably, in suburbia virtually every means of transport (except for the touring bus) has a higher user potential than in the rural area. It will have to be investigated, whether in the Eifel a higher portion of immobile or less mobile persons is living.

	Bonn	Suburban space	Rural space	All
on foot	61.0	46.3	38.6	50.2
car	36.3	65.0	53.5	48.2
public transport	20.6	3.4	0.8	10.0
bicycle	9.6	9.3	3.1	7.3
train	31.1	30.9	28.8	30.2
touring bus	15.4	16.2	18.8	16.8
taxi	31.0	17.0	10.5	21.0

Table 3: Regular users of different transport modes (in per cent)

Definition of "regular users":

– On foot: "My feet are my most frequent means of transport"
 – Bicycle, car, public transport: used at least 7 times in the last two weeks

– Train: used at least once in the last three months

– Taxi: used at least 3 times in the last six months

Source: FRAME household survey

3.3 *Modal choice for specific activities*

When the modal choice is distinguished by activities, conspicuous differences by type and location of activities become apparent. Figure 2 shows typical modal split distributions of selected leisure activities, which occur in similar form when we regard other activities. In general, the dominance of the private car and the own feet is apparent. Only partially public transport plays a significant role, mainly in the city of Bonn and for activities which are undertaken in Bonn (museum visits).

Senior meetings are typically visited within the residential area on foot. This applies to the city as well as for the suburban and the rural area. Other typical 'on foot activities' are hiking, walking, church visits and visits of public festivals (f.i. street festivals, neighbourhood festivals).

Comparatively often, friends and acquaintances are visited on foot, even though the car plays a major role as well. Similar modal split distributions occur in honorary posts, graveyard visits, garden and club activities. With certain restrictions (more car trips) this can be stated for visits of restaurants and pubs, too. In spatial perspective we can see that friends in foot-distance are

especially prevalent in the rural area, and least prevalent in the city. This is compensated by the use of public transport in the city.

