# Experienced old eyes can look young in HCI research

Robin L. Hill[1], Anna Dickinson[2] and John L. Arnott[2]
[1] Institute for Language, Cognition and Computation,
School of Informatics, University of Edinburgh
r.l.hill@ed.ac.uk
[2] School of Computing, University of Dundee
{adickinson, jarnott}@computing.dundee.ac.uk

## ABSTRACT

Eye-tracking studies have demonstrated that older people tend to exhibit poorer visual engagement with screen-based technologies than young adults; notably slower eye movements and longer fixation durations. The assumption has been that these findings are attributable to physiological and cognitive degradation associated with normal aging [1]. In other words, reduced performance is inevitable and predictable by chronological age. The size of these effects can be task dependent, but evidence across a range of HCI tasks suggests that computer experience can reduce age-related differences in viewing behaviour [2]. Eye-movement patterns and distributions for experienced older adults are remarkably close to those for younger adults carrying out similar tasks. And within a sample of older adults (n=18, age range: 70-93), even a minimal level of computer familiarity is enough to create significantly distinguishable groups. This implies that treating all older adults as a single cohort is a gross oversimplification. Additionally, in many usability studies these visual aspects of interaction are confounded by physical performance difficulties, such as mouse control or typing. Models of visual behaviour and eye movements should therefore consider computer experience as a variable as well as age.

## BODY

*When experience is controlled for, older adults' eye movements resemble younger adults. Age alone is less important than previously assumed.*

## REFERENCES

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