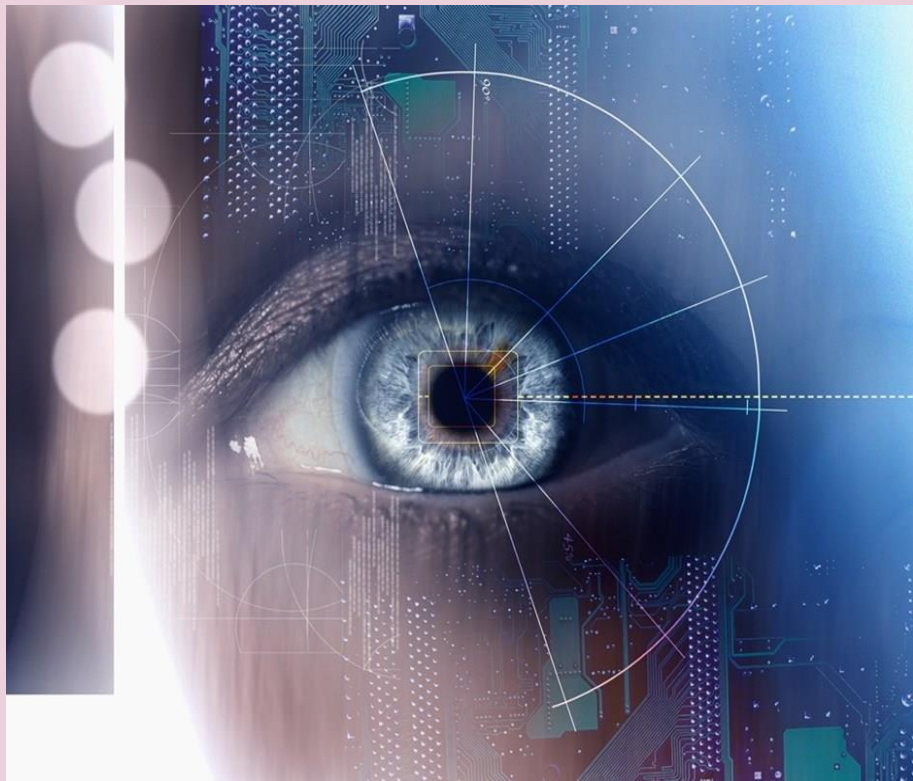


How does input speech influence processing difficulty in simultaneous interpreters?



Funding:

**Nowe Idee, IDUB (UW)
SONATA BIS (NCN)**

Methods:

- cognitive tests**
- eye-tracking (pupillometry)**
- AI-assisted quality assessment**

PI:

dr Karolina Broś

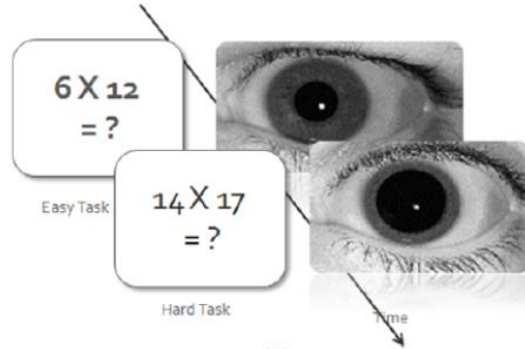
Cognitive load

Simultaneous interpreting is a cognitively demanding task

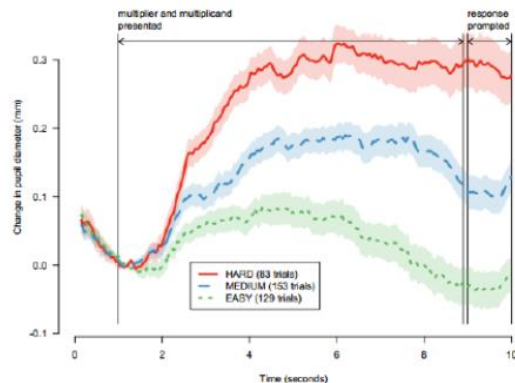
- requires training and skills, good WM, management of cognitive resources
- **professionals vs trainees:** expertise
- **interpreters vs bilinguals:** domain-general cognitive flexibility
- **dual-mode language use**
- **cognitive reserve**



