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MOBILITY AND THE ELDERLY : SUCCESSFUL AGEING IN A SUSTAINABLE TRANSPORT SYSTEM

MESsAGE

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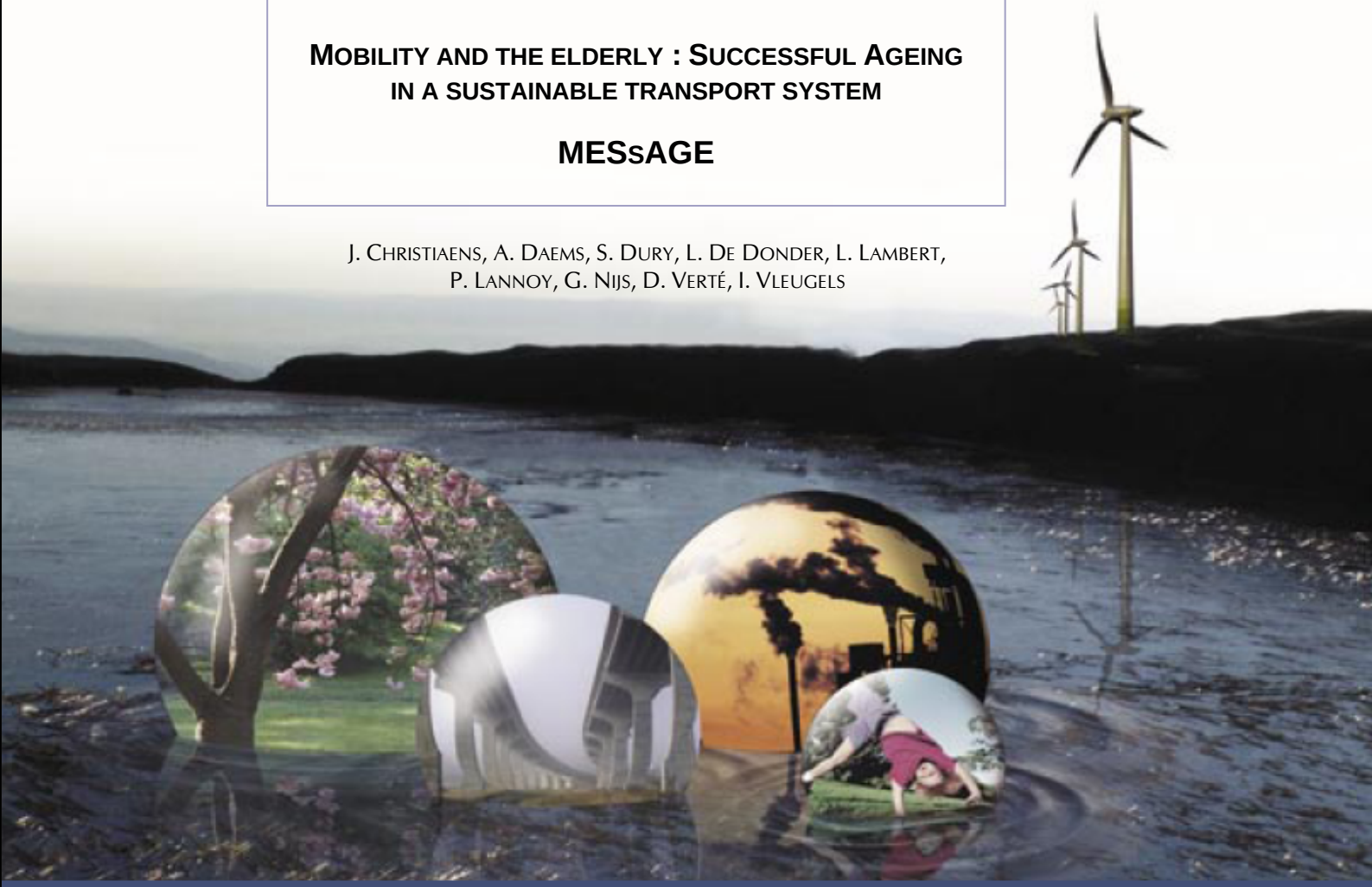

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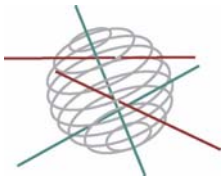

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FINAL REPORT

MOBILITY AND THE ELDERLY : SUCCESSFUL AGEING IN A SUSTAINABLE TRANSPORT SYSTEM

"MESsAGE"

SD/TA/06

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Christiaens J., Daems A., Dury S., De Donder L., Lambert L., Lannoy P., Nijs G., Verté D., Vleugels I.*, **Mobility and the Elderly, Successful Ageing in a Sustainable Transport System "MESsAGE",*** Final Report. Brussels: Belgian Science Policy 2009 – 97 p. (Research Programme Science for a Sustainable Development)

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1. INTRODUCTION

1.1 Context and objectives of MESsAGE

The acronym MESsAGE stands for Mobility and the Elderly: Successful Aging in a Sustainable transport system.

In the year 2000 one out of six Belgians was aged 65 years or older. In 2050 this will be one out of three. Life expectancy increases, healthy life expectancy increases less. For the elderly, mobility is considered a precondition for a qualitative life. Pursuing transportation autonomy among elderly has become an important task for local policy makers. Traffic safety, accessibility and availability of transport means and the design of the public space are important features. Next to the social aspects the economic aspects also play an important role: e.g. the additional costs of a tailor made transportation system for elderly persons versus savings on home services and health care costs. From an environmental point of view, the substantial car use of older people is a concern. And this trend is likely to increase due to the higher part of people with a driving licence among the future generation of elderly.

This research project MESsAGE aims to contribute to the extension of the transportation autonomy of older people and to increase the use of sustainable transport modes within this target group. Therefore, young senior citizens need to be made more aware of the possibilities to organise their lives in a way to lengthen their transportation autonomy. Local policy makers must be addressed to raise awareness about specific mobility needs of elderly persons. These needs have to be translated into concrete mobility measures on the field.

The operational objectives of this research project are the following:

- To gain insight into the current mobility patterns of elderly people in Belgium (transport modes, trip purposes, trip distances, frequencies, ..) and future trends;
- To gain insight into the determinants of the current mobility behaviour of the elderly;
- Assess the impact of the current mobility behaviour of the elderly in terms of sustainability now and in the future (such as contribution in congestion, social inclusion, environmental impacts, traffic unsafety);
- Gain insight into older people's perceptions regarding the problems of sustainable mobility, their own responsibility and opportunities for action;
- And testing and evaluating new methods to enhance elderly participation into the local mobility policy.

Within the period from January 2007 until March 2009, a research network with three partners studied this topic from different angles and fields of expertise: Among them were two universities: the department of Agogics of the University of Brussels (VUB) with extensive expertise on social gerontology. The Centre de Récherche Urbaine (ULB) has broad expertise on qualitative research techniques related to sustainable mobility. Mobiel 21 (the project coordinator), an NGO, has comprehensive expertise in the practice of mobility management and awareness raising activities towards sustainable mobility focused on different target groups.

1.2 State of the Art knowledge: Elderly & mobility

The project started with a screening of national and international literature on the topic of elderly and mobility. Of particular interest were: determinants of transport autonomy and transport dependence of elderly and their relative importance, mobility patterns of elderly (recent trends and issues), the policy context and involvement of senior citizens in local (mobility) policy. A separate report of the literature review was set up. We briefly go through the main findings below. For an extensive overview, we refer to a separate technical report which is available both in English and Dutch.

The next generation of elderly will be used to a higher mobility level; they will probably travel more than the current generation of elderly people. In general, this future elderly generation is higher educated (research shows that mobility rises with level of education). On average, one might expect that in the future, the elderly people will live in better health and physical conditions than in the past due to higher living standards. Visual, auditive and motoric limitations will be lessened due to improved health care, keeping the group of elderly to an age of 85 years longer mobile. Elderly are likely to remain active for a longer period than in the past and have a wider offer of possible leisure activities at their disposal (sports, cultural activities, travelling abroad, etc.) than the former older generations had.

Recent studies show that average travel distances of elderly people are smaller than of adult people in general; this difference however is likely to disappear as "Aging in place" is given high value in society. In earlier time, elderly people moved in with their children or moved to homes for elderly. Since the sixties, this living environment is situated more and more in peripheral and rural areas. The result is that elderly people will have to keep on travelling to do shopping, to meet people etc. On the other hand a whole services network is being built to deliver services at the houses of the elderly generating mobility as well.

About all studies come to the conclusion that the car plays a central role in the transport autonomy of elderly people: It is the most accessible and most desired transport mode among all transport modes. The car offers most comfort – it provides door-to-door transport – even for someone with limited physical abilities; the car offers most security, and avoids unpleasant confrontation with other road users. This predominance of the car is still growing as the future older generations count more women with a driving licence than the current ones. More over baby boomers that are now getting 60, 70-80 years old have never learned to use public transport.

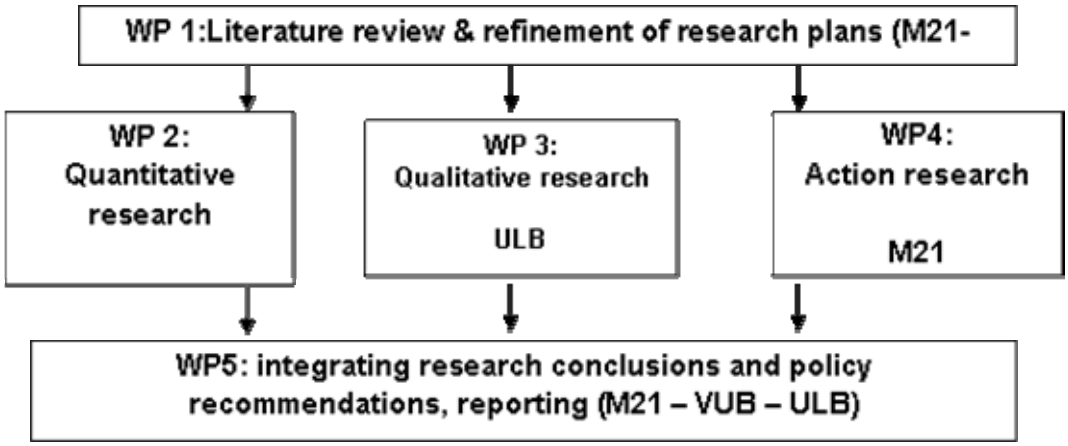
Elderly people are among the frailest group of road users. In figures on gravity rates (percentage deaths and heavily injured among accidents) the group of elderly bikers and pedestrians reached the same gravity rates as the group of motorcyclists. On the other hand elderly road users try to compensate the accident risks within their travel behaviour using various strategies. As car drivers, they drive slower and avoid risky traffic situations where possible but also as pedestrians and bikers, they avoid unsafe situations. But even if one expects traffic to be more calm and considerate - due to the fact that the share of older slow drivers will increase-, the growing number of frail elderly road users will lead to more accidents that are serious or fatal, and thus higher societal costs in terms of severe accidents.

A general conclusion of the state of the art literature was also that aging people do not form a homogeneous age category and that mobility is a far more complex question than often stated in literature..

2. METHODOLOGY

2.1 Introduction

The overall research design of the MESsAGE project was one with both at the beginning and at the end of the project life time, two more integrative work packages: a literature review and an integration part to draw conclusions and recommendations. In between, three researches ran more or less in parallel: a qualitative, a quantitative and an action research part.



These three research parts all looked at the same theme of elderly and mobility but from different angles and perspectives using different methodologies and theoretical frameworks (gerontology, local policy participation, socio-anthropology of space). All network partners were involved in the different research parts in different ways. Regular meetings were organised to exchange information and findings.

The overall aim of the quantitative research was to gain insight into the current mobility patterns of older people in Belgium and its determinants (socio-demographic profiles, living environment, individual conditions, etc.). A second aim is to assess mobility needs of elderly in cities and communities. For both purposes, statistical analyses were conducted on existing and new survey databases. The team of VUB took the lead in this research part. (see section 2.3)

The qualitative research aimed to gain more insight into perceptions and expectations of older people concerning their mobility behaviours and needs. The aim was to identify the subjective or cognitive dimension of older people's mobility. What contributes to successful aging in the area of mobility? Are the elderly perceptions and exceptions compatible with sustainable development goals? Based on the literature review in MESsaGE, the methodology was adapted from only focus group interviews to a mixture of observations, face-to-face interviews and collective discussions with elderly. The team of ULB, Centre the Récherche Urbaine, took the lead of this research part. (see section 2.2)

The aim of the Action research was to apply research under 'real life conditions'. In a selection of cities and municipalities in Flanders (Dutch speaking region) and the Walloon (French speaking) region, five small action groups were set up and new participatory techniques were tested to involve senior citizens in the design of the local mobility policy. This work was lead by Mobiel 21. (see section 2.4)

In the last six months of the project, integration meetings were organised between the three network partners in order to integrate the findings of the three research parts. Converging and diverging outcomes were compared at the background of the different interpretative concepts. One overall framework was used to integrate the findings from the three parts called the 3 M's which is explained in section 2.5. .

2.2 Qualitative research methodology

2.2.1 Introduction

2.2.1.1 Moving while aging

The qualitative approach aimed at considering various and evolving experiences and meanings of daily mobility along processes of aging. It intended to scrutinize those experiences not from an abstract or disembodied point of view but from the discourses and practices of the actors themselves. This work was meant to echo their mobility perceptions and expectations in order to find ways to prolong the period of transport autonomy .

Experiences and forms of those two processes -moving and aging- are plural and radically different nowadays from what they used to be a century or even half a century ago[1] . The thresholds of "old age" are largely blurred. The current withdrawal from the labour market of former baby boomers and the specificities of their daily and residential mobility behaviours enrich the diversity of profiles. In the light of these evolving mobility practices and meanings, a renewal of the perspectives on moving and aging, and furthermore on the notion of "autonomy", is needed. This, in order to imagine sustainable mobility behaviours that can be fostered, as well as the conditions to be taken into account.

From its firsts steps, this research attempted to turn the mobility question "inside out", looking at what happens *during* daily moving about, instead of talking about mobility as something rather abstract, only the result of structural social and geographical logics or dynamics. In a sociological landscape proclaiming the "generalized mobility", ordinary journeys are still often "black boxed" in mobility and transport studies. The various ways people experience and live those ordinary space-times, remain undisclosed, even more so as they grow older. This being said, serious attempts in this direction are currently made (Watts, 2006; Lannoy & Ramadier, 2007; Laurier, 2005). The present work is enrolled in such approaches. Like mobilities, the meanings and experiences of growing older or oldness are never given in advance, nor are they independent of our accounts and representation of them. They are here considered as built and negotiated in specific relations, socio-material practices and situations.

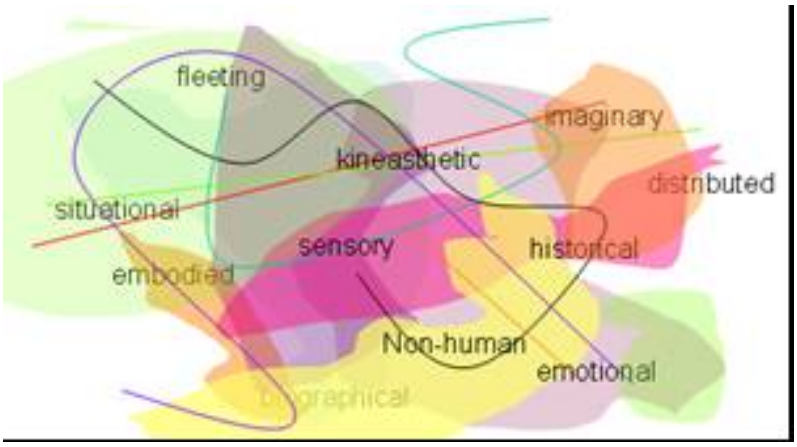
2.2.1.2 Ontological politics

In resonance with recent positioning of some contemporary social science researchers concerned with the performativity of social sciences (Law, 2004; Law & Urry, 2004; Moser, 2006), the sociological and anthropological approach proposes an attempt to think the multiple and to articulate multiplicity in thinking. The following text proposes a theoretical framework able to grasp aging and moving in their dynamism and complexity. As such, it also proposes a frame for political reflexion.

When practising social science – and science tout court – it has to be kept in mind that sciences have an influence on reality. When doing research, science uses certain methods to approach the world 'out there', and through this method they bring into existence a certain reality. In the analyses linked to the method some dimensions, processes or elements (variables) are thought of (and integrated), and others not. The making absent or unrepresentable of phenomena is called the 'process of Othering' (Law, 2004): when making things present through research, one also makes things absent. It can mean the making absent of the obvious, things that are not unequivocal but ambiguous, or dynamic processes.

[1] See SoA report, chapter "Moving and Aging".

Our theoretical starting point tried to take into account some so-called 'silent realities', things that stay absent in most of the literature on elderly mobility. This brought us to put mobilities and growing old in the light of complexity theory (Thrift, 2006; Law & Mol, 2002). Complexity theories - in short – have a dynamic look on the world, with only temporary equilibria; the populations of individuals are in turbulent motion. In their conceptualisation, the categories used are situational- they are not independent from the world – whilst there is not only one objective description of the world. People are considered as taking part of several wholes, not one. What delineates these wholes depends on the situational criteria describing them. In addition, it can be put that there is not but one rationality: there are many rationalities, each of them being embodied, emotional and sensorial. The different dimensions taking part in the study of the relationships between moving and growing old are composed of a.o. the fleeting, the kinaesthetic, the distributed, the sensory, the biographical, the situational, the embodied, the non-human, the historical, the imaginary, memories, … (see conceptual representation below. These dimensions manifest themselves through different possible articulations. There are many possible, non-linear relationships between these dimensions that overlap each other. Furthermore they articulate themselves through varying intensities, differing from situation to situation, in ever changing motion. One can think of a same trajectory taking on different forms depending whether one is on foot or by car, whether you cross people you know or not, whether one recalls of certain memories or not, or simply whether one has to carry a bag or not, …



With the trope of modelling and representational practices in science and politics nowadays, and with these being entrenched in certain discourses, alternatives seem increasingly less viable, less comprehensible, even less scientific. Nevertheless, this kind of discussion tends to miss what is actually more important: how do the models or representations relate to reality (if one already accepts the idea of an independent reality 'out there')? How does a particular scientific practice and the methods it uses translate and simplify reality to make it manageable? What is left out in the results or representations of the results? What reality is brought into being when these results are turned into policy? All of these questions matter, and *make* matter. All of these questions are beyond 'mere' epistemology. They are questions about 'ontological politics': "If methods also produce reality […] then social science is in some measure involved in the creation of the real. […] And to the extent that it enacts methods that look for or assume certain structural stabilities, it enacts those stabilities while interfering with other realities […] We have suggested that the issue is one of 'ontological politics'. If methods are not innocent then they are also political. They help to make realities. But the question is: which realities?" (Law & Urry, 2004).

2.2.2 Method assemblage

The qualitative method device enlights some realities and, like any methodological approach, veil others (Law, 2004; Law & Urry, 2004). Two major principles guide the building process of the method.

The principles aim on the one hand at offering an approach grounded in the lived experience of the people met via the stimulation of actor's reflexivity (and affording resistance on their part) and on the other hand at proposing a pragmatic approach (cfr. Mondada et alii, 2007): the first principle was to find ways to have the question raised requalified/reformulated by the people concerned (Stengers & Despret, cited in Latour 2004). The second principle was to have the ability to grasp more silenced aspects or dimensions of the experience of moving in relation to processes of aging. Apt to fulfil these principles, the methodological approach consisted of face-to-face interviews (fixed and "walk along" or "drive along" interviews), fixed and itinerant observations and collective discussions. Collective and personal narratives of people have thus been explored as well as experience of journeys followed "on the move". Itinerant methodologies (Pasquier, Petiteau, 2001; Kusenbach, 2003) were meant to explore the particular situation where our informant's everyday mobility takes place in its pragmatic and phenomenological dimensions. The three qualitative methods (observation, face-to-face interviews, collective discussions) are interwoven and related one to the other by ways of *complementarily and permeability (output of one method becoming input for another). These methods are not implemented successively but rather through a coming-and-going movement across the three of them*.

Fixed and dynamic in situ observations facilitate the observation and description of enacted movements, uses, behaviours, frictions, interactions, tactics and reaction in situation. Fixed observations refer to interactional/circulatory hot spots (like crossroads, public transport interchanges). People's movements and trajectories where also observed "along the way" by moving in street and in public or private transport means. Material is made of field notes, pictures and videotaping.

Fixed and moving face-to-face interviews allow the deepening of data and the opening of new issues. The intimacy of the face-to-face conversation makes it possible to frame enunciations into individual situations and biographies. Fixed, they stimulate a reflexive and subjective glance. Moving, they allow to get a better insight into the sensorial, the kineasthetic, the situated, embodied and emotional aspects of moving, as well as into their narration: by asking the respondents to guide us along one of his/her ordinary trajectories and to comment it (the so-called "go along" or "walk through" methodologies), we stimulate a narration of what happens during the movement itself. The audio recorded transcription serve as raw material for subsequent analysis. Face-to-face interviews were led with people growing old and living in various situations or with providers of specific mobility services such as "social cabs" for older adults.

Collective discussions: The collective discussions aimed at linking together different people, situations and realities. This to make several voices speak together, and produce negotiated knowledge in an interactional context: People are encouraged to talk to one another, to generate and explore their own questions, in their own words. By means of the collective discussions, relevant questions and points of interest emerge. Collective discussions are aimed at eliciting people's perceptions, attitudes and opinions and at showing the ways in which these are constructed and negotiated during the course of the discussion (Crossley, 2002; Barbour & Kitzinger, 2001; Russel, 1999). Furthermore, it allows the distinguishing of different effects of time—period effects, biographical effects, generational effects—because the groups are constituted out of people of different ages and situations. For collective discussions, we favoured a semantically open device[2] . The process of discussion is sequential and cumulative; each discussion inflects the next one. Taken separately, however, each of the three meetings has a specific agenda. The first meeting concentrates upon actual situations and practices concerning daily movement on the basis of material gathered during face-to-face interviews and in situ observations, the second discusses former situations and practices through a reflection upon former conditions or uses of objects, places, techniques. The last meeting aims at an exchange about the analytical work and proposes further reflexion on autonomy. The participants become an active part of the process of analysis.

The choice of sites of implementation of the collective discussions, endorsed during the first moments of this research holds a role in the conclusions and reflections drawn. 5 sites were selected, where collective discussion sessions were to be organized. The selection was prompted by the concern to explore the same questions in several spatial contexts, differentiated in terms of urbanization, transport connections and proportion of 65+ population. The selected sites are Brussels Centre and Berchem Ste Agathe in the Brussels region, Braine-l'Alleud and Leuze in the Walloon

[2] For a detailled presentation of the collective discussion grid, see the Methodological Annex.

region and Brasschaat in the Flemish region. Group composition was carried out based upon different ways of recruitment (associations, institutions, personal contacts, …). Analysis is based upon selective transcription of video recordings.

Our corpus[3]:

- 15 sessions of collective discussion (+/- 2h30 each) have been video recorded and transcribed.
- 14 face-to-face interviews (1 to 3 hours each) have been led by the team, 10 of them including an itinerant part. All were recorded and transcribed.
- In addition, 52 face-to-face interviews have been conducted as part of a seminar in sociology by students of the third degree in ULB, 8 of which including an itinerant part.
- Numerous hours of in situ observation have been spent in all sites where collective discussions were to be led: In several districts of Brussels, Brasschaat, Leuze, Braine l'alleud.

2.3 Quantitative research

2.3.1 Objective(s)

The first aim of the quantitative analysis (WP2) was to gain insight into the current mobility patterns of older people in Belgium and its determinants (socio-demographic profiles, living environment, individual conditions, etc.). A second aim is to assess mobility needs of elderly in cities and communities. For both purposes, statistical analyses will be conducted on existing and new survey data bases and population statistics regarding mobility and demography.

First of all, the project will analyse two existing survey datasets:

- BAS (Belgian aging study), a data set of a representative sample of more than 40 000 older people in Flanders with information on elderly needs and perceptions about 'quality of life'-factors such as housing conditions, health, well being, quality of facilities, participation at the socio-cultural life, mobility, etc. The mobility perceptions of older people and its relative importance to and correlations with e.g. other quality of life determinants will be analysed;
- a data set of a representative sample of Belgian and Flemish households (respectively MOBEL (1999) and OVG (1994 - 2000) with information on the mobility patterns. The mobility profile of the older age groups will be analysed in depth (mode use, trip distance, trip frequencies, etc..) and will be compared with other age groups. The impact of different determinants of mobility will be investigated.

2.3.2 Description of the programs

2.3.2.1 OVG (Mobility in Flanders)

The OVG study (2001) was carried out by the 'Provinciale Hogeschool Limburg voor verkeerskunde' Diepenbeek. The survey was conducted from January 2000 to January 2001 in Flanders (N=22351).

Data were collected using a combined questionnaire, which was sent by post and filled in by the respondent. Additionally a part of the sample was contacted by telephone in order to heighten participation, to help participants filling in questions, and to validate the answers once the questionnaire was sent back.

The combined questionnaire consisted of two surveys, a household questionnaire filled in by the head of the household and a person's questionnaire filled in by each household member. The person's questionnaire contained a form where all daily outdoor movements needed to be registered focusing on the purposes, used transport mode, duration and distance of the outdoor movements.

[3] For further information on interviewees (gender, average age, residential location and connection), see presentation in the Methodological Annex

The main objective of the secondary data analysis was to get an overview of the mobility pattern of the elderly. An analysis was made of the mobility behaviour in relation to socio-demographic modes, use of transport modes and purposes. We focused on mobile as well as non-mobile elderly.

2.3.2.2 MOBEL (Mobility in Belgium)

The MOBEL study is based on the National Household survey on mobility provided by 'services fédéraux des affaires scientifiques, techniques et culturelles'.

The survey was conducted from December 1998 to November 1999 in Flanders, Brussels and Wallonia. Respondents were Belgian residents (N=7025). The sample was stratified by province with a random purposive method. In each province the number of households was taken out proportionally to the square root of households living in each province. The response rate was 45%.

Data were collected using a combined questionnaire, which was sent by post. Additionally a part of the sample was contacted by telephone in order to heighten participation, to help participants filling in questions, and to validate the answers once the questionnaire was sent back. This procedure increased the response rate from 32% to 45%.

The combined questionnaire consisted of two surveys, a household questionnaire filled in by the head of the household and a person's questionnaire filled in by each household member. The person's questionnaire contained a form where all daily travels needed to be registered. This form focuses on the aim of the movements outdoors, the transport mode used, the duration and the distance of the movements.

The main objective of the study was to get an overview of the mobility of elderly. An analysis was made of the mobility behaviour in relation to socio-demographic variables, use of transport modes and goals. We've focused on mobile as well as on non-mobile elderly.

2.3.2.3 BAS (Belgian Aging Studies)

A sample of 44 431 residents aged sixty and over living in 93 cities in Flanders, was interviewed between January 2004 and September 2007. Every sample is representative for the specific municipality. We drew a stratified sample using particular quota where variables as gender and age were matched with the makeup of the underlying population.

A highly structured interview, developed especially for older adults was used to collect information about a variety of topics, including demographic characteristics, mobility, feelings of insecurity, neighbourhood features, well-being, housing facilities, mobility, participation in social life … .

The interview-design was developed to maximize the response. In cooperation with the provincial government, local authorities and members of the local senior organizations the research project was developed and carried out. Through an intensive recruitment campaign interviewers were found. Key figures, seniors with a wide circle of acquaintances in the elderly population, played an important role in that campaign by searching for elder volunteers who were willing to interview the respondents. This system of peer-research enriches the research-design, resulting in more complete questionnaires and a high response rate (between 70 and 85%). Interviewers employed in the study received a training session. A more complete description of the interview-design can be found in Verté and De Witte (2003).

2.3.2.4 Method of analyses

A chi² measures the difference between nominal split variables and nominal test variables. This test allows comparing the measured cell frequencies with the expected cell frequencies. These frequencies can be found in the cross tables. A chi² with p-value < .05 indicates a significant difference (Baarda & De Goede, 2001).

Secondly, we use T-test's. A T-test is a special form of variance analysis to find out whether population means of different groups differ and to what extend these differences are based on

coincidence. In this research the T-test is composed of one dependent and one independent variable. The null hypothesis states no difference between both categories. If p-value <.05 there is a significant difference between the means of both categories (Baarda & De Goede, 2001).

Thirdly, we used Multifactor ANOVA analysis. Instead of using one independent variable (cf. one-way ANOVA) we used 2 or more independent variables. Multifactor ANOVA can also measure effects of interaction between several independent variables. For example to measure whether gender differences concerning mobility are caused by age. The one-way ANOVA analysis is used to test the means of three or more populations, for example to test educational differences concerning mobility. The null hypothesis states no difference between both categories. If p-value < .05 the null hypothesis is rejected indicating a significant difference between the means of both categories.

Fourthly, Multiple Response analysis is used to analyze questions where one or more answers could be ticked (Baarda, De Goede & Van Dijkum, 2007). In the OVG questionnaires the respondents had to fill in two random days. For each day they had to indicate if they had left the house or not. If not, they had to mention the reason why. To incorporate the reasons of both days we had to use the Multiple Response analysis.

2.3.3 Introduction to the results

2.3.3.1 Description of the population

A. OVG

In the research program "Mobility in Flanders" 3244 elderly between 60 and 100, with a median of 68 years. In Table1 we present the socio demographic variables. 49,5% of the respondents was male, a majority had a low educational profile (66,8%); 47,6% had a total monthly income of less than 1250€ and 70,7% disposed of a driver's license. The sample contains 5000 households stratified by age of the head of the household. The response rate was 34%.

Concerning the OVG data we note that respondents aged 70 and younger are overrepresented in the sample, while the 80 plus population is largely under sampled. Over 70% of the elderly is married or living together. Although the majority of the respondents is low educated, this part of the population is slightly underrepresented in the OVG data set.

B. MOBEL

In the research program "Mobility in Belgium" 7025 respondents were included. We carried out a secondary data analysis on the respondents aged between 60 and 99 years (N= 1401), with a median of 69 years. 48,3% of the respondents was male, a majority had a low educational profile (75,9%); 60,2% had a total monthly income of less than 1860€ and 57,5% disposed of a driver's license.

As in the OVG databank the youngest old are over sampled, while the oldest old (80 years and over) are under sampled. Concerning the marital status and the educational level the proportions are in line with the OVG databank and the BAS sample.

C. BAS

In the research program 'Belgian Aging Studies' 44,431 residents aged sixty and over living in 93 cities in Flanders and two cities in the Walloon (Brussels and Gouvy) region were included. In the Walloon region a sample of 509 residents aged sixty and over living in Gouvy (N=202), a rural municipality in Wallonia, Belgium and in Brussels (N=307), the capital of Belgium were included. The latter residents were interviewed between November and December 2008. Although the respons rate in Gouvy was in line with those in the Flemish region, in Brussels it was rather low (50 %). In Brussels women are over represented (59.9 %) as well as the high educated (48.8 %).

As the sample was stratified in each city including age and gender as strata, the sample represents the population in the participating populations. Respondents ranged in age from 60 to 107 years, with

a median of 71 years. 45.2% was male, which is representative for the older population. Most respondents have a low educational profile (72% of the elderly went to school until they were 14 years) and 64% had total monthly household incomes of less than 1499 euro. 39.9% has no physical restriction none whatsoever.

Table 1: Socio demographic variables

		OVG	BAS	MOBEL
Gender	Man	49,5	45.2	48.3
	Woman	50,5	54.8	51.7
Age	60-69	57,4	45.3	52.8
	70-79	34,0	37.2	36.9
	80plus	8,7	17.5	10.3
Driver's license	Yes	70,7	NI	57.5
	No	29,3	NI	42.5
Education	Low educated (secondary low or below)	66,8	72.1	75.9
	High educated (secondary high or above)	33,2	27.9	24.1
Membership organization	No Member	NI	33.5	NI
	Member	NI	66.5	NI
Marital status	Partner	71,6	70.8	72.7
	No partner	28,4	28.7	27.3
Income	Less than 495 Euro a month	10,6	NI	NI
	Between 496 and 1240 Euro a month	47,6	NI	NI
	More than 1341 a month	19,9	NI	NI
	Between 500 and 999 Euro a month	NI	27	NI
	Between 1000 and 1499 Euro a month	NI	36.7	NI
	More than 1500 Euro a month	NI	36.6	NI
	Less than 745 Euro a month	NI	NI	13.5
	Between 746 and 1860 Euro a month	NI	NI	60.2
	More than 1861 Euro a month	NI	NI	26.3
Physical health	Physical restricted	NI	60.1	NI
	Physical not restricted	NI	39.9	NI

NI= not included

In the BAS study we have categorized the cities and communities according to the method of clustering of cities (Dexia, 2007; http://aps.vlaanderen.be/lokaal/lokale_kaarten.htm) developed by K. Heyse. According to the degree of urbanisation and the economic activities we've included seven categories, namely residential communities (high income communalities with a centre function) , rural communities (very low urbanisation), communities with a concentration of economic activities (municipalities with a large economic, mainly industrial activity), semi urban communities (urban character with a modest centre function), small cities, large cities (great allure and centre function) and finally coast communities.

2.3.3.2 Mobility results

The second part of the OVG and the MOBEL person's questionnaire focuses on the movements made by the elderly.
During two days (OVG) respondents had to indicate if they had left the house, by answering yes or no. If not, they had to indicate the reason, choosing between six possible answers: working/studying at home, responsibilities at home, sickness or restriction, weather, no need to, and other.
If they had left the house, they had to indicate the mode of transport, main purpose, hour of departure, distance, and duration for each movement.
Contrary to the OVG methodology in the MOBEL study only one measurement (1 day) was taken into account.

2.4 Action research

2.4.1 Definition and aims of Action research

The following definition of Wadsworth (1998) explains in detail what (participatory) action research is and how it has been elaborated within the framework of MESsAGE:

"*Participatory Action Research (PAR) is research which involves all relevant parties in actively examining together current action (which they experience as problematic) in order to change and improve it. They do this by critically reflecting on the historical, political, cultural, economic, geographic and other contexts, which make sense of it. … Participatory action research is not just research, which is hoped to be followed by action. It is action that is researched, changed and re-researched, within the research process by participants. Nor is it simply an exotic variant of consultation. Instead, it aims to be active co-research, by and for those to be helped. Nor can it be used by one group of people to get another group of people to do what is thought best for them - whether that is to implement a central policy or an organisational or service change. Instead it tries to be a genuinely democratic or non-coercive process whereby those to be helped, determine the purposes and outcomes of their own inquiry*." (Wadsworth, 1998).

The aim of (participatory) action research is not to present finalized answers to problems, but to reveal the different truths and realities held legitimately by different groups and individuals. People with identical information will interpret it in different ways, depending on their previous experiences, worldview and culture. The task of the action researcher therefore is to develop a context in which individuals and groups with divergent perceptions and interpretations can formulate a construction of their situation that makes sense to them all – a joint construction. (Stringer, 1999:45).
The term 'action research' is a very generic one, comprising various methodologies and adopted into different contexts. However all approaches have at least a number of common features (Gray, 2004, p.374):

- The research subjects – in the case of MESsAGE elderly people- are themselves researchers or are involved in a democratic partnership with a researcher, in casu the MESsAGE network partner Mobiel 21.
- The researcher becomes actively involved in the research process as a change agent;
- Action research is seen as an agent of change and involves a cyclical process of planning, acting, observing and reflecting.
- Data are generated from the direct experiences of research participants.
- Methods of data collection include documents, meeting minutes, observations, questionnaires, audio recordings, ..

