

ICAP 2014 Abstract Submission website

Traffic and Transportation Psychology / Psychologie appliquée aux transports

ICAP14-ABS5414

Capabilities, resources and conversion factors: towards an analytical model of older pedestrians' mobility

Fanny Le Morrelec ^{1,*}Margarita Anastassova ¹Aurélie Dommes ²Sabrina PANEELS ¹José Lozada ¹

¹Laboratory for Sensory and Ambient Interfaces, CEA LIST, Gif sur Yvette CEDEX, ²Laboratoire Exploitation, Perception, Simulations et Simulateurs de conduite, IFSTTAR, Versailles - Satory, France

Define the presentation language of your presentation: I wish to submit this presentation for the ENGLISH Program

Specify your preferred presentation method: Oral or Poster

Do you want to apply for a student award ?: No, I will not apply for a student award

Abstract: Given their difficulties encountered during pedestrian wayfinding, we present two exploratory studies on older adults' mobility. These studies had two major objectives: 1) identify and model the main psychological and cognitive difficulties experienced by older adults when crossing the street or orienting in complex outdoor environments; 2) identify the environmental resources and the technological aids which could help older adults compensate the effects of aging on street-crossing behaviour and orientation. The studies were based on an online questionnaire distributed to people aged 50 and more, as well as on semi-structured interviews with older adults. The semi-structured interviews were constructed on the basis of the Critical Incident Technique. The analysis of the data of the two studies was inspired by the Capabilities Approach (Sen, 1985). The Capability Approach is a socioeconomic theoretical framework focusing on human development. Therefore, it can support reflection on how the environment and existing technologies may reinforce human capabilities. The Capability Approach has a strong focus on ethics, dignity and support for enhancing cognitive, physical and sensory capacities and, in this sense, can be very useful for the design of mobility trainings and aids for older adults.

The results of the studies presented in this paper showed that the major difficulties encountered by older adults are mostly related to the environment: for example the flow of traffic (i.e. the crowd, strollers, trolleys, bikes), the lack of information (i.e. signage, maps), the difficulties during multimodal interchange (i.e. lack of availability of means of transportation at the given location or lack of information), the legibility of information (too much or wrong information, the graphic design of the signage) and the lack of space on sidewalks. Other secondary difficulties are rather of a physical nature, such as difficulties to carry bags, joint pain and sight.

As for the resources, they reside in the knowledge of places (i.e. mental maps), in preparing the itinerary before leaving, paper or board maps and sometimes the GPS or smartphone.

We will also discuss leads to improve existing resources (signage, pedestrian GPS, etc.), thus attempting to reduce their limitations.

Keywords: Capability, Compensation, Conversion factors, Crossing, Older Adults, Orientation