

H. KÜNEMUND, N.M. TANSCHUS. **Technology acceptance and usage in old age.** *Gerontechnology* 2012;11(2):177; doi:10.4017/gt.2012.11.02.466.00 **Purpose** It is widely taken for granted that interest in technology goes down with increasing age. Many studies, and especially large-scale surveys, seem to confirm declining technology acceptance<sup>1</sup>, interest in technology<sup>2</sup>, and usage of new technologies with increasing age<sup>3</sup>. However, many factors may contribute to such findings. We argue that composition effects (e.g., increasing proportions of women among the older age groups), cohort effects (e.g., experience with different technologies during the life course) and various living and health conditions (e.g., living alone, having children in the neighborhood, experience of falls) have to be taken into account and that these factors will impact on the acceptance of different scenarios of assistive technologies. **Method** Our analyses are based on data from a self-administered questionnaire (n=2,032, random sample of individuals aged 50 and above drawn from population registers in Lower Saxony, Germany). The survey was part of the 'Lower Saxony Research Network Design of Environments for Ageing - Information and Communication Technologies for Promoting and Sustaining Quality of Life, Health and Self-sufficiency in the Second Half of Life - (GAL)' which aims to identify, enhance and evaluate new information and communication technologies for the design of environments for ageing<sup>4</sup>. GAL develops four assisting systems: (i) a memory assistant for everyday planning of activities and housekeeping, (ii) a physical activity rehabilitation monitoring device that records vital parameters in patients with chronic obstructive pulmonary disease (COPD), and (iii) a sensor-based automatic and continuous assessment of activities at home, and iv) a sensor-based fall prevention and detection device. The survey briefly introduced these four scenarios and the respondents were asked to indicate their intention to use such a system (immediately, only in case of need, or not at all). Multinomial logistic regressions were used to explain the acceptance of these four scenarios. **Results & Discussion** The results show that the simple assumption of an aging effect –that is, technology acceptance inevitably declines with increasing age–is insufficient and may be misleading. For the memory assistant no age effect was found, controlling for the other variables in our model. Income, slight health impairments, and experience with technology contribute to the explanation of intended usage. The monitoring of physical activity in a rehabilitation context was more favourably assessed for possible use by young old people with slight or strong health impairments and experience with technology. The sensor-based activity measurement would be used more by older with health impairments. Regarding the sensor-based fall prevention and detection device, very old people especially (aged 80 years and above) expressed an interest; health impairments and experience with technology increase the probability to use such a device. Furthermore, childlessness was found to be a significant factor. Consequently, we suggest that an answer to the question of whether older people will make use of assistive technologies in the future should take into account specific scenarios and also various socio-economic variables.

#### References:

1. Morris MG, Venkathesh V. Age differences in technology adoption decisions: Implications for changing work force. *Personnel Psychology* 2000;53:375-403
2. Hennen L. Positive Veränderung des Meinungsklimas – konstante Einstellungsmuster. Ergebnisse einer repräsentativen Umfrage des TAB zur Einstellung der deutschen Bevölkerung zur Technik. Berlin: Büro für Technikfolgenabschätzung beim Deutschen Bundestag; 2002
3. Peacock SE, Künemund H. Senior citizens and Internet technology. Reasons and correlates of access versus non-access in a European comparative perspective. *European Journal of Ageing* 2007;4(4):191-200; doi:10.1007/s10433-007-0067-z
4. Haux R, Hein A, Eichelberg M et al. The Lower Saxony research network design of environments for ageing: towards interdisciplinary research on information and communication technologies in ageing societies. *Informatics for Health and Social Care* 2010;35(3-4):92-103; doi:10.3109/17538157.2010.52041

**Keywords:** Ambient Technology (AT), Ambient Assisted Living (AAL), technology acceptance

**Affiliation:** University of Vechta, Vechta, Germany; E: herald.kuenemund@uni-vechta.de

**Full paper:** No