One of the drawbacks of many action research projects is that they tend to be fairly unique and difficult to generalize. Being fully aware of this, within MESsAGE a monitoring and evaluation framework was set up to describe in a systematic way the process, outputs and impact of the different action research projects conducted. This allows for a minimum comparative analysis of the findings between the individual ARs and to draw overall conclusions and recommendations towards future action research.

According to Gray (2004), two levels of impacts need to be distinguished in an action research: first of all, to what extent have the actions resulted in a change? And secondly, to what extent have the action research participants learned anything?
The second type of impact is strongly related to the process assessment which gives insight into the following issues: how far did the action researchers engage in the steps of action research, how did they record their data and how were they in true reflection of what was studied. It also shows how they tested their own assumptions and interpretations of what was happening on a continual basis; how they accessed different views of participants, showing both confirming and contradictory interpretations.

Within MESsAGE, most emphasis has been given to the process assessment. Main reason for this is that the action research processes have taken a lot of time and were very much spread in time (from

7months up to more than a year). In total, five different action research demonstrations have been undertaken during the MESsAGE project life time: three of them have been finalised completely; two other action research projects were in March 2009 in the finalisation stage of their action phase.

The monitoring and evaluation framework of the AR research specifies a list of descriptors and indicators. Descriptors serve to describe the settings and (pre)conditions of the action research. They add vital contextual detail to better understand the individual site processes and outcomes. The indicators describe how good certain aspects of the actions have been conducted and accomplished. They reflect the issues we are trying to change with the actions planned. The following paragraph provides the overall structure of the common evaluation framework for the 5 action research demonstrations:

- External framework conditions for the action research
    - Main characteristics of local transport network and public space, the transport policy framework;
    - Characteristics and practice of the local policy towards senior citizens and the role of senior associations;
    - Existing experiences with participatory actions/measures wrt mobility
- Composition and functioning of the action research groups
    - Group of elderly participants: description of process of participant group composition, number and representativeness of elderly group, relationships between the participants, between participants and researchers, and interactions during the meetings; description of bottlenecks encountered and how these were solved
    - The Involvement of local key stakeholders: their role in the AR-process and results, their relation with the researcher and with the participating senior citizens
- Information on the action research process
    - Planning phase: description of the choice of the focus of each AR, choice of actions and drafting of action plan, process of giving responsibilities to participants and stakeholders, …
    - Implementation process: number of meetings, task distribution, concrete activities undertaken, outputs obtained
    - Evaluation and reflection: comparison of action output and impact versus objectives, evaluation of action research process by action partners

All information about indicators and descriptors compiled within the five action researches has been written down in an extensive technical report structured along these three main headers of the evaluation framework. The information is compiled through a combination of different methods: meeting minutes of all the steering group meetings moderated by the action researcher (40 AR-meetings in total!), bilateral contacts (telephone, face-to-face and through e-mail) with the participants outside the AR-group meetings and observations during the meetings. A structured questionnaire targeted at the individual AR-participants was used to collect information on the senior's personal appreciation of the AR process and impacts. The results of this individual participant assessment was used as input for a collective discussion during a separate steering group meeting dedicated to evaluation. (see appendix X). All AR-group meetings were attended by two MESsAGE-researchers (one to moderate the discussions and the other to take notes). The technical report was set up by the two action researchers together. The discussion between them about the interpretation of descriptors and indicators and the feed-back provided by the whole MESsAGE research network validates the findings.

In the following paragraphs, we describe the action research projects as conducted in MESsAGE.

2.4.2 Action research projects conducted in MESsAGE

2.4.2.1 Getting started: site selection criteria and recruitment procedure

The following criteria were set up for the selection of the action research (AR-)sites:

- An equal split between Flanders, Wallonia and Brussels

- Consideration of three different scales: rural, peripheral and urban areas.
- Stage of the development of an overall urban transport plan
- Willingness of the local policy makers to engage in experimental participatory projects
- Available capacities and willingness for participation of organizations of elderly

A thorough search process resulted in the selection of 5 sites that agreed to start up the AR: the cities of Sint-Truiden and Leuven in the region of Flanders, Brussels capital and the cities of Mons and Gembloux in the Walloon region. In this way, the first selection criterion was met.

As for the second criterion, we succeeded in having a balanced division between the three scales (rural, peripheral and urban). The cities of St-Truiden and Gembloux, two provincial towns with respectively 38 000 and 20 000 inhabitants (NIS, 2008) can be considered as examples of a rural area with a transition to peripheral area towards the city centre. The cities of Leuven and Mons, both provincial capitals with resp. 92 704 and 90 154 inhabitants (NIS 2008), can be considered as peripheral areas with a transition to an urban area towards the city centre. And finally Brussels capital with more than 1 mio inhabitants is an urban area.

For the third criterion, the situation is more complicated, as we have a substantial difference in local policy and policy planning between the three regions. In the Flemish cities of St-Truiden and Leuven, an urban transport plan is in place since 2002. At this moment, these plans are updated. This cyclical process of evaluation and consideration is also recommended and even made mandatory by the Flemish government. In Wallonia however, no such practice is common (yet) for municipalities or cities. The cities of Gembloux and Mons both have an urban transport plan in place respectively since 2003 and 2000. However, these UTPs can't be compared in any way with the examples from Flanders. On the other hand, this gives the AR even more freedom and also relevance for the policy makers. Finally, in Brussels we encountered another different situation. Whereas in Flanders mobility plans are made on a very local (or even micro-) scale, mobility plans in Brussels are made on a more capital-like scale and thus less focusing on very local problems. The policy process in Brussels isn't comparable to that of the Flemish region or the Walloon region, also because the rather complicated structure of the Brussels Region when regarding mobility policy.

The fourth and the fifth criterion are more or less preconditions for being selected into the project. In all five AR-sites we found dedicated policy makers or public officers who were willing to take part in the project and invest at least their time into the process. Also the organisations of the elderly which have provided us with an AR-group were evidently willing to participate in the project.

In the appendix, each action research is described in a separate fact sheet.

2.4.2.2 Composition and functioning of the AR-groups

A. The process of participant group composition

Methods and media for selecting and recruiting the action research sites were a mixture of website visits, personal contacts by telephone, face-to-face contacts, invitation letters sent by mail, introduction meetings with PPT-presentations of the MESsAGE-project and an explanation of the Action research (aims, tasks and expectations for all parties involved). Also a general announcement of the action research was made through the M21-newsletter sent to all Flemish communities and through the transport magazine *Verkeersspecialist*.

Besides the five cities where the AR actually took place, five more Flemish cities and municipalities were contacted for the action research but in none of these cases, the project was taken up. In most cases, it were the local officials that decided not to take part after some negotiations, in one municipality the group of elderly self decided not to engage in an AR. In the Walloon region, there were close contacts with overall nine cities and municipalities selected with the help of intermediary persons and/or through references found on website fora. From these nine contacts, Gembloux and Mons decided to take part in the MESsAGE-project.

As overall conclusion, we can say that there was a poor spontaneous reactions to broad announcements in traffic and mobility related magazines. It seemed to be important for organizations

as well as policy makers to have a good idea of the process and the outcomes before participating in it. Especially policy makers were often reluctant to commit themselves to a kind of research process in which the group itself decides what will be the subject and the result. They often expressed the wish to be in what seems to be a steering position or a last approval-position. Therefore personal contacts through telephone and face-to-face meetings were important as a first step. It also helped if the city had already experience in participation projects. Information meetings at the sites with a delegation of the senior council where the project MESsAGE and the action research were presented, were important as a second step in order to convince people to take part. These information meetings acted at the same time as recruitment channel for interested seniors at the research and to gain their trust and interest. The intermediation in the recruitment process by one interested person at the site helped to compose the AR-group and get all interested senior citizens around the table.

All in all, once the decision was made to participate – a process that took some time -, the kick-off of the first real AR-sessions followed very soon afterwards.

B. Elderly participants in the different AR-sites and their profile

Table 2: composition of the participant group at the action research projects

	Sint-Truiden	**Leuven**	**Brussels**	**Mons**	**Gembloux**
Number of participants	8 elders (7 males, 1 female)	7 elders (1 male, 6 female)	6 elders (2 males, 4 females)	6 elders (2 males, 4 females)	7 elders (3 male, 4 female)
Composition	Members of the elderly citizens council	Members of the general assembly and the executive board of the city's elderly citizens council, completed with some acquaintances	Participants to the activities of the centre for elderly people	Residents of the municipal home for the elderly and others, being introduced by the Plateforme des Aînées.	The elderly citizens council

In all five AR-groups a smaller core of senior citizens attended all the AR-meetings; the number of elderly in this core group varied between 4 (in the Brussels AR) and 8 senior citizens in the AR in Sint-Truiden. In Leuven and Mons, six elderly persons attended (almost) all the AR-meetings at their site, in Gembloux the core group consisted of 7 elderly persons.

For senior citizens that joined the AR-group at a later stage, it was often difficult to integrate in the process and in one case (Brussels), some persons dropped out again. However, there was no general drop-out observed after the first meeting in the 5 groups as the AR evolved. So the time-taking recruitment process with personal contacts and info meetings before the kick off, turned out to be effective.

No requirements were set up towards the senior citizens to join the AR-group regarding their socio-demographic nor mobility profile. Being interested in sustainable mobility for elderly people was the only condition for participation.
With the help of a small written structured questionnaire form and informal talks, we collected some basic socio-demographic background information from the participants. The following information is based on the forms filled in by 19 elderly participants in 3 AR-groups (Brussels, Sint-Truiden and Leuven).

Socio-demographic profile

- Overall there was a good spread in age in the different AR-groups between all the participants: the youngest one is 61 – the oldest one was 80.
- In all AR-groups both males and females participated; however in Sint-Truiden there was a strong majority of males presented (7 males and only one female), whereas in Brussels, Leuven and Mons, older women were in the majority.
- Almost all elderly participants (except for 2 participants) finished their studies of higher secondary education; in Sint-Truiden, Brussels and Leuven, at least two participants had a degree of higher education.
- Most of the elderly participants live independently (except for two sisters living in a congregation in Leuven), with or without partner in the city centre or in a smaller borough. In the AR-group of Mons, two participants lived in a home for elderly persons.

So, as was to be expected, the AR-groups were not really representative samples of senior societies: either females, or males were overrepresented; most of the participants were well educated.

Based on observation and informal talks during the AR-meetings, we can say that most elderly AR-participants seemed to be in good health with a few exceptions. In Mons more particularly, two blind elderly persons took part in the AR-research.
Almost all the elderly AR-participants are active in multiple associations in their city. In Leuven and Sint-Truiden, everyone was member of the city's council of the elderly. In Brussels, all AR-participants were active members of the Brussels Senior centre. Also in Gembloux, all participants are members of the city's commission of the elderly. In Mons, the elderly participants represented different local elderly associations.

Mobility profile[4]

- The majority of the elderly participants in the AR-groups have a driving licence;
- Many of them also own a car; and these are spread over the AR-groups.
- Concerning main mode use, we know that in all AR-groups, representatives of the different mode users are at least represented. However in Sint-Truiden, there were relatively more bike and car users, in Brussels tram and metro users were in the majority. The AR-group in Leuven consisted of relatively more experienced bus users.

[4] Information about mobility profile only available for the action research groups of Sint-Truiden, Brussels and Leuven.

C. Relationships between the participants before and during the meetings

The group settings varied a lot between the five action research sites. On the one hand there was in Sint-Truiden a group of elderly people who know each other on before hand and more over who had already worked together on the topic of Mobility; in Brussels, the AR-people met for the first time but all of them had been active in other fields or projects at the Senior centre; in Leuven, Mons and Gembloux, the AR-group contained a mixture of senior citizens with some of them knowing each other from other activities, combined with persons who participated at such activities only for the first time and because of a personal interest in the topic.

Concerning the participant's interactions during the AR-meetings, the following points were observed in the different AR-groups and confirmed through the individual participant's questionnaire and bilateral conversations:

- Existing hierarchical structures among senior participants often influence the debate; this was especially the case in the AR-groups where people knew each other on beforehand and have co-operated in the past or see each other in different contexts.
- Differences in communication skills between the participants were sometimes confusing: e.g. one lady who took part on an ad hoc basis, was only concerned about making her point without listening to the others.
- In the AR-groups where people didn't know each other, there was in the beginning a common atmosphere of mistrust against PT-providers and government in general.
- The coming and going of different people during the AR-process in some of the AR-groups made it sometimes difficult to move forward and stick to the conclusions and agreements made during the preceeding AR-meetings;
- As said before, for persons who entered into the group at a later stage, it was difficult to join in.
- At the later stages of the AR-process, sometimes fear entered among the AR-group members about the outcomes of the AR-actions and e.g. their possible budgetary consequences for other local government departments that were not involved in the action research (especially for actions where the need for infrastructure improvements was raised (as in Mons and Gembloux).

The researchers experienced in most of the AR-groups a positive evolution in the interaction researcher – elderly group during the AR-process: in the first sessions, the AR-researchers felt treated a bit like naïve grand-children who want to change the world. You could call it a sort of natural distrust towards the researchers that however disappeared along the course of the project. Especially when the AR-process went into action, the coaching and input by the external researcher was very much appreciated. And most of the senior AR-participants state in the evaluation questionnaire that they attribute great importance to the role of the researchers as moderator and coach (in Brussels, Sint-Truiden and Leuven).

D. The role of external stakeholders involved in the action research

In the five AR-groups, also - non senior- stakeholders from different backgrounds took part in different ways. The following table gives an overview of the different background of the stakeholders that took part in the five AR-groups. Before the start of the action researches, no specific role was given to them apart from a more logistical support (reservation of meeting rooms and catering). Some stakeholders took part either on their own initiative or because the senior participants invited them to some or all of the AR-meetings.

Table 3: Stakeholders participating at the action research projects

Back-ground	Sint-Truiden	Leuven	Brussels	Mons	Gembloux
Mobility related	Mobility official *Role = participative observer + organisation, financial and logistical support (All AR-meetings)* Elderman for Mobility (in *1 meeting)* *All minutes sent to elderman for mobility and to the city mayor*	-	Minister of transport of Brussels region & his staff members *The action was presented at his offices (2 times)*	-	Elderman for Mobility (only 1st meeting)
Welfare Related	-	Public officer of Welfare service (*only first AR-meetings) Organisational and logistical support*	Responsible of the senior centre *Role=active participation in all meetings + organisation, financial & logistical support)*	Representative of Plateforme des Aînées (*all meetings : logistical and organisational support)* Department of social affairs (several *meetings*)	Elderman for senior citizens (*all AR-meetings*) Secretary of elderly citizens council (*all meetings) strong involvement in action planning and implementation*
PT-provider	-	De LIJN Vlaams Brabant, bilateral contacts to get permission for action	Delegation of PT-providers MIVB, De LIJN, NMBS, *Action was presented to them*	-	-

As can be read from the table, the five AR settings differ a lot regarding involvement of stakeholders. Overall, in the AR of Leuven, there was least involvement of external stakeholders. The public officer of the city's welfare service only took part in the first AR-meetings and her role was more to provide logistical and organisational support. She remained available for this more practical help throughout the AR-process. The contacts with the PT-provider were only bilaterally with the researchers and not with the elderly group.

The strongest involvement of stakeholders was felt in Gembloux. In the first AR-meetings, the elderman for mobility, for senior citizens and the secretary of the elderly citizens council took actively part in the discussions. Halfway the action research process in Gembloux, a new secretary of elderly citizens attended the meetings. This person was newly hired at the city administration and one of the tasks in her new job was to conduct a needs assessment survey among the elderly in Gembloux. She took the AR as an opportunity to meet this goal and she often took over the lead of the AR-meetings. The result was that the AR-philosophy where the group of elderly plans and takes action coached by the researcher got lost. The MESsAGE-researcher was driven into the role of mobility consultant, and the AR-meetings became more technical meetings about surveying techniques with discussions above the heads of the group of elderly. After four AR-meetings – part of the action was completed by then-, there were no more AR-meetings. The AR ended with a meeting between the MESsAGE-researcher, the alderman for elderly and the public officer to sort things out and find a way to continue in a way that is acceptable for all parties. Unfortunately due to timing, this didn't result in a new AR-meeting within the time frame of the MESsAGE project.

In Sint-Truiden, the local mobility government had the most structural participation in the AR-process. The mobility official or his assistant attended all AR-meetings and took up a role participative observer. Now and then, he took part in discussions to provide more background information.

In Mons, there was a coming and going of different stakeholders during the course of action research. Next to the core group of elderly people in the AR-meetings, different faces appeared and they all contributed in the discussions in an open and participatory way. Towards the action phase in the AR-process, the stakeholders became more and more uncomfortable with the possible outcomes of the action. And at this stage, they tried to influence the discussion into a more non-committal result.

In Brussels, the responsible of the senior centre facilitated all the AR-meetings. She took part in the discussions in an active way and helped in keeping the group of elderly interested and motivated in the AR. All PT providers in Brussels and the Minister of transport were approached during the action phase. They were very interested in the AR conducted and gave positive feed-back afterwards.

The involvement of the public transport providers in the AR in Leuven and Brussels were closely related to the type of action chosen by action group. Most of the elderly participants had high expectations regarding the role of the mobility official and the PT-providers..

2.4.2.2 The cyclical action research process

The whole action research follows a cyclical process consisting of the three main steps: planning, implementation and evaluation spread over a number of meetings varying from five meetings (in Sint-Truiden) to 10 meetings in Leuven, depending mainly on the type of action developed. See overview in next table) In between those meetings, the AR-group received "homework" in order to prepare the following sessions: such as looking up more information, writing articles, taking photographs, surveying their peers in the city, etc.. One complete AR-cycle – from planning to evaluation - varied between 7 months (in Sint-Truiden) and more than one year (such as in Brussels). The Action researches in Mons and Gembloux were not yet finished at the end of the project time of MESsAGE. The action phase at both sites were almost completed. (see also a detailed overview of activities in the AR fact sheets in appendix).

Table 4: Action research meetings at the different sites

Meetings	Sint-Truiden	Leuven	Brussel	Mons	Gembloux
Information action research	25/09/07	20/03/08	18/12/07	06/02/08 20/02/08	11/04/08 20/05/08
Planning	26/10/07	14/05/08	14/01/08 07/04/08	30/01/08 23/05/08	10/06/08
Action	06/12/07 31/01/08 19/02/08	28/05/08 01/07/08 05/08/08 06/10/08 15/11/08 16/11/08 21/11/08 25/11/08	05/05/08 02/06/08 16/10/08 21/01/09 30/01/09	09/06/08 09/09/08 21/10/08 18/11/08	29/07/08 19/08/08 20/02/09
Evaluation	15/04/08	08/12/08	04/02/09		

A. Planning: getting the focus right

The aim of the first meeting(s) was to get the focus of the AR right. In this first meeting(s) the AR-researcher analysed with the elderly AR-participants the local mobility problems and needs of the elderly. Next the AR-group tried to prioritise problems on which to work on in the near future.

Problem and needs analysis

As input for this discussion, the MESsAGE researcher presented the main conclusions from the literature review in MESsAGE in a short PowerPoint and gave the elderly some time afterwards to reflect on this. *Do they recognize this portrait given of elderly and mobility in their personal life? And how do they feel about it?*
The discussion then continued with the focus on: *what are their personal problems and needs regarding mobility? And what can they themselves do about it?*
In order to structure this discussion about problems and needs, the researcher presented five themes related to sustainable mobility: traffic liveability, accessibility, attainability, traffic safety and civil participation. The idea behind it, was to make elderly think about a broad range of possible needs including the different dimensions of sustainability in liveability (the ecological component), civil participation and accessibility (the social component), attainability (an economic component) and of course traffic safety.

Based on the input of the individual participants, the groups tried to sum up the main conclusions. By the end of the meeting, the group ended up with a prioritised list of the principle problems and needs encountered in their daily movements. The table below gives a brief overview of these lists in the five ARs. We will come back to each of these later in the report (section 3).

Priority	Sint-truiden	Leuven	Brussels	Mons	Gembloux
1	Tailored and targeted infor-mation on public transport	Courtesy	Accessibility of PT and information on PT-use	Infrastructure	Lack of info on needs & problem of elderly population
2	Courtesy	Respect on buses, focus on youth	Courtesy	Courtesy	
3			Congestion, noise pollution	Citizen participation	

In Sint-Truiden, only one meeting was needed to have a consensus about the main problems the group of elderly is faced with. In Brussels, the needs analysis was spread over three meetings. Already during the information meeting - before the actual start of the AR-, senior citizens started to talk spontaneously about the problems they encounter during their daily mobility as was the case in Brussels and Mons. In Leuven, the AR-group didn't need to use the different themes suggested by the researchers. They touched upon these different themes spontaneously. The action research group in Gembloux found it hard to point at the main mobility problems and needs of the elderly population of Gembloux in general. They felt they as a group were not representative enough to come up with a good problem analysis. Immediately , the idea was born in Gembloux to ask it to the elderly population of Gembloux straight away within a survey. In this way, also the action was decided at the same time.

From problems and needs assessment to planning action

Once an overview of needs and problems was set up where everyone agreed with, the next step – in the second or third meeting- was the task to choose from the list only one and only one action to counter it. It was important in this step to get a consensus among all participants about the focus of the action research. Both the relevance of the perceived problems as well as the feasibility to tackle the problem are important issues. All participants were asked to vote for one topic and motivate their choice. In this way a consensus was built.

Both the participants and the action researcher made suggestions of possible actions to tackle the selected problem. The AR-group (participants and action researcher) plans a strategy how to implement the action. This action plan defines the targets of the action(s), defines expected results, makes a division of tasks and responsibilities, and sets up a concrete timing.

In most of the AR-groups, the switch from discussion of problems and needs to planning for action was difficult. Often, the group restarted the whole discussion again and the researcher needed to focus the groups to think about action. One of the causes of this difficulty was the fact that different people joined in the group and they needed (and insisted) to go through the first step again resulting in rebuilding a new consensus. Another reason is that some group members became reluctant to take action as they fear that their action might have important consequences for the city (public works and finance). Some participating stakeholders in the AR-group fed this feeling. Another reason is that some persons felt not able to change the problems that were on top of their priority list: *infrastructure changes are needed but that is something we as a group can't do anything about.*
In this step, much coaching was needed by the researchers to make the elderly think about small feasible actions such as ways for example to make politicians aware about the need for infrastructural changes. In all ARs, the researcher had to propose their ideas of actions to tackle the problems chosen by the group. Only based on these examples, the group self started discussing these options and came up with their own ideas.

Setting up an action plan, defining tasks and distribute them among the AR-group members needed coaching as well. In none of the AR-groups, the elderly felt responsible for the overall implementation process. They were often rather reluctant to take up responsibilities for tasks; however once accepted a certain task, they took it serious.
The MESsAGE-researchers remained the process leaders in the whole process, the elderly people were the enthusiastic executors of clearly well defined tasks. Also the contacting of external organisations was left over to the researchers (such as taking contact with the PT-providers).

B. Action

The following table provides an overview of the actions that have been planned and implemented in the five action research groups.

St-truiden	Leuven	Brussels	Mons	Gembloux
Survey towards elderly population on needs concerning information and information channels Articles on PT-info (written by the AR-group) published in city magazine	Campaign on courtesy in buses of Leuven (posters and postcards) Awareness raising among peers during the annual "week of seniors" in leuven	Guided tour on Brussel's PT – network in presence of Ministry of Transport and PT-providers	Scrap-book with pictures and explanation on black points Round-table with policy-makers (planned)	Survey on needs and problems concerning mobility

As can be seen in the table as well as in the fact sheets of the five action research sites (in appendix) and later on in the results session of this report, quite different actions were developed and implemented by the senior participants.

C. Observing and Reflecting - evaluation

The last AR-meeting was dedicated to the reflection on the past AR-activities. In preparation to this meeting, all AR-members were asked to fill in an evaluation questionnaire to give their personal opinion. The evaluation meeting built further on some of the results of the individual assessment. This final evaluation step was conducted in three AR-groups: in Sint-Truiden, in Brussels and in Leuven. The two other AR-groups in Mons and Gembloux did not reach this step at the end of the MESsAGE-project. The stakeholders that participated at the ARs were interviewed separately to ask for their personal assessment.

The following items were assessed.

1. Did you personally learn something about the **theme of mobility and elderly**? What in particular has stuck in your mind, did you expect to learn more about this theme? And how would you assess different aspects relating to the AR (such as the input of researcher, the participation of the external stakeholders (if any), own research conducted as homework in preparation to the meetings, the discussions during the AR-meetings and the discussions and talks outside the AR-meetings)?

2. Did you personally learn something about the possibilities of **elderly participation** in the local mobility policy? What has stuck in your mind about the planning and executing the actions? (positively/negatively)? How would you assess different aspects relating to this (the input of the researcher as external coach? The role of stakeholders, the own research activities done, the composition of the AR-group, the discussion during the meetings, the stepwise approach, (problem analysis, defining priority action fields, preparing the action, implementing the action, the task distribution in the action research))?

3. Was the action research overall a **nice way of cooperation** on the theme of elderly and mobility? What aspects did you like/dislike? Would you engage in the future in a similar project to set up actions on mobility and elderly?

In the three AR groups (Sint-Truiden, Brussels and Leuven) most of the elderly group members stated that they learned something new about mobility through the AR. The contribution of the researcher was assessed as very important in this respect. Also the step-by step approach in the action research was assessed positively by the group members. The number of meetings, the length, conduct and minutes were generally assessed as good. Except for Brussels where some persons had bad feelings about the efficiency of the meetings mostly due to people that only participated once and therefore delayed the AR process. Most of the participants were proud about the actions they realised within the AR-research and they never expected to realise so many things in a relatively short period. Some people confirmed that in the process ,it had often been difficult to distribute tasks and to come up with actions themselves; the composition of the AR-group in this respect was thought to be crucial and it was said to be not always easy to listen to each other and come to a consensus. But at the same time, they thought it was valuable to confront the different opinions. Some people would have liked more active contribution by external stakeholders from the mobility policy (the mobility officer – PT-providers) during the meetings.

After the AR-experience, it was often said that there is still a lot to do in the field. Some said that the same step-by-step approach could be used for a lot of other needs related to elderly people. On the question whether they wanted to set up new actions in the future with the same group, the answer was somehow scattered. For most of the AR-group members, the coaching by an external organisation is crucial, as well as a clear commitment of the city council. Some people also think about a strengthening of the composition of the AR-group with new people with good ideas.

As overall conclusion, we can say:

- Support is necessary. The elderly are really willing to work on the subject, but they need someone to keep them on top of the subject, to divide tasks and responsibilities, to make the minutes, to contact other parties, to explain things, to give ideas, etc.
- They are willing to act, but the talking phase is very important. Without the opportunity to talk about problems, irritations, experiences etc, they can't go any further, first a bottleneck discussion or needs assessment is really needed.
- Without the support of the community or an senior organisation it won't work. They need the coffee, the biscuits, a good place to meet, the personal contacts, the feeling the authorities care.
- The authorities need to believe the elderly can stand up for themselves. From the moment the elderly feel the authorities take over, they don't do things themselves anymore, they won't ask responsibilities back.
- Support is needed for follow-up, the elderly won't do this themselves, although they say to be interested, not only for their own action but also for the actions in other communities.
- When there is too much time between two meetings, it is difficult to turn on the engine again.

2.5 Framework for integration: the 3M structure

The research was meant to cross the perspectives of researchers talking form several backgrounds: the practical (M21), the sociological and anthropological (ULB) and the demographical (VUB). In an effort to get the works of the various MESsAGE work packages to enter into dialogue, the results of the research are presented in a common theoretical framework. This framework is built on the basis of three concepts: Motility, Mobility Practices and Moving around, each of which allow considering various aspects of the question of the experience of daily mobility while aging and analyzing it from several perspectives. The three concepts wear at the same time a heuristical and a political value: on the one hand, they allow building a collective corpus of knowledge and on the other hand, they explicitly point various decisional levers and fields of action in the scope of a sustainable mobility policy.

2.5.1 Motility : potentials

In biology & medicine, the motility of an animal, cell or organ refers to its physiological capacity to effectuate movement. The motility of a fly differs from that of an elephant and that of an eye is not the same as that of a leg or an arm. Transposing this concept to human beings, V. Kaufman proposes to consider the motility as a measurement tool that defines a person or a group's capacity to be mobile, "both geographically and socially" (Kaufmann, 2003). The motility of an individual or a collective (couple, household, …) can be evaluated by ways of a calculation of the resources at disposal and the constraints hanging over him / it. Motility is thus the potential of mobility of someone or of a group. This potential isn't necessarily translated into mobility (potentials are not practices) but can be translated into mobility according to aspiration and circumstances (Kaufmann, 2003).

The concept of motility represents a significant endeavour to apprehend the production of inequalities, one of the crucial aspects of sustainable mobility being to identify and brake the production of social inequality in mobility systems. It allows indeed considering the disparity of people's "mobility situations" and to articulate a series of heterogeneous dimensions. If we follow Kaufmann, the motility of someone can be described and evaluated mainly through three inseparable features: access, skills and appropriation.

- Access : the residential location and what it proposes in terms of access to shops, services and transportation systems; communication and transportation means at disposal : owning of a car, of a driving licence, of a PT season ticket, of a bike; social network, …
- Skills: savoir-faires, physical abilities, acquired skills and knowledge –to be able to fond one's bearings on transport networks, to be able to drive a car, …
- Appropriation : expectations, values, attitudes, perceptions, …

And at last, the motility concept lends itself well to analyze how those various dimensions are related one to the others in a configuration that shape the capacities and potentials to move.

The motility of someone can be evaluated for an individual but is eminently social: one's motility situation is tied to that of other entities which (s)he is associated with (couple, family, neighbours, collectives, …). Motility is said to be contextual: it only exists in relation to particular settings, partially inherited, and constituted by different processes and objects. In one sole life, many motility configurations might be encountered, lived or not.

Two last things are to be said to introduce this concept: motility is, in itself, a very dynamic notion. It can be considered as a process that is not given in advance but evolving in time, from one period of life to another (so motility configurations differ from one person to another and changes, in someone's life, from one moment to another). Finally, motility is a non unequivocal notion. Paradoxes and ambiguities are part of it. Let's illustrate this: what means a potential for some can hinder the action of others (speed of movement of some users of the circulatory space threatens others), a potentiality might become an hindrance (to be able to rely on the car can switch into car dependence when the car is no more available), and some potentials are never activated (the bike gathering dust in the back of the garage). The question is thus: how can motility be enhanced in a sustainable way when people grow older?

2.5.2 Mobility : practices & logics

After having qualified the mobile actor / group and her / his / their mobility potentials, we turn our attention to an understanding of their mobility practices. If we follow Kaufmann, the degree of congruence between motility (potential) and mobility (effective practices, acts of moving) is always the expression of the more or less restrictive nature of the range of possible choices to which the person or group in question has access. It corresponds to choices made among options in a situation. By "mobility", we designate in this context, logics of daily mobility behaviours, the sedimentation of various logics and rationalities in daily practices. Mobility practices are seen as situational and heterogeneity of the actors (human and non human) participating to a movement is uttered.

The aim is here to explore the content of those particular space-times of ordinary journeys in order to understand: which are the various logics at play in mobility behaviours? Why are some potentials

activated while others not? Why are those mobility choices made / abandoned / unmade? What is here carried out can be called a "pragmatical switch": the aim being to understand how particular practices and modalities of mobilities are enacted, encouraged, prevented, hindered or forbidden in addressing the various anchorages and sedimentations of practices and experimentations. The focus is thus now put on the co-construction, in other words, the mutual shaping of practices and mobile subjects able to actualize them. In "mobility practices" chapter, it is suggested to consider entities, beings and relations populating mobility practices, their agency and their transformations as time passes. The question is here: How can sustainable mobility practices and logics be enhanced as people grow older?

2.5.3 Moving around : situations

Moving your feet, driving in the city, walking to the hairdresser… We go here one step forward in the enquiry about the user's experiences, trying to understand how are the particular space-time of movement lived, experienced? What happens during a mere moving about? With the concept of "moving around" we aim to grasp aspects of mobility situations in the course of situated action, on the move and in the circulatory scapes.

Behind the brute fact of getting from A ……to B, travel times include indeed various forms of interactions involving socio-material configurations, human beings (other passengers, people accompanying the journey, individual assuming various roles, land/cityscapes, objects (bags, keys, seats, …), techniques (transport techniques like metro, tram, buses, cars but also mobile phones, i-pods, information techniques, …), invisible realities (souvenirs, imaginaries, …), and so on. What do people actually feel, do, think as they move? A full analyze needs to locate these various actors / agents / actants and entities in the unfolding of practices, in the sites and moments of their efficiency, in particular settings incorporating other persons, artefacts and ongoing activities. This is what is at stake in the third part of the report which consists in an attempt to identify elements which permit to understand how these particular space-times of ordinary journeys are made, experienced and given meaning. This supposes a more phenomenological approach, apprehending sensory and emotional aspects of a mere movement. An ordinary journey is here considered as an event and as an effort engaging a whole of hidden work and travel time as a process during which passengers are simultaneously affecting and being affected. This raises the question: How can the study of the lived experience of journeys enhance sustainable mobility behaviours as people grow older?

2.5.4 Relations between the 3 M

As stated before, this structure isolates aspects and elements that are strongly bond together within daily practices. In the lived experience, the potentials, the practices and the various logics inhabiting them, the experiences of situations themselves are entangled. This is why we close each chapter by suggesting references to other parts and chapters of the present report. There are thus several modes of reading this report. The reader can read it chronologically, form the first page to the last one, or follow our referrals to other chapters of the report that are interrelated.

3. RESULTS

3.1 Motility

3.1.1 Motility – from the sociological & anthropological perspective

More than a scholarly calculation of resources and constraints, the empirical material has shown that mobility potentials –that is *motility*- should be better represented as a fluid *configuration*, a set of elements bound together. This configuration is not something decided once for all and its frontiers are vague and malleable. Some of its elements are statistically measurable, others are not. In this chapter, we ask ourselves what shapes various motility configurations, and try to highlight some of its more silenced dimensions as people advance into old age; dimensions that can only be thought by listening to the actors describing their mobility situation. More particularly, we put the focus on the nature of those ties binding elements of motility together rather than on that of the elements tied up.

3.1.1.1 Motility and Meanings

As Cresswell states, "mobilities involve both material practice and meaning, and it is important to consider both side by side" (Cresswell, 2006). Indeed, a first basic corpus of empirical material could be related to sense making processes. "*As long as I can", "until I'm not able anymore", "as it is still possible".* In the empirical material gathered, such sentences twinkle like refrains. They refer to a certain adequacy between desires and potentials of mobility. An adequacy that is seen as temporary, changing in relation with a variable and abstract temporal threshold . But what does the threshold those sentences mention consist of *(as long as, until, …)*? This threshold has something to do with immobility. What is here put in the foreground is the mutual dependency of mobility and immobility in motility (Beckmann, 2004). To grasp desires and expectations in terms of mobility, it is of importance to first ask how mobility is imbued with meaning.

A. The context of generalized mobility and the various meanings attributed to "movements"

Today, to move is considered as the actualisation of an essential human freedom, as a value in itself, a right which frames access to citizenship and well-being during late life as at any stage of life (Size, 2003; SoA report MESsAGE, 2007). Simultaneously, in social sciences, we nowadays assist at what is often called a "mobility turn". Mobility, in its various forms (spatial, social, virtual, temporary or long lasting travels, daily or residential movements), has reached the level of a contemporary paradigm that "goes beyond societies" (Urry, 2000, Kaufmann, 2002).