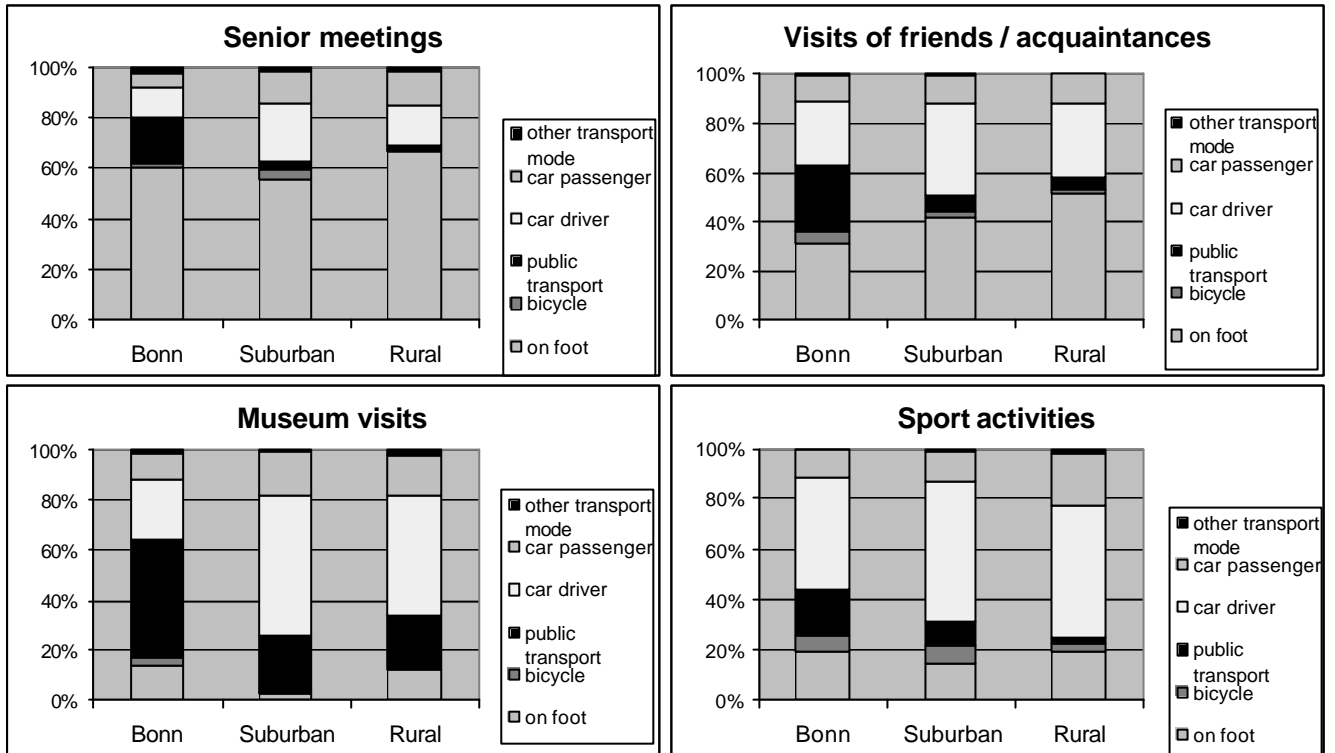


Figure 2: Modal split of selected leisure activities

Source: FRAME household survey

Museum visits are typical motorised trips. Because of the central location of the Bonn museums, public transport attains a comparatively high portion, particularly within the city of Bonn. In the suburban and rural area the car is dominating, but public transport reaches considerable shares as well. Visits of cultural events, travels, café visits and shopping have similar modal splits – typical 'urban' activities, with the exception of travelling.

Particularly often, trips to sport activities are undertaken by car. Only in the city, public transport reaches a share which is worth mentioning. Further typical car-oriented activities are camping, to a lower degree also educational events (f.i. evening classes for adults).

3.4 Rating transport modes

The dominance of the car also becomes evident when transport modes are subjectively rated. 65% of the interviewees judge the car the most comfortable means of transport (figure 3). 7% decide in favour of public transport, 24% in favour of the train (multiple responses possible).

However, the least favourable judged transport modes do not seem to be totally uncomfortable. Persons who frequently use a specific means of transport, consider it much more often as the most comfortable one, than others.

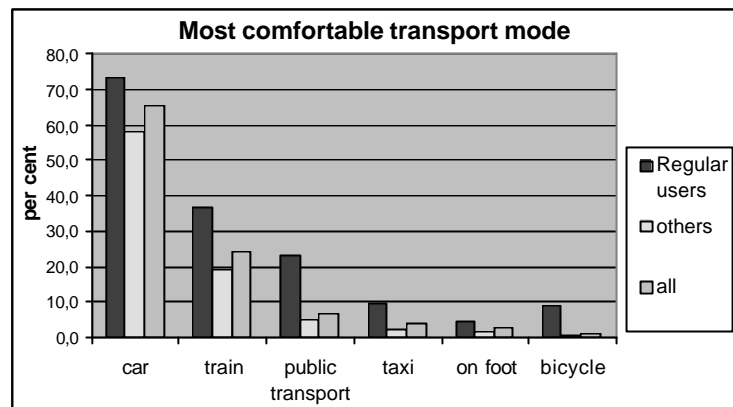


Figure 3: Most comfortable transport mode and realised modal choice (in per cent)

Definition of "regular users" see Table 3. Multiple responses possible.
Source: FRAME household survey

Considering these results, one could object that only 4.2% of the regular pedestrians judge their own feet as the most com-

fortable mode of movement either. This interpretation, though, ignores that even the taxi – certainly a very comfortable means of transport – is only quoted by just under 4% of the interviewees (frequent taxi users: 9.8%, others 2.3%). This rather supports the thesis of a selective perception of which transport modes come into consideration at all.

3.5 Unfulfilled activity wishes

The research interest in FRAME lies not only in the realised travel behaviour, but also in the chances of senior citizens to participate in mobility, and thus in societal life – just as the notion 'mobility' can be understood as *movability*, i.e. as a potential or chance. In this sense, a measure for mobility could be, whether a person is able to realise his or her activity wishes or if he or she has any unfulfilled activity wishes.

Table 5 shows evidently that the participation chances of elderly people are partly restricted despite of increasing motorization and longer lasting health.

Every second interviewee (51.5%) has at least one unfulfilled activity wish. Most frequently, cultural activities (visiting theatre, concert, opera, museum,

No unfulfilled activity wishes	48.5
Unfulfilled activity wishes	51.5
... most important of it:	
Culture (theatre, concert, opera, museum, exhibitions)	12.9
Holidays	8.2
Walking, hiking, bicycle tour	7.0
Sport activities	5.8
Dancing, festivals, courses	3.3
Excursions	3.0
Restaurant, pub, café	1.5
Visiting sport events	1.0
Meeting relatives, friends, acquaintances	1.5
Shopping	1.4
Other	5.9

Table 5: Unfulfilled activity wishes (in per cent)

Source: FRAME household survey

exhibition) are quoted, followed by holidays and 'intrinsic trips', where the trip itself is the activity (walking, hiking, bicycle tour).