Pupil size and cognitive load



(A)

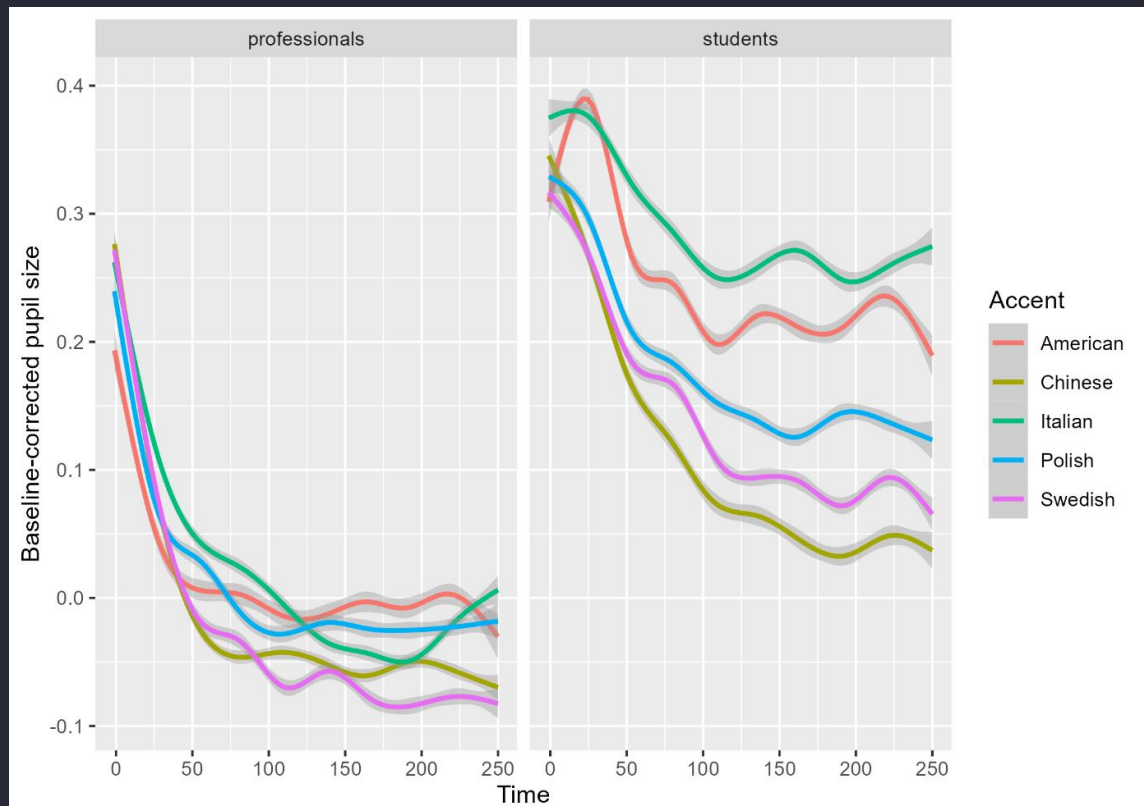


(B)

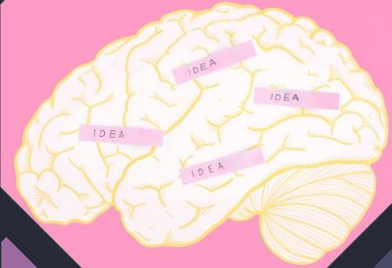
The amount of working memory resources dedicated to a specific task. (Hess & Polt, 1964; Sweller et al., 1998)

Figure: (A) mental multiplication task, (B) difficulty effect: the more demanding the multiplication task, the greater the pupil dilation (Klingner et al., 2011, Figure 5.5)

The acoustic challenge: accented speech



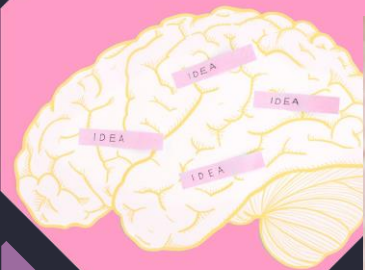
What else is a challenge?



THE AGE FACTOR

AGE PREVIOUSLY NOT STUDIED