Besides, in social sciences as in public debate, mobilities are more and more considered as sites of construction of differences. "Mobilities are enacted and experienced differently by different people and some mobilities depend on the relative immobility of others" (Cresswell, 2001; Massey, 1997, Verstraete 2001 in Cresswell 2006). Some authors have recently addressed mobility as an ambivalent concept, being a constraint and generating tensions in people's life, bringing up the importance of obstacles and blocks, inequalities and constraints people face in their daily behaviours (Juan, 1997; Le Breton, 2008; Bonnet, 2006; Orfeuil, 2004). Highlighting the normative content of the prevailing discourses about mobility and pulling apart the occasionally over-enthusiastic celebration of all things mobile, such works utter how mobility and immobility constitute each other. They show how fixity, obduracy, roots, attachments and locatedness are not the opposite of mobility but are strongly intertwined with what mobilities "are", and with the ways they become meaningful.

As has been stated elsewhere, the idea that a lack of mobility is something that must be rectified, a problem in itself "reflects a tendency to equate modernity with mobility, and therefore to see a lack of mobility directly as inequality" (Richardson & Jensen; 2008: 219). This equation must be problematised, otherwise it could just peddle supposedly neutral norms or standards. So the concept

of motility relies first of all on the idea of correspondences and discrepancies between a certain situation, the potentials it offers on the one hand and mobility desires within a normative context where mobility is strongly enhanced and immobility seen as a lack or a defeat on the other.

B. Between constraints and desires

A first contrast can be pointed out in the discourses gathered: a dual sense of immobility, expressed in phrases such as being *pinned down* from wished or desired immobility, or alternatively linked with ideas like *moving is not of my taste any more*. The one and the other are experienced in an opposite manner. Some people say they are driven mad staying without moving, they mope in a constraint immobility while for others, on the contrary, this immobility correspond to a desire: If I can send someone, I'll prefer. I don't need to go out (N, Leuze CD#3) *I know I should go out more often, but I am rather a stay-at-home woman* (G, Plancenoit). This late kind of withdrawal from the outside doesn't reduce the ambient mobility as, to be feasible, it relies on a whole network of movements usually designated under the concept of "Reverse mobility[5]" ?

This being said, in the words of the people we met, the "real" oldness is often associated with people being restricted in their movements, as precisely stated by one participant during a collective discussion *Oldness is a loss of mobility, as well physically as intellectually* (E, Braine CD#1). Following C., one of our collective discussion's participants in Leuze, not being able to keep track of the fast technological information and communication evolutions is part of the spatial mobility question. It doesn't give a sense of self-esteem if it indicates that you lose another form of mobility, the mobility of the spirit (C, CD Leuze #3). For C, the speed of those transformations is disheartening. *Communication technologies are another form of mobility. Internet and the like, I don't know anything* about them. If I was twenty years younger, I would learn to use it, at least to know what this all goes about. (...) Internet, I would say, is a means of communication that is out of reach for us (…) you blame yourself not to be able to make that effort but you're behind. It's no use anymore (C, Leuze CD #2). We could indeed, like C, talk about two distinct and connected forms of communication strongly intertwined in today's circulatory systems[6] .

As we will see it all along this work, mobility, in all its possible guises and forms, takes part in constituting what oldness is[7] . The idea of increasing immobility isn't valued, total immobility becoming a synonymous for death. That kind of immobility strikes fear into people's life. This is why some people talk about forcing oneself, '*mordre sur sa chique'* (A, Leuze), clinging to what progressively slips out of reach. These people develop strategies to "hang in" and to postpone "what's next". In a world of generalized mobility, lesser mobility and immobility are pushed forward in an effort to outsmart the movement of getting older[8] .

C. The changing thresholds of immobility

So immobility is seen as a threshold that can occur at different moments and levels. Throughout the biography of a person, we can distinguish between temporary (immobility forced by a fall or accident for example) and more permanent forms of immobility. Abandoning car driving, refraining from public transport, ordering delivered meals, move to a residence with care services: these are some steps towards a higher degree of immobility, as perceived by the person. They represent thresholds that can be decided upon by the individual, but it is often a collective decision implicating professionals (doctors), relatives or friends. Successive thresholds are often triggered by events that question or reassess the degree of mobility: a fall, an accident, a surgical intervention ….

Often considered as a crucial threshold for people whose mobility strongly depended on the car, the demotorisation process profoundly exacerbates motility configurations. Some narratives gathered tell the strong ties forged between habits, people and thing : *My father sold his car when he reached the age of 85 years old. Then he died. As if he had abandoned the wish to live from that moment on. Or as if he had decided, by selling it, that it was enough* (P., Leuze).

[5] Reverse mobility means that people come over, sparing people of going out themselves
[6] To know and be able to manipulate Internet allows searching information on PT networks and timetables, as well as on events occurring and the ways to reach them >> See "Peripheral objects / actors preconditions to mobility potentials".
[7] See "Situated identities
[8] See « The double movement of acceptance and resistance».

Such thresholds are often pushed forward or postponed *until I'm really not able any more*[9] . Which mean that they are malleable and that they are made of elements of varying nature. L (Brussels) tells us that she doesn't go out anymore because of a hip ache. She can only walk with a hand on her buttock. *One cannot expect me to walk the streets like that*! (L., Brussels). As time goes by, the pain remaining, she doesn't go out anymore. Others will resist walking assisted by a crutch or a rollator. A socio-psychological threshold (refusal to be seen with a sign of lesser mobility or identified as lesser mobile) can turn into a physical threshold as the body loses its habits to move around. The malleable thresholds of immobility pointed in the empirical material and the various meaning they are given are thus strongly related to motility configurations: By endowing im-mobility with meaning, mobility potentials are reconfigured. An apparent paradox thus appears: those thresholds of immobility are also, to a certain extent, stimulating: they entail reconfigurations, they appeal reflexivity towards potentials and constraint.

D. Somewhere to go, something to do

Analyzing the meaning of mobility, it must be asked « what does mobility make? » and furthermore, « what does mobility allow to make »? Indeed, more often than not, to move, a motive is needed: a reason to go out. Reasons to go out might change with the retirement or the departure of the children. Shopping, medical care, administration, dog walks, hairdresser and visits to relatives are some of the reasons to go out the most frequently cited during our interviews. Relatives might become less and less numerous: as stated by some of our respondents, the older you get, the less people you know. The world, when growing older is becoming depopulated. *There are only new faces, I do not recognize anybody anymore* (Woman in the street, Braine). Some have left, they moved, there are those you don't see anymore and the others died. But things are not so clear cut: If the world is less populated on the one side, it can become more populated on the other. For example, new relationships are fostered through (mutual) help systems (cfr. Social cab driver, home help, mamy sitters, …). New networks might also be created through participation in senior associations or animation for which mobility in itself appears sometimes as symbolic core of the actions (avoid immobility as well as isolation, cfr the sheet of UCP called "le Dynamique"). Senior associations are often well informed about mobility difficulties of their participant and sometimes implement inventive transport solutions.

But what about strolls, then, or the so-called « mobility per se »? Indeed, this kind of mobility should not be neglected, on the contrary. Besides the idea to go out for some fresh air, strolls can also find their motive in contemplation, in being touched, affected by the world (Despret, 1999; Latour, 2004; Winance, 2006). Strolls in public realm is an occasion to nourish the feeling of belonging. *The feeling of still being part of the world of the youngers* (E, CD Braine #1) one participant referred to. This joins a whole theoretical reflection on the relation between motion and emotion: motion, as Massumi states (2002) produces emotions (Ahmed, 2004; Sheller, 2004; Adey, 2007): "the mobile body moves as it feels and feels as it moves". Similar ideas are developed in disabled studies on people being restricted in their movements (Winance, 2006; Akrich, 1999; Moser, 2006). The sense and meanings of movements are endowed with some kind of vital meaning linking mobility and movements with the capacity possibility of being affected: "To have a body is to learn to be affected, meaning "effectuated", moved, put into motion by other entities, humans of non-humans. If you are not engaged in this learning you become insensitive, dumb, you drop dead" (Latour, 2004: 205). Movements in public space becomes an opportunity to observe life as it unrolls and to be part of it, even if our respondents also evoke more static ways of being transported elsewhere (Moser, Law: 2001): a piece of music, the reading of a book or watching TV are other forms of encounter which provoke some kind of displacement in space and time.

3.1.1.2 About changes: Transitions & transformations

The life course can be regarded as discontinuous and fragmentary, especially when advancing in old age. Periods of change alternate with more regular phases. As a consequence, there are varying configurations of motility through life: mobility potentials and constraints are changing. Configurations change when rigidities limit flows, or when fast or abrupt changes occur. We can thus differentiate at least two kinds of changes: slow transformations (progressive or so slow that they can even remain

[9] See "Placement and displacement" in Motility configurations and residential mobility

unnoticed) and sharp breaks, that can be called (life-)transitions (when things radically change from one day to the next).

A. Shifting grounds and reflexive periods

"*You know, changes happen progressively. It is only after a certain moment that you notice that you don't do the things the way you used to…"* (J, Brasschaat). As stated by J, some transformations occur progressively, others don't: retirement, an accident or surgical operation, a new love, the passing away of a relative, the selling of the car are other forms of change that challenge everything. *When people retire, that is when appear the shock of the beginning of oldness* (E, Braine, CD#1), or more dramatically evoked in the same discussion *You retire and, overnight, you are nobody anymore. A little pensioner as many* (R, Braine, CD#1). Following C. Laz, such events may work like age clicks / pinches. They signify a certain intensification of the growing old processes (Laz, 2003). They work as pivotal moments redefining potentials: there is a biographical 'before' and 'after'. From that moment on, possibles are seen in the light of the particular event. Disrupting the order of things, those moments of transition function as periods of crisis that manifest what is, to a certain extent, usual and taken-for-granted. Such transitions commit reflexivity and raise awareness about « what holds the person together », what holds her / him as a whole (Mol, Law, 2004). Suddenly, time is interrupted to shift onto another path. These changes provoke readjustments in the daily habits. They engage processes of negotiation and adjustment to the redefined situation. In order to face the situation, and get along, people conduct enquiries and set up strategies. After a while, those transitions are incorporated in the reconfigured daily life and those strategies and the collective networks supporting them are, again, rendered invisible or taken-for-granted. The implication of other people in those transitions as well as in the manner they are lived and mastered can be underlined: *since my accident, my children forbid me to drive* (J, Charleroi), *The nurse told me not to take the bus anymore : if I fall, it might be the end, so I do not want to go out alone anymore* (M., Brussels).

Changes (transformation and transitions) can be considered from at least two complementary perspectives: from the individual's point of view and from the point of view of the world s-he is living in. The transformations and/or transitions of the person and the context are interacting with each other[10] . A multiple diachronicity acts upon motility configurations and several calendars are mutually phasing each other, namely the situational, the biographical, the generational and the historical calendar.

Mobility potentials are to be considered in the light of the spatial and temporal mutations acting upon them. We built the first house of our street (E., Brugelette). The periurbanisation phenomenon, the increasing distance between housing and professional locations, the spatial dispersion and centralization of services and shops, the mutations of the PT systems are some of the transformation that profoundly affect motility: It was fast but, at the same time, we didn't really realize it. New norms are raised, new risks emerge, and referents are totally different. As says T, in our second collective discussion in Brussels: *Nowadays, it is totally different from my time, you just can't compare* (T, Brussels, DC#2). Considering the contextual dimensions of changes in motility configurations, one of the recurrent topics of discussion was the transfiguration of the circulatory space, the streetscapes and the sets of rules managing them: *there was not so much traffic and there were not so many rules, everything was self-evident* (K, Brasschaat, CD#2). The transformations of the circulatory space can be summarized in three words: increasing volume, speed and complexity. From a non structured space mixing traffics and regulating itself automatically, it became a space where flows are distinctly separated and regulated by a far reaching set of rules orchestrating movements. The rapid transformation of some technological devices was also underlined. New habits are taken[11] . As stated before, these changes might happen suddenly or progressively. One might adopt them or not.

The actor's changes affecting mobility potential are of various natures. It can be the transformation of her/his body, relations, and more generally of he/his ties with the world.

- *You do not realize that you get older. – Well, you do not feel it except when you suffer* (T & T, Brussels CD #1). Besides the question of the pain, several other bodily considerations are recurrent. They generally indicate a lesser swiftness, a lesser agility, and suppleness of the body. A certain fatigue. *You do not have the same reflexes*. To see and hear less also entails to learn to « cope with »

[10] See "Memory Works".
[11] See "The experience of car driving".

this new sensitiveness[12] . We learn new gestures and it comes just like that. *Like A. and his hand. At the beginning, he had to ask me for everything, and then he got used to it, he learned, I don't know*… (S, Leuze). Contrary to statements from the functionalist theories of disengagement (Cuming, Henry 1961), in the material gathered, transformation as growing older might not only be apprehended as loss or progressive decline. André, for example reports to have better sight since a surgical eye intervention. Changes are nor linear nor univocal and some interventions delay / invert the effects of time (a late love, for example, as shown during this research). Rather than a linear vision of the growth in old age, the empirical material prompts us to a vision in terms of back and forth, jumps, stops and new departures. Growing old entails changes in the relations between the person, her body, her world and urges a consideration of the ties that build and hold together the person. Some changes happen automatically, without any conscious intervention while others require a lot of work. A work of adjustment that is often hidden and reveals collaboration between people, bodies and devices (Suchman, 2007). Motility configurations are thus changing as time goes by. Changes of the world and changes of the actor interact with each other, forging new constraints and presenting new opportunities.

B. The double movement of acceptance and resistance

Following our empirical material, we can distinguish a double reaction when facing changes (affecting the actor and affecting the world): the first one is to accept adjusting oneself to the changes. This can lead to accept to abandon part of one's faculties, to take other paths or renounce to some, to learn to move in a different way, to adopt new routines. It can also mean to adapt things, aspects and configurations (like buying an automatic car, like using a crutch or rollator or adding a pillow on the driver's seat, …). Expectations and goals might be revised; differences are embraced, and even claimed rather than rejected (Moser 2006)[13] . The second one is to resist changes. To struggle to *stay the same*. To continue activities, for instance, is sometimes presented as a strategy of resistance. Forcing oneself. Not accepting not being able anymore. Deciding not to adopt new ways of doing things and keeping new technologies at a distance might be part of this movement. As said during one collective discussion, *you have to accept and do a little bit more* (S, Berchem, CD#1).

Acceptance and resistance are not contradictory. They are part of the same movement, which is a double movement acting upon motility configurations. Rather than talking about adaptation or successful aging processes, we propose to talk about a negotiation of the various forms of those processes, processes that can be ignored, denied, resisted, eluded, accepted or claimed[14] .

- *Oldness, you should rather avoid to think of it. You go on with the living, that's all.*
- *You have to accept, little by little.*
- *It is the living process! (T&T, Brussels, CD#1).*

Oldness, you have to fight against it all day long. People do not realize it but it is a day-to-day struggle (T., Brussels, CD#1). *Having leisure activities, seeing people, it is to take away from growing older* (E, Braine CD#1). Mobilities in themselves are told to hold a role in strategies of resistance, as expressed during a collective discussion[15]: – *Arthorsis can be overcome by walking* (J, Braine, CD#1).

People accept and resist, or as Callon should say, are formed and transformed (Callon, 1986), and so are motility configurations: they are formed and transformed in the same movement. Those acceptance / resistance movements that act upon motility configuration act at the scale of a whole life or at the scale of an ordinary journey. If there is a stabilisation of motility configurations, it is always relative and temporary. Things, bodies, people, technologies, ties might consecutively resist and need new adjustments (either accepted or resisted). This reflection is given a concrete content in the following point.

[12] See "Mobility Situations"
[13] See "Enactment Stories"
[14] "When I complain, I say oh I'm so old, I invoke the forces of old age, somebody tries to cheer me up by saying « no you are not so old", I smack him with my cane!" (Deleuze, 1996[1988]).
[15] >> See "Motility and Meanings".
>> See "Enactment Stories.

3.1.1.3 Motility and residential mobility

Often, and more in general, people tend to have a residential mobility in function of daily mobilities. In other words, when people move to a new home, they will take their daily mobilities into consideration. It is interesting to look at how the (future) choice of housing influences and is influenced by all sorts of mobility ties. For the people moving into old age we interviewed, we distinguished several considerations having to do with daily mobilities. One recurrent consideration is to move towards or not to move further away from family members (especially those who already invest their time and effort in them at present). This is not mainly to reduce their own travelling times, but those of the others coming to them. So, in this way they facilitate reverse mobility. *My daughter Else says 'you should come to live in Mol, Leo has an apartment'. But that is in Olen. Leo says there is a small chapel just across the road. Then they say: 'then you can go do things with us, to the theatre, or go out walking or cycling* […] *And my other daughter says: 'mother, you can move, but if you do it will be towards Kapellen* [where she lives]. *Otherwise we always have to come to Brasschaat*. (R, Brasschaat).

In other cases, a phenomenon that has been talked about a lot during interviews, there is a removal towards centres: the centre of the village or a city centre. Reasons given include moving closer to (concentrations of) shops, certain services (health, financial, …), or networks of mobility (mainly PT). *I always say, my sister she lives in Namur [city], and I say 'you don't know how lucky you are!'. She is in university for the third age, she has the theatre, she has… Here, you don't have anything! So you see, you have to have another viewpoint when you decide to move.* (E, Soignies). The physical/ geographical reconfiguration means a reconfiguration of their motility in another, extensive way. This means that some relations, some ties will be 'stretched', while others will be 'loosened' which can lead to a 'reinforcement' or 'weakening' of the relation.

So Movements have to be considered in relations with temporary or more permanent anchorages of individuals and collectives. mobilities are tied with localisations. Mobility is often linked with the « aging in place phenomenon ». Living 'at home' for as long as possible, the people met will often postpone the time to move in a nursing home. The decisive threshold is often related to a mobility threshold. This threshold can be physical (the body that fails), but it can also be related to certain missing relations that make it possible to stay 'at home'. This phenomenon changes to population of care or nursing homes because, as C (Leuze, CD#3) says, *people are ever more 'further' when they arrive at the care home: they will have waited for the moment they cannot walk anymore.*

Listening to the ways that people anticipate the decisive threshold, we can get an understanding what makes possible the organisation of the mobility of a person. *As long as it is the two of us, it's all right, but if one day I'm alone, I'll go to a [care] home* (S, Leuze). The decision to move to a home for the elderly often involves third parties like family and professionals. This reveals the necessity to find other configurations, to ease tensions. It should also be added that the question of mobility and of differentiation through mobility is not absent in care or nursing homes either. There differentiation exists in those who can still move outdoor and those who cannot.

3.1.1.4 Motility configurations and [mutual] support systems

As seen in the previous chapters, to move means to mobilize a whole set of ties. This set of ties consists of several modes of delegation & collaboration: delegations to devices, techniques, people and collaboration with such entities. Again, several configurations are possible. And configurations evolve as time passes: when changes occur, people are challenged to face their potentials. Being not taken-for granted anymore, those potentials suddenly become visible. The actor (individual or collective) faces the network on which s-he may rely to move and in what condition. S-he becomes aware of his/her allies (Callon, 1986). For some, this might be rather awkward: The difference with before, and with younger people, is that you have fewer alternatives : *At the age of 30, when you have a transport problem, you go by bike, take the scooter, the bus or go by foot. While with age, possible alternatives are less and less numerous* (A, Braine CD#1). When a potential is required but lacking, not directly accessible, or not activated 'automatically' the person or the collective under question have to ask for support. The ways given support is received or experienced often remain out of the scope.

A. Having to ask

A certain reluctance to ask for support or help was often expressed during the encounters. This brought along a further enquiry into what the rejection is about, the situations raising this reticence and the possible ways to overcome it. *I am not of those who ask for help, even if not doing so implies tiring myself. You should not ask, otherwise you have the negative return* (E., Braine CD#1) I don't like being the one who asks. The reluctance to « ask for help » is expressed in relation to feelings of pride or because people don't want to disturb others. Sometimes the facing of possibly negative answer is avoided. Most of the people told us to do things as long and as much as they are able to. For some, asking for help is seen as synonymous of "having to depend on".

We might add some slight nuance: the discomfort is rather expressed by more recent generations, maybe more likely to be touched by independent and autonomous ideals, for them, the difference with a former situation is more blatant. Also, the reluctance might be related to specific constructions of masculinity and femininity (Smith & al., 2007): The question of care or support in mobility -which for some culminate with the demotorisation- appears to affect a feeling of autonomy and power enacting a certain "being male". It entails a shift in control and also inverts the balance of care giving. Finally, tensions about asking for help are much more addressed in rural or peripheral contexts. Reliance on others might be seen as stronger there while, in urban contexts, home delivery services count as important actors supplying personal mobility.

To accept or keep away and resist assistance might be a way to preserve the concerned relation (for example: avoid to bother) but also to maintain a presentation of the self as independent and to resist a definition of the self as lacking something. Briefly said, to maintain continuity with a former situation[16] . It also means not being free to choose and loosing some kind of control over the situation by becoming a tributary of the supporting system at hand. A system which imposes its own laws and logics (the person has to be disposed and to have time to spend for you), as expressed by this mother *: I don't like to ask my son, I think he rides too fast* (N, Leuze, CD#2). This underlines the importance of questions of power and control within support experiences : *One likes to do things in one's personal way (…) I come and leave when I feel like it.* (Y, Leuze, CD#2) and as well the simultaneous acceptance of things that cannot be controlled in life coupled with greater fear of loosing that control. For others, on the contrary, support receiving is not threatening for the self.

B. In search of the appropriate help

Besides the routinised appeal to some actors[17] of the network, which do not require to be "asked", people are sometimes forced to seek after help and, most importantly, the appropriate help provider. Support can come from friends, relatives, neighbours, institutionalised systems or technical devices. Some relations are activated sometimes, for some purposes, while others are mobilised in other contexts. To be efficient, support must be adjusted and this work of adjustment (Winance, 2006) must be started again each time the "ally" changes[18] . But what kind of calculation do the actors engage in facing one particular situation? How are these questions solved? And on which logics do they rest as time goes by?

The mobilization of parts of the supporting system lies on practical constraints, on availability and responsiveness. It also takes into account the changing nature of interpersonal relations (conflicts, …), which entails a redistribution of the control on actions. Becoming unable to perform a daily task, some people will first try to manage by delegating as much as possible to technical systems instead of asking for help. In the delegation to technical systems, people preserve heir decisive power: they can decide when, where and –at least to a certain extend- how the requisite support will be provided. As such, one preserves the feeling of independence (Smith al., 2007; Moser, 2006; Torres & Hammerström, 2006: 292), even if it doesn't avoid a certain kind of dependence. However, having to depend on the timetable of a bus service is not the same as depending on a relative for a lift. Neither do you feel indebted to the cab driver as one can be towards a relative or friend helping you for a drive. *The difference is that when you do it that way, you are still the one who decides (*P,Leuze) I do not ask anybody, I order the social cab! (C. Leuze, CD#2). Institutionalized support systems (taxi

[16] >> See "The double movement of acceptance and resistance".
[17] *L'idéal, c'est que parfois, il ne faut pas demander. Ca se passe, c'est tout (Y – Leuze, DC#2).*
[18] See « walking (together) on irregular pavement »

tickets, social cab, municipal or local (shopping) shuttles, bel bus, minder mobile centraal & so on) here represent now an essential alternative for those making use of them. But many of the people met ignored their existence and conditions of availability.

To mobilize support systems such as social cab, belbus or the like supposes that the user is accustomed to the system and its modalities, from the timetables of the driver to the number of places available in shopping shuttles and the delay to forecast to be sure to get a ride. It doesn't work spontaneously. *If you decide at the last moment, you probably won't have a place* (C, Leuze CD #2). In peripheral areas such services are sometimes implemented in an informal manner at the scale of a village or neighbourhood, made up for the lack of a formal system. Also the official system might be unable to meet the demand, or might require a too high flexibility from its users. Furthermore, social cab services and the like work only for certain journeys, considered as necessary: shopping, medical care, administrative formalities. Depending on the nature of the journey, the social cab being unavailable, people will ask for an ambulance in the case of medical journeys, but they will then be compelled to wait for all other patients to be fetched and will also pay a much higher fee. Twists of the system at once indicate gaps in the current conditions and show inspiring new opportunities: wrapped as a shopping trip, the ride might open up the possibility to visit somebody. Current systems are also limited to a restricted spatial area. For some, formal and less formal mobility support systems constitute an opportunity for tying specific sociability's, as shown in the case of the social cab of Leuze, while for others, the [supposed]labelling entailed by its use will be dissuasive. Technical / institutional support and its use might work to make of or enact several realities: lacking something, dependnent, (dis-)abled, free, autonomous, independent, smart …and those labelling come to matter, making the use of such services conceivable for the person or not (on such questions, see Moser, 2006).

Concerning parent-children relations, care giving in terms of mobility is a central issue rooted in earlier family relations and experiences (Merz & al., 2007). Some of our respondents are still taking care of their older parents but say they won't accept their children to do the same for them. Transformations might be connected to contemporary evolutions in ways of living: familial structure's transformations, geographical scattering of relatives, amongst other, have an implication on familial support relations (Connidis, 2008). A recurrent idea is that children must be "sympathized with": they have their own rhythms, children, worries. At least until a certain threshold, often a medical one. With the extension of the life span, a growing number of people will be in demand of support while, at the same time, their adult children will be in a similar situation. As such, relations of geographical nearness, as neighbours (at the scale of a building, in cities, as at that of a street or a village), hold a crucial role: they rest upon a "collective doing" that can compensate the lack of a closer familial network. Those relations themselves undergo a certain change with the current acceleration of the turnover in rental market coupled with effect of age: *We used to know everyone in the neighbourhood. Now, we don't know anybody anymore* (Woman in street, Braine).

In considering someone's network and its various relations as a whole, a collective articulation of practices inside various networks (family, association, neighbourhood, friends…) appears rather than a one-way supporting system. The actor is supported by and supports a set of ties and bonds. Underlining the social costs of asking for help we must consider the various strategies mobilised to reduce that cost. What must be emphasized is the affective dimension of collective supporting systems. Asymmetry can be solved or regulated by gift – return gift systems. Take care of grand children, pay the journey, cook a cake, do the ironing, render available the empty garage for neighbours to park … The material gathered shows complex supporting systems which blur the status of support/care-giver and –receiver. The expression « mutual help systems » would better suit the experiences recorded. When we look closely, the networks supporting someone appears at the same time continuous and variable, fluid, going through gradual changes.

3.1.1.5 Peripheral objects/actors: preconditions to mobility potentials

We introduce the concept of peripheral mode preconditions to make up for a lack in literature on transport and mobility. In this literature there is often mention of the transport modes on the one hand, and certain – rather indirect - preconditions on the other. We look at whether a household has a bike, a car, etc. and look at the financial resources, driver's licence, and so on. When mobility is studied from a pragmatic point of view, these preconditions still stay relevant (because they will influence the mobility that is produced), but other preconditions come to the fore. When going out by bike, it isn't

enough to have a bike. One needs all kinds of objects that at first sight don't seem important, but that can determine whether or not the bike is used. Frequent bike users we interviewed have a whole range of objects that accompany them to be 'prepared' for using the bike. Like R: "*I always take sunglasses and an umbrella, they are in my cycle bag. [...] Going by bike, I need my two cycle bags, and another small bag that is attached to my handlebar. In that bag there is my mobile phone, two pieces of two euro, a cloth and a small hood to cover my saddle when it rains. The large bags I need for my shopping."* (R, Brasschaat).

Now we would like to draw attention to these, not to minimise the importance of other processes (we could also mention issues of skill and knowledge besides the above-mentioned preconditions), but to render visible these seemingly superfluous/ nonessential objects or dispositions. Not only are these objects and dispositions less essential than the mode itself, they can also be 'held accountable' for the reluctance people sometimes have to switch modes. In the 'becoming' of a biker, even just an ordinary one, people have to have a whole network of objects to be a biker. This becoming has to be seen as a process, a learning/ having process that some people are just not willing to pass. Reasons for this could be of a rather practical nature (I want to go out by bike, but I don't have the appropriate vest for this weather; I need to take this or that by foot, but I don't have the necessary bags/ transport objects; …), but it can also be related to identity processes. If there is a discrepancy that is felt by the person between what he actually has to be a biker and what is actually needed to be a biker, this can lead to cutting short the becoming of a (regular) biker. We can draw parallels with sports to make ourselves clear: becoming a jogger isn't that 'easy'. Yes everyone can go out to jog, but that doesn't make you a jogger. Besides the body techniques, skills and knowledge of where and how, you need the right shoes, the right outfit, perhaps you need an MP3 player, or someone to go out and jog with, … So a 'jogger' isn't simple the 'person'. It is 'the person + the shoes + the outfit + the MP3-player + the jogbuddy'.

Rendering visible the materially heterogeneous network of actors that are seemingly unimportant can lead to a better/ other understanding of mode use, of 'being' this or that mode, and how to 'become' this or that mode. Further, incompatibilities between certain peripheral preconditions and certain modes (and their infrastructures) can put a stop to or even impede changing to another mode.

3.1.1.6 The concept of autonomy in an attachment perspective

From the motility point of view, the carrying out of daily mobilities means that the potentiality of mobility is realized. This realization entails the performing of certain articulations within the realm of potential ties available to the actor. In doing this realization of mobility potentials, different things can happen with the articulations. These articulations can develop in different ways (through the realization of mobility potentials). Articulations that are regularly performed will eventually stabilize. These routines inflict a "black boxing" of part of the network of actors that makes the realization of potentials possible. The network or some of its actors only reappear when problems occur, i.e. when small shifts or larger transformations occur in an actor's network or in the lives of people growing older.

- *I think that nowadays, mobility raises all kind of problems at any stage of life if you don't dispose of a car*
- *Well, not for everyone…I do not own a car*
- *Yes but then you depend on someone to move?*
- *Ah yes*
- *There you go!* (F & Y, Leuze, CD#2).

As motility is reconfigured for people growing older, an erosion of their autonomy can easily be alleged. But what kind of autonomy is at stake? Why is autonomy so valued and what could be its definition within our cultural horizon and ontology? And how come that "automobilized" mobility behaviours seem to fit perfectly well in those schemes? According to Myriam Winance, usual definitions of autonomy « consider the autonomous individual as deciding and acting alone, without making use of help of others, and the dependent individual as not being capable to realize or execute diverse daily activities without falling back on the help offered by others. These definitions are unaware of the plethora of relations that structure and maintain the individual qualified as autonomous. Autonomy doesn't mean absence of ties, on the contrary: an autonomous person isn't a person that acts and decides alone, but one who's decisional power and capacities to act are supported by

multiple social, technical, institutional, symbolic, … relations […] Action is distributed and delegated between human and non-human entities one associates with » (Winance, 2007; our translation). It is thus through the redefinition of autonomy that we can move away from definitions that obscure the normatively of their content.

Defining autonomy as the distribution of agency between different human and non-human entities of bodily, technical, social, institutional, … nature, we forsake a definition of the autonomous as self-sufficient. Furthermore, a more complex approach allows seeing what 'holds a person in place' and what makes it possible for him or her to move (or not). This new definition parallels the multidimensional concept of motility. The grip people have on the world can be accounted for in a way that doesn't necessarily centre the question around one sole entity and its capacities (Ball et al. 2004). Or in the words of one respondent: *In some ways, one constantly depends on anybody. It makes up mobility as one big whole* (C, Leuze CD #1). We pass from a conception of autonomy that divides and separates toward a definition that holds people, devices, things together.

This can be addressed through the concept of 'attachment' (Hennion, 2007; Latour, 2003; Winance, 2001) which propose a version where autonomy is held together by a moving configuration where people, bodies, objects and devices are articulated and bond together. The question is then 'what makes it hold together?' A conception of autonomy based on the notion of attachment allows looking at mobility as a reflexive practice, and allows leaving aside classical deterministic schemas and enrolling more entities into what makes up motility. Motility, in this perspective, becomes a fluid, evolving configuration of attachments. Attachments that are based on different elements—objects, collectives, devices, schemes, bodies, and conditions—and that are each given their importance. An infinity of configurations is possible. Configurations that are not fixed but moving: attachments disappear, transform, evolve, others emerge, … Such an approach invites for a revisiting of questions of the grip on the world (prise/ déprise/ reprise), dear to contemporary sociological debates on old age and aging (Caradec, Membrado, Druhle, …). Mobility, from this viewpoint, is considered as a "problematic modality of attachment to the world" (Hennion, 2003). Moreover, the attachment perspective lays bear the distribution and reinforcement of certain attachments, or certain groups of attachments, and less of others (Latour 2000). The attachment perspective underlines the creative ability of actors and not only their reproductive one. « In other words, a pragmatic presence to the world that we make and that makes us » (Hennion, 2003).

3.1.2 Motility in a quantitative perspective

The concept of motility represents a significant endeavour to apprehend the production of inequalities, one of the crucial aspects of sustainable mobility being to identify and break the production of social inequality in mobility systems. It allows indeed considering the disparity of people's "mobility situations" and to articulate a series of heterogeneous dimensions. If we follow Kaufmann, the motility of someone can be described and evaluated mainly through three inseparable features: access, skills and appropriation.

Access: the residential location and what it proposes in terms of access to shops, services and transportation systems; communication and transportation means at disposal: owning of a car, of a driving licence, of a PT season ticket, of a bike; social network,…

Skills: savoir-faires, physical abilities, acquired skills and knowledge –to be able to fond one's bearings on transport networks, to be able to drive a car,…

Appropriation: expectations, values, attitudes, perceptions,…

3.1.2.1 Access

In the OVG study a large majority has a net monthly income between 496 and 1240 Euro, while in the MOBEL study a large majority of the elderly has a net monthly income between 746 and 1860 Euro and only 13.5% can rely on income less then 745 Euro a month.
In the BAS study however 27% has an income lower then 1000 Euro a month, while 36.7% can rely on an income between 1000 and 1499 Euro a month. Moreover 40% of the elderly indicated that they experienced difficulties to cope with their monthly income.

Next we focus on the residential location and what it proposes in terms of access to public transport, bus stops, the adequacy of the crossings, benches and public toilets.
In general 26% of respondents complain of inadequate public transport facilities and the lack of benches (38.9%). Remarkably when we compare Brussels with Gouvy, a large city with a rural community in the Walloon region, in Brussels only 20.5 % of the respondents complain of inadequate public transport or a lack of bus stops (22.1 %)(Chi^2= 16.45; df= 2; p>.05), while respectively 49 % and 41.4 % did in Gouvy (Chi^2= 33.72; df= 1; p<.05). Between Brussels and Gouvy no differences occurred concerning complaints of inadequate benches or public toilets.
However elderly in Brussels (31.7 %) are less satisfied with the condition of the sidewalks than their counterparts in Gouvy (15.4 % (Chi^2= 30.09; df= 1; p<.05).

Moreover no age differences concerning the lack of public transport facilities or benches can be noticed. About one quarter of the population, especially the oldest old, indicated that they experienced difficulties accessing bus stops and that the crossings were inadequate in their neighbourhood. Remarkably the lack of public toilets is one of the main problems in the neighbourhood. Especially the youngest old mentioned the inadequate distribution of public toilets. Moreover only 38.5% is satisfied with the condition of the sidewalks. The bad condition of the sidewalks restricts elderly to get access to the public space.