3.6 *Mobility problems – how to explain unfulfilled activity wishes?*

A small number of out-of-home activities or minor transport participation does not necessarily mean little mobility in the sense of potential. Though, unfulfilled activity wishes indicate restricted ability to move. What are the reasons for unfulfilled activity wishes?

We have to distinguish between reasons which are quoted by the interviewees themselves, and causes which can be deduced by researchers from presumed frame conditions. For instance, gerontological mobility researchers frequently claim that the absence of a private car is responsible for inferior mobility and poor life quality (ROTHE 1993), that giving up driving is even a "risk factor for a depressive development" (BMFSFJ 2001:212).

For health reasons	45.0
Don't want to do this alone; there is no fun in doing this alone	44.5
Public transport (unfavourable location of stations, generally insufficient public transport connection, equipment of cars, entrance/exit, timetables/ ticket machines are intricate, exposure to molestation or crime)	42.1
Leisure supply (no leisure facilities in the vicinity, unfavourable daytime of events, equipment of facilities)	37.3
Lack of time (vocational obligations, care for other persons, house or garden work, care for animals)	33.6
Don't like to go out in the dark	32.0
Weather conditions	31.7
Partner (partner's health, partner has got no time, has different interests, is against it)	31.1
Personal condition (difficulties of organisation, feel too old, don't think I can do it any more)	24.6
Don't have the possibility to do it by car	18.1
... among these: without car in household	10.3
Social aspects of leisure supply (too many people, only young people, only old people visit these events)	17.8
Financial situation	15.5
Parking places at the destination are insufficient	11.2
Other important reasons	19.1

Table 6: Interviewees' reasons for unfulfilled activity wishes (in per cent)

Source: FRAME household survey

The most frequent objections quoted by the interviewees themselves are health problems, being alone and problems with public transport (table 6). As specific deficits of public transport, intricacy of timetables and ticket machines and generally insufficient public transport connections are most frequently quoted, followed by the unfavourable location of stations. The latter strongly correlates with generally insufficient connections. The frequent mention of

problems with public transport is a clear reference to the demand for improvement from the elderly's point of view. It is striking, too, that public transport problems are quoted in Bonn just as often as in the other study areas. Public transport seems to be least problematic in the rural area (!) (Bonn: 42%, suburbia: 51%, rural space: 37%).

Moreover, in Bonn comparatively many people feel unsure in the dark, feel anonymous ("in my neighbourhood nobody cares for the other") or complain about a lack of contact to neighbours. 27% of the Bonn interviewees claim to feel totally or rather unsure in the dark within their residential area (suburbia: 12%, rural space: 11%). However, this does not correlate with quotes of unfulfilled activity wishes.

Beyond the obstacles stated by the interviewees themselves, connections between unfulfilled wishes and assumed constraining structures can be examined.

In doing so, it becomes evident that neither car availability nor living alone vs. in a partnership have a big impact on the existence of unfulfilled activity wishes (table 7). Persons *with* license and car in the house-

hold quote unfulfilled wishes even slightly more frequently than others. According to this, it is not the car that guarantees satisfaction of out-of-home activity wishes. Rather, car owners among seniors are the more vigorous and hale ones, making heavy demands on life, with multiple activity wishes occasionally staying unsatisfied. This interpretation is supported by the fact that interviewees living in a partnership – who are on average much younger than solitary persons and who probably still 'expect more from life' – claim unfulfilled activity wishes slightly more frequently.

Moreover, age has a much stronger impact on the existence of unfulfilled wishes. The results show, contrarily to the expectations according to the gerontological mobility research (table 7): Not the aged ones (less mobile) are most frequently quoting unfulfilled wishes, but the 'young

	Unfulfilled activity wish?	
	yes	no
car availability		
driving license and car in household	53.1	46.9
no driving license, but car in household	48.9	51.1
no car in household	49.1	50.9
Partnership		
Yes	51.7	48.3
No	49.6	50.4
age category		
60 to 64	57.8	42.2
65 to 69	54.9	45.1
70 to 74	47.1	52.9
75 to 79	47.8	52.2
80 to 89	48.1	51.9
90+	42.0	58.0
judgement of own health		
bad	65.0	35.0
more bad than good	60.6	39.4
more good than bad	50.5	49.5
good	46.9	53.1

Table 7: Unfulfilled activity wishes by car availability, age and judgement of own health (in per cent)

Source: FRAME household survey

seniors'. In contrast to that, a bad health condition, has – as expected – a heavily constraining character: The worse people judge their own health, the more often they have unfulfilled wishes. This can be confirmed by analysing unfulfilled wishes by health judgement within different age categories.