Table 5: Shortages in the neighbourhood (BAS, Flanders)(%)

Inadequate:	**60 – 69**	**70 – 79**	**80+**	**Total**
Public transport: Chi^2= 1.72; df= 2; p>.05				
Yes	25.8	26.0	26.6	26.0
No	74.2	74.0	73.4	74.0
Bus stops: Chi^2= 24.80; df= 2; p<.05				
Yes	24.1	26.0	26.9	25.3
No	75.9	74.0	73.1	74.7
Crossings: Chi^2= 22.05; df= 2; p<.05				
Yes	23.7	24.8	26.7	24.6
No	76.3	75.2	73.3	75.4
Benches: Chi^2= 2.75; df= 2; p>.05				
Yes	39	38.4	39.6	38.9
No	61	61.6	60.4	61.1
Public toilets: Chi^2= 15.71; df= 2; p<.05				
Yes	43.8	42	41.3	42.7
No	56.2	58	58.7	57.3
Sidewalks: Chi^2= 51.912; df= 8; p<.05				
Not satisfied	16.4	18.3	19.7	17.6
Rather dissatisfied	20.1	20.3	19.5	20.1
Nor dissatisfied, nor satisfied	24.4	23.4	23.2	23.9
Rather satisfied	30.1	28.7	27.5	29.2
Very satisfied	9	9.2	10.1	9.3

3.1.2.2 Skills

In this part we focus on the possession of a driving license, physical health, falling and experienced problems with transportation.

A. Driving license

Although the OVG research indicates that more than 70.7% of the respondents dispose of a driving license, this is more likely for men (90.8%) than for women (50.4%) (Chi^2= 616.58; df=1; p<.05). 77.5% of the elderly aged between 60 an 69 years dispose of a driving license, while in the age group 70-79 years this is the case for 66.2%. In the oldest old, the possession of a driving license drops to

39.8% (Chi²= 166.12; df=2; p<.05). Contrary to the high percentage (70%) in the OVG databank only 57.5% of the elderly disposes of a driving license in the MOBEL sample.

B. Physical health

In the BAS study the MOS scale (Medical Outcome Scale, Kempen et.al., 1995) was included in order to assess the physical health of elderly. We have recoded the rough data into two categories, namely elderly who are physically restricted and those who are not. In our dataset 60.1% of the population is physically restricted, with a dramatic increase of the number of restricted persons when one becomes older (Chi²= 2651.31; df= 2; p<.05) . In the youngest age group only 47.2% is physically restricted, 67.1% in the age group 70-79, while in the oldest old the number of restricted elderly raises to 83.9%.

C. Falling

In the BAS study we've asked the respondents if they have been falling in the past year. In general 26.4% has fallen at least once the past year. Although in the lowest age group only 19.4% was falling at least once a year. In the oldest old the number increased to 41.8%.

D. Problems with transportation

We have asked the respondents if they experienced problems in transportation and, if they did, how frequent this occurred. In general 29.1% of the elderly never experienced problems with transportation, 16.6% rarely did, while 12.4% frequently experienced problems.
Concerning transportation problems (Chi²= 4.18; df= 3; p>.05) or elderly who need assistance to move outdoor (Chi²= 2.66; df= 1; p>.05) no differences can be noticed between Brussels and Gouvy (Chi²= 4.18; df= 3; p>.05).

Table 6: Frequency of transportation problems (BAS, Flanders) (%)

	60 - 69	70 - 79	80+	Total
Never	76.8	68.1	61.1	70.9
Seldom	15.6	17.4	17.6	16.6
Frequently	7.5	14.5	21.3	12.4

Moreover once aged 80 or above more than one quarter of the elderly frequently experienced difficulties in transportation, while in the youngest age group only 7.5% was confronted with the same problem (Chi²= 1072.54; df= 6; p<.05). Moreover 20.9% of the elderly needed assistance in order to move outdoor. However spectacular age differences occurred (Chi²= 6855.456; df= 2; p<.05). In the youngest age group only 7.7% was in need of assistance, while those aged between 70 and 79 years 21.7% needed so. In the oldest age group more than half of the population needed assistance to move outdoor.

3.1.2.3 Appropriation

In this part we focus on feelings of insecurity, traffic insecurity and loneliness.

A. Feelings of insecurity

In the BAS study the respondents were asked to what extent they agreed with eight items concerning feelings of insecurity. Possible answers were: completely disagree, disagree, neither agree nor disagree, agree, and completely agree. The following items were included:
1. These days it is not safe to be out on the streets at night
2. These days it is not safe to let children out on the streets without supervision
3. I seldom go out alone because I am afraid of being mugged

4. You have to be extra careful when you are out on the streets at night
5. These last 10 years the streets have become less safe
6. After nightfall I don't open the door when someone rings
7. These days an alarm system is more than just a gadget
8. When I go away on holiday I don't dare leave my house unwatched

With Cronbach's alpha being 0.86, we can conclude the items are one-dimensional and we can create one scale: feelings of insecurity. The minimum reading for the scale is 0 (very secure) and the maximum 100 (very insecure).

In general we noticed that the feelings of insecurity increase with aging (F=258.52; df=2; p<.05). In the oldest old (Mean: 66.48; SD: 22.27) feelings of insecurity are more pronounced than in the age category 70-79 (Mean: 63.02; SD: 22.61) and the youngest old (Mean: 58.74; SD: 22.59) respectively. However differences in feelings of insecurity are spectacular between Brussels (Mean: 72.42; SD: 20.94) and Gouvy (Mean: 55.74; SD: 23.59) (t= -6.36; df=218.34; p<.05).
While in Gouvy respondents feelings of insecurity are below the average of the Flemish region, in Brussels we notice a spectacular raise.

B. Traffic insecurity

44.2 % (Brussels: 39.9 %; Gouvy: 56.2 %) of the older people included in the BAS study never felt insecure in traffic, while 24.8 (Brussels and Gouvy: 22.6 %) rarely does. However 31% (Brussels: 37.4 %; Gouvy 21.2 %) sometimes or quit often felt insecure in traffic. Moreover concerning traffic insecurity in Brussels elderly felt far more insecure than their counterparts in Gouvy (Chi²= 14.54; df= 3; p<.05).

Although differences between age groups are small, especially in the oldest old the number of respondents which felt insecure in traffic doubles compared to the youngest age group. Moreover almost 40% (Gouvy: 41.1 %; Brussels 50.2 %) of the respondents mentioned that in the neighbourhood the traffic is too busy in their own neighbourhood and 21.5% (Gouvy: 27 %; Brussels: 33. %) wasn't satisfied with the traffic policy in their community.

Table 7: Traffic insecurity (BAS, Flanders)(%)

Traffic insecurity: Chi²= 306.99; df= 6; p<.05	**60 - 69**	**70 – 79**	**80+**	**Total**
Never	45.1	42.9	44.3	44.2
Seldom	26.8	24.3	20.7	24.8
Sometimes	22.1	24.3	23.5	23.1
Often	6	8.5	11.5	7.9
Traffic neighbourhood : Chi²= 32.10; df= 2;p<.05				
Too busy	37.9	40.8	40.9	39.5
Not too busy	62.1	59.2	59.1	60.5
Satisfaction traffic policy : Chi²= 5.65; df=8; >.05				
Not satisfied	7.9	7.5	7.7	7.8
Rather dissatisfied	13.7	13.6	13.6	13.7
Nor dissatisfied, nor satisfied	30.8	30.8	30.9	30.8
Rather satisfied	37	37	36.2	36.9
Very satisfied	10.6	11	11.6	10.9

B. Loneliness

In order to assess the social network a loneliness scale (Cronbach's = 0.86) was included. For the index of loneliness the Manual of the Loneliness Scale 1999 from De Jong Gierveld and Van Tilburg (1999) was used. Loneliness is defined as an un pleasant and undesired shortage of social contacts.
In general 9.8% of the elderly felt extremely lonely. Important age effects can be noticed. In the youngest old only 6.1% scores very high on the loneliness scale. The proportion of very lonely people

increases however with aging. In the age group 70-79, 10.7% is very lonely, while in the oldest old this number climbs to 18.1% (Chi^2= 121.81; df= 2; p<.05).

3.1.3 Motility encountered in the action research

As stated earlier in section 2.5.1, Kaufman proposes to consider motility as a measurement tool that defines a person or a group's capacity to be mobile, both geographically and socially. The motility of an individual or a collective can be evaluated by ways of calculation of the resources at disposal and the constraints hanging over him / it. Further, following Kaufman, the motility of someone can be described and evaluated mainly through inseparable features: access, skills and appropriations.

The analogy between the calculation of resources at disposal and the problem-finding phase in the action research can easily be made, without saying they're similar. In the problem-finding phase participants in the action research looked for, indicated, listed, prioritised and discussed all those factors which hinder them from being mobile the way they wish to be. During discussions participants also indicated quite often what are the possibilities they still have to be mobile such as call-a-bus-systems, taxi social, etc.

The table below repeats the overview of the problems and needs which were seen as key priorities within each AR-group.

Table 8: Overview of problems at the different action research sites

Priority	Sint-truiden	Leuven	Brussels	Mons	Gembloux
1	Tailored and targeted information on PT	Courtesy	Accessibility of PT and information on PT-use	Infrastructure	Lack of info on needs & problem of elderly population
2	Courtesy	Respect on buses, focus on youth	Courtesy	Courtesy	
3			Congestion, noise pollution	Citizen participation	

Referring to the definition of motility and the partition into the three features in relation with the table above, we see that access to information about public transport is an important constraint or problem for being mobile in two out of five action groups. In St-Truiden the participants indicated the lack of tailored and targeted information on the offer of public transport as particularly hindering them to use it. Nevertheless, in St-Truiden the public transport system is quite extensive and well established. However, the group stated that the needed information is sufficiently provided in the city centre but that there's a lack of information in the parishes around the centre

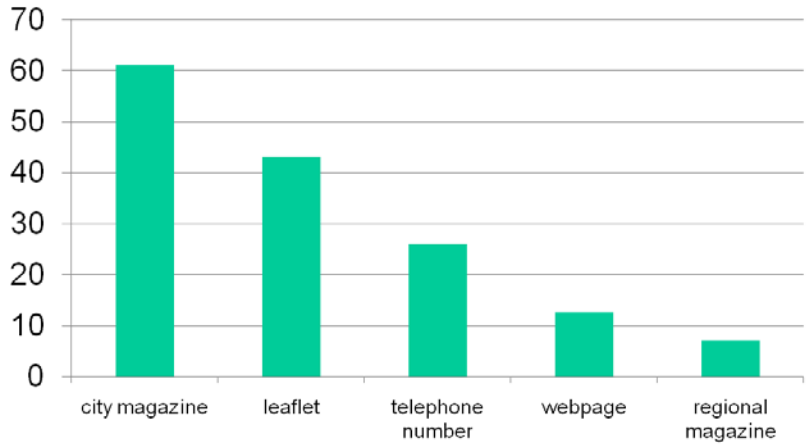
The Brussels' group indicated the same problem but added the complexity of the public transport system and the problematic accessibility of the system. However there's a great supply of possibilities when wanting to use public transport in Brussels, the group indicated that this great supply is a blessing as well as a scourge. Because of the great supply and little synchronisation between the providers, it has become quite an ordeal to find your way around as an elderly person.

In order to fully understand the 'information' topic, we go more into detail on the action research processes of St-Truiden and Brussels.

3.1.3.1 The actions developed in St-Truiden

In St-Truiden the group felt they had poor knowledge on desires and needs of the elderly population regarding information and information channels. Therefore, two small-scaled surveys were set up with the following two aims: what kind of information about PT does the elderly population of Sint-Truiden need? And where and how do they like to get this information? The original version (extended version) was shortened by the action group because of experienced difficulties during the test phase with the first respondents. Respondents were contacted by the action group and recruited out of member-organisation of the senior citizens council of St-Truiden. A total of 63 people responded to the extended version. In addition, 72 responded to the short version. In the short version the city magazine and a leaflet came up as being most desired information channels. Main information needs were the call-a-bus-system, services for the physically impaired and information on special rates and tariffs.

Figure 1: Preferred channels for mobility PT information by senior citizens in St- Truiden in % response (N=72)



In the extended version the results were quite similar but it added some more detail on needs the information needs and desired information channels. In the table below you can see the results of the extended version of the survey.

Figure 2: Preferred information on PT by senior citizens in St- Truiden in % response (N=63)

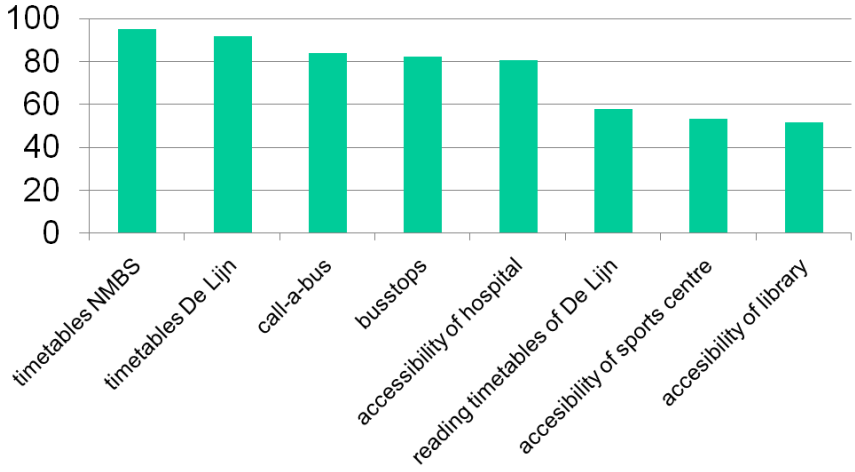
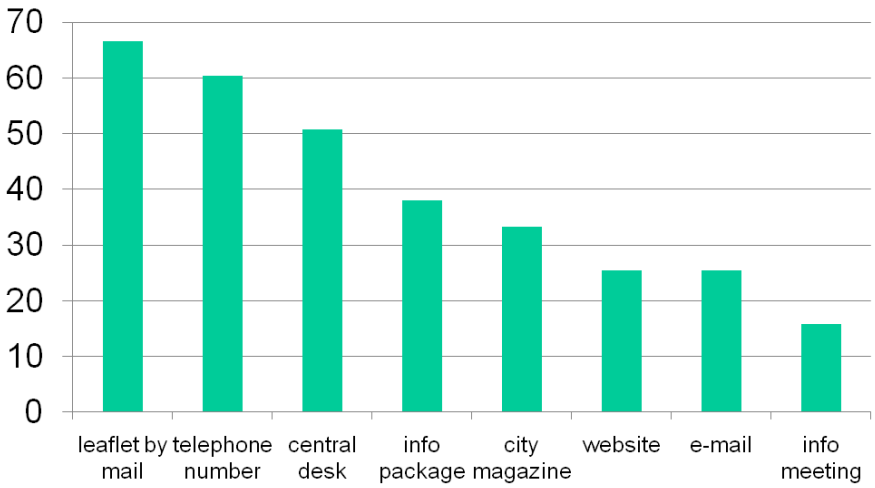


Figure 3: Preferred channels for mobility PT information by senior citizens in St-Truiden in % response (N=63)



Based on the discussion of the outcome of the two surveys (short and extended) and taking into consideration the capacity of the action group members, the participants chose to write 6 articles in the city magazine Although not the most cited medium in the survey, it was the most feasible and still not unimportant. Chosen subjects were: general information, call-a-bus, information on NMBS, information on De Lijn (x2) and how to find information on the internet. The participants choose in small groups one theme and gathered information for an article. As none of the participants was familiar with the internet and the call-the-bus service, the participants asked the researchers to adopt these themes. The city was very co-operative in publishing the articles in the city magazine.

3.1.3.2 The actions developed in Brussels

In the needs analysis the group stated that accessibility is a factor that hinders senior citizens from using public transport. Scrutinizing this problem the group came up with a division into three problem areas: accessible information, accessible PT-facilities and feelings of insecurity. Because of the complexity of the public transport system in Brussels the group decided to design a guided tour which would allow them to show the problems they encounter in real life conditions. To enlarge the impact of the action, the Ministry of Transport, the TEC, De Lijn, the MIVB and the NMBS were invited to take part on the guided tour with the AR-group..

The main messages that the AR-participants wanted to convey during the guided tour were divided into two subsections: information and accessibility. Regarding information the group formulated five recommendations. First of all, there's a clear need for consistent use of symbols and signs. Text on signs should be in full text wherever possible. Abbreviations make things needlessly difficult. Wherever possible, there should be the possibility to have face-to-face contact through a human interface such as a counter or an information desk. When investing in maps and signage, there should be given attention to clarity and visibility. Not only for the map itself but also for the location and the placement of the map. Last but least, the group urges the PT-providers to provide as much traveller information as possible, keeping in mind the former recommendations.

Regarding accessibility the group indicated three possible fields of improvement. Special attention should go to the installing and maintaining of warning signs such as yellow lines. Secondly, ramps instead of stairs could make platforms much more accessible. When needed, one should be able to find assistance tools such as contact knobs, elevators and escalators. There should be sufficient signage[19].

[19] Remark: the part on accessibility has much to do with the problems and needs regarding infrastructure while Moving around" (see section 3.3).

The participants in Brussels decided to communicate the perceived problems to the PT-providers and the authorities. They did this during a tour they organised on the public transport to illustrate what they experience each day.

Access to information

In St-Truiden and Brussels access to information is an important factor in defining motility of elderly people. Getting the right information to the right people is perceived to be a problem which can be countered by building knowledge on desires and needs on information and information channels, by tailoring the information to the target group and keeping the information clear and consistent.

Information gathering skills

Gathering information is a basic competence needed when trying to stay mobile by using public transport. Information is often disperse, difficult to understand and technologized by means of computers or automated machines. The action research groups state clearly that they want to take some steps forward in learning to deal with these developments but that they need back-up systems such as human interface possibilities, consistent and clear signage and assistance tools when they make a mistake or misjudgement.

Some participants also indicated that they call in help from relatives or peers to get the right information for their trip. Doing so, they experience the ambivalent feeling of being dependent in one way but wanting to be independent in another way. They often stated that they don't want to disturb relatives or lean on them too much. In order to stay mobile without support from their relatives, the transport system should make it possible for elderly people to autonomously ask for help at the designated assistance facilities provided by the PT-provider.

Action versus reaction

The participants of the action research in Sint-Truiden and Brussels had a totally different type of action. In Sint-Truiden the elderly detected a problem and looked for a way to solve it themselves. The participants in Brussels however decided to inform the authorities and the PT-providers. The problem there was of course far more complex than the needs in Sint-Truiden. Both groups felt to have made a difference with their action, although both actions were of a different type.

3.2 Mobility practices

3.2.1 Findings from the sociological & anthropological perspective

In chapter 3.1.1, it has been asserted that motility – mobility potentials- concerns a fluid configuration changing as time goes by. A reworking of the notion of autonomy has been suggested in that perspective: autonomy can be seen as a network of attachments of varying nature. Mobility practices (the effectuation of some of these potentials), in their turn, entail a lot of work and the association of heterogeneous entities and logics. Concurring with motility, the effectuation of motility is also fluid, in that different potentials are effectuated at different moments or in different periods of life and for different reasons. Some potentials are effectuated on a daily basis, others every now and then, while still others are rarely or never effectuated. In looking for reasons given by our respondents, two main effects come to the fore. One is related to feelings of autonomy and selfhood, namely related to agency and its distribution over a network of attachments. The other has to do with the long biography of people moving into old age, namely the different effects of time. As such two challenges emerge: first, an understanding of the ways heterogeneous elements building up practices are bond together and how these are intertwined with relations of power and control. Second, the highlighting of rather invisible aspects of mobility practices as people advance into old age that is effects of time and layering of time. In brief, this approach urges for a pragmatical shift in reflexion.

3.2.1.1 Mobility and agency

When looking at the mobility practices of people growing older, taking into consideration the concept of agency can be fruitful. Agency, defined as the "capacity of actors to enable, resist, conduct, guide and perform action" (Valderrama & Jorgensen, 2008), has for long been attributed to humans alone. The control centre of an action was situated within humans, and humans alone. With the advent of posthumanist stances in several theoretical currents (science & technology studies, feminist/ cyborg studies, philosophy of science, …), agency is now said to be distributed in human and nonhuman actors. In this view, a person never acts alone. Instead, action is only possible through a network of heterogenuous actors, meaning humans and nonhumans alike. When it comes to studying mobility practices and their various dimensions, then, studying processes of distribution of agency may inform the understanding of these practices in a novel way. What's more, it sheds light on discussions that are raised throughout this work on the nature of autonomy and the importance of attachments in mobility potentials and practices. We will first discuss the notion of agency, after which we will turn our attention to how agency is intertwined with motility and mobility practices.

A. Human-non human agency

Agency isn't located within one sole actor, the single person. It is, as we suggested, distributed over different actors. But what does this mean? Let us take the simple example of a person going out for a walk. He or she might need a cane to do his or her walking. Both – a human and a nonhuman – "work together" in accomplishing things. In this case they accomplish the doing of mobility, going out for a walk. Could this walking together come about without one or the other? No. The person needs the walking stick as much as the walking stick needs the person to become mobile. The person and the cane together offer each other mobility. And in this working together, each is responsible for aspects of the action. The person delegates some aspects of the action to the stick. In this delegation, the person also delegates some of its control, some of its power to act. This is what is called the distribution of agency, in our example the distribution of agency between the person and the stick.

When the person uses the stick all the time, something else happens. The person and the stick 'merge', or fold one into the other. When the person and the stick become so accustomed to each other, it is like they are extensions one of the other. They mutually get so used to each other that a 'new singularity' is formed (Winance, 2006). We could not imagine this person without his or her stick anymore. Neither does the person. He becomes one with the object, and wouldn't feel complete without it. The relationship between the two is one of 'intra-action' (Barad, 2003), instead of inter-action. The object and the person aren't two separate entities anymore, they become one. The limits or boundaries that existed between them seem to have vanished. This vanishing of boundaries between two different actors led some authors to propose not to look for delineation any longer. But, as the intra-actions never take place in a void, in a situation without context, nor that the 'merging' is never complete or stabilized, we need to reconsider this. Instead of looking at the distribution of agency as fixed, with agency attributed to the actors involved, we suggest to look at this distribution as an ongoing process, as ongoing 'reconfigurings of the world' (Barad, 2003: 819).

In our example of the person and the walking stick, we could add (to make it more realistic) that the walking isn't done nowhere. No, the walking is situated, it happens in a certain context. A context with other actors (humans and nonhumans). To have an account of the actors involved, the concept of a 'collective' has been put forward (Moreira, 2004). To delineate these collectives for analysis, researchers have taken recourse either to given delineations (such as organizational, administrative ones) or delineated collectives themselves (in time and space), based on theoretical considerations (more on that in the next paragraph). In talking about daily mobilities, the delineation of the collective could also be done on a situational basis, instead of an organizational one. This would mean that the collective is to be identified according to the situation[20]. If we extend our example to a situation where the person-with-cane wants to cross the street at a pedestrian crossing with a car heading the

[20] Another way of delineating collectives is to delineate them 'organizationally'. In the discussion of motility, we already mentioned that the potential of mobility depends on the realm of attachments a person (or actor) has. It was also argued that the motility of a person is fluid, because it changes over time. Some attachments disappear or appear, others are reinforced or become weaker, and so on. We saw, for example, the potentiality of different collectives and attachments to do the shopping. A collective in this can be that of an older person with a caddie taking the bus. It can also be collective consisting of an older person, a relative or friend, and a car.

crossing, some other actors come into sight: the pedestrian crossing, the car (and it's driver), and the street now 'join' the action, they become co-implied in the action. Contrary to the person and his stick, the other actors haven't 'merged' in any way. Instead of intra-action, their relation is based on inter-action. The collective in which the agency is distributed in and through the interaction of actors of the collective: "Furthermore, agency is not a property of the individual components of the collective but is distributed among them; agency is relational, in that it is effected in their interactions." (Goodwin, 2008: 350). The main point is that the distribution of agency is relational, situation-sensitive, and based on intra- and interaction. In any of these interactions, though agency seems fixed within the design, has to be re-negotiated. It entails a constant reconfiguring. Much like the example given by P: *«It goes all right when there are stairs with railings; then I hold on to the railing and pull myself up the stairs. But there are staircases for example that don't have a railing ; then no support is available. And then I'm really afraid. There are only steps and I do it one step at a time, but luckily my son comes to help me.* (P, Woluwé).

Now that we have explored the notion of agency, we will take a closer look at the influence of agency on the effectuation of mobility potentials. That is, in the passing from motility (i.e. the potentials-of-mobility) to mobility-in-practice, how are choices influenced by agential questions? A first hint of an answer to this question lies in the relatedness of agency with motility and of agency with identity. In brief: agency has to do with the control an actor (e.g. an older person) has over the organization of one's mobility. Agency also has to do with selfhood or identity of the person/ actor. The choice of effectuating this and not that mobility potential then follows from the control an actor (still) has over her/his own mobility, and how one feels or how one's identity is affected by the sharing of control.

To understand this better we will first turn our attention to the agency of the body and its implications for motility, for the control the body has on mobility potentials and ultimately on mobility practices is not to be underestimated. In this, the desires of the person do not always correspond to the constraints the body impose. Growing older means granting agency to the body. After that, we will look at the different distributions of agency that are tied to different collectives and how these two relate to the (feeling of) autonomy and identity. Different collectives have different distributions of agency, and subsequently influence feelings of autonomy and personal identity.

B. Body agency

Growing older comes with nonlinear changes of the body. In varying intensities the body enables or resists the actions a person wants to complete. There are changes from day to day, there can be progressive diminutions of capacities of the body, but there can also be sudden positive changes (e.g. after a surgical operation). These bodily changes have an influence on mobility practices, and on what potentials can be effectuated and what not.

Now it is our view that the body has agency with which the person has to deal in regard to her/his mobility practices. Moreover, the question of bodily agency might well be intensely entangled with the selfhood of the person, with the (technical, social, and institutional) attachments of the person, and might thus be quite central to questions of moving into old age and mobility practices.

The play of bodily capacities entails a play of selfhood, of identity, which in turn influences agency: "Self is both recognised in the courses of action actors engage in and in the ability to use shared social knowledge to locate oneself in the social world. Just as action is structured by shared forms of classification of objects, identity is rooted in social categories of persons that are available through social interaction with others. The experience of illness[21] refers not only to physical suffering but also to shifts in the social placement of the person, which affects how the person interprets situations and his/her position in them. Agency, or the way action is attributed to people or claimed by them, is likely to change in this process." (Moreira, 2004: 34). P comments: *I am not autonomous anymore, it is finished, I need other people to help me walking. My physiotherapist, for example, accompanies me to go for a walk in the street. She prohibits me to take my walking cane, and holds me by the elbow, gently, only to catch me if I fall. So, you see, it isn't very fantastic.* (P, Woluwé).

[21] We are not claiming that oldness is an illness or that bodily changes only have to do with illness. However, parallels can be drawn between social categorizations of oldness and those of illness, and the effects they can have on the identity of a person

Thus, self and agency are intertwined and influenced by what the body can do[22]. And, 'what the body is able to do' is not fixed, it is of varying intensity[23] . So, when the body resists, and 'claims' control over certain actions or situations, the person has to deal with it. *It are my hands, the arthrosis, it consumes you. I don't know. I think it is the end of life. In the end, you have to deal with it, as they say.* (B, Brussels) And dealing with bodily agency implies either resisting/accepting body agency[24] , or re-distributing agency by introducing new actors in the local collective of mobility. Sometimes these are very mundane things, like changing shoes. *To be equipped, all that is calculated, you know it is easier; you take your handbag around the elbow instead of on your shoulder. You buy equipment in function of your physical capabilities. Shoes, for example, are very important. Leather, comfortable, anti-slip. You know you cannot wear anything.* (C, Leuze CD #3).

This re-distribution involves changes in the mobility potentials that can (still) be turned into mobility practices, and those that can (temporarily or more permanently) not be considered (any longer). At the same time it affects the feelings of selfhood and autonomy of a person.

C. Re-distribution of agency

Re-distribution of agency comes about when a person delegates parts of control over actions or courses of action. In the main, this means delegation to technical, social or institutional actors to which one is attached (or becomes attached if the attachment didn't exist before)[25] . The case of technical delegation has already been mentioned above, where we mentioned a person and a walking cane. Due to the resistance of the body, a person may begin to use a stick to move outdoors. This means, then, that the local mobility collective is extended to a 'person + walking cane'. Social delegation could mean becoming a passenger instead of the driver, for example. The result is that the local mobility collective is transformed into 'older person + son/ daughter + their car'. The person now has to share control with the rest of the collective. Without becoming dependent on that person, shifts in control over the situation or action have come about. The same is true for institutional delegation. In the case of tailored institutional mobility services like the social cab, one has to 'share control' over one's mobility with the other clients of the service. Besides, the person has to fit in the schedule of the service, and thus has to organize his or her mobility (more) in advance.

From one configuration of attachment to another/ limits of configurations: Some configurations become impossible in terms of the distribution of agency, it becomes too difficult to attain enough power to control the situation (perhaps only from the actor's point of view, perhaps from the point of view of other actors). In these cases, the actor may decide to change configurations. I: *Do you still go out? Y: Individually, you mean? No, I don't dare to anymore. Because I loose my balance and I'm afraid of falling, even with my walking cane. […] Perhaps it is wrong, perhaps I should force myself, but I don't feel safe. […] Now it is finished, I need other people to help me with walking. (Y, Brussels) Or it can be that as Winance (2001) puts it that body shaping and world shaping go hand in hand. When a certain configuration becomes impossible, that 'part of the world' will progressively cede to exist. I wouldn't be able to do that anymore. To get up some stairs, … that is why I only very rarely go to my son nowadays. Because he lives in an apartment where there is no elevator. (Y, Brussels). Another example of this has to do with the incompatibility between peripheral preconditions[26] . These too show the fluidity of practices while at the same time show how redistribution works: For example, I know very well that to go shopping in the GB in Rue Venderkindere, and then coming back with a caddie is exhausting due to the old cobblestones, tatatatata [sound of the caddie on the cobblestone surface . It is exhausting to pull the caddie along whereas when you go to the Match, it is 30/30's flat pavement stones], there you don't have this problem*. (VL, Brussels).

If we draw the picture of mobility in a framework of 'agential realism' (Barad, 2003; Suchman, 2006), in other words, if we take into account the role the distribution of agency plays in mobility practices, another light is shed on why some mobility potentials turn into practices while others are only occasionally or even never effectuated. Together with the multiplicity of attachments and the heterogenuous networks of human and nonhuman actors, the notion of agency allows envisaging the tackling of more complex mobility questions.

[22] See "Body agency"
[23] See "The changing thresholds of immobility" and "The double movement of acceptance and resistance"
[24] See "The double movement of acceptance and resistance"
[25] See "The concept of autonomy in an attachment perspective"
[26] See "Peripheral objects / actors: preconditions to mobility potentials"

3.2.1.2 Memory Works

You have to situate in time when you talk about me (M., Bruxelles) said a man commenting his current mobility practices; "Old people have long past that must be taken into account" (Settersten, 2005: 174). Indeed, as Ingold states, human life is, a process that "involves the passage of time" (Ingold, 1993: 152), time which is "a multilayered and complex fact of life" (Pilcher, 1994: 486). It might well be represented as a constellation of several temporalities that collide and merge (Burgin, 1996 cited in Crang & Travlou, 1999): one particular mobility practice and its rhythms may be linked to the biographical history of a person and its marking events, all while overlapping with social history and the contemporary era. Personal and collective biographies are also tied to a generational dynamic - the so-called "lived through history". Past, present and future (through anticipation for instance) are joined in practices.

Various forms of time act upon mobility practices, but their action and power often remain invisible or hidden. How do they 'act'? The following proposition develops several modes of representation of actions of the past: palimpsests, souvenirs & oblivion, sedimentation & erosion.

A. Palimpsests

Palimpsests are pieces of writing on which the original writing has been overwritten by more recent addings or erased to make room for new one. Some traces do remain. The word is used to evoke something reused or altered but still bearing traces of its earlier forms (De Certeau, 1980). This palimpsestic feature of spaces is blatant in the material gathered. *They talk to me about a city that doesn't exist anymore* said the coordinator of a local association in Brussels, surprised by the way the older inhabitants described their common neighbourhood and their difficulty to find their way through it. This sentence expresses the fact that "we have great difficulty in understanding a survival of the past in itself because we believe that the past is no longer, that it has ceased to be. We have thus confused being with being-present" (Deleuze, 1988: 55 cited in Crang Travlou, 1999). Past times pervade current perceptions and practices. Spaces, here and there, testify of former modes of dwelling or moving which still resonate in current ones. Past practices can resist, insist and play tricks on current mobility practices which are, like landscapes, constituted as an enduring record and testimony to the lives, works and practices of past generations who have left there something of themselves (Ingold, 1993).

This can for example be observed in the transformation of public transport networks. Current networks of transport systems are read by referring to previous schemes: *you do as if you took the 55 line as before…* (a man explaining an itinerary, Brussels). Following anthropologist Tim Ingold, spatial practices and perceptions can be considered as acts of remembrance, the environment being pregnant with the past (Ingold, 1993). Former land marks way mark current mobility practices for those able to recognize them. For others, they simply have no appeal. The idea of the palimpsest allows to represent time and its action by ways of layers or calques which are superimposed one on another, perceptible by some, not by others. The same holds true for the often mentioned transfiguration of the circulatory space; two paradoxes appeared in the course of the discussions. Firstly, there seems to be no nostalgic inclination towards the circulatory space known by the past. Clearly, in the current circumstances, characterised by increasing volume of traffic, high density of the infrastructures and average speed acceleration, turning back to the former situation would be impossible or non advisable on the part of older users. Secondly, the sense of trust brought by the framing and regulation of the contemporary circulatory space is precisely what makes possible the amplification of the current dynamics (in terms of volume, complexity and speed). In this perspective, trust is due to a system which is based upon its necessity. Since the distinctive features of this circulatory system – speed, volume and complexity- stimulate fear, anxiety and disapproval and urge some kind of distributed trust.

Memories are embedded in places, objects and bodies encountered on the way, all bearing traces of former practices. Ghostly paths and presences inhabit current mobility practices, and constitute as many reminders of previous shapes and configurations. We could talk about past or ghostly geographies materializing the presence of past in present[27] . Commenting the map she brought during the second session of collective discussion, C indicates "*Here you can see the "piedsaintes" the*

[27] A whole corpus of recent – and less recent- geographical approach are dedicated to those so-called "spectral geographies".

"senti", and the "passages" we used to follow. Maybe you don't even know those words, you are too young; But they used to make our distances shorter. You had a turnstile; I think you can see them on my map. (…) to join that street, you passed in the pasture. We were used to shortcut through meadows, we used to do it all the time. R: There is still one, near the supermarket its is still marked "ruelle" (…) F: "those tracks are less and less used because people walk less. The nature takes its right back… (C, R and F, Leuze, DC#2). Paths and tracks pattern the movements of people, shape networks and sediment mobilities over many generations. Some have nowadays partially disappeared, they have been abandoned, fenced off, privatized or disappeared in the recalling of agricultural enterprise. The action of palimpsest is multiple: it is creation, erasure and re-emergence in the same movement. Covering old stories and making rooms for new ones (Pinder, 2001) within a constant process of wearing out and renewing.

B. Souvenirs & oblivion

Souvenirs are another type of action of past times upon present practices. Images and sensations from the past are triggered by a bare object, view or space traversed or used during daily routes. Buses, trams, stations, cars, streets … are sites of embedded memories. They bring affordances for biographies. Parts of our life history are preserved in them. « We draw on those memories to construct stories about ourselves that will let us validate our self-identity. We do this within the norms and cultural contexts that have shaped our lives" (Shenk et alii, 2002: 402). Like the Madeleine de Proust, mobility spaces, practices and devices may evoke souvenirs that invite past events in present situations. As such, they form a direct connection with the past (Caradec, 2004). Souvenirs, unlike palimpsest, do not intervene constantly in practices (they are not inherent to them): they are activated by an element, they might be incited (to re-walk an ancient beloved path, to recover the sensations connected with the train) or avoided (not to risk crossing an abhorred place, or to retrieve unpleasant sensations and emotions). The seasick sensation linked with the tramway, the deafening noise of the train, the view of the sparks thrown out by the arrow of the tram, the sensation of driving empty roads, train memories, … are some of the various souvenirs invoked during collective and face-to-face encounters. Souvenirs (and traumas) act upon current practices*: I fell off a bike and never used it again.* (S., Leuze) *Since I was attacked, I never went out in the dark again* (G Braine, DC#1) *Someone has stolen my bag in the metro once. Ever since, I think about the way I dress before venturing the city* (A, Braine, DC#2). New precautions and new habits are taken in correspondence with remembered events (to avoid driving in the dark, to border the wall, not wearing a handbag any more, using the mobile phone, …). Practices are thus both producing and containing memories (Pile in Pinder, 2001).

It is in the nature of things : the older you grow, the more memories you have (F, Leuze, DC# 3). This being said, remembrance is a complex process and memory is not a cumulative storage. It sorts things out, it selects: *I don't remember how it was, it has been so long… How did it look like, yet*? (G. Brasschaat, DC#2). *To forget is a virtue* (L, Ellezelles) said Liliane, a woman well into her nineties. Remembering and forgetting are processes through which people, spaces and objects related to daily mobilities retain an active significance and role. Things that once had a meaning have become opaque, indifferent, what was familiar has become strange. The same goes for skills and knowledge. Some knowledge vanishes against their own wish while others become obsolete but are strongly kept in mind (I still know the timetables of the trains to Brussels by heart). The loss of memory, and more generally oblivion can appear as disorienting and threatening. Some respondent shared a sudden feeling of being lost in familiar places, as well as the difficulty of living in oblivion, exacerbated by an acceleration of the changes on the surrounding.

C. Sedimentation & erosion

Evolutions in the modal practices and habits were often debated during the collective and face-to-face interviews. Respondents emphasized the importance of walking and cycling in the past: those transport modes in a few decades turned from essential functional modes (going to school, to work, …) to entertainment modes promoted for corporeal benefits. To own a car, from one generation to the next, switched from a privilege to a mass consumer good and triviality due to the growth of buying power, the democratization of the car market and the institutionalization of vacation days. About 50 years ago, people used to take the car occasionally, and mainly for leisure purposes during

weekends. From the 60's on, practices of driving and passengering have changed[28] : "car has become a common feature of everyday life" (Thrift, 2004: 46). Progressively, the use of the car imposed itself as a quasi-necessity in a space wholly configured according to its logics and saturated by its presence[29] . From that moment on, some authors talk of an automobilized time-space (Urry, 2000).

Former practices and logics encrust heritage in current ones. Prior circumstances & expectations sediment and frame current choices (Morgan et alii, 2005). Whatever the transport mode under consideration, current practices are anchored in former routines (this is the case with the practice of 'car flâneries[30] ', for instance). Like the erosion of a rock by the power of the waves, erosion of practices does not only follow regular and logic laws. Some fragments tightly hold together while others break and crumble suddenly, turning strange what was familiar until then. What is observed is stability under change, an association of continuous and discontinuous selves, an oscillation between familiarity and strangeness. Having taken the train for professional trips supposes a familiarity with and the use of this transport mode may be sustained *(Train, is 'super déjà vu' for me! I've taken it for so damned long, it doesn't panic me at all!* (R, Braine, DC#1)) or, on the contrary, might be called to an end as professional life gives way to retirement: once you gave up the train, it is finished forever (A&J, Leuze). - When you stop walking, you loose the habit. – Well, I used to think that those who were used to walk kept on walking. But I've seen it with my father, it is not the case: once he bought a car he definitely stopped walking. (G& D, Braine, DC#2). Transportation modes and their whole system may be connected to certain periods of life and abandoned when turning into another stage of life. Current attitudes, practices and perceptions might thus be beneficially reconsidered in light of former experiences and of the ongoing formation of the subject's identity. Current practices, behaviours and attitudes "through with embodied age is accomplished[31] are consistent with earlier habits, ideas and training " (Laz, 2003: 517)

For some, the discovery of new places, new modes, new know-how arouses pleasure. For others it holds a strong dissuasive power. The tramway I used to take doesn't follow the same route anymore; it doesn't stop at the same place. Then I told myself "I don't go to the city anymore"(S, Brussels*). I've never taken the bus, I don't even know how it works* (G, Plancenoit). In the words of the people met, a recurrent idea is the wish to "make one's existence easier": strategies include taking routes known by heart, avoiding complicate trips, moving in familiar places or using well known devices. Claire, whether she moves by foot or by car, pictures the whole path in her head and anticipates meteorological previsions: *When I come here, I'm a little bit worried. I'm not so self-confident… so I always take paths I know well. Actually, I have the precise map in my head before I move. It's a whole calculation but it happens by itself. (C, Leuze, DC#2). Now, with our free transport ticket, it is easier: you don't have to know the zones and so on (B, Brasschaat, DC#2). We used to take the metro, in the days when my husband was there. But now, it has totally changed, I wouldn't dare, I wouldn't find my way* (Y, Brussels). Familiarity with places, devices and their logics & codes allows accessing a situation and managing unforeseen events. Diverse dwelling modes, various spatial knowledges, evolving practices are evaluated in the scope of former routines, refrains or references inscribing familiarity or strangeness in practices. Working as interiorised land marks, they may also open new potentialities by the accumulation of knowledges and know how in a changing context.

3.2.1.3 Powers of narratives

After having explored modes of action of memories and history (personal & collective) on mobility practices, a last actant could complete the scene: 'stories'. Far from to accusing stories to be untrue or unreal, as if they draw a curtain on reality to mask or disguise the world, narratives guide the attention of the listening ear into some aspects of the described situation or practice (Ingold, 1993). Stories or narratives shape practices in very much the same way as does the design of the built environment people inhabit and move through. They can provoke emotions and feelings, and produce dispositions towards practices and situations (Adey, 2007). *Avec tout ce qu'on entend, il paraît que*, …Meanings attached to events that happened to acquaintances or unknown people activate feelings, shape practices*. A kind of panic is being created* (A, Braine, DC #1) told that lady relating her spontaneous fear towards young people in a parking. Criss-crossing stories and narratives, disseminated through

[28] See " The experience of car driving".
[29] Whole parts of the built environment are now a mute but still eloquent testimony to automobility (Urry, 2000, Thrift, 2004).
[30] Some people reported their pleasure to take the car just to make a stroll.
[31] See "Situated Identities".

medias amongst others, overlap one another and challenge access to spaces and modes. They stimulate forces of attraction or repulsion, hospitality or threat, trust or suspicion (or both at the same time). Personal and more collective depictions of realities "out there" (Law & Urry, 2004) are build. They provide explanations and accounts of events, they provide evidence and create attitudes and practices, notably through forethought and anticipation. *As people have been attacked there, well we don't walk on the Ravel anymore* (Y, Leuze, DC #2). Stories challenge listeners to place themselves in relation to specific features of places in such a way that their meanings may be revealed or disclosed.

Old people are more exposed. I don't know why.. maybe because we are more frail or look less suspicious (D., Brussels). In the material gathered, an interiorisation of a widely accepted idea of older users as frail, vulnerable or even deficient users is blatant. The legal construction of the "lesser mobile" category and its practical translations (specific fare, particular timetables in the case of the train, particular seats in PT network, …), probably strengthen this general assumption of older users as deficient users, even if they are felt as improvement and necessary. Echoing some feminist analyses and labelling theories, it could be argued that the interiorisation of this image inflicts a doubling of this sense of vulnerability. Vulnerability becomes a label attributed to various subjective feelings (Lock 1993). These labels have the capacity to disempower people (Woodward 2002) by insisting upon –or even naturalizing- their frail constitution rather than, for example, upon their rich accumulated experiences and inventiveness to cope with a changing environment (Quéré, Relieu, 2001). Feminist author C. Woodward deplores what she calls a "cultural prohibition of anger in older people in the United States". Rather than enacting their powerlessness or their withdrawal from the public sphere (Morell, 2003 ; Membrado & al.), she suggests to bring to the fore a "wise anger", combining wisdom (defined as balanced reflection and judgment that come with long experience) with anger. This vulnerability can be linked together with nostalgia and the socialisation of old age as a decline which are common in the rhetoric of emotions related to old age and mobility practices. It both simplify the rich diversity of experiences met and disempower the people concerned.

3.2.2 Mobility practices from a quantitative perspective

In this part we try to understand mobility practice. By "mobility", we designate in this context, logics of daily mobility behaviours, the sedimentation of various logics and rationalities in daily practices. Mobility practices are seen as situational and heterogeneity of the actors (human and non human) participating to a movement is uttered.

The aim is here to explore the content of those particular space-times of ordinary journeys in order to understand: which are the various logics at play in mobility behaviours? Why are some potentials activated while others not? Why are those mobility choices made / abandoned / unmade? What is here carried out can be called a "pragmatical switch": the aim being to understand how particular practices and modalities of mobilities are enacted, encouraged, prevented, hindered or forbidden in addressing the various anchorages and sedimentations of practices and experimentations.

In the OVG research the reference period was two days, randomly chosen. A movement is taken into account when an older person moves outdoors. The immobility rate on the first reference day is 33.8 %, while on the second it increases to 41.6 %. For both days (Day 1 & 2) we notice that the number of movements declines when age increases. Moreover, there is a drastic decline once a person is aged 80 and over. Only 35.4% of the respondents aged 80 or more moves on day 1, while 71.3% of the elderly aged between 60 years and 69 moves outdoor. On day 2 all age groups seem to move less.

In the MOBEL study we can notice the same tendency. The immobility rate is in line with the OVG study, namely 39.9 % on one reference day. The number of movements declines with aging. However the differences are not as outspoken as in the OVG sample.

Table 9: Percentage of elderly which move outdoors

Movements	60 – 69	70 – 79	80+	Total
OVG DAY 1	71.3	64.9	35.4	66.2
OVG DAY 2	66.7	54.6	27.3	59.4
MOBEL	66.4	56.9	39.6	60.1

OVG Day 1: (Chi^2= 132.40; df= 2; p<.05)
OVG Day 2: (Chi^2= 154.81; df= 2; p<.05)

MOBEL: (Chi^2= 35.60; df= 2; p<.05)

Moreover in the OVG sample 56% of the elderly aged between 60 and 69, and 44.5% of respondents aged between 70 and 79 moved outdoor on both days, while of the 80 plus only 16.6% did so. Review of the elderly who didn't leave the house (non-movers) on both days shows that 18% of the age category 60-69 didn't leave the house (non-movers) on both days. We notice a slight increase of the number of non-movers in the age category 70-79, while 53.8% of the 80 plus group belongs to the non-movers on both days. Elderly who live together/married, and those who dispose of a driving license moved more outdoor then those who have no partner (Chi^2= 57.82; df= 2; p<.05) or have no driving license (Chi^2= 106.22; df= 2; p<.05).

In the MOBEL study 66.4% of the elderly aged between 60 and 69, and 56.9% of respondents aged between 70 and 79 moved outdoors on an arbitrary day, while of the 80 plus only 39.6% did so. Review of the elderly who didn't leave the house (non-movers) shows that 33.6% of the age category 60-69 didn't leave the house (non-movers). We notice a slight increase of the number of non-movers in the age category 70-79, while 61.1% of the 80 plus group belongs to the non-movers on both days. Elderly who dispose of a driving license come out more often than elderly without a driving license (Chi^2= 106.22, p<.05). In contrast with OVG, MOBEL concludes that elderly who live together/married don't move more frequently outdoor then those who have no partner (Chi^2= 2.38, p>.05).

In the BAS study the respondents were asked what transport modes they've used in the past year, and to indicate how frequently the transport mode was used (Never, less than once a month, monthly, once to twice a week, or daily). Based on these questions we've created four categories independent of the transport modes, which gives us an overview of the amount of movements outdoor.
In general we notice that the number of movements declines smoothly with aging, but drastically once aged 80 years or more (see table 10). Non movers (3.2%) never moved outdoors in the past year. The number of non movers increases from 1.3% in the youngest age category to 8.6% in the oldest. This latter tendency can be noticed in the occasional movers, those who moved maximum monthly or less (4.6%) too. Most (14.3%) of the occasional movers are aged 80 years or above, while in the younger age categories respectively 1.3% (60-69) and 4.2% (70-79) occasionally moves outdoor. However most of the oldest old are regular movers (30.3% moved maximum once or twice a week) or often movers (46.8% moved outdoor more than twice a week).
Although there is a drastic decline once age 80 years or above, more than three quarters of the oldest old moved at least once or twice a week outdoor.
In Brussels as well as in Gouvy the moving patterns are in line with those of the Flemish region (Chi^2= 4.70; df= 3; p>.05).

Table 10: Percentage of elderly which move outdoor (BAS, Flanders)(%)

Categories	60 – 69	70 – 79	80+	Total
Non movers	1.3	3.1	8.6	3.2
Occasional movers	1.3	4.2	14.3	4.6
Regular movers	12.2	22.3	30.3	19.0
Often movers	85.2	70.4	46.8	73.2

(Chi^2= 4891.97; df= 6; p<.05)

3.2.2.1 Average number of movements by the elderly for both days

In the OVG study the average number of movements for both days (see table 11) differs strongly between all age categories (Chi^2= 296,95; df=38; p<.05). About 20% of the elderly aged 60-79 frequently (often) makes 2 movements daily, the second movement meaning returning back home. The majority (70.1%) of the elderly aged 80 plus doesn't make any movements at all.

Table 11: Average number of movements on two arbitrary days (OVG, Flanders) (%)

Day 1 & 2	60 – 69	70 – 79	80+	Total
No movements	27.2	40.4	70.1	35.4
1 movements	19.4	19.4	17.1	19.2
2 movements	19.1	20.1	8.2	18.5
3 movements	15.7	11.6	1.8	13.1

4 and more movements	18.6	8.5	2.8	13.8

In the MOBEL study we notice that in the oldest old not only the amount of non mover increases dramatically (see table 12), but the number of movements a day decreases strongly as well (Chi²= 273,94; df=8; p<.05). In the age groups 60-69 years of age 33.6% and the category 70-79 years 42.9% didn't move outdoor, while the amount non movers increases to 61.1% in the oldest old.
Moreover the number of elderly who makes four movements or more a day declines from 27.8% in the youngest age group to only 11.1% in the oldest.

Table 12: Number of movements on one arbitrary day (MOBEL, Belgium) (%)

Arbitrary day	60 – 69	70 – 79	80+	Total
No movements	33.6	42.9	61.1	39.9
1 movements	4.9	5.6	8.3	5.5
2 movements	25.5	27.1	16.0	25.1
3 movements	8.1	6.4	3.5	7.0
4 and more movements	27.8	18.0	11.1	22.5

3.2.2.2. Reasons for not leaving the house

The next table (13) summarizes the most important reasons why elderly didn't leave the house on both days in the OVG research. Multiple response analysis was used to retrieve the most important reasons for not moving (leaving the house) on at least one day.
For those who didn't leave the house 54.5% stated there was no need to leave the house.
Working or studying at home wasn't mentioned frequently, while staying at home due to sickness or restriction was mentioned by 19,4%. Moreover the importance of this latter increases with age.

Table 13: Reasons for nor leaving the house (Multiple response OVG, Flanders) (%)

	60 – 69	70 – 79	80+	Total
Working/ studying at home	1,3	,4	,2	1,9
Responsibilities at home	7,5	2,6	,6	10,6
Sickness or restriction	6,3	6,5	6,5	19,4
Weather	3,9	2,4	,6	6,9
No need to	28,1	20,2	6,2	54,5
Other	3,0	2,2	1,6	6,8
Frequencies	852	584	268	1704
Total	50,0%	34,3%	15,7%	100,0%

In table 14 a summary of the reasons elderly mentioned when they didn't leave the house is given (MOBEL). Most results match quite well with those of the OVG study. As in the OVG study the most important reason was 'no need to', followed by illness or restriction. Contrary to the OVG study especially elderly aged between 60 and 69 years which mentioned 'working or studying at home' are more prominent in the MOBEL study (1.3% versus 11.1%). However like in the OVG study important age related differences can be noticed (Chi²= 76.75; df= 18; p<.05). Staying at home because of work or studying drops from 11.1% in the youngest age group to 1.5% in the oldest, while in the youngest age group short term illness is a major reason in the oldest old long term illness or restriction raises dramatically from 5.1% to 37.3%. For the oldest old long term illness or restriction becomes more important then 'no need to'.

Table 14: Reasons for not leaving the house (MOBEL, Belgium) (%)

Age groups	60 – 69	70 – 79	80+	Total
Working/ studying at home	11.1	5	1.5	7.3
Responsibilities at home	10.6	8.3	6	9.1
Long-term illness or restriction	5.1	11.1	37.3	12.1
Short-term illness	9.2	7.2	6	8
Weather	8.8	9.4	4.5	8.4
No need to	47	48.9	26.9	44.8
Two reasons including short/ long-term illness	0.9	1.1	6	1.7
Two reasons including the weather	3.2	2.2	4.5	3
Two reasons not including illness and weather	0.5	2.2	0.0	1.1
Other	3.7	4.4	7.5	4.5

In the MOBEL study, elderly were asked if they experienced problems to walk, to bike, to get in or out of the car, to drive the car, to reach the station or to get in or out public transport modes (vehicle).
Contrary to those who's walking possibilities stayed intact (33.6%) older people who experience difficulties walking (52.8%) are more likely to stay at home (Chi^2= 35.86; df= 1; p<.05).
Moreover elderly who experienced difficulties to bike (Chi^2= 25.39; df= 18; p<.05) (problems: 48.6%; no problems 31.6%), to get in or out of the car (Chi^2= 30.34; df= 1; p<.05) (problems: 54.7%; no problems 34.1%) or to drive the car (Chi^2= 35.44; df= 1; p<.05) (problems: 56.5%; no problems 30.4%) are more likely to be non mobile.
The amount of non mobile elderly increases when they experience difficulties to get access into the station (problems: 53.2%; no problems 32.1%) (Chi^2= 33.61; df= 1; p<.05) or when they have problems to get in or out public transport modes (vehicle) (Chi^2= 35.44; df= 1; p<.05) (problems: 52.7%; no problems: 31.5%).

3.2.2.3. Average number of trips per gender and age

The average number of trips decreases with age (F=106.51; df=2; p<.05). The OVG survey shows an average trip frequency 1.82 trips a day in the group 60-69; for the age group 70-79 1.24 trips a day; for the oldest old the average number of trips made per day is only 0.49. The figures for Flemish survey on travel behaviour (Zwerts, 2002) shows an average trip frequency of 1.5 trips a day within the age group of 65 and over. In Mollenkopf (2005:137) however the average number of trips made by senior citizens aged 55 and older per day within the reference period was 2.1.
Women moved significantly less than men (F=36.18; df=1; p<.05) in all age groups. However in the OVG study no interaction effects were found (F=0.36; df=2; p=0.96).

Table 15: Average number of trips per gender and age (OVG, Flanders)

		Movements Day 1 & 2			
Age	Gender	Mean (Sd)	60-69 (1)	70-79(2)	80+(3)
60 – 69	Men	2.05 (1.87)			
	Women	1.58 (1.54)			
	Total (1)	1.82 (1.73)		***	***
70 – 79	Men	1.46 (1.53)			
	Women	1.00 (1.30)			
	Total (2)	1.24 (1.44)	***		***
80+	Men	0.73 (1.44)			
	Women	0.32 (0.61)			
	Total (3)	0.49 (1.06)	***	***	

*** p< .05

In the MOBEL study the average number of trips decreases with age as well (F=7.02; df=2; p<.05). Elderly aged between 60 an 69 years made on average more trips (3.5) a day than the oldest old (2.66) en those of the age group 70-79 (3.05). Between the two oldest age groups there are no

significant differences concerning the average number of trips a day. In Castaigne's study (2003) including persons of 55 and older in the Walloon part of Belgium, on average 3.07 trips a day were made.
Moreover women moved significantly less than men (F=6.52; df=1; p<.05). As in the OVG study no interaction effects were found (F=0.08; df=2; p=0.99).

Table 16: Average number of trips per gender and age (MOBEL, Belgium)

Age	Gender	Movements Mean (Sd)	60-69 (1)	70-79(2)	80+(3)
60 – 69	Men	3.72 (2.22)			
	Women	3.19 (1.85)			
	Total (1)	3.50 (2.08)		***	***
70 – 79	Men	3.30 (2.01)			
	Women	2.81 (1.70)			
	Total (2)	3.05 (1.88)	***		ns
80+	Men	2.88 (1.76)			
	Women	2.35 (1.23)			
	Total (3)	2.66 (1.58)	***	Ns	

*** p< .05
Ns not significant

In all studies immobility rate grows with age. However in MOBEL age differences are not as outspoken as in the OVG sample. As in MOBEL and OVG we notice in the BAS study as well that the number of movements declines smoothly with aging, but drastically once aged 80 years or more. Although there is a drastic decline once age 80 years or above, more than three quarters of the oldest old moved at least once or twice a week outdoor (BAS).

In the MOBEL as well as in the OVG study we notice that in the oldest old not only the amount of non mover increases strongly, but the number of trips made a day decreases as well.
In line with Castaigne's findings (2003) male seniors made more trips than female seniors irrespective of their age and living in couple seems to raise the mobility of older persons. However the latter wasn't confirmed in the OVG study. Moreover senior citizens who dispose of a driving license made more trips than those without.

3.2.2.4. Average number of trips per income

The income of the elderly has an impact on the average number of trips a day (F=66,84; df=2: p=0.00). Elderly with a lower income tend to move less (1.13 trips a day). The richest respondents made on average 2.22 trips a day, while the poorest only made 1.13.

Table 17: Average number of movements per income (OVG, Flanders)

Average monthly net-income (OVG)	Mean (SD)	(1)	(2)	(3)
Less than 495 Euro a month (1)	1,13 (1.33)		***	***
Between 496 and 1240 Euro a month (2)	1,46 (1.61)	***		***
More than 1,341 Euro a month (3)	2,22 (1.81)	***	***	

*** p< .05
ns p>.05

In the MOBEL study the average monthly income of the elderly explains differences in the movement pattern (F=7.23; df=2: p<.05). Elderly with an income lower then 745 Euro a month made on average less trips a day (2.56) than those with a higher income. However the richest respondents move as much outdoor as those with an income between 746 and 1,860 Euro a month.

Table 18: Average number of trips per income (MOBEL, Belgium)

		(1)	(2)	(3)
Average monthly net-income	Mean (SD)			
Less than 745 Euro a month (1)	2.56 (1.68)		***	***
Between 746 and 1860 Euro a month (2)	3.30 (1.97)	***		Ns
More than 1,861 Euro a month (3)	3.55 (2.00)	***	Ns	

*** p< .05
ns p>.05

3.2.4.5 Effects of demographic, individual and contextual variables on occasional movers (BAS)

A multinomial logistic regression was used to assess the effect of demographic, individual and contextual variables on the likelihood of being an occasional mover, using the never movers as a reference category. We also estimated the likelihood of being a regular mover, and being an often mover, both using the never movers as a reference category.
Table 19 shows multinomial logistic regression coefficients for mobility. Both unstandardized coefficients (β) as odd ratios are presented. The model shows an explained variance between 19,1% (Cox and Snell) and 25.8% (Nagelkerke).
The first set of unstandardized coefficients (β) and odd ratios (columns 1–2) estimate the likelihood of being an occasional mover with never mover as a reference category. Only gender and physical health were found to be associated with a significant change in odds of reporting occasional moving. Other individual and contextual variables are not significantly associated with the likelihood of being a occasional mover (in reference to never movers).

In the second set (columns 3-4), we estimated the likelihood of being a regular mover, using never movers as a reference group. It shows that there is a negative or inverse relationship as age increases the likelihood of being a regular mover decreases. The odds ratio show a proportion decrease of 7 percent (calculated as 1-.930 = .007 *100) less likely to report being an occasional mover. Although these may appear to be small changes, notice that this is an estimated change for one unit of age. There would be substantial differences in reported worry levels if we compared estimated change in odds between a 60 and a 80 year old. In this instance one would multiply these odds by 20 times.
Physical health presented a strong positive relationship with being a regular mover: the better the health, the more likely older people will move regularly. An analogous reasoning is shown by frequency of falling: elderly people who suffered 2 or more falls in the last 12 months are less likely to be regular movers, in reference to never movers.

Table 19: Multinomial logistic regression analysis of demographic, individual and contextual variables with mobility (BAS, Flanders)

	occasional movers versus never movers		regular movers versus never movers		Often movers versus never movers	
	β	Exp (β)	β	Exp (β)	B	Exp (β)
Age	-.010	.990	**-.072****	**.930****	-.127	.881
Gender						
Women (ref)						
Men	**-.431***	**.650***	-.264	.768	**.448****	**1.565****
Physical health	**.627***	**1.872***	**2.053****	**7.792****	**3.185****	**24.177****
Frequency of falling						
Never (ref)						
1x/year	-.072	.930	-.285	.752	-.262	.769
≥2x/year	-.317	.728	**-.492****	**.612****	**-.620****	**.538****
Income						
500-999€ (ref)						
1000-1499€	-.081	.922	.066	1.068	.152	1.165
> 1500€	-.042	.959	.372	1.451	**.786****	**2.194****
Degree of urbanisation [32]						
Residential community (ref)						
Rural community	.055	1.057	.343	1.409	.364	1.439
Concentration economic activity	.395	1.485	**.610***	**1.840***	**.697***	**2.007***
Semi urban	.214	1.239	.347	1.415	.471	1.601
Small city	.027	1.027	.029	1.030	.091	1.095
Large city	-.220	.803	.212	1.236	.516	1.675
Coast community	1.001	2.722	.452	1.572	1.305	3.688
Insufficient bus stops						
Yes	-.007	.993	-.069	0.933	-.234	0.791
No (ref)						
Traffic is too heavy						
Yes	.040	1.040	-.096	0.909	0.032	1.032
No (ref)						
Condition of the sidewalks						
completely dissatisfied	-.248	.781	-.343	.710	-.212	.809
rather dissatisfied	-.127	.880	-.189	.828	-.102	.903
neither dissatisfied nor satisfied	-.143	.867	-.187	.830	-.240	.787
rather satisfied	-.120	1.127	.066	1.068	-.005	.996
very satisfied (ref)						
Feelings of insecurity	.007	1.007	.005	1.005	0.001	1.001

**p < .01, * p < .05

[32] Heyse, K. (2007). Vernieuwde methode voor clustering van gemeenten, uitgewerkt door Dexia, Geraadpleegd op 18 januari 2008 op http://aps.vlaanderen.be/lokaal/lokale_kaarten.htm

Finally, degree of urbanisation plays a significant role. The odds ratios show living in a municipality with economic activity had substantially increased the likelihood of being a regular mover.

The third set (columns 5-6) shows unstandardized coefficients (β) and odd ratios for the likelihood of being an often mover, in reference with never movers. Gender is both positively and significantly associated with being an often mover: being male increases the odds of moving often. Physical health again is an important predictor of moving often. Odds ratio increase enormously. Frequency of falling and living in a municipality with economic activity play an important role too in the same way as in the second set.
A new variable that shows a significant relationship with moving often is 'income'. Having a monthly income of minimum 1500€ is positively associated with being an often mover, in reference to never movers. Elderly people with a high income have significantly higher odds ratios of being an often mover.

To conclude, we can state that there is a positive association between mainly socio-demographic variables and the degree of mobility. Being male and physical healthy increases the odds of being an often mover the most. In addition, the frequency of falling plays an important part too in the differences between never movers and regular/often movers.
Age is also a significant determinant, but solely for regular movers. For the other categories it appears that it is not age 'an sich' that plays a part, but it is especially physical health that is the most important predictor of mobility.
Having a monthly income above 1500euro is associated with a higher degree of mobility. When often movers are compared with non movers, it is income that makes elderly able to heighten their degree of mobility to the top.
Looking at contextual variables, particularly the influence of the degree of urbanisation is significant. Elderly who live in municipalities with a concentration of economical activity are clearly more mobile than older people who don't.
This, however, does not suggest that the built environment is not important in relation to mobility. However, simply adding bus stops or purely improving sidewalks will likely not be enough.
Whereas in bivariate analyses areas with insufficient bus stops, with heavy traffic and with poor sidewalks appeared to be significant contributors of mobility, in multivariate analyses their influence is not significant. These relationships proved not to resist when we controlled for age, gender, physical health, etc.

3.2.2.6 Trip motives, the temporal dimension of travel behaviour and trip distance

In this part we focus on the different trip motives, the temporal dimension of travel behaviour, and the trip distance.

Trip motives

Table 20: Multiple response trip motives (%)

OVG trip motives day 1 & 2	60-69	70-79	80+	Total
Returning home	24.2	10.5	1.4	36.1
Working	3.4	0.7	0.1	4.1
Leisure/ sports/ culture	7	3	0.3	10.4
Services	3.5	1.7	0.2	5.3
Shopping	13.5	6.7	0.9	21.1
Visiting someone	6.5	10.2	0.4	9.8
Promenade	3.7	1.7	0.1	5.5
Bringing/ picking someone up	3.7	1	0.1	4.8
Other	2.1	0.8	0.1	3
Total	67.4	29	3.6	100%

MOBEL				
Returning home	22.8	12.4	1.9	37.2
Working	2.9	0.3	0.1	3.3
Leisure/ sports/ culture	6.3	2.4	0.8	9.4
Services	4.9	3	0.6	8.4
Shopping	12.5	8.2	1.2	21.8
Visiting someone	5.5	2.9	0.6	9
Promenade	2.8	1.9	0.5	5.2
Bringing/ picking someone up	4	1.4	0	5.4
Other	0.2	0	0	0.2
Total	61.8	32.5	5.7	100%

Table 20 shows that in both studies shopping, visiting someone, and leisure/culture/sports are the most popular trip motives. Moreover, the trip motives don't differ largely across the age groups. Elderly aged 60-69 leave the house most often for shopping (OVG: 20.1%, MOBEL: 12.5%), leisure/culture/sports (OVG: 10.4%; MOBEL: 6.3%), and visiting (OVG: 9.6%; MOBEL: 5.5%). These trip motives also remain a priority for the elderly aged 70 and above. Shopping seems to become more and more popular amongst the elderly aged 80 and above and becomes more important than working, promenade and bringing/picking up someone. When we consider chain movements the main motives for the first trip are shopping (OVG: 42.3%; MOBEL: 42.3%), leisure/culture/sports (OVG: 13.3%; MOBEL 11%), and visiting (OVG: 12.3%; MOBEL 12.3%) and this for all the age categories.
The most popular trip motive of the second movement is going home (OVG: 58.9%; MOBEL: 62.3%). That means that almost half of the elderly make chain movements. In that case the main trip motive remains shopping (OVG: 12.8%; MOBEL: 13.2%).
In the second place elderly aged 60-69 prefer leisure/culture/sports (OVG: 7.6%, MOBEL: 5.9%)), while respondents over 70 make a second trip in order to visit someone (OVG: 8.6% MOBEL: 5.2%).
The main motive of the third trip is also going home (OVG: 42.2%; MOBEL: 30.4%). In the OVG study the main motive of those aged 60-69 and above 80 remains shopping (14% and 16.1%), while elderly aged 70-79 prefer visiting someone (11.8%).
However in the MOBEL study shopping remains the most important trip motive for all age categories, while in the oldest old the third movement concerns more often (14.3%) services.
Based on the analysis we conclude that in the OVG study 40% (MOBEL: 47%) of the mobile elderly make chain movements. Elderly often combine shopping with a relaxing activity as visiting someone or leisure/culture/sports.
These findings are in line with those of Mollenkopf (2005:137) and Castaigne, 2003).

Temporal dimension of travel behavior

On average a trip takes 71.1 minutes (MOBEL: 62.5). However in the OVG study the duration of the trips decreases as age increases ($F=1.08$; $df=2$; $p<.05$). Elderly aged 60-69 travel on average for 72 minutes, while the elderly aged 80 and above only travel for 61 minutes. Yet in the MOBEL study no age related differences could found concerning the duration of the movements outdoor ($F=1.77$; $df=2$; $p>.05$).

Moreover men travel frequently longer distances than women and subsequently spend more time on their movements (OVG: $t= 2.81$; $df=1338$; $p<.05$; MOBEL: ($t= 3.00$; $df=753$; $p<.05$). Women spend on average 66 minutes (MOBEL: 56.67) while men spend 75 minutes (MOBEL: 67.44) on their movements. Concerning the duration of the movements no income relate differences can be found (OVG: $f=2.95$; $df=2$; $p>.05$; MOBEL: $f=2.30$;$df=2$; $p>.05$).
In the OVG study data indicates that 56.9% (MOBEL: 57.1%) of the movements take place in the afternoon, 34% (MOBEL: 34.4%) in the forenoon, and 9.1% (MOBEL: 8.5%) early in the morning. Concerning the onset of the movements no age differences occurred.

Considering chain movements, elderly frequently leave their homes for a trip between 9 and 10am, or around 2pm. The second movement, which often includes a second destination, is concentrated between 10 and 11am or around 2pm. Finally the third and often last movement, usually returning home, is mostly situated between 14 and 16pm.

Across the different age categories we note that the first movement often takes place in de forenoon (50.8%). At the second movement, usually also a second destination, a large majority of the elderly prefers the afternoon (60.7%). A third movement also takes place in the afternoon, usually the last movement of the day and therefore often means returning home.
Elderly aged 80 and over start their movements more frequently in the afternoon, while the hour of departure of the other age categories is split between forenoon and afternoon.

All findings concerning the temporal behaviour match with those of Castaigne (2003).

Trip distance

In this topic we focus on trip distances (OVG). The average total trip distance per day amounts to 28.8 km. Considering the differences in age groups, the results show clear differences in mobility: the average number of kilometres travelled by respondents between 60 and 69 years is 31.2 km. This number decreases in the age group 70-79 until 25.2km and finally, elderly aged 80 and over travel a mean of 18.3km . As age increases, total trip distance decreases.
Looking upon the average trip distance, the analysis demonstrate that these age differences are mainly due to differences in average trip distances. The young old travel per trip 11.7 km. The average trip length of elderly between 70 and 79 is 10.2 km and elderly above 80 prefer shorter distances (7.8 km). Based on the average trip distance, we notice that the outdoor movements become shorter in distance as age increases. Mainly these results are in line with the findings of Castaigne (2003), with the exception of the amount of kilometres travelled by the age group 65 and over. He concludes that this age groups travels 13.06 km a day, where as our results show that elderly travel 25.3 km (70-79) or 18.3 km (80+) per day.

Following Mollenkopf (2004) and Castaigne (2003) the results show that men travel longer distances (32.1 km per day, 12.3 per trip) than women (24.9 km per day, 9.5 km per trip).

Elderly with the lowest monthly income travel on average 22.9 km per day (9.3 km per trip), while the average distance of those with an income between 496 and 1240 Euro is 27.0 km per day (10.8km per trip). Older respondents with the highest income travel on average 34.8 km per day (12.3 km per trip). Thereupon, we can conclude that the distance increases as the net income of the respondent increases.

We found no figures on the average trip distances per income category in the literature to compare our results with.

3.2.3 Mobility practices within the action research

During the discussions of the needs analyses done in the first phase of the action research, it became clear that there are a few differences in the importance that the participants attribute to different modes.