A spatial comparison is difficult because of the uneven age structure in the three study areas. A spatial comparison *within* age categories proves that at least persons up to 80 years have distinctly less frequently unfulfilled wishes in Bonn than in the suburban and rural area. This result seems to indicate the easier access to leisure facilities in the city, which might lead to better possibilities to satisfy activity wishes. Though in the upper age categories, the uneven relation does not occur. At this point, extended analyses on the basis of the total sample remain to be done.

What is more, because of the expected high correlation between the mentioned and other assumed factors, further results will be reserved to extended (particularly multivariate) analyses.

4 Leisure offers, potentials and problems – preliminary results of expert interviews

Beside the household survey, there are different groups of responsible individuals integrated into the project by further investigations. The valuations, points of views and activities of people who influence leisure supply or leisure mobility by their function, and who presumably know about decision criteria of elderly persons are surveyed with various methods.

A survey among 30 experts of public transport providers and planning institutions was undertaken by a short standardised questionnaire. The relevance of seniors' needs considering public transport as well as realised or intended senior friendly offers were inquired (KASPER/SCHNEIDER 2002).

Furthermore, a qualitative investigation on leisure offers for the elderly is currently conducted in the study areas by means of telephone-based semi-structured interviews. By May 2002, 39 interviews were made. The selection criterion was the experts' expected ability to judge the potentials and problems of leisure offers for elderly people. Such offers include:

- spatial offers (f.i. meeting-places, cafés, excursion destinations...);
- activity specific offers (f.i. clubs, sport facilities...);
- time specific offers (f.i. senior day...);
- financial offers (f.i. senior ticket...);

- information offers (f.i. help for self-help, education, advice...);
- organisational offers (f.i. care, transfer...).

Interview topics include leisure offers, mobility wishes and mobility problems to assess the seniors' demand and talk about the possibilities of planning and improvement. To come to know the experts' positions on these questions demands alternative epistemological approaches. Qualitative methods were chosen to evaluate the subjective points of view, reasons and values in the context of social action. By doing so, we tried to investigate the decision structures by which conditions and individual or institutional aims are transformed into action.

The interview partners can be assigned to different sectors:

- senior associations (f.i. 'grey panthers')
- housing institutions (old people's homes, housing corporations...)
- territorial authorities (municipalities, rural districts...)
 - ... and their special representatives (senior and mobility representatives, police...)
- transport providers and facilities (bus firms, urban transport services, mobility office, car-sharing...)
- public transport authorities (districts, city administrations, local administration unions)
- car and bicycle industry
- public and private leisure facilities and leisure providers, among them:
 - ... age specific ones (senior academies, senior meeting-places...)
 - ... age unspecific ones (sport clubs, city park organisations, hiking clubs, travel agencies, tourist offices, restaurants, pubs, cinema entrepreneurs...)
- facilities, which are not primarily leisure oriented (parishes, barter groups, advisory bureaus, block clubs or community clubs...).

Subsequently, interview results from selected sectors are presented.

4.1 Actors – offers – mobility problems

▪ **Transport providers and transport authorities**

In a survey among transport providers and transport authorities, 30 persons were participating. The results indicate that the specific needs of elderly people are frequently taken into consider-

ation. This is not only the result of a self-valuation of the interviewees, but also proven by realised measures and the valuation of acceptance and constraints.

Realised or at least scheduled constructional-technical, organisational and cooperative measures are in particular senior tickets, low level vehicles and barrier-free design. Less frequently, the following measures are quoted: participation of senior associations in planning measures, evaluation and – if necessary – improvement of the clear and legible design of timetables and ticket machines, safety concepts, improvement of access to senior housing facilities and senior-relevant leisure destinations, and 'tempting offers' for seniors (f.i. exchange senior ticket for driving license).

The acceptance of the realised measures is only partly judged favourably. Low level vehicles, barrier-free construction, senior tickets, safety concepts, and the new design of timetables and ticket machines are almost unanimously judged positively. The acceptance of the other measures is rated more negatively. The reasons for the lack of acceptance are different with respect to the kind of measure. They may be summarised as follows:

- Lack of public relations, communication problems between provider and customer,
- cooperation and communication problems within the planning system,
- lack of demand, in particular with regard to improvements of access to new areas and to 'tempting offers',
- missing impact analysis.

When these statements are correlated with the general constraints which inhibit the realisation of a more senior friendly public transport (missing demand, financial problems, lack of problem awareness), we can deduce preliminary recommendations: cooperation and communication strategies are necessary steps to connect providers' solutions with customers' interests. Furthermore it becomes evident that the problems go beyond transport problems in a narrower sense. Hence, classical transport system immanent solutions alone can not be successful.