Table 21: Importance attributed to modes based on needs analysis

	St-truiden	Leuven	Brussels	Mons	Gembloux
walking	low	medium	high	high	high
cycling	medium	low	low	low	low
PT	high	high	high	low	medium
car	high	low	low	medium	medium
Action	Survey towards elderly population on needs concerning information and	Campaign on courtesy in buses of Leuven (posters and postcards) Awareness	Guided tour on Brussel's PT – network in presence of Ministry of Transport and	Scrap-book with pictures and explanation on black points Round-table	Survey on needs and desires concerning mobility

	information channels Articles on PT-info (written by the AR-group) published in city magazine	raising among peers during the annual "week of seniors" in leuven	PT-providers	with policy-makers	

The differences in attributed importance are also reflected in the different actions that are chosen. In St-Truiden, Brussels and Leuven, the action groups were far more interested in public transport. They all chose an action involving public transport in one way or another. However, there are some differences to be mentioned. The Leuven group chose an action on courtesy because they live the experience every day as frequent PT-users. This was also the case in Brussels. Our Brussels' participants are frequent PT-users who experience the problems mentioned earlier every day. In St-Truiden they chose their action based on the own experience of having poor information on the existing PT-network and not because they are frequent users themselves. Some of the participants in St-Truiden indicated a higher use of public transport since they got to know the possibilities of public transport in St-Truiden.
In Mons and Gembloux the bigger part of the attention goes to walking, safety and accessibility. Cycling and public transport are mentioned but aren't a priority at all. The action in Mons evolved mainly around infrastructural problems such as maintenance of sidewalks, bad condition of the network, difficult crossing sites, etc. In Gembloux there was also some extra attention to this infrastructural aspect of mobility.

3.2.3.1 Actions developed in Gembloux

Due to the specific nature of the action in Gembloux, where we conducted a survey among the city's elderly population, we can go more into detail about mobility practices in Gembloux. The questionnaire for this survey was developed by the participants to the action research, in close cooperation with the city representatives and the researchers.
Also thanks to some media coverage on the survey we managed to get a representative sample (N=240) of the Gembloux elderly population. The questionnaire was based on a compilation of relevant questions from the Elderly Needs Assessment used by VUB (BAS), questions from earlier non-published questionnaires by Mobiel 21 and several street audit forms. The topics of the questionnaire were the following:

- Socio-demographic and mobility profile;
- Assessment of the proximity and accessibility of main services and destinations;
- Transport modes use for movements to main services and destinations;
- Assessment of security during daily movements;
- Assessment of quality of life in the neighbourhood;
- Assessment of participation possibilities of senior citizens in the local (mobility) policy;
- Assessment of quality of public domain for pedestrians and cyclists.

In the following paragraphs, we describe the results of the questionnaire from the point of view of the different transport modes used by the elderly in Gembloux and the perceptions they have about the quality and security of these different modes.

A. Relation between possession and use of transport modes

Walking and driving a car are the most popular transport modes in Gembloux. This result is completely in line with the findings from the State of the Art and therefore not that surprising. Striking fact is that 70% of the respondents owns a car as well as a bike but that only 5% uses that bike on a daily basis. On the other hand, 54% of the respondents uses his/her car on a daily basis.

Figure 4: Modes use by senior citizens in Gembloux (N=240)

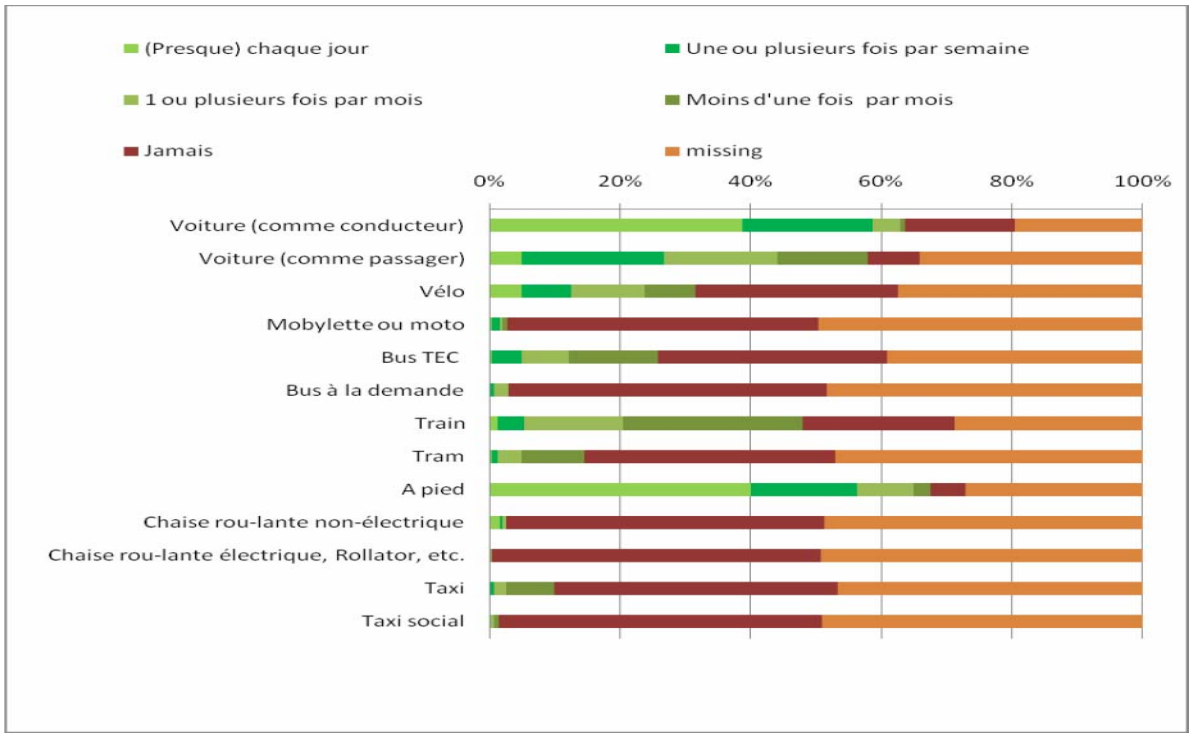
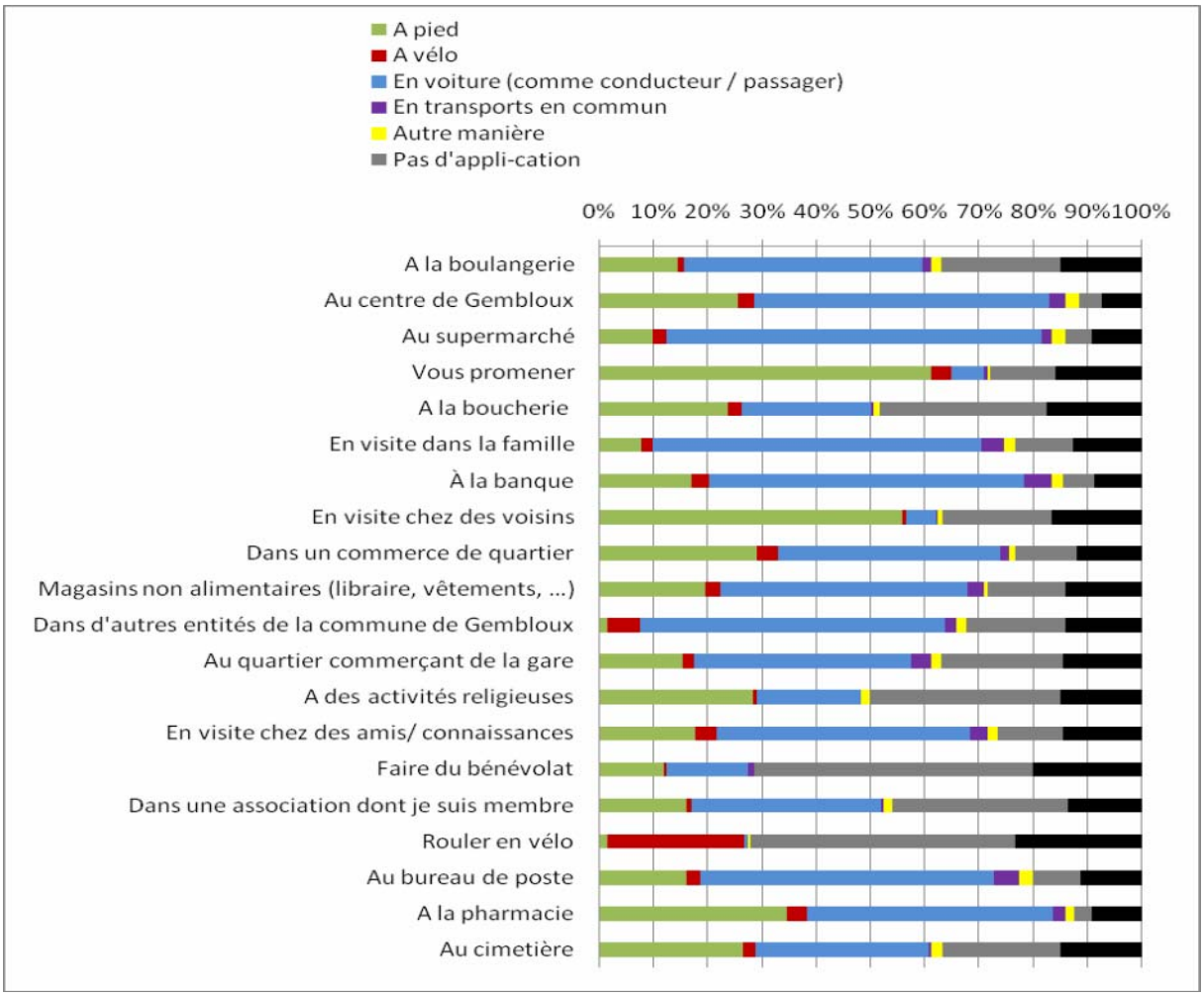


Figure 5: Modes use per destination by senior citizens in Gembloux (N=240)



B. Walking

A small majority of the respondents walk on a daily basis to several times a week. Only 5.5% never walks. Purpose of these walks is in most cases leisure time (61%). Other important destinations are shops in the neighbourhood: the pharmacist, hairdresser, corner shop.

Walkability and liveability of walking routes seem to be very important, according to the reactions on questions regarding quality of life in the neighbourhood. One third of the respondents feel that the lack of benches and public toilets hurts the nature of the public realm. Apart from that, respondents indicate that there are too little places to cling onto when walking. Over half of the respondents feel also that there is too less space for pedestrians.

When asked about the quality of the public domain, mostly problems concerning walking come up. Almost 90% of the respondents indicate that sidewalks are in bad condition. Another 75% says that sidewalks are crooked, which can be a real obstacle for elderly people. Over 75% of the respondents thinks that there are sidewalks lacking. Other problems are: obstacles in general (72.5%), cars parked on the sidewalk (68%), lack of pedestrian crossings (66%), badly lighted crossings (51%).

During daytime, 71% of the elderly population goes outside and feels relatively safe. At night time, the numbers decrease dramatically, 30% never goes out at night. The respondents feel particularly unsafe when they are alone or when walking. There's a fear of getting mugged or robbed. Quite remarkable is that feelings of insecurity in the neighbourhood are attributed the most to the bad condition of the road network (61%).

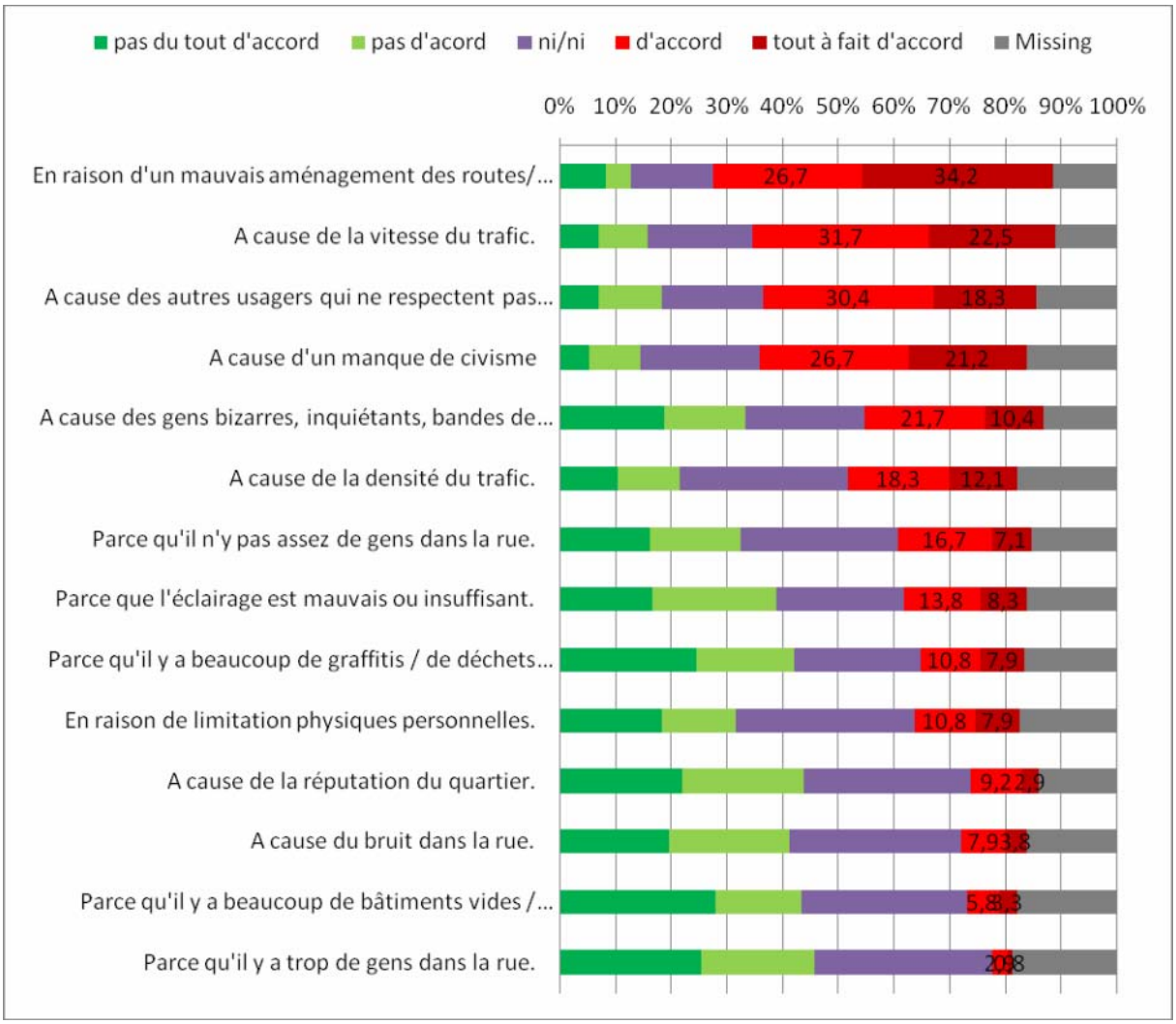
Figure 6: Quality assessment of public domain for cyclists and pedestrians by senior citizens in Gembloux (N=240)

C. Cycling

Only 5% of the elderly population uses his/her bike as a transport mode on a daily base. However, 70% owns a bike. 31% of the respondents indicates that they never cycle. The bike, as a transport mode, is completely underrepresented in the numbers on services and use of transport modes towards these services.

More than 50% of the respondents feels sometimes or always unsafe when cycling during daytime. At night time, this number increases to three quarters of the respondents. Main causes for these feelings of insecurity are the bad condition of roads and cycle lanes, the traffic speed, lack of respect for rules and other road users and a lack of civism or courtesy. 62.5% of the people think that there is a lack of cycle lanes. 55.8% thinks that the existing cycle lanes are badly engineered en poorly maintained. Another 55.8% feels too little room is attributed to cyclers.

Figure 7: Feelings of insecurity by senior citizens in Gembloux (N=240)



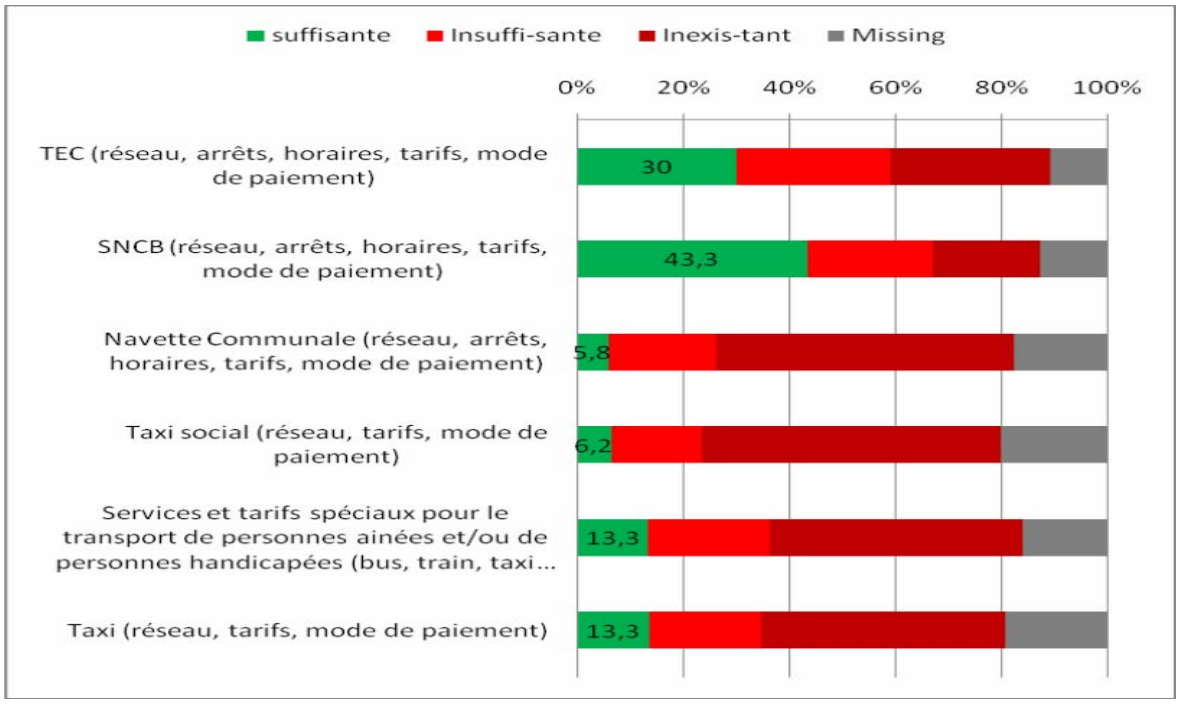
D. Public transport

Based on the results, we can say 12% of the elderly population has a season ticket for the TEC , only 5% has a season ticket for the NMBS. However, there are more train users than bus users. On a yearly basis, 10% makes use of a taxi. The special system 'taxi social' is used by only 1%.

Only 30% of the respondents is satisfied with the closeness of a bus stop and 40% is satisfied with the closeness of a train station. 65% of the respondents indicates never to walk to a bus stop. 37 % never goes to a train station. On the other hand, 30% indicates that they walk to the bus stop nearby. The problems on walking facilities mentioned above, could be an important threshold for bus use.

In general, the respondents feel they have too little or no information about public transport or special services in Gembloux. Especially the information about the Navette Communale and the 'taxi social' is lacking, only 6% indicates to have sufficient information on this. 30% of the respondents have sufficient information on timetables, rates, etc … of the TEC, 43% has sufficient information on timetables, rates, etc… of the NMBS.

Figure 8: Assessment of information on public transport by senior citizens in Gembloux (N=240)



E. Car

As mentioned before, 70% of the respondents has a car at their disposal. 60% of the respondents has a drivers licence. A staggering 96% uses the car (as driver of passenger) daily or at least several times a week. The car is the most popular transport mode for all trips and destinations, except for going for a walk, going to the park, going cycling, visit neighbours or the community centre or attending to religious activities. People use their cars as much as they walk to go to the bakery.

Car drivers and passengers tend to feel safe on the street during daytime. They also feel a lot safer in their care than with any other mode at night time. When they do feel insecure, it is caused by traffic speed, congestion and lack of respect for traffic rules.

3.3 Moving around

3.3.1 Moving around: situations - main findings from the sociological & anthropological perspective

"Duration is not 'empty time' but it is perceptions and actions in a flow of experience" (Crang & Travlou, 1999: 168). This sentence introduces well the last part of this report, dedicated to mobility experiences. That is to say an analysis of the actualisation of mobility practices in mobility situations. The duration explored in the following pages concerns the sequence of ordinary trips and the various facets of the experience involved. Movements in the public realm & various adjustments to daily mobility situations are now considered through an ethological and ecological frame that enlightens pragmatic and phenomenological dimensions of the action of moving as well as the plural experiences of ordinary trips. Complex and dynamic ties between environments, perceptions and movements are portrayed. Light is shed on embodied aspects of movements: emotions, rhythms, sensations and know-how at work in ordinary situations.

This attention to minor aspects of access to the space, this micro-sociological approach offers another angle of view on experience. It shows how micro and macro levels interpenetrate. This is made

apparent when the most trivial mobility experience joins the question of the access to certain situations (built environment, public or private transport device, …), that of the construction of social differentiation and the creation or use of standards and norms. This last part of the report is mainly based upon analysis drawn from in situ observations and go-along interviews[33] .

3.3.1.1 Situated Identities

Age is not a natural phenomenon, it is an accomplishment: "Like gender, age is accomplished – not in the sense of something completed, but in the sense of something 'brought to pass' or continually carried on. In accomplishing age, we create and maintain selves, roles and identities. …Although age often feels like something we simply are, it feels this way because we enact age in all interactions. Since we usually act our age in predictable ways – predictable given the particular context – we make age invisible. We make age seem natural." (Laz, 1998: 100). Age-as-accomplishment is something we do. In doing age, identity is created and carried on. However, as Laz notes, doing age doesn't pass in a void. Age is constructed in interactions with others and can be enacted differently in particular contexts. Daily mobilities and the sites they pass through play an important part in these continual identity forming processes. Daily mobilities offer resources for doing age. Moreover, interactions with other people and with the built environment can also make people do age, in our case old age. Nevertheless, as we will see, age can also be resisted or negotiated. It can be differently enacted.

A. Interactions and enacting age

In daily interactions with others while moving through public space, people categorize and are categorized. Among all things with which people interact, certain of them signify. The 'ordinary' categorization of people isn't based on some certified 'proof' of chronological age. Rather, we rely on visible cues to categorize people (Laz, 1998: 93). The physical appearance of somebody offers a wealth of cues inducing categorization: the condition of the skin, colour (and presence) of hair, body posture, etc. But there is another way in which the body plays a role. Besides the body acting like a cultural screen, a site of projection of social meaning, the ways in which the body moves conveys information to others, too. Especially in situations of mobility, body movement becomes an important feature of ordinary semiotics. These are 'kinesthetic semiotics', as it were. The swiftness in the unfolding choreography of an action, fluidity of movement, continuity without hesitation, they all communicate ability, familiarity or skillfulness. Hesitation, discontinuity, jerkiness, … could be interpreted as signs of lacking skills, of lesser mobility or disability. *"First of all, it is in the gait that one can see whether somebody is old."* (Y, Leuze, DC#1). Together with additional material signs such as the clothes one wears and the use of 'mobility devices', it can be old age that is being enacted.

We function by using stereotypes, predetermined categories that provide for identities and roles in relations and situations. To do this categorizing, we base ourselves on a series of signs or clues that indicate and fabricate differences. It are thus the signs and significations given to them, that "make", that "fabricate" aging and old age. This is what makes that there are young people and old people (us and them). Based on that, we anticipate actions, attitudes, and behaviours on their part, while at the same time we position ourselves too. This refers to the normatively of prescribed categories and attitudes. A woman moving into old age might not get wistled at anymore, but instead she might be offered a seat in the tram: *the first time somebody did so [offer seat], I found it unpleasant. But, it doesn't happen a lot, so I don't look that old. Well, it does happen, but that is more from being a woman facing a polite young man, rather than my age.* (V, Brussels) What is also interesting in the latter example is that there can be interferences between different enactments. Instead of enacting old age, it can also be gender that is enacted. Enactment and plays of enactment are not unambiguous or determinate. They can – up to a certain extent – be negotiated or undone. However, a lot also depends on the built environment wherein the enactment takes place. Performing this and not that identity can be facilitated or counteracted by the built environment. Sometimes (or more often than not), the built environment "makes you do", makes you perform your identity. With old age and mobility this is also the case.

[33] See Methodological Annex

B. Built environment, power relations and enacting age

Interactions that are at play during daily mobilities do not take place in a void. They are situated, they are framed (Crabtree, 2000; Latour, 1994; Lynch, 1993). We could say that the built environment is the setting, the décor. But that would be to miss part of the story. Indeed, the built, a street, a motorway, a square are not just that. They are no passive setting, no empty container that is filled with the actions of people. It is a participant in the actions and interactions between people. The built environment frames the actions and interactions between different people (and vehicular units). They allow certain things and make other things more difficult. The built environment renders comprehensible what happens, what has to be done. It gives/ makes sense to what one is doing. As much as the actions taking place in a given environment give sense to the place, as much does the place itself give sense to the actions taking place in it. We could say, then, that in moving, in passing through sites and places, that they give form to our action, that they shape it, while at the same time shaping or fabricating the sites that we pass through.

This seems very obvious, but it is not. For example, in the planning and architecture of places it is only fairly recently that it was realized that all built environment is calibrated, or normative. It is calibrated to Da Vinci's Vitruvian man. He is the standard: a man equipped with all physical capacities, with a certain strength, speed, and ability. This man, however, is not really representative for the whole of the moving population.

The built environment, its configuration, as well as the people that participate in the situation, play a role in what is enacted or not. What is meant by this is that actions are rendered possible or counteracted in certain sociomaterial configurations. Accordingly, we should be asking ourselves: what is it that makes the difference? What is it that makes people enact oldness? The height of stairs, the absence of ramps, the absence of railings, heavy doors, ... It is there that the making of differences reveals as also being power related. There where a difference is made or marked, plays of power are revealed or come into being. If the escalator does not work and the height of steps does not allow a person to descend the stairs, in this case, it is the escalator that fabricates lesser mobility or old age. It is the escalator 'that makes me old'. Just like the time that is given by a traffic light to cross the street together with the person's body fabricates the slowness of that person. It makes her-him 'do oldness', as Latour would say (Latour, 2007).

C. Different enactments or interferences in enactment

Through the interactions (and intra-actions) with people and the built environment, that is the socio-material configurations, differences are made. However, we should not forget that there are different differences that are being made. There are at least interferences between different enactments that can be made or unmade. As Ingunn Moser (2006) showed for the interferences between the enactment of gender and disability, we could analogically talk about the interferences between old age and disability. Using an umbrella instead of a walking stick, for example, could serve to enact old age instead of disability. So, the actors can try to make or unmake certain enactments by using requisite artefacts.

Having said that, it has to be clear that enactments are rarely totally unmade, for there are a lot of elements contributing to this enactment and not that. *You can rejuvinate yourself through different clothing and the like. But it will gain you only 10 years. If you go for 20 younger, you look ridiculous!* (M, Brussels, CD#1). However, within a certain scope, an infinity of variation is possible: for some, using the umbrella instead of a walking stick can serve to enact elegance instead of old age. What is more, besides the interferences between enactments, we could talk about different versions of the same enactment. When a woman growing into old age is making cars stop, queue and wait because she is crossing the street at her own pace with a stranger's helping hand, is she enacting gender? Is she enacting gender and old age at the same time? Or is she enacting a version of gender or old age, namely of a feminist woman or a rebel old mobile subject? It thus seems that the enactment story and what 'makes doing old' is versatile and changes throughout time, according moments or situations, or given the context. This means that we should also emphasize the heterogeneity of enactments and of 'making doing oldness', and that they are not all the same. However, at the same time it does not mean again that there is no difference at all, we need not to relativize infinitely. Challenging the Big Divide between the old and the others does not mean falling into the trap of absolute relativism.

The idea of enactment can tell us about how differences can be made or unmade, and it can even show its versatile nature when the point of view changes. However, it tells us less about the experience of co-implied actors in a mobility situation, and about the invisible work associated with the accomplishment of a common world. The experience and invisible work can be read as the workings of at least three so-called performative tools, namely emotion, the Umwelt and spatiotemporality. This is where we turn our attention to now through the discussion of some basic mobility situations.

3.3.1.2 Mobility Situations

During the collective discussions, an important matter was that of hightened awareness for irregularities of any kind in the circulatory space. As a result, situations are experienced as difficult or dangerous, and lead to feelings of unease or fear. At least two groups of situations have to be distinguished: a group of situations that have a higher user cost for anyone, whatever age or ability, and a group of situations that seems very obvious to most people, and represent an effort for others. In the second group we can mention traffic situations such as pedestrian crossings, crowded situation but also irregular paving and the like. These are trivial situations for most of the users of traffic space, but can be(come) a trial for other. Besides the physical aspect, we have to keep in mind that it is a social or collective accomplishment to do mobility: most traffic situations are collective actions that need coordination between the users. The latter are explored further in the following pages. In this chapter, various daily mobility situations are envisaged. A theoretical framework has been mapped out in the present work. It rests on three so-called "performative tools" that have the property to address the complexity and plurality of experience.

A. Emotions, spatio-temporality and Umwelt: the three performative tools of experience

Nothing is more difficult than understanding and describing somebody else's experience. The ideal would be to live exactly the same thing, in the same way and at the same moment. In other words, to put oneself in somebody else's shoes. As an alternative, three descriptive tools are here proposed. They point three crucial dimension of experiences put in the foreground by the people met and observed. They are called "performative" because each of them, besides a descriptive role and also holds an active role inside mobility experiences: they can literally change experience. The complex relations between those tools make the experience vary: all three assess that several versions of reality coexist in mobility situations.

The first performative tool is emotion. Mobility situations are imbued with emotions. In Vincianne Despret's view of emotion (Despret, 1999), following William James's, the emotionnal experience rest on at least two indeterminateness. On the one hand the emotional experience is unfolding in the indeterminateness of not knowing whether it is the body and its movements that makes the subject feel an emotion, or whether the body is moving in a certain manner (prudently, rapidly, peacefully…) because the subject is feeling an emotion. On the other hand, the emotional experience is fabricated by the indeterminateness about what is body and what is world: the frontier between the two is blurred. Emotion is at the same time what is felt and what makes feel. By a work on emotion, and their intensity, it is the experience itself that can be transformed.

The second tool is that of spatio-temporality: Rather than a universal metronome cadencing all actions, various rhythms beat in the city (Lefebvre, 1995; Crang, 2001). Environments do not live following a singular tempo but in an more or less synchronised orchestration of different beats (day / night, week / weekend, seasons, winds, and weather, peak on / off hours, body rhythms, speed and slowness, …). Rhythms, pulsations, beats interplay with events and singular opportunities of the situation. Much like the differences in experience of time and space within different animal species, these differences also exist in humans. Different spatiotemporal experiences are lived when driving a car or riding a bike and there is a multiplicity of spatiotemporal experiences differing from one person to another and for the same person, from one period/moment to another. At the same time, the embodied speed of execution of an action can influence the experience of time and space according to the situation. Accelerating or slowing down a movement can open or close dimensions of the considered action. Actors can thus try to change the spatiotemporal frame of an action by slowing down or accelerating the movement. Again, like in emotions, it is not clear whether the speed of the

execution of an action is body determined or an outcome of strategically mediated action. It is probably both at the same time.

The third tool makes those fragments of the experience "hold together". It is the Umwelt: Jakob von Uexküll during the 1930's talked about the differences in significance that can be made in the living organism's Umwelt or immediate environment (von Uexküll, 2004 □1934□). Drawing from the case of the tick, Von Uexküll demonstrate that each being reacts to a selection of signs that build a singular world and engage action. In that, he talked about the ordering and construction of both a body and an Umwelt in relation with and to one another. Some things for some subjects only have a perceptive character, either they are perceived but don't signify or they signify but aren't important for the task at hand. For others or for the same subjects in other situations, carriers of signification have an active character, meaning that they are associated with some perception-action loops. Goffman (1973) used this concept to talk about people. Amongst the things we perceive, some are not perceived by others. Or if they are, they don't bear the same meaning. Umwelt, is thus at the same time what affects the subject, what reach him and how the subject is reached or touched by the signe under consideration. It designate all the things someone's body has learned to be affected with (Latour, 2004).

B. Walking (together) on Irregular pavement

Let us now imagine the fairly simple example of a situation of a mobile subject growing older walking on a cobblestone pavement. Our mobile subject doesn't seem to think of it as a trivial situation. It looks like quite some prudence is put in the moving about. Cautioning against an unwanted encounter with the cobblestone surface, the mobile subject is grounding the feet, and taking time at its own pace. Furthermore, the subject is looking attentively at the walkway, and balancing subtly with every possible intelligent muscle in its body. Seems like a lot of work for an ordinary walk. As presented here, the work of prudence could be partly described as embodied prudence. Without cognitive intervention, the muscles of the body act 'by themselves', hoping to keep the body up right. This embodied prudence is actually an emotional experience. The mobile subject is doing emotion (Katz, 1999). There is an indeterminateness to know whether are it the cobblestones or is his/her body that is making him/her move prudently. An indeterminateness to know whether s-he is moving or s-he is being moved? Whatever the answer to that, the mobile subject has at some points learned to be affected in another way by the cobblestones. Since her fall in the street, D, a lady reaching 100 years old, doesn't go out alone anymore. Her body has become untrustworthy. The fear to fall has transformed her experience of moving, and has fabricated a singular reality in which a loose cobblestone means a threat. Rooted neither entirely in the body or the environment, such an emotion, related in this case to souvenirs of previous falls, has modified her experience, her perceptions, and requalified what her body is able to do. Falling has transformed her relations to other people, and to the world. The "*damned cobblestones*" are not only able to arouse nostalgic delight and pleasure, they can also strike fear in the heart and body of our mobile subject.

That is why the cobblestones can signify something else. Their connotation can be pejorative, amongst other possible connotations. So, we could say that the cobblestones signify danger-of-losing-balance-and-eventually-of-falling in D.'s Umwelt, and that the action component would exist in 'walking prudently'. But as we saw, things aren't that simple or clear cut. We must not forget the complexity of relations. For the cobblestones might not be immediately visually perceived by the mobile subject, but she is informed by the feet and a sense of disequilibrium, conducing embodied emotion 'doing prudent walking' all of a sudden. Or the cobblestones might have signified danger to the person, even before the body felt the danger of the situation.

The same holds true for spatio-temporality. Again it is not clear whether the speed of the execution of an action is body determined or an outcome of strategically mediated action. We argue that it is both at the same time. Together with emotion and signifying processes, actors can try to literally change the spatiotemporal frame of an action. In the example of prudent walking, it means slowing down the action. The plays of and on emotions, the Umwelt and spatiotemporality sometimes allow to overcome the difficulties of the action. Sometimes, however, still other ways have to be found.

Like D., several people told they didn't go out anymore if not accompanied. By fear of falling. Being accompanied allows to keep the balance. Walking arm in arm will reduce the sensation of vertigo or dizziness felt by some. This sensation is mainly due to bodily transformations related to processes of growing old. Besides his reassuring presence, the "escort" will be in charge to execute fractions of

actions: the opening of a door with a severe groom, or orientation and guiding of the walk. As such, the attention, as well as the action, is distributed. Maintaining the constant visual vigilance on the surroundings, the escort allows the accompanied person to focus her attention on what counts for her. Cobblestones, for example. Here we have a way of walking that cannot be done alone. The walking body we talk about is a collective body. To « do » that collective body is not self-evident. It requires coordination. It requires work and training. D.'s scoliosis and fear to fall find expression in her stooped posture. While she is paying attention to the unpredictable surface of the pavement, her eyes being fixed on the ground, the escort will afford other parts of the action. Their rhythms have to adjust mutually. As D. says, *«in the beginning, the person accompanying me always goes too fast"*. The escort must get attuned. This work can lead to mutual adoption. During this mutual shaping process, the fluid and vague boundaries of their bodies have merged. Together, D. and her escort compose a multiple but common world, extending, while acting, the boundaries of their bodies.