- **Age unspecific leisure facilities**

The staff of age unspecific leisure facilities seemed only little interested with respect to leisure activities and mobility of elderly people – even if the share of senior visitors in the facility was above average (f.i. gulf club, thermal bath, shipping, tourist information). At the most, in singular cases the interviewees took the needs of elderly persons explicitly into consideration. Valuations of mobility problems or possibilities to improve the mobility of seniors were hardly existing. One reason for this result is that the relevance of mobility problems is not discernible

for the interviewees. For the large number of car-mobile seniors, there are sufficient parking lots – therefore, accessibility seems to be guaranteed. In the bus travel sector, the interviewees are aware of the needs and wants as well as of elderly's physical impairment. They do not, though, turn their attention to the mobilisation of potentially new customers beyond the already existing access possibilities. In a few singular cases only, the experts are interested in technical or infrastructure improvements.

▪ **Senior leisure facilities**

In contrast to the age unspecific leisure facilities, the staff of leisure facilities for elderly people has an intricate insight of the said subjects. This becomes evident in manifold valuations.

Leisure facilities for elderly people are offers for everyday leisure activities. They are supported by town administrations, the church or charitable organisations. The provision of room and financing of personnel allows the organisation and realisation of events. The meeting-place is at the same time destination and starting point for further activities. Programmes include for example gregarious coffee and game afternoons, dance and gymnastics courses, lectures and education courses. Several facilities complain about the decreasing numbers of visitors. The reasons they state are the changing requirements and leisure interests, the longer lasting health and the changed self-perception of seniors.

"In former times, people worked themselves to death, so during retirement the most important thing was indeed resting. Nowadays people are in 'unrest'. They are more mobile, active, healthy, they have hobbies and other interests. They like travelling, dancing and they want to plan their leisure, which was not possible during employment. They want to make up for the things, which had been impossible before" (E17).

As a reaction to the shortage of 'young people', restructuring the program is seen as the main strategy (particularly computer courses), but this is generally judged as not realisable for financial reasons. Because it is doubtful whether these institutions are able to stay competitive among the 'mobile seniors' – even with altered programs – it seems necessary to offer decentralised leisure offers to the less mobile, highly aged seniors.

Beside the in-door offers, most of the facilities regularly (about every four weeks) organise bus trips with various themes and destinations. Often they are sightseeing trips, shopping trips to nearby cities or to the Netherlands, trips connected to ship tours, Santa Claus or Christmas trips etc. For that, private bus enterprises are involved. Various groups are participating in such trips: seniors with or without a car, singles and couples. Moreover, facilities in Bonn make ambitious offers, f.i. thematic or 'motto hiking' like 'hiking and culture' for hale elderly. In these hikes, a

maximum of ten persons are gleaming the surroundings of Bonn, using a group ticket for public transport.

In the valuation of leisure mobility of elderly people in the context of senior leisure facilities, it has to be distinguished between the participation in organised excursions on the one hand and accessibility of the facility on the other. Regarding the excursions, there is experience on the kind of journeys which have proven successful: The single distances should not be greater than 100 kilometres, enough breaks have to be scheduled, and outside the bus, short distances are necessary. On these excursions, mobility itself becomes a leisure activity. Bus excursions are an appropriate travel possibility for elderly persons with or without a car. The organiser's scheduling and preparation relieves from efforts like choice of a destination, driving, orientation, making decisions, finding the destination, scheduling, and – as the case may be – being on the road alone. The journeys have the advantages of idle and gregarious travelling in connection with the certainty not to participate in a sales journey.

However, health damages can not fully be compensated. Secondly, the journeys are linked to the leisure facilities. This means a broadening of the range of offers, but it does not vitally broaden the facilities' clientele. Those seniors who have difficulties in reaching the leisure facility, hardly reach the offered excursions.

With respect to everyday leisure mobility, there are distinct differences in accessibility, depending on the facility's catchment areas. In the suburban and rural area – with below-average public transport -, a central location of facilities is important to ensure accessibility within walking distance. Otherwise, individual coordination activities are necessary to participate in leisure offers. Few facilities in the suburban and rural space assure accessibility by themselves. For example, handicapped pedestrians among the elderly are picked up at home with a donated van driven by volunteers (generally retired men).

The usually better public transport in urban spaces not only promotes accessibility, but also allows elderly people to choose between various facilities. Thus, female seniors from neighbourhoods on the right side of the Rhine come to left-Rhine senior leisure facilities and accept travel times of more than 30 minutes. The female expert in this example explains this with regard to the good offers in this facility, but also by the good public transport connections.

▪ **Senior housing facilities**

Interviews with experts in senior housing facilities (old people's homes, hostels, senior residences) were particularly instructive with respect to the aim 'promotion of elderly people's leisure mobility'. Though there are not many clues from these interviews regarding the younger,

highly mobile elderly, but they distinctly indicate mobility problems arising from age specific handicaps.

There are increasingly more people with age specific mobility handicaps living in such facilities. This observation was confirmed by several interviewees: In the past ten years, the portion of hale seniors had diminished. People move to such a facility not before it becomes impossible to live at home, and there is no alternative any more. This trend is ascribed to the financed care at home which was introduced by the health reform.

The senior housing facilities are supported by churchly, charitable or private institutions. Predominantly, the age of the inhabitants starts at 60, but some facilities offer housing opportunities to younger, physically or psychically handicapped persons as well.

Among the offers there is usually medical care according to requirements, food preparation, help in everyday difficulties, leisure offers and organisation of excursions by so-called social-cultural or therapeutic services. The leisure offers are mostly arranged by a plan, but have various topics. This is explained by the inhabitants' wants: people expect a certain routine, otherwise they are overstrained.

The facilities' size ranges between 20 and 130 inhabitants. Mostly, about 50% to 80%, in singular cases only 10% of them are able to leave the house without accompaniment. The activity radius varies significantly: the seniors' mobility ranges from leaving the house for a stroll to the autonomous short journey alone or in small groups. Mobility constraints are not only due to physical or psychical impairment. Following, the most important problem domains are discussed.

4.2 Problem domains of mobility

Rating mobility problems, the experts specify different levels on which the needs of elderly have to be taken into account.

- **Spatial and temporal accessibility of destinations**

As expected, public transport connections are varying strongly between and within the three study areas. In areas with insufficient connections, the experts judge this as a central, but rarely as an instantaneously solvable problem. In singular cases, improvements like the installation of a bus stop in front of the hostel or residence could be achieved. Alternative solutions can only be reached by the experts by offering excursions or similar offers with hired vehicles.

This, though, is no adequate solution for everyday leisure mobility. Mobility problems are judged unessential as long as the town centre lies within walking distance (f.i. Bonn, Meckenheim, Heimerzheim). The micro-spatial location is appraised as a stimulation for the elderly to go out and have a daily aim. If topography and spatial structure allow the use of infrastructure for (slightly) physically impaired (f.i. incontinence), there have to be at least opportunities for repose. Securing the mobility of elderly always requires spaces for immobility: places to rest and pause. Beyond the removal of obvious barriers (particularly steps), the experts point at less obvious barriers, f.i. lack of seats, missing or inaccessible lavatories, which restrict mobility likewise.

Hence, the spatial integration of senior housing facilities into the settlement context with a minimum supply of infrastructure seems well-grounded. Though, a causal relation can not be deduced from this. Sufficient spatial integration does not necessarily lead to contentment and use of offers as well as insufficient integration does not necessarily lead to immobility. An interesting example for this is a facility which started in the late twenties as a “home for difficult girls” in Cologne-Lindenthal. A decade ago, this home was relocating to the rural community of Schleiden in the Eifel, where bigger distances to the local centre and the topographical situation are a severe problem. Because meanwhile, many of the inhabitants can only go out with best effort, they are still mourning for the local centre of Cologne-Lindenthal. The women miss the good integration and the good supply situation, even if they could not make use of everything. The female manager says, however, the relocation has not restricted their 'urge for outside':

"They want to be among other people, no mountain can bar them from doing that. They have their very own desire to socialise, they even take the mountain" (E27).

The spatial conditions are not the only determining aspect for the leisure mobility of seniors. The impact of routines and habits for the maintenance of life quality becomes evident with respect to activities as well as to modal choice. The expansion or limitation of offers alone does not inevitably lead to changes in behaviour – though it supports possible potentials.

▪ **Social security (protection from objective and subjective danger)**

Beyond doubt, objective and subjective peril are handicaps in the use of public spaces, such as green areas or train stations. The experts share the opinion that subjective security plays a major role in the self-dependent use of public space and public transport. Fear affects the use of public transport and time-use (going out in the dark). Transport providers react to the claim for more security by installing SOS-telephones, cameras and security guards.

Some interviewees refer to the – in their opinion – good 'security training' programme, which has been carried out for more than a year by the department for prevention of the Bonn police. The central aim of this program is the promotion of security. The background is the insight that fear causes mobility problems:

"Problems often arise from fear, so that the seniors don't dare to go outside any more" (E14).