C. Moving and being moved by the crowd

During the interviews and collective discussions it was often mentioned how certain situations are associated with negatively connotated feelings. The situations are said to affect them in such a way as to avoid them or to develop strategies to deal with them. They are situations where a lot happens at the same time (a lot of people or vehicles moving together, a lot of actions happening at the same time in a limited space, …), that is situations of collective action. But why actually are these collective actions – such as walking in a crowd, driving in the city, or taking a crowded bus – experienced so intensely, up to the point that they are regarded as problematic? And how are the collective actions dealt with? What strategies are employed to either change the situation, or change the experience of the situation?

One of the possible answers to the problematic experience of crowds/ collective actions is given by the interviewees themselves: "there is a lot happening at the same time"; "*I need ten eyes, […] there are cars and bikes everywhere"; "You have to read the intentions of people".* (Brasschaat, DC#1) A first point to be made then is that collective actions involve a lot of actors, and that collective actions suppose coordination (Thévenot, 1990). Moreover, to get the collective action to work, the actors involved have to identify the action at hand and anticipate the next move (i.e. read the intentions). During the action, the identification slides across and the actions of others are assessed as to make sure that the action is going smoothly. For people moving into old age, as for people more in general, the coordination of collective actions and emanating problems have to do with the three performative tools making up the experience of moving[34] and with the distribution of agency[35] .

Let us take a look at the workings of the performative tools (Umwelt, emotion, and spatiotemporality) in situations of crowding. Again, it is the complex relation between the three tools that make the experience (at first) vary between uncertainty and indeterminateness. Through previous experiences, for example, the crowd can signify danger-of-falling (= Umwelt). Seeing a crowd or arriving at places that are metonymically associated with crowds then signify danger, leading to adjusting behaviour and being affected (i.e. scared, cautious, nervous, … = emotion). It can also be the case that the crowd hasn't been identified as a crowd, and that all of a sudden it becomes clear that one is in a crowd: the speed one is moving at isn't of personal choice anymore, or a near accident/ collision makes us aware of the crowd (= spatiotemporality). In other words, the complexity of the relationship between the three performative tools makes that sometimes the identification of the situation as problematic happens a priori, and passes through recognition and signification leading to a certain emotional posture, while at other times it happens when one is already in the situation.

D. The experience of car driving

The car as a mode remains a very important way of moving around. However, the experience of driving doesn't stay the same when one is aging. Besides discourses of freedom and pleasure (like 'car flâneries'), driving a car is also an experience that is more ambiguous. All people that have driven a car know that car driving is a complex activity that comes with complex feelings and experience. Praxeologically driving seems easy when it is a habit and one can count on all senses and body to work together. When this is less the case, car driving soon becomes a very difficult activity. The latter

[34] See "Emotions, spatio-temporality and Umwelt, the three performative tools of experience"
[35] See "Mobility and agency"

is tied to the emotional experience of driving, too. While car driving is a very sensuous and emotional experience, it can be so for the good and the bad. Desire and pleasure can turn into fear and displeasure, making people drive differently than before. The tasks of driving may well be somewhat alleviated by new (ethological) technologies (Thrift, 2004), the complexity arising from the multitude of other vehicular units in the immediate environment or 'vehicular Umwelt' (Laurier, 2003) (cars, but also cyclists, pedestrians, busses, trams, mopeds, …) makes the attention divide and the multitasking of driving a real challenge, a gamble with lives at stake. And as the world of traffic evolves together with people growing older, driving environments aren't merely media or substrata of action, they become active participants or actants ever more. In the following paragraphs we will add some notes on ordinary car driving[36] .

Several authors have pointed out (Beckmann, 2004; Thrift, 2004; Katz, 1999) that driving a car means merging to a new entity, resulting in a 'motile hybrid' (Beckmann, 2004: 85). Through the mutual delegation of driving tasks, the fusion of driver and car 'occasions a metaphysical merger, an intertwining of the identities of driver and car that generates a distinctive ontology in the form of a person-thing, a humanized car or alternatively, an automobilzed person' (Katz, 1999: 33). The driver-car entity thus has its own phenomenological register that transforms senses, distorts emotion, reconfigures perception and action, and changes (possibilities of) communication. All of which, of course, enters in a multilateral dialogue between persons, their bodies, objects and environments (i.e. circulatory space).

The transformation of the senses and reconfiguration of perception and action works in both ways. It is a double movement of the two entities folding one into the other, mediating their affect and action. The actions of the affected person are translated into the actions of the car: if the driver is nervous, the driving will appear nervous, too. If the driver is prudent, the car will act prudently, too. But at the same time, the car mediates the actions of the driver according to what it can do. Driving nervously in a sports car will have a different effect than driving nervously in a 'normal' car. The importance of this implies that for research into daily mobilities of people moving into old age, the car becomes more than just a mode. Interest has to be taken in the different experiences that are fabricated through different driver-car configurations. Moreover, understanding what drives people to drive in this or that manner isn't simply a question of the driver alone. However, in some cases it is important to look at the driver's side of the story. These are cases in which the driver isn't sure anymore of what his or her body can do . In our discussions, it was often mentioned that people feared driving the car, or that they had stopped (or were inclined to stop by others) driving the car out of fear. Surprisingly, they didn't fear for their own safety for *'I always drive safely' (F.L., Woluwé), but they feared for the safety of other road users: "And in Woluwé, it's always the same, you're afraid to run over kids, stuff like that […] it wasn't so much for me, I drove carefully. But as it didn't go too well anymore, my son was afraid that I'd cause an accident and hurt other people."* (F.L., Woluwé). Fear of driving, so it turns out, isn't simply fear for oneself, it is also fear for others.

3.3.1.3 Users & Uses

When moving around in circulatory and traffic spaces, such as sidewalks, streets, market squares, and the like, people tend to use objects and the built environment in particular, non-intended ways. Along with 'intentional' design that aims at structuring environments for use by inscribing certain functions in it, the users of public space often find themselves helped out by functions of the built environment that were not intended in their conception. Ignoring the divide between intended and non-intended functions, people use their immediate environment in whatever way to get by, to deal with moving around through a given space. Different people have different needs for this moving around, and according to these needs, different affordances will 'appear' in the immediate environment. In the immediate environment affordances offer, provide or furnish people possibilities to enable or disable their actions. These affordances are not necessarily inscribed in the design, nor are they solely an attribute of the object or of the person using the object. The affordances only exist in their relation between the object and its user. The affordances of an object appear during the course of action, and afford dealing with the task at hand. A railing, for example, can prevent children from running on the street when put near the school's entrance gate. That same railing in another context can afford

[36] In recent years, car driving as an ordinary action has received more and more attention. A more pragmatic approach to understanding car driving has been proposed by several authors (Lynch, 1993; Gauthier, 2006; Laurier, 2001, 2005; Katz, 1999), to counter the 'mentalistic' and 'schematic' approach of psychologists (see for example Van Elslande, 1992), that for long dominated research

support for people having to wait to cross the street. Following our discussion on the experiences of space and moving around, we can put forward that objects or configurations of objects have different significations or different meanings. Different significations for different needs. Multiple object uses that reflect multiple worlds. "*Because I can't descend the curb at a given point, I go three meters further because there is a tree, a pole, or a flower box on which I can rest to descend. Or when there is a puddle and I cannot pass, I have to go around it. Automatically I do that. Here, I walk along the houses, I feel more secure than out in the open. I have a support when I don't feel well. There are also parked cars, for example, I take the support of the cars to get on the curb. You look automatically."* (C, Leuze DC #2).

In terms of policy and future design of public space, some lessons can be drawn from our collected empirical material. Some affordances or uses of the immediate environment exist in their own right. They are 'additional' affordances of objects that initially are intended for other uses. In this way, it is important to take notice of these and take them into account when new spaces are created. However, they cannot be built or created as such. A typical example of this are the walls or façades of buildings. The buildings afford living in, of course, but they also become sturdy supports for people who have difficulty in keeping balance. Walking along the walls of buildings is a technique people use that can make it easier to keep in balance. Moreover, besides the 'actual' or physical support, the walls offer reassurance, making the walking down the street less frightening. In this way, it also changes the emotional experience of walking.

Some uses are not so much a question of good or bad design, but they rather reflect shortcomings in the built environment. They are to do with planning, policy and/ or problems of distribution over space (either there is not enough of something in a given space, or the objects aren't well allocated over the space). Public benches are an excellent example of this. When the benches at a bus stop are used to sit on, not to wait for the bus, but just for having a rest (cfr. observations Sint-Agatha Berchem), this could indicate that there are too few of them, or that they are badly allocated. Immobility at the heart of mobilities, that is halt and resting points, can be an important need for people moving into old age. Whereas mobility can be seen as the moving from point A to point B without interruption, looking at daily mobilities from within shows that mobilities are more often than not discontinuous. They are interrupted, sometimes out of desire, but also out of need. The observation of such alternative uses, then, can inform city planners on the absence or less desirable allocation of accommodation to be (or stay) mobile.

Still other uses can reveal user possibilities and can inform future design. Through strategies of adaptation, extension, displacement or 'détournement', users can be considered as innovators (Akrich, 1998). Particular uses or affordances can inform future design of public space. The ubiquity of parked cars, for example, form a negative affordance for moving: they are obstacles in the 'path of safe travel' (Gibson, 1938) for pedestrians wanting to cross the street. For some people, however, parked cars are no obstacles. Instead, they become affordances of elevation, meaning that they help people getting on the kerb. When walking is a difficult endeavour for a person, distances are experienced as much longer than their objective measure would suggest. Walking several meters to cross the street at the zebra crossing where the kerb is lowered, then, can become an enormous and fatiguing detour. The ubiquity of parked cars in such cases enables personally convenient paths. Again the latter can inform future design and thinking about multiple uses of objects for ordinary mobility needs.

3.3.2 Moving around: main findings from the quantitative research

The questionnaire (OVG and MOBEL) measured the frequency of movements made through different modes of transport. List of modes: car, motor/moped, public transport (bus, tram, subway), train, bike, taxi and airplane. For each selected mode of transport the respondents had to indicate the frequency: never, daily, once or more a week, once or more a month, once or more a year.

OVG reveals that in daily use the car and the bike are the most popular transport modes (see table 22). Only 12.5% of the elderly never uses the car when they move outdoors. Public transport is seldom used on a daily base. Although 33% never moves outdoor by bus, this transport mode is frequently used occasionally. Almost none of the older people moves outdoor by motor, moped or taxi and travelling by airplane is never done by almost three quarter of the respondents.

Table 22: Transport mode (%) (OVG, Flanders)

	Never	Daily	Once or more a week	Once or more a month	Once or more a year
Car	12.5	27.8	48.7	8.0	3.1
Motor/moped	98.0	0.5	0.8	0.3	0.4
Bike	34.3	21.1	23.0	10.9	10.9
Public transport	33.0	2.2	17.0	21.0	26.7
Train	38.8	0.3	0.9	8.6	51.4
Taxi	84.1	0.1	0.2	1.2	14.4
Motorbus	51.5	0.1	0.5	2.7	45.3
Airplane	63.1	0.0	0.2	0.3	36.4

Comparing the OVG and the MOBEL data some major differences occur. First of all the differences in car and bike as transport modes are rather large. Contrary to the OVG data (12.5%) in MOBEL (see table 23) 59.4% never drives a car when they move outdoor, while in the BAS sample (see table 24) 20.2% never does. In Castaigne (2003) 31.3% of the respondents aged 55 and older never used the car.
The percent which uses the car on a daily base differ from 27.8% in the OVG study to only 7.1% in the MOBEL study. However these differences could be explained by the number of elderly that moves as a car passenger. In the BAS study however 42.1% drives the car on a daily base, while Castaigne (2003) finds out that 29.2 % used the car for their trips on a daily base

In the MOBEL study biking is a less popular transport mode than in the OVG sample. While in the OVG study 65.7% (BAS: 57.3%) of the elderly bikes and 61.2% (BAS: 29.8%) goes by train when they move outdoor in the MOBEL study this drops to only 40.6% and 45.4% respectively. Castaigne however indicates that 54.5 % of the Walloon elderly never bikes, while 59.4 % occasionally made a trip by train.
However in the MOBEL study the use of public transport, taxi and airplane are more in line with the OVG study. Concerning public transport the BAS sample indicates that only 38.2% (Gouvy 15.2 %; Brussels: 74.8 %) occasionally uses public transportation (see table 24). Apart from the high number in Brussels these results conflict with the those of both the OVG and the MOBEL study. Both studies indicated that more than two thirds of the elderly uses public transportation. Probably these major differences can dedicated to differences in methodology, especially the high response rate in the BAS sample and the stratification can lead to the inclusion of higher percentage of physically frail elderly, and a much higher percentage of the oldest old (BAS: 17.5%; OVG: 8.7%; MOBEL: 10.3%).

Table 23: Transport mode (%) (MOBEL)

	Never	Daily	Once or more a week	Once or more a month	Once or more a year
Car	59.4	7.1	13.1	9.2	11.2
Car as passenger	17.5	8.0	31.1	22.2	21.1
Motor/moped	96.4	0.7	0.9	0.8	1.3
Bike	59.4	7.1	13.1	9.2	11.2
Public transport	33.3	3.3	6.5	24.1	30.9
Train	54.6	1.3	1.3	6.1	36.6
Taxi	78.3	0.7	0.7	2.6	17.8
Airplane	69.1	0.4	0.0	0.6	29.8

While in Gouvy the number of car driver's (82.4 %) is in line with the Flemish results, in Brussels only 61.1 % drives the car when they move outdoor (Chi^2= 21.55; df= 1; p<.05).
In the BAS study, apart from the car most of the elderly move outdoor on foot (70%), seldom move by call bus (6.1%) or by taxi for less mobile (2.2 %). However elderly in Brussels move much more outdoor on foot compared to their Flemish counterparts and those from Gouvy (7.3 %)(Chi^2= 20.90; df= 1; p<.05).

Table 24: Transport mode (%) (BAS, Flanders)

	Never	Daily	Once or more a week	Once or more a month	Once or more a year
Car	20.2	42.1	31.5	3.5	2.8
On foot	30.0	36.0	21.8	5.4	6.9
Call bus	93.9	0.3	0.8	1.2	3.9
Bike	42.7	23.3	18.5	5.7	6.8
Public transport	61.8	2.7	8.9	10.1	16.5
Train	70.2	0.7	1.3	5.6	22.2
Taxi	95.8	0.2	0.2	0.5	3.3
Taxi for less mobile	97.7	0.2	0.4	0.4	1.2

Moreover in Brussels (4.2 %) as well as in Gouvy (3 %) the call bus is less popular than in the Flemish region, while elderly in Brussels (4.6 %), but especially in Gouvy (7.4 %) depended on a taxi for less mobile persons for their movements outdoor. Remarquebly no significant differences occurred between Brussels and Gouvy concerning the transport modes 'train' (Chi^2= 2.45; df= 1; p>.05).

All studies indicate that if persons go out, they most often use private modes of transportation such as car, bicycle, walking (Mollenkopf, 2005; Davey, 2003:8). However in Mollenkopf (2005:129) driving a car was only the second mode. Public transport plays a role when no other alternatives are available or when the public transport system is very well organized, which is more often the case in urban areas.

3.3.2.1 Age differences in transport modes

The use of transport modes is related to age. Contrary to Mollenkopf (2005) the older the people get, the less often they 'walk' as transport mode. In the BAS study moving outdoor declines with aging (Chi^2=864.34; df=8; p<.05). In the youngest age group 75.6% moves out on foot, while in the oldest age group this drops to 58.6%.
However, the car is the most popular transport mode in all age categories. When age increases the use of the car decreases (OVG: Chi^2=186.88; df=8; p<.05; MOBEL (Chi^2=80.78; df=8; p<.05; BAS: Chi^2=5280.63; df=8; p<.05). In the OVG study, elderly aged 60-69 most frequently use the car (33%) on a daily basis, while only 22.4% of the respondents aged between 70 and 79 do so. Once 80 years or older the daily use of the car collapses to only 9.8%.

In the MOBEL study older people rarely use the car on a daily bases. However like in the OVG study there is a decline in the use of the car on a daily base from 8.9% in the youngest age group to 2.2% in the oldest. Moreover, only 12.1% occasionally drives a car while in the youngest age group 52% does. Remarkably almost 82.5% occasionally moves by car as a passenger. While in the oldest age group these transport mode is popular once or more a month, the youngest age group seems to be passenger more frequently (Chi^2=23.99; df=8; p<.05).

Concerning the car, the results of the BAS study are in line with the previous studies when the age related differences are taken into account albeit in the youngest old 56.5% drives the car on a daily bases while only 11.5% in the oldest old. Moreover in the oldest age group only 62.4% drove the car in the past year, while in the youngest 71.1% did so.

In both the OVG and MOBEL study motor or moped as transport mode seems to be age invariant (OVG: Chi^2= 13.92; df=8; p>.05) (MOBEL: Chi^2=4.43;df=8; p>.05). In the BAS study this variable was not included.

The bike is a very popular transport mode. However the amount of bikers decreases dramatically once 80 years or more (OVG: Chi^2= 313.90; df=8; p<.05; MOBEL Chi^2=80.78;df=8; p<.05; BAS Chi^2=4544.86;df=8; p<.05). In the age group 60-69 years 76.1% (MOBEL: 52%; BAS: 71.1%) bikes on a regular basis when they move outdoor. We can notice a decrease in the age group 70-79 to 57.4% (MOBEL: 29.1%; BAS: 54.6%), while this drops to only 21.3% once 80 years ore more (MOBEL: 12.1%: BAS: 25.7%).

The use of public transport differs between the three age categories (OVG: Chi²= 107.40; df=8; p<.05; MOBEL: Chi²=16.48; df=8; p<.05; BAS: Chi²=796.60;df=8; p<.05). However important inconsistencies can be seen between the OVG and the MOBEL study. While in the OVG study public transport is a less common transport mode, in the MOBEL study it is one of the most popular. In both studies however elderly take part in public transport occasionally.
The amount of elderly which never uses public transport decreases with age from 33.7% (MOBEL 37.3%: BAS: 62.6%) in the youngest age group to 50.7% (MOBEL: 34.7%: BAS: 72.7%) in the oldest. Once again we ought to stress the major differences between the results of the BAS study on the one hand and those of the OVG and MOBEL study on the other hand.

The Train is occasionally used (once or more a year) by 51,4% in the OVG study (MOBEL 36.6%; BAS: 22.2%). However in the oldest old (80plus) 62.7% (MOBEL 74.5%; BAS: 85.3%) never takes the train while in the youngest old (60-69) only 36% (MOBEL: 51.9%: BAS: 66.2%) never uses the train when moving outdoors (OVG: Chi²= 65.06; df=8; p<.05; MOBEL: Chi²= 19.54; df=8; p<.05; BAS: Chi²=1047.62;df=8; p<.05).

Although using a taxi (OVG: Chi²=51.41;df=10; p<.05; MOBEL: Chi²= 21.87; df=8; p<.05), the motorbus (Only OVG:Chi²= 56.49; df=8; p<.05) or an airplane (OVG: Chi²= 64.07; df=6; p<.05; MOBEL: Chi²= 14.54; df=8; p<.05) is influenced by age, the differences between the youngest and the oldest are not as spectacular as in the other transport modes.
In the OVG study the youngest age group (60-69) 51.6% occasionally uses the motorbus, while in the age group 70-79 48.9% did so. Once 80 years ore more this drops to 23.4%.

This latter tendency can also be seen in the transport mode 'airplane'. 41.3% (MOBEL: 33.3%) of the youngest age group catches an airplane once or more a year when they move outdoors. In the age group 70-79 years 32.4% (MOBEL: 31.2%) uses this transport mode, while this drops to 15.8% (MOBEL: 15.6%) in the oldest age group.

However the use of taxi increases from 13.8% (MOBEL: 16.6%) in the youngest age group (60-69) to 22.6% (MOBEL: 31%) in the oldest age group (80 plus).
In the MOBEL as well as in the OVG study it seems that once people exceed the age of 80, they compensate their loss on mobility in classic transport modes through a more individualized transport mode.
This latter is also the case in the BAS study (Chi²=115.78;df=8; p<.05). The use of a taxi increases from 3.8% in the youngest age group until 5.6% in the oldest. We notice a similar tendency when the use of the call bus (Chi²=110.39;df=8; p<.05) and the taxi for less mobile are examined. In the youngest age group 5.1% and 1.2% uses the call bus or a taxi for less mobile, while in the oldest the percentages raises to 6.3% and 4.7% respectively.
It seems that once people exceed the age of 80, they compensate their loss on mobility in classic transport modes through a more individualized transport mode.

3.3.2.2 Gender differences in transport modes

In the study of transport modes important gender differences are found. Men more often drive their car on a daily basis (OVG: 36%; MOBEL: 44.6%; BAS: 39.4%), than women (OVG: 17.9% daily: MOBEL: 16.4%; BAS: 33.1%) does so (OVG: Chi²= 210.76; df=4; p<.05; MOBEL: Chi²= 264.34;df=4; p<.05). Contrary to men (OVG: 7%; BAS: 13.2%), 18.5% (MOBEL: 55.5%; BAS 32.8%) of the women never uses the car when moving outdoors.

When elderly move outdoors 42.8% (MOBEL: 67.3%; BAS: 50.1%) of the women and 25.9% (MOBEL: 51.3%; BAS: 33.8%) of the men never bikes (OVG: Chi²= 102.10, df=4; p<.05; MOBEL: Chi²= 29.73,df=4; p<.05; BAS: Chi²= 1150.43,df=4; p<.05). No age difference can be found in the MOBEL study concerning the use of the motor or moped (Chi²= 4.41; df=4; p>.05), while in the OVG study men (3.1%) more frequently drive the motor/ moped than women (0.9%) (OVG: Chi²= 19.62; df=4; p<.05).

In the OVG study women (OVG: 71.6%; BAS: 39.4%) rely more on public transport than men (OVG: 63.7%; BAS: 36.9%) (Chi²= 53.58; df=4; p<.05; BAS (Chi²= 90.80; df= 4; p>.05). However, in the MOBEL study no age differences occurred (Chi²= 4.45; df= 4; p>.05).

Women more often take the train than men (OVG: Chi²= 19.54; df=8; p<.05; MOBEL: Chi²= 1.50; df=4; p>.05; BAS: Chi²= 49.13; df=8; p<.05).

In the OVG and MOBEL study no gender differences can be noticed concerning the use of a taxi (Chi²= 4.99;df=4; p>.05; MOBEL: Chi²= 5.84;df=4; p<.05).

No gender differences were found in the transport modes 'airplane' (OVG: Chi²= 0.12; df=3; p>.05; MOBEL: Chi²= 3.50; df=3; p>.05).

In the BAS study women tend to use the call bus (7%) (Chi²= 110.39;df=8; p<.05) and a taxi for less mobile persons (2.8%)(Chi²= 313.89;df=8; p<.05) more frequently then men (respectively 5.1%, and 1%)(Chi²= 5.844a; df=4; p<.05).

3.3.2.3 Income differences in transport modes

We have mentioned before that elderly with a lower income tend to move less. However, when they move outdoor we notice that the use of transport modes is strongly income related (see table 25). Elderly with a lower income drive the car (OVG: Chi²= 111.51; df=8; p<.05; MOBEL Chi²= 38.92; df=8; p<.05; BAS: Chi²= 2478.52; df=8 p<.05) or the bike (OVG: Chi²= 36.03; df=8 p<.05; BAS: Chi²= 1019.56; df=8; p>.05)) less often than their counterparts who can rely on a higher income. However, in the MOBEL study no income related differences could be noticed concerning biking (Chi²= 14.52; df=8; p>.05).

Table 25: Transport modes per income

OVG	< 495 Euro	496 – 1240 Euro	> 1241 Euro
Car	81.8	86.3	94.1
Motor/moped	1.2	2.1	2.5
Bike	54.8	65.7	70.6
Public transport	64.2	65	71.6
Train	55.8	59.5	67.5
Taxi	10.5	14.1	18.1
Motorbus	44.9	48.6	46.7
Airplane	30.9	32.9	48.7
MOBEL	**< 745 Euro**	**746 – 1860 Euro**	**> 1861 Euro**
Car	47.7	69.4	75.4
Car as passenger	76.7	82.2	86.3
Motor/moped	0	5.1	1.9
Bike	29.3	42.3	41.9
Public transport	58.1	63.8	66.2
Train	33.6	43.3	52.2
Taxi	21.1	19.8	23.8
Airplane	16.8	26.5	43
BAS	**< 999 Euro**	**1000 – 1499 Euro**	**> 1500 Euro**
Car	69.3	79.6	80.9
On foot	61.8	70.6	80.2
Call bus	7	6.9	4.8
Bike	47.3	59.3	66.3
Public transport	32.4	39.1	45.5
Train	22.3	28.3	42.4
Taxi	3.2	3.6	5.7
Taxi for less mobile	2.9	2.5	1.3

Moreover in the MOBEL study poorer elderly are more likely moving as a passenger in the car than those with a higher income (MOBEL: Chi²= 31.05; df=8; p<.05).
In both the OVG and the BAS study elderly with a higher income are more likely to use public transport (OVG: Chi²= 20.01; df=8; p<.05; BAS: (Chi²= 467.71; df=8; p>.05) or a taxi

(OVG: Chi²= 17.41; df=8; p<.05; BAS: (Chi²= 139.53; df=8; p>.05) than poorer elderly. However, these results are not in line with those of the MOBEL study. No income related differences were found concerning public transport (Chi²=7.85; df= 8; p>.05) and taxi (Chi²= 7.48; df=8; p>.05).

In all studies the poorest respondents travelled less by train (OVG: Chi²= 27.07; df=8; p<.05); MOBEL Chi²= 21.76; df=8; p<.05; (Chi²= 1355.94; df=8; p>.05).
Moreover in the OVG and MOBEL study the poorest respondents travelled less by airplane (OVG: Chi²= 52.71; df=6; p<.05; MOBEL: Chi²= 38.02; df=8; p<.05).
Furthermore no income related differences were found concerning motor/ moped (OVG: Chi²= 3.28; df=8; p>.05; MOBEL: Chi²= 8.780a; df=8; p>.05) or motorbus (OVG: Chi²= 11.91; df=8; p>.05).

3.3.2.4 Health differences in transport modes

In the BAS study physically restricted elderly moved less outdoor by car (Chi²= 104.82; df=3; p<.05), on foot (Chi²= 326.92; df=3; p<.05), by bike (Chi²= 1,834.67; df=3; p<.05) or by train (Chi²= 118.22; df=3; p<.05) than those who were not physically restricted (see table 26). Physical restriction impacts strongly on movements outdoor by bike and on foot and are less outspoken in their impact on transport modes as car and train. However we've mentioned before that once people exceed the age of 80 their loss on mobility in classic transport modes is compensated through a more individualized transport mode. Moreover in the oldest old the number of persons which are physically restricted increases and in the physically restricted compensatory transport modes are more likely to be used.
It looks like public transport (Chi²= 5.72; df=3; p<.05)can compensate for a part the loss of classical transport modes such as moving outdoor by car, on foot or by bike. Moreover physically restricted elderly are more likely to use transport modes such as the call bus (Chi²= 46.70; df=3; p<.05), the train (Chi²= 118.22; df=3; p<.05), a taxi (Chi²= 35.02; df=3; p<.05) or a taxi for less mobile persons.
Collective organized, but more individualized transport modes are clearly helping physically restricted elderly to move outdoor.

Table 26: Health differences in transport modes (%) (BAS)

Car	Never	Monthly or less	Once or twice a week	Almost daily
Physically restricted	19.5	8.6	33.5	38.4
Not restricted	11.4	3.8	31.1	53.8
On foot				
Physically restricted	28.0	14.0	23.4	34.6
Not restricted	20.3	13.5	23.5	42.7
Call bus				
Physically restricted	92.8	6.1	0.8	0.2
Not restricted	94.6	4.6	0.6	0.3
Bike				
Physically restricted	48.9	12.7	17.0	21.5
Not restricted	25.7	16.	23.6	34.7
Public transport				
Physically restricted	50.9	29.4	9.3	2.3
Not restricted	58.5	30.1	8.9	2.5
Train				
Physically restricted	68.5	29.8	1.3	0.4
Not restricted	62.8	35.0	1.5	0.7
Taxi				
Physically restricted	94.9	4.6	0.4	0.2
Not restricted	95.9	3.8	0.1	0.2
Taxi for less mobile				
Physically restricted	96.8	2.4	0.5	0.3
Not restricted	98.8	1.0	0.1	0.1

3.3.2.5 Differences in transport modes by urbanization rate

As mentioned before, we've categorized the cities and communities according to the method of clustering cities (Dexia, 2007) developed by K. Heyse. According to the degree of urbanisation and the economic activities we've included seven categories, namely residential communities, rural communities, communities with a concentration of economic activities, semi urban communities, small cities, large cities and coast communities.

Table 27 give us an insight in the different patterns concerning the use of transport modes taken into account the urbanization rate and the economic activity. In global we notice that the urbanization rate impacts strongly on the different transport modes (car: Chi^2=568.28; df=18; p<.05; on foot: Chi^2=658.19; df=18; p<.05; bike: Chi^2=543.56; df=18; p<.05; public transport: Chi^2=4,009.84; df=18; p<.05; train: Chi^2=730.11; df=18; p<.05; taxi: Chi^2=494.75; df=18; p<.05; taxi for less mobile: Chi^2=48.31; df=18; p<.05; call bus: Chi^2=396.09; df=18; p<.05).

Contrary to respondents in coast and semi urban communities, communities with a concentration of economic activity, small and large cities, in residential and more outspoken in rural communities elderly most frequently drive the car when they move outdoor. However in large cities nearly one third never drives the car.

Moving outdoor on foot is very popular in coast communities and large cities, while especially in rural communities or in those with a concentration of economic activity elderly are not likely to make their movements on foot. However in large cities and residential communities elderly are not likely to bike, while in rural and semi urban communities and in those with a concentration of economic activity biking is a more popular transport mode.

In rural communities, small cities as well as in communities with a concentration of economic activity public transport is rarely in sight when elderly move outdoor. However in large cities, but especially in coast communities it is the most popular transport mode.
Moving out by train is rarely done in rural and semi urban communities as well as in communities with a concentration of economic activity. Probably because of the proximity of a train station and the availability of a taxi in large cities and coast communities moving by train or calling a taxi have a more prominent position.

Although differences are not very large for the use of transport modes such as the call bus and a taxi for less mobile persons are more likely to be used in small cities.

Table 27: Transport modes by urbanization rate

	Never	Monthly or less	Once or twice a week	Almost daily
car				
Coast community	19.3	8.5	34.8	37.3
Rural community	16.1	6.1	31.3	46.4
Economic activity	19.1	5.7	32.0	43.2
Semi urban	22.9	6.3	30.1	40.6
Small city	22.1	6.2	32.9	38.9
Large city	29.7	4.9	29.3	36.0
Residential community	17.3	7.4	32.2	43.1
On foot				
Coast community	16.1	7.8	19.6	56.6
Rural community	34.6	13.1	20.9	31.3
Economic activity	33.6	13.6	21.1	31.7
Semi urban	30.6	12.3	21.9	35.1
Small city	29.4	11.3	22.0	37.3
Large city	27.3	9.1	20.3	43.3
Residential community	24.8	13.3	24.2	37.3
Bike				
Coast community	40.5	14.7	16.6	28.3
Rural community	38.6	12.7	20.6	28.1
Economic activity	38.4	12.8	19.6	29.3
Semi urban	39.6	12.4	17.9	30.1
Small city	44.0	10.8	18.0	27.1
Large city	50.0	10.0	15.8	24.3
Residential community	48.0	14.7	17.5	19.8
Public transport				
Coast community	28.0	36.6	28.1	7.3
Rural community	70.7	23.0	5.1	1.1
Economic activity	70.7	23.6	4.6	1.1
Semi urban	66.7	25.7	6.0	1.6
Small city	68.3	25.3	5.0	1.3
Large city	42.2	27.1	21.2	9.5
Residential community	52.3	32.8	12.0	2.9
Train				
Coast community	56.2	40.7	2.0	1.1
Rural community	77.6	21.4	0.6	0.4
Economic activity	72.9	25.5	1.2	0.5
Semi urban	73.1	25.2	1.1	0.6
Small city	67.6	30.5	1.3	0.6
Large city	62.7	34.0	1.8	1.4
Residential community	65.2	32.0	2.1	0.7
Taxi				
Coast community	92.7	6.5	0.3	0.4
Rural community	97.0	2.6	0.2	0.2
Economic activity	97.5	2.3	0.2	0.1
Semi urban	97.8	1.9	0.2	0.1
Small city	97.1	2.7	0.1	0.1
Large city	91.7	7.5	0.3	0.3

Residential community	93.8	5.7	0.2	0.2
Taxi for less mobile				
Coast community	98.3	1.0	0.2	0.4
Rural community	97.9	1.6	0.3	0.2
Economic activity	97.8	1.5	0.5	0.1
Semi urban	97.9	1.5	0.4	0.3
Small city	96.9	2.4	0.4	0.3
Large city	98.3	1.1	0.3	0.3
Residential community	97.5	2.0	0.3	0.2
Call bus				
Coast community	92.7	2.1	0.3	0.3
Rural community	92.9	5.7	0.9	0.4
Economic activity	92.0	6.7	0.9	0.4
Semi urban	94.8	4.2	0.6	0.3
Small city	90.4	7.6	1.5	0.5
Large city	97.7	2.0	0.2	0.1
Residential community	95.7	3.7	0.5	0.2

3.3.3 Moving around: main findings from the action research

Moving around for elderly people means coping with a lot uncertainties. In our needs analyses the participants indicated uncertainty about information, infrastructure and encounters with other roads users. As already mentioned, gathering the right information is an important obstacle in using sustainable transport modes. Apart from that, infrastructure or the lack of adapted infrastructure were important topics in all action research groups. Most remarkable fact was that in all groups the topics of courtesy, respect or civic behaviour were discussed intensively.

Table 28: Topics prioritised by the AR groups

Sint-truiden	Leuven	Brussels	Mons	Gembloux
Tailored and targeted information on PT	Courtesy	Accessibility of PT and information on PT-use	Infrastructure	Lack of info about needs and desires of elderly population
Courtesy	Respect on buses Focus on youth	Courtesy	Courtesy	
		Congestion, noise pollution	Citizen participation	
Survey towards elderly population on needs concerning information and information channels Articles on PT-info (written by the AR-group) published in city magazine	Campaign on courtesy in buses of Leuven (posters and postcards) Awareness raising among peers during the annual "week of seniors" in leuven	Guided tour on Brussel's PT – network in presence of Ministry of Transport and PT-providers	Scrap-book with pictures and explanation on black points Round-table with policy-makers (planned)	Survey on needs and desires concerning mobility

3.3.3.1 Actions developed in Mons: infrastructure

In Mons it became clear after the needs analysis that infrastructure and civic behaviour were the topics that touched the group the most. Every participant could easily pinpoint a large amount of

problems regarding these topics, referring to their own daily experience. In every discussion the same topics showed up: bad condition of the road network, bad sidewalks, illegally parked cars, bad maintenance of the public realm, antisocial behaviour, … The group decided to gather some examples by making some pictures in their own neighbourhoods. This resulted finally in making a PowerPoint presentation, called the scrap-book, with the most flagrant pictures each with some words of explanation. At the end of the presentation, the group summed up some recommendations for the policymakers of Mons. The presentation would then be used in a participative meeting with the decision makers but this remains a question until present day. The coordinator of the Platform for the Elderly in Mons feels up until now too uncomfortable about presenting all the slides to her City Council. She feels that the presentation should be backed with a large and extensively documented technical dossier to make any chance of approval. Even after having explained to her the nature of the project and our point of view at several occasions, she remains at her original point of view.

Some pictures from the presentation

Obstacles on the sidewalk

Sidewalk in bad condition

The list of recommendations was short but comprehensive.