In the security training, the department for prevention has instructed twenty male and female seniors in a four day course in autumn 2001 on topics like fear, communication, help, trip planning and prevention. The predominantly young seniors are now working as multipliers, undertake security talks in senior facilities and animate other seniors to live a more active life. The responses are altogether positive: Freedom to move has improved, knowledge about police activities acts as a sedation, and the improved judgement of one's own fear is rated positively. For coming autumn, another training is announced. The demand is already high.

The acceptance of one's own fears and feelings of uncertainty, as well as the transfer of facts and solution strategies by a skilful elderly person promotes the competence to cope with unfamiliar or unpleasant situations in public spaces.

▪ **Social serviceability**

The complexity of regulations and operating procedures in public transport seems to become ever more mobility restricting with increasing age, but also with lack of routine and experience. Following the interviewees, the intelligible, easy handling of offers is still an exception. Frequently the various increasing age-specific restrictions of movability, apprehension and orientation are not considered adequately. An important compensation for this lack are contact persons who give information or advice. The experts claim the fact that there are not enough such persons. The missing staff in regional trains is regarded as a specific problem. Because of this, there is no possibility to make sure that one is entering the right train. This problem affects railway in particular, because in busses, the drivers can give information.

"We usually advise our inhabitants to ask their way. Though the problem is, that in regional trains between Cologne and Trier there is no train staff any more. There is no chance to ask. Just two weeks ago there was someone again travelling to Koblenz instead of Cologne" (E23).

The facilities react on difficult conditions by organising their own excursions and journeys. However, these offers can not compensate for limited chances for self-dependent everyday mobility. The experts highly value the meaning of neighbourhood, accompaniment and contact persons. They count as a set-off for physical or spatial limitations.

Some facilities therefore promote contact to relatives, friends and acquaintances of their inhabitants, as well as access of honorary volunteers from nearby communities or villages. For instance, in one facility there are so-called 'green ladies' operating. They are honorary women from the housing facility's neighbourhood, who 'adopt' single elderly persons to organise and spend their leisure time together with him or her: talk with or read to him or her, or make regional car excursions.

Another possibility to promote mobility is directed to managers of bus enterprises. Because of the lack of personnel, housing facilities organise excursions with hired busses not very frequently. En-route care personnel is necessary, while at home everyday business has to be run. Two experts suggested that bus firms should rent out 'assisted busses' with two nurses or caregivers.

Altogether it became evident that particularly in the sector of social serviceability there are possibilities to improve public transport.

- **Physical-technical safety and serviceability**

Many experts highly praise the improvements of standards in trains, trams and busses as well as construction measures at stations and bus stops. With lifts, ramps, low level busses, spaces for wheel chairs in busses and other technical modifications, the use of public transport has been greatly improved for seniors. Most of the interviewees' suggestions rather referred to improvements in service or cycle time than to technical skills.

Beyond this, the experts judge the seniors' complaints differently. Partly they feel the same shortcomings and support the claim for improvement, partly they regard the criticised points as marginal and don't see any call for action. Nonetheless, the question is, how seniors can address concrete suggestions for improvement. Hence, existing coordination and cooperation structures have to be scrutinised chiefly.

5 Conclusion and prospect

Leisure mobility of elderly persons is characterised by manifold aspects. Mobility chances or limitations have significant impact on leisure activities and constraints. In age-unspecific leisure facilities, there is little awareness for this. Transport providers and transport authorities partly register little acceptance of new offers and stagnating demand in spite of their increased consideration of the requirements of elderly people and in spite of improvements in technical equipment. At the same time, elderly people often regard public transport as a reason for abandoning leisure wishes. By far most of the motorised leisure trips are undertaken by car. The

question suggests itself, what this discrepancy means for transport planning in urban, suburban and rural spaces.

On the other hand, the increasing car use of the more sophisticated 'active seniors' for leisure activities provides an extended mobility. Besides the ecological effects, this is becoming a problem when it leads to thinning out the neighbourhood leisure infrastructure. This process causes mobility limitations as soon as the loss of the fitness to drive and the complementary orientation at the residential area sets in. At the same time, it gets more difficult to reach the less mobile elderly under these conditions, because besides the accessibility of leisure destinations and urban design, the 'social design' of paths and trips (accompaniment, spaces of fear etc.) proves to be highly important.

At a glance on preliminary research results, the hypothesis is not confirmed that the leisure activities of elderly people in different areas are distinctly unequal. The majority of leisure activities can be realised independently from settlement structures. Observed differences are partly due to different social-economic structures. Age specific mobility limitations have a distinctly stronger impact than spatial limitations.

Roughly half of the interviewees claim unsatisfied activity wishes. Most frequently quoted are cultural activities. Further analyses will contribute to an improved understanding of the leisure mobility of elderly people. In particular, demand structures, degree, destinations and mobility restrictions will be investigated further. Moreover, the development of sustainable – environmentally friendly, socially balanced and economically solid – mobility offers will be developed and adjusted to the respective spatial and social conditions. The concepts, though, are also determined by the spatial and social images in planning institutions. What kind of urban and rural linkages do we imagine? And what are the strategies to pursue this image?

Continuing the project FRAME, these questions will mark the starting point in the development of suggestions for local or regional solutions. In a workshop with representatives of organisations, institutions and the population, the developed suggestions will be discussed and evaluated with respect to fitness for practice.

6 References

- BMFSFJ (Bundesministerium für Familie, Senioren, Frauen und Jugend, 2001): Dritter Bericht zur Lage der älteren Generation in der Bundesrepublik Deutschland: Alter und Gesellschaft. Berlin.
- BMV (Bundesministerium für Verkehr, ed., 1998): Verkehr in Zahlen 1998. Hamburg.

- BMVBW (Bundesministerium für Verkehr, Bau- und Wohnungswesen, ed., 2000): Verkehr in Zahlen 2000. Hamburg.
- BRÖG, WERNER / ERL, ERHARD / GLORIUS, BIRGIT (1998): Germany. In: EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (ed.): Transport and Ageing of the Population. Report of the 112th Round Table on Transport Economics. Paris. pp. 45-141.
- HOLZ-RAU, CHRISTIAN / SCHEINER, JOACHIM (2002): Seniorenfreundliche Siedlungsstrukturen. In: SCHLAG, BERNHARD (ed.): Mobilität und gesellschaftliche Partizipation im Alter (Tagungsband "Mobilität und gesellschaftliche Partizipation im Alter", 10.-11.7.2001, Dresden, Dreikönigskirche). Stuttgart (in preparation).
- KASPER, BIRGIT / LUBECKI, ULRIKE (2002): Freizeitmobilität älterer Menschen. In: BECKMANN, KLAUS J. (ed.): AMUS 2002 – Tagungsband zum 3. Aachener Kolloquium "Mobilität und Stadt". Aachen (in preparation).
- KASPER, BIRGIT / SCHEINER, JOACHIM (2002): Nahverkehrsplanung für ältere Menschen. Technical Note in the project FRAME (unpublished). Dortmund.
- MOLLENKOPF, HEIDRUN / FLASCHENTRÄGER, PIA / WERNER, STEFFEN (1998): Wohnen und Mobilität Älterer. In: DEUTSCHES ZENTRUM FÜR ALTERSFRAGEN (ed.): Regionales Altern und Mobilitätsprozesse Älterer. Expertenband 2 zum Zweiten Altenbericht der Bundesregierung. Frankfurt/Main. pp. 264-350.
- MÜLLER, STEFAN (1997): Die jungen Alten: Zielgruppe, Vision oder Fiktion? In: Planung und Analyse 6, pp. 20-26.
- OPASCHOWSKI, HORST W. (1998): Was ist neu an den "Neuen Alten"? Die ältere Generation: Gestern. Heute. Morgen. In: Marketing Journal 3, pp. 164-166.
- ROTHE, J. P. (1993): Nicht mehr Auto zu fahren – ein kritisches Lebensereignis. In: Zeitschrift für Verkehrssicherheit 39, pp. 12-16.
- SCHEINER, JOACHIM (2002): Freizeitmobilität älterer Menschen – Bedingungen, Formen und Entscheidungsstrukturen. In: GATHER, MATTHIAS / KAGERMEIER, ANDREAS (ed.): Freizeitverkehr: Hintergründe, Probleme, Perspektiven. Studien zur Mobilitäts- und Verkehrsforschung 1. Mannheim. pp. 63-86.
- SCHULZ, ERIKA (1999): Zur langfristigen Bevölkerungsentwicklung in Deutschland - Modellrechnungen bis 2050. In: DIW-Wochenbericht 42/99. <http://www.diw.de/deutsch/publikationen/wochenberichte/>
- STATISTISCHES BUNDESAMT (2000): Statistik der Schwerbehinderten 1999. Wiesbaden.
- WAHL, ANKE (2001): Lebensstile im Kontext von Generationen-, Lebenslauf- und Zeitgeisteinflüssen. Dissertation TU Berlin, Fachbereich 7 Umwelt und Gesellschaft. Berlin.