1. Maintenance

The infrastructure should be maintained on a regular basis (filling of holes, cutting of trees, mowing of grass and herbs, …)

2. Coordination between the services

There should be a general planning strategy for road works. This prevents road works from taking too long or that road works are executed in a illogical order.

3. Repression of infractions

There is a need for a general police action on prevention and repression to counter antisocial behaviour. This can be done with progressive repression with a gradual system of punishments or fines.

4. Civic behaviour

The group sees the need for a broad action on civic behaviour through information, education and awareness raising.

5. Signage

All road works and other special situations should be accompanied by sufficient and clear signage.

3.3.3.2 Actions developed in Leuven: Courtesy in buses

The only group that decided to take action on the popular topic of courtesy was the Leuven group. The main problem encountered was the problem of respect towards elderly on city buses. The participants told extensively about experiences with younger people who didn't want to leave a place for them, backpacks on seats and in standing areas, even hostile reactions towards elderly people as in "speed up" or "you ride for free so you don't deserve a seat". The participants often mentioned a general lack of respect towards elderly people and the need to change this attitude.

The action method was rapidly agreed upon. The participants wanted to design a cartoon which would represent a youngster standing upright in a bus. This cartoon would then be printed on posters and postcards. The aim and target group of the action shifted some times during the meetings. At first, the group wanted to contact schools and youth organisations in order to give them the cartoons and give some explanation with it. This was found to time consuming and ineffective. The action shifted then to an action towards elderly people and on the city buses itself. The group decided to attend the annual Week of the Elderly where they would explain to their peers about the aim of the action and giving them the postcard to use on the bus whenever seen possible. Next to that, contacts with De Lijn was established in order to get approval for using the posters in the city buses. This approval came quickly and the posters were distributed on all city buses. Moreover, the postcard was available in the vending point of De Lijn at the Leuven Station. Thanks to the cooperation of De Lijn and some good media coverage (in newspapers and regional tv) we got quite some good reactions on the action itself. The participants felt it could really make a difference.

The poster which was distributed in city buses

Infrastructure and courtesy in the action research

In the needs analyses the topics of infrastructure and courtesy were always raised as important factors regarding problems with mobility of elderly people. However, it's to be mentioned that only two groups took those themes as priority action themes (Mons and Leuven).

3.3.3.3 Needs for Infrastructure

When talking with people, not only elderly people, about mobility there always is a very quick referral to infrastructure in terms of sidewalks, cycle lanes, roundabouts, crossings, lighting, etc… This was also the case in the action research. During the needs analyses, a vast amount of site-specific examples were given and extensively explained. Reaction were mostly quite similar and somewhat typical: "Street X and the crossing of X with Y is extremely dangerous. There's no cycle lane and motorists drive really fast there. We should have a speed bump there, or a camera."

Mons was not the only group who raised questions and problems about infrastructure. Also in St-Truiden, Brussels and of course Gembloux this topic was discussed. Why did only one group take up the challenge on infrastructure? There might be some good reasons for that.

First of all, raising questions on infrastructure demands some knowledge on traffic and infrastructure of the participants. The group of Mons had two members who were particularly well educated in this matter and they were even asked by the city to give advice in certain technical dossiers. By this experience, they could give a very good overview on what could be needed to improve infrastructure in Mons. In the group of Leuven there was none or little experience on infrastructural problems. It became quite clear after one or two meetings that they wouldn't see this as a major action theme.

Secondly, the experience of previous actions on infrastructure comes into play. The St-Truiden group already was involved in an action on discovering and inventorying black points on cycle lanes. For them, there was need to get into this again. In Mons and to a certain extent in Gembloux, there were no previous actions on infrastructure. Comparing Mons and Gembloux to St-Truiden and Leuven also gives the idea that there is still some work to done in the southern part of Belgium when it comes to cycle and walking facilities.

Thirdly, the presence of a mobility official during the problem detection phase could explain a few things. In the groups of St-Truiden and Gembloux, there always was a mobility official present. Whenever an infrastructural question or remark was raised, the official could explain why and how a

certain situation existed or persisted. The fuse was immediately drawn from the problem in this way and didn't receive the status of a priority problem. In Gembloux the question of infrastructure came up again in an indirect way. The results of the questionnaire gave a clear message on the infrastructural situation in Gembloux. In the future, this will become a major point of discussion in the senior citizens council of Gembloux.

Last, the complexity of the environment is also a factor in this discussion. The Brussels' group spent quite a lot of time discussing infrastructural problems in the Brussels Region but never achieved to get a clear overview of the situation. It always remained very exemplary, site-specific and sometimes isolated cases. Of course, so the participants understood later on, it's virtually impossible to give an overview of all infrastructural problems in Brussels, let alone take action on it. They decided to narrow down to public transport and choose a few cases and situations that could be an example for the rest of Brussels.

3.3.3.4 The problem of lack of courtesy

"They don't respect us anymore. In our days, it was different".

This sentence was heard a lot in many action research groups. When taking a look at the table of priority problems above, we see that the topic was listed as a priority in four out of five action groups. Only one, Leuven, took action on it. Why?

Firstly, it is believed in most groups that the responsibility for taking action on this lack of respect lies not with the elderly but with the parents and the schools. The lack of good education would result in a lack of respect towards elderly, according to the participants of the group in Mons. Most groups were reluctant to take action towards parents and school because of various reasons: too time-consuming, too difficult, education is something personal within the family, …

Secondly, today's society is blamed for the lack of respect that youngsters seem to have. Many participants referred to today's day and age as always hurrying, stressful and individualised. Many participants didn't think they were up to the task of changing society very dramatically on this particular topic.

Last, the problem of lack of courtesy is often referred to as a complex and large problem in today's society that only can be solved by a massive change in mentality. An action on changing attitudes and mentality would take a lot of time and resources, according to most groups. Time and resources is something we don't have to spare.

4. CONCLUSIONS

4.1 Mobility and Elderly: Facts and figures

The most cited **shortages in the immediate neighbourhood** by elderly people 60 and older that might hinder them from going outside are the absence of public toilets (42,7%) and the absence of benches (38,9%). More over about one quarter of the elderly respondents in BAS - especially the oldest old - indicate that they experienced difficulties accessing bus stops and that the crossings are inadequate in their neighbourhood.
According to OVG data more than 70.7% of the elderly respondents dispose of a **driving license** but this is more likely for men (90.8%) than for women (50.4%). More over possession of a driving licence drops down with age from 77,5% (age group 60-69) to 39,8% (age group 80+).
Following BAS, 60.1% of the elderly population is **physically restricted**, with a dramatic increase of the number of restricted persons when one becomes older. In the youngest age group only 47.2% is physically restricted, 67.1% in the age group 70-79, while in the oldest old the number of restricted elderly raises to 83.9%. Following BAS again, 26.4% of the elderly respondents state that they have **fallen** at least once in the past year. Although in the lowest age group only 19.4% had fallen at least once a year. In the oldest old the number increased to 41.8%.
In general 29.1% of the elderly never experienced **problems with transportation**, 16.6% rarely did, while 12.4% frequently experienced problems (BAS). Once aged 80 or above more than one quarter of the elderly frequently experienced difficulties in transportation, while in the youngest age group only 7.5% was confronted with this problem. In the youngest age group (60-69) only 7.7% was in need of assistance while moving outdoor. In the oldest age group more than half of the population needed assistance to move outdoor. In general **feelings of insecurity** increase with aging. In the oldest old (80 and over) feelings of insecurity are more pronounced than in the age category 70-79 and the youngest old respectively. However differences in feelings of insecurity are spectacular between Brussels and Flanders.
Traffic insecurity, perception of traffic and transport policy. 31% of older people included in the BAS-study sometimes or quite often feel insecure in traffic. Although differences between age groups are small, especially in the oldest old the number of respondents which felt insecure in traffic doubles compared to the youngest age group. Moreover almost 40% of respondents mentioned that in the neighbourhood the traffic is too busy and 21.5% wasn't satisfied with the transport policy in their community.
Immobility rate. The percentage of elderly people that not moved outside during reference days differ between OVG, MOBEL and BAS. In the MOBEL study 39.9 % of the elderly didn't go out during one reference day, in OVG only 35 % never moved out on the two day reference period. Following BAS - with a reference period of one year -, 3.2 % of the elderly aged 60 years and over never moved out in the past year, while 26.8 moved less than twice a week outdoor. In all sources, immobility rate grows with age. Although there is a drastic decline once age 80 years or above, more than three quarters of the oldest old moved at least once or twice a week outdoor (BAS). For those who didn't leave the house (elderly respondents of OVG), 54.5% stated there was no need to leave the house. Staying at home due to sickness or restriction was mentioned by 19,4%. The importance of this latter reason increases with age. Most results match quite well with the ones of the MOBEL study.

Average number of trips (MOBEL & OVG). We notice that in the oldest old not only the amount of non mover increases strongly, but the number of trips made a day decreases as well. Male seniors make more trips than female seniors irrespective of their age. Moreover senior citizens who dispose of a driving license make more trips than those without. Also income of the elderly has an impact on the trips older persons make a day. Elderly with a lower income tend to move less.
Trip motives (OVG and MOBEL). The most common trip motives of elderly respondents are shopping, followed by visiting someone, and leisure/culture/sports.
On average a trip takes 71.1 minutes according to OVG, 62.5 minutes according to MOBEL. The **duration of the trips** decreases as age increases. Moreover men travel frequently longer distances than women and subsequently spend more time on their movements. Considering chain movements, elderly frequently leave their homes for a trip between 9 and 10am, or around 2pm.
Trip distance. The average number of kilometres travelled by elderly per day is 28.8 km. Considering

age, we conclude that the average total trip distance becomes shorter as people grow older. Looking upon the average trip distance, the analysis demonstrates that trip distances for the young old are significantly bigger (11.7km) than for elderly between 70 and 79 (10.2km) and elderly over 80 (7.8km). Men travel longer distances than women. Finally, income plays an important role here too as elderly with the lowest income have the shortest travel distances.

Effects of demographic, individual and contextual variables on being mobile or not (BAS). We found a positive association between mainly socio-demographic variables and the degree of mobility. Being male and physical healthy increases the odds of being an often mover the most. In addition, the frequency of falling plays an important role too in the differences between never movers and regular/often movers. Age is also a significant determinant, but solely for regular movers. For the other categories it appears that it is not age 'an sich' that plays a role, but it is especially physical health that is the most important predictor of mobility. Having a monthly income above 1500euro is associated with a higher degree of mobility. When often movers are compared with non movers, it is income that makes elderly able to heighten their degree of mobility to the top. Looking at contextual variables, particularly the influence of the degree of urbanisation is significant. Elderly who live in municipalities with a concentration of economical activity are clearly more mobile than older people who don't. Whereas in bivariate analyses areas with insufficient bus stops, with heavy traffic and with poor sidewalks appeared to be significant contributors of mobility, in multivariate analyses their influence is not significant. These relationships proved not to resist when we controlled for age, gender, physical health, etc. This, however, does not suggest that the built environment is not important in relation to mobility. However, simply adding bus stops or purely improving sidewalks will likely not be enough.

Transport modes per age, gender, health, income, urbanisation rate. In daily use the car isthe most popular transport modes (OVG). Only 12.5% of the elderly never uses the car when they move outdoor. The figures of MOBEL show lower frequencies of car use. Public transport is seldom used on a daily base. Although 33% never made a trip by bus, this transport mode is frequently used occasionally. All studies indicate that if persons go out, they most often use private modes of transportation such as car, bicycle, walking. Public transport plays a role when no other alternatives are available or when the public transport system is very well organized, which is more often the case in urban areas.

The use of transport modes is strongly related to age: the older the people get, the less often they 'walk' as transport mode. Moreover, the car is the most popular transport mode in all age categories. When age increases the use of the car decreases and the number of bikers decreases dramatically once 80 years or more. The use of individualized transport modes such as taxi, call bus or a taxi for less mobile persons increases when age increases.

In the study of transport modes important gender differences are found: men more often dispose of a driving license and consequently drive their car more frequent on a daily basis than women. In OVG and BAS, we found that women rely more on public transport, the call bus, a taxi for less mobile persons than men.

When they move outdoor we notice elderly with a lower income drive the car or the bike less often than their counterparts who can rely on a higher income. Poorer elderly are more likely to move as a passenger in the car than those with a higher income.

Following BAS, physical restriction impacts strongly on trips by bike and on foot and are less outspoken in their impact on transport modes as car en train. However we have mentioned before that once people exceed the age of 80 their loss on mobility in classic transport modes is compensated through a more individualized transport mode. It looks like public transport can compensate partly the loss of classical transport modes such us moving outdoor by car, on foot or by bike. Moreover physically restricted elderly are more likely to use the call bus, a taxi or a taxi for less mobile persons. Collective organized, but more individualized transport modes are clearly helping physically restricted elderly to move outdoor.

According to BAS, in urban areas and especially in large cities the car is more often banned, while in residential and rural communities the car stays in pole position as transport mode. Moving outdoor on foot is very popular in coast communities and large cities, while especially in rural communities or in those with a concentration of economic activity elderly rather cycle than walk. In rural communities, small cities as well as in communities with a concentration of economic activity public transport is rarely in sight when elderly move outdoor. However in large cities, but especially in coast communities it is the most popular transport mode. Making a trip by train is rarely done in rural and semi urban communities as well as in communities with a concentration of economic activity. Probably because of the proximity of a railway station and the availability of a taxi in large cities and coast communities moving by train or calling a taxi have a more prominent position.

4.2 Mobility and elderly: from an anthropological point of view

The guiding framework built along the qualitative research in MESsAGE was made up of four guiding ideas, namely that of multiplicity, pragmatism, reflexivity, and the principle of generalized symmetry:

The idea of **multiplicity** appears to be blatant in the process and experience of aging as well as in the process and experience of moving. During this report, multiplicity was talked about in terms of possible and brakes of/ on mobility, multiplicity of the actors, actants and dimensions involved in mobility and aging processes, multiplicity of diachronicities acting upon mobility potentials, behaviours and experiences (situational, biographical, historical). This leads to an orientation towards multiplicity in policy.
The idea of a **pragmatic approach** to questions of mobility and aging offers another lens on both, and generates knowledge that is embodied, dynamic, singular, in addition to articulating the different dimensions of the daily mobility.
Giving voice to the people themselves, to people moving into old age, as well as having faith in their **reflexivity** resulted—surprisingly or not—into reflexive accounts. The ongoing thickening of biography and the actual experience of growing older simultaneously give rise to a certain awareness, as if they open up the black boxes that make up daily mobility practice.
Taking up socio-materials into the research allows yet another enrichment of the understanding of mobility behaviour while aging. The idea of **symmetry** makes present and even emphasizes the often complex relationship of and in interactions between humans on the one hand, and between humans and nonhumans (objects, configurations of objects, the built environment …) on the other.

The resulting analysis has most of all to do with the social and ecological pillars of sustainable development. Without talking about "emissions", "ecological footprint", and the like, we looked into the behaviours, the practices, and the logics that make up the daily outdoor moving in order to identify levers that are susceptible to favour or promote sustainable mobility behaviour. In this context, we have looked at the ecological in the sense of 'what holds things together for a long period', along the lifespan, as well as the 'durable-sustainable'. In a political sense, as is recalled in the following lines, it underlines the infinity of sites of political intervention upon the practices of 'aging movers'. The main conclusions drawn from the empirical material leading to policy recommendations were organized in the three interacting fields for political action: motility or potentials, mobility or practices, moving around or situated identities.

The work around the concept of motility highlighted the variability and differentiation of potentials and constraints between persons and collectives and their respective transformations as time goes by. Motility is considered as a fluid configuration made up of elements of distinct nature bond together: human relations, transport devices, localizations, accessibilities, physical status and so on. Through this work, more than detailing those already well known mobility potentials or constraints, a deep attention was dedicated to analyze how those elements are bond together: what holds them as a whole or, on the contrary, what unties them, urging for a reconfiguration: meanings, mutual help systems, changes and transitions stimulating reflexivity, preconditions to the activation of potentials are the four main dimensions elaborated in this reflexion upon mobility potentials. This work led us to a translation of the concept of autonomy in the perspective of attachment: rather than a version considering the autonomous subject as someone that lives and moves without the intervention of the others (an 'auto-mobile'), a sustainable mobility system should favour a definition of the autonomous user as the one which is sustained by an efficient and well related set of technical, institutional, and social ties.

In the section on mobility practices and logics, we looked into what acts upon the mobility practices. Integrating the question of agency—the possibility to influence the control over something—into questions of mobility and aging tells us more about why certain potentials are effectuated and others are not. What is more, it allows looking at how the question of agency is actually a question of distribution of agency. Whereas until recently, agency was situated within the head of a person, there is no reason not to recognize that agency is distributed over persons, their bodies, other persons and objects. Moreover, agency is not fixed once and for all in a configuration or in a design, scheme or setup. On the contrary, agency is continuously re-distributed, it is fluid, it implies work to make things

fit. A second important actant in this section is time. The research looked into the plays of time and how they affect the relationship between aging and daily mobility. Time can be seen as a multilayered phenomenon, and especially with an extensive biography, the plays of time can be very complex. We explored how different times or epochs can be superimposed in circulatory spaces and sites of daily mobility (i.e. palimpsests); how things of several pasts can be remembered or forgotten, and triggered by elements or the absence of elements that are perceived during daily movements outdoor (i.e. souvenirs & oblivion). On another time plane, time can be considered as sedimentation and erosion, where the intertwining of the different time effects such as historical, periodical, and biographical also influence the actual, current mobility practices.

The third part of the work led us to consider mobility situations, how being 'inside' mobility situations, on the move, influences feelings of selfhood and how identity is fabricated in mobility situations. But also, and at the same time, how there is a play off and on identity during daily mobility. A play that can be one of resistance against being categorized as 'old', an elderly, or even 'disabled person'; of subtle displacements that come to interfere the enactment of old age; or still, on the contrary, of the acknowledgement of being seen and treated as an older person. Also, the interplay of human and nonhuman actors and actants that are implied in these identity processes: the built environment, mobility objects, objects tout court, other people … Together with the aspects of identity and moving around comes the experience of moving around. The experience of moving around is described by ways of three performative tools that can inspire policy action and allows the thickening of a plural apprehension of the experience of moving around: emotions, spatio-temporality and the umwelt. These three tools enlighten the plurality of experiences and, at the same time, ways to influence it.

To conclude, we could say that this whole work documents the multiple worlds inhabiting and coexisting in an ordinary journey. One can live it as a child, an adult, an old adult, one can live it as familiar or unfamiliar, exciting or stressing, difficult or not, the policy work consisting precisely in the building of a plural and common world.

4.3 Mobility and elderly: undertaking action with the elderly in a concrete local setting

The five action research groups showed a variety of backgrounds, group compositions and group dynamics. The total duration of one complete action research cycle varied between 7 months and more than one year. And also the number of meetings varied significantly between 5 and 10 meetings with preparatory homework in between. The table provides an overview of the results of the problems and needs assessment and action phase.

Sint-truiden	Leuven	Brussels	Mons	Gembloux
Results of problem and needs assessment in order of priority				
1. Tailored and targeted information on public transport 2. Courtesy	1. Courtesy 2. Respect on buses, focus on youth	1. Accessibility of public transport and information on PT-use 2. Courtesy 3. Congestion and noise pollution	1. Infrastructure 2. Courtesy 3. Citizen participation	1. Overall lack of information about needs and desires of elderly population
Actions developed				
1. Organisation of a survey among elderly population in Sint-Truiden to know their information needs and preferred information media 2. Writing of articles on PT-info, published in the city magazine	1. Campaign on courtesy in buses of De LIJN in Leuven (posters and postcards with a cartoon) 2.Awareness raising on mobility among peers during the annual "week of seniors citizens" in Leuven	1. Guided tour on Brussels' PT – network in the presence of the Ministry of Transport and local PT-providers in order to show deficiencies regarding accessibility	1. Composition of a scrap-book with pictures (a PPT-presentation) and explanation on black points 2. Organisation of a round-table with local policy makers (planned)	1. Organisation of a survey on needs and desires concerning mobility among elderly people in Gembloux

Access to information about public transport appeared to be an important constraint or problem for being mobile in two out of five action groups. In St-Truiden the participants indicated the lack of tailored and targeted information on the offer of public transport as particularly hindering them to use it. Nevertheless, in St-Truiden the public transport system is quite extensive and well established. However, the group stated that the needed information is sufficiently provided in the city centre but that there's a lack of information in the parishes around the centre. The Brussels' group indicated the same problem but added the complexity of the public transport system and the problematic accessibility of the system.
Information is often disperse, difficult to understand and technologized by means of computers or automated machines. The action research groups state clearly that they want to take some steps forward in learning to deal with these developments but that they need back-up systems such as human interface possibilities, consistent and clear signage and assistance tools when they make a mistake or misjudgement. Some participants also indicated that they call in help from relatives or peers to get the right information for their trip. Doing so, they experience the ambivalent feeling of being dependent in one way but wanting to be independent in another way.
The participants of the action research in Sint-Truiden and Brussels developed a totally different sort of action. In Sint-Truiden the elderly detected a problem and looked for a way to solve it themselves. The participants in Brussels however decided to inform the authorities and the PT-providers. The problem there was of course far more complex than the needs in Sint-Truiden. Both groups felt to have made a difference with their action, although both actions were of a different type.

When talking with the elderly people about mobility there was a quick referral **to infrastructure in terms of sidewalks, cycle lanes, roundabouts, crossings, lighting, etc**… This was also the case in the action research. During the needs analyses, a vast amount of site-specific examples were given and extensively explained. Reaction were mostly quite similar and somewhat typical: "*Street X and the crossing of X with Y is extremely dangerous. There's no cycle lane and motorists drive really fast there. We should have a speed bump there, or a camera*." Mons was not the only group who raised questions and problems about infrastructure. Also in St-Truiden, Brussels and in Gembloux this topic was discussed. Only one group took up the challenge on infrastructure to take action. Why? Specific more technical expertise is needed to develop action on this topic which was not available in all action research groups. Also the complexity of the infrastructural environment was a threshold to develop action. The participation of the local mobility official was helpful in order to explain the current status and planned actions.

The problem of lack of courtesy. *"They don't respect us anymore. In our days, it was different".* This sentence was heard quite often in many action research groups. The topic was listed as one of the priorities in four out of five action groups. Only one, Leuven, took action on it. Firstly, it is believed in most groups that the responsibility for taking action on this lack of respect lies not with the elderly but with the parents and the schools. Most groups were reluctant to take action towards parents and schools because of various reasons: too time-consuming, too difficult, education is something personal within the family, … Secondly, today's society is blamed for the lack of respect that youngsters seem to have. Many participants referred to today's day and age as always hurrying, stressful and individualised. Many participants didn't think they were up to the task of changing society very dramatically on this particular topic. Last, the problem of lack of courtesy is often referred to as a complex and large problem in today's society that can only be solved by a massive change in mentality. An action on changing attitudes and mentality would take a lot of time and resources, according to most groups. Time and resources is something we don't have to spare.

5. RECOMMENDATIONS

5.1 Policy recommendations in terms of motility

Diversify the elderly's profiles taken into account in policy and policy measures

Instead of a policy thinking that categorizes according to age, identify/ act according to types of situation and their possible and constraints. Differential treatment of people in function of certain types of situations, identified with the help of a set of factors. This report puts forward, suggests some possibilities: residential localization, physical ability, accessibility, local support networks, type of trip, desires, … In brief, following configuration types of motility.

The quantitative analysis showed that the income profile is a significant determinant for the elderly persons mobility or immobility.

Differences between elderly prove to be large, but not merely due to age differences. Distinctions between age categories are not as big as distinctions between different income groups. Age as such, is not the primary determinant in predicting mobility. The gap, however, between the "have's" and the "have not's" is esteemed as a major problem. The WOOPie's (well off older people) are less obstructed in their mobile life, but the category one should focus on is of those who cannot dispose of financial resources. Elderly in the lowest income group are impeded in making the necessary adaptations in the process of growing older, resulting in a low degree of mobility. As this group, not only disposes of less financial resources, but also of fewer coping mechanisms, a worse health condition and less communication skills, the "have not's" are the most vulnerable group to take into consideration.
WOOPie's, the youngest old, the physical healthy elderly and men are the least vulnerable group. They can autonomously choose between different transports modes and often choose for personalized transportation (care, bike, walking …). Expecting that the gap between men and women concerning owning a driver's license will decrease a great deal in the future, we can expect that the general difference in degree of mobility between men and women will decrease too. However, solely under the condition that income differences will decrease to the same extent.

Promote a encompassing/ multi-dimensional and dynamic understanding of the question of daily mobilities of people growing into old age.

A multi-dimensional approach. A multi-dimensional approach articulates, attaches the heterogeneous dimensions that make up or fabricate the situation of a person or a collective in terms of mobility (its possible, its constraints). Such an approach "draws things together" and, in doing so, re-thinks the boundaries of the mobility question. A dynamic and evolving understanding. Within the question of mobilities as well as within the processes of moving into old age various temporalities are articulated. Taking into account these calendars and their relational effects on the potentials, practices and choices set out in terms of mobility, allows to comprehend the logics of mobility in their plurality and complexity. Apprehending mobility and life trajectories with a particular attention for big thresholds of transition and attention for the ongoing readjustments they engage.

- Creation of statistical databases that allow identifying of mobility profiles that articulate a maximum of dimensions and their possible evolving scenario's based on identified points of transition. Existing databases already allow this up to a certain extent, but are not mined as such.
- There is a need to multiply the political domains connected to the question of daily mobilities in people growing older. Daily mobilities transversely pass through a lot of political domains.

Take into consideration the relation between sustainability and flexibility.

Sustainable solutions will be those that offer a bigger flexibility. Solutions need to be able to address perpetual changes' requirements. Attention needs to be given to the links between sustainability and fluidity/ flexibility.

- Establish flexible or fluid devices of organization (e.g. the sustainability of help systems), that enable strong attachments between the different actors involved.
- In formally constructing attachments (e.g. institutionalizing help systems), construct them solidly, robustly. Creating an attachment that resists entails a lot of work of mutual/ multilateral adjustment between the actors involved.

Reconsider the notion of autonomy: from a notion of autonomy that detaches to a notion of autonomy that attaches.

If sustainability is to be reconciled with autonomy, we first need to reconsider the concept of autonomy. Autonomy is an arrangement of attachments and not selfsustaining. Taking this perspective as a starting point, the viewpoint shifts to the nature of attachments more than to the entities that they attach. That is, then, to analyze that what holds things together.

- Change the unities of measurement of the motility question accordingly.
- Simplify the implementation of local (mutual) helping schemes, and enhance community based/ proximity based supporting systems: the neighbourhood as a crucial actor in mobility support systems.
- The instalment of tools that take into account that what makes things hold together.
- Work out human 'chaperone' systems for daily mobilities, in all its possible dimensions and guises: accessibility to transport modes and infrastructures, but also for information, … A support that can also be institutional, but that also is effected in and through action (within the sites of mobilities), in the preparation of action. Furthermore, switch from surveillance to accompanying.

Considering "giving voice" of the population of elderly and their "spokespersons" that represent them: the elderly have a voice, but it is not necessarily that which is conveyed in the actual political structures**. Interest should be taken in people that are not politically organized**.

Instead of talking about successful adaptation to the processes of aging, **consider the experience of growing into old age as a process of negotiation**: growing older entails at the same time acceptance and resistance.

Be aware of the connotations of mobility and activity, and of the ideological contents they convey. **Underline the paradox between increasing mobility needs and the need for sustainability**. Link the tension between desires and constraints in terms of mobility.

5.2 Policy recommendations in terms of mobility practices

Suitable transport modes are needed in every stage of life.

When people want to move outdoor and they cannot do this autonomously anymore (regardless of the reason), we observe a shift in transportation mode: from moving independently (car, bike, walking) over public collective transport (bus, train, etc.) to relying on someone else to make transportations and when this is not possible to collective personalized transportation (taxi's for less mobiles persons, call busses).

This requires specific attention to frail elderly and to the situation in rural areas, where less compensatory possibilities are available. Seeing that where public transport is available, in coast communities or large cities, elderly do use these transport modes frequently. Especially women, who

lack a driver's license, heighten their mobility by using public transport. However, when that is not possible anymore, due to health problems, financial problems, etc., elderly people rely on collective personalized transportation to come out.
A short, yet important, comment which can be made here is that is not merely providing public transport that is important for elderly, but in particular taken old age into consideration in traffic adjustments and transport facilities. For example: safely getting in to a bus is not always easy for elderly people.

The change of habit when starting to use public transport in replacement of independently moving, should be accompanied by a clear communication strategy. Automatically assuming that elderly people will find the public transport, adapted best to their needs, when they most need it, is not a good idea. When having to adapt to a new mode of transport, elderly people benefit from clear messages in a language they can understand and clear and consistent information through channels they know and trust. For those who need extra help in finding their way in the public transport system, more concrete help can be provided by their own social network or in training projects organised by different organisations and associations.

When elderly people are already successfully using public transport, the task of clear communication stays important. Consistency, clarity and human interface are the key words for such a communication strategy: consistency in use of symbols, signs, terms and colours, clarity in terms of readable maps with large fonts and good contrast and providing human contact possibilities wherever and whenever possible.

Conceptualization of mobility practices in terms of agential realism, that is in terms of distribution and ongoing re-distribution of agency.

Agency, power relations and feelings of selfhood or autonomy are intimately intertwined, especially in the mobility practices of people growing older. This research puts forward how power relations are at play and imbue mobility practices with normatively or certain standards, effecting a hegemonial version of the real on others, like the elderly. Augmenting the sensibility concerning agency in mobility practices of older people allows developing questions of delegation –institutional, social, technical delegation.

- Creation of tools that can take into consideration the distribution of agency at play in different mobility practices, taking into account the local, situational, variable and relational dimensions of agency.
- Training of people that work with elderly in giving adequate advice in questions concerning agency and autonomy.
- In terms of the built environment and material configurations: work on the accessibility and hospitality of places and sites by emphasizing the normative characteristics of urban places and sites in their conception and equipment.
- In terms of the embodied dimension in mobility practices. Swiftness, the kinesthetic, force, speed, emotions, and sensations are strongly entangled in mobility practices. Take into account these dimensions in the conceptualization of the practices and the sites or places that have to meet these conceptualizations.

Take into account the dimension of embodied memory works in mobility practices.

Daily mobilities can be seen as the articulation of various durations: situational, biographical, generational, historical, … These evolutions have to be looked at in their totality: the changing of the body, the changing of sensations, the evolution of technologies, … Mobility practices are made up of numerous temporal (and relatively temporary) references. Never is there some kind of tabula rasa. The current mobility choices and practices are done and effected in reference to former practices, habits, souvenirs, … Also in terms of transmission: towards the future, no tabula rasa, but a listening ear to former accounts that still exist in the present, as well as a development of a testimony.

- Take into account or revitalize—the often sustainable—old routes, short cuts, pedestrian circulations in the conceptualization of new mobility plans.
- Take into account topologies of memory (cfr. by revitalizing old naming of streets and places, …)

- Conduct research on the relations between familiarity and strangeness with certain mobility practices. With attention for familiarity as a mode of access to places, routes, transport logics/systems.

5.3 Policy recommendations in terms of moving around

The quantitative analysis showed that as people grow older their mobility behaviour shows a decrease in the radius of action and there is a decrease in the use of facilities further away. Therefore, the interaction possibilities in the neighbourhood and the quality of the environment play a vital role for older people who depend on their neighbourhood. However, looking at contextual variables, we put forward that simply adding bus stops or purely improving sidewalks will likely not be enough. Adapting the residential environment could play an essential role in enlarging the degree of mobility of elderly, but not without understanding the neighbourhood context and population before prioritising action. As the results indicated that physical health plays an important part in the degree of mobility, it is not merely enough to improve sidewalks, but for instance also to pay attention at reducing obstacles and awkward footboards, provide sufficient safe pedestrian crossings, in other words creating a neighbourhood which is accessible, not just for walkers but more generally also for wheelchair users.

In policy decisions on the new and existing mobility infrastructure and public space, consider what mobility situations "do" and "make people do".

Where and how is difference enacted and how is it lived: is it empowering? Disempowering? Where do interferences spread, circulate and enact themselves, in what form and through what kind of connection?

In architecture, urban planning, and (re-)design of public space: think of immobility within mobility. Provide for possibilities of halt or rest within daily mobilities. It has become less and less possible to stop, to rest in public space and infrastructures of mobility. Having a halt now is done standing up or with the help of objects that were not foreseen as such in their design. Immobility is not the enemy of mobility. Designing immobility in legitimizes less mobile behaviour.

Identity and enactment questions in terms of object design: **stimulate the redesign of mobility enhancing devices (walking canes, rollators, …).** These objects often are strongly medically and instrumentally connoted. As has happened to the glasses, mobility enhancement devices can be designed as to become accessories or identity markers (instead of being markers of dis/ability or illness).

The need for the creation (or extension of existing programs) of "chaperoning" services for daily mobilities.

A great desire is expressed by the people concerned for chaperones to daily mobility. They can be there for support as well as company.

Policy decisions thought of as the articulation of the plurality of experience, **pluralistic experiential approach.** Policy as an orchestration of the plurality of needs. Orchestration of different rhythms, emotions, significations; in the public realm as well as in circulatory spaces. The notion of Umwelt provides a lens to see into these different life-worlds. It encapsulates the plurality of environments/ life-worlds within the same physical space.

Policy promoted situated approaches into researching daily mobilities, as well as involving the people concerned (as 'user experts'). **Pragmatic approach to participation in policy**. Furthermore, a monitoring or observation of the strategies and skills developed by people to deal with disabling environments. These minority circulatory modes can be a source of inspiration for the whole of the mobile population.

A **pluralistic and pragmatic approach** on participation in policy can be found to some extent in the **action-research methodology**. The starting point of any action research process is an acknowledgement of the plurality of needs and experiences that participants have. By confirming participants as being the specialists in their own needs and experiences, you can empower them to get a hold of their own situation and ideally take action to improve it. This empowerment by confirming can only reach a level of excellence when not only researchers, associations or organisations take part in the process but also when decision makers of local governments are willing to take part in confirming participants as experts in their own experience.

The action-research cycle of planning, implementation and evaluation is a very pragmatic way of getting people around the table. By analyzing their needs in the planning phase, prioritising them in order to find an action theme and finally implement the action, the group gets into a very hands-on process in which pragmatism and realism go above theoretical, freewheeling or complaining discussions with no well defined goal.

Other design guidelines: where possible, a de-standardization of design interventions. Play on the affordances of the situation. Take the lived experience into account in the development of circulatory space; take into account felt (un)safety next to objective (un)safety (not necessarily insecurity, but also safety). Have attention for non intentional design: consider, in terms of design, the ecological characteristics and the affordances offered by spatial objects, urban furniture, materials, surfaces, etc.

Attention for place and neighbourhood is essential when talking about mobility inclusion of elderly in the community. Not only for receiving support, assistance and services, but also for organising activities and enhancing social participation.
This does not only suppose an awareness and readiness of local policymakers and urban planners to construct/create a neighbourhood which is free of obstacles, accessible to public transport and that encompasses community services, but **it also supposes sensitizing elderly themselves**. As previous research (Verté, De Witte & De Donder, 2007) concludes, anticipating care dependency and mobility problems is no concern at all of the youngest old. There is only little awareness among healthy and mobile elderly that this situation is not long-lasting. Elderly themselves should be questioning where and how they want to grow old and asking oneself whether the area where one lives in now, is also the environment where one wants to live in when he becomes less/not mobile. Sensitizing elderly to adapt their residence, or promoting residential mobility could become an important responsibility of social organisations.

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7. APPENDICES

7.1 Appendix 1: Fact Sheets Action Research

See separate document.

7.1 Appendix 2: Qualitative Methodological Device

See separate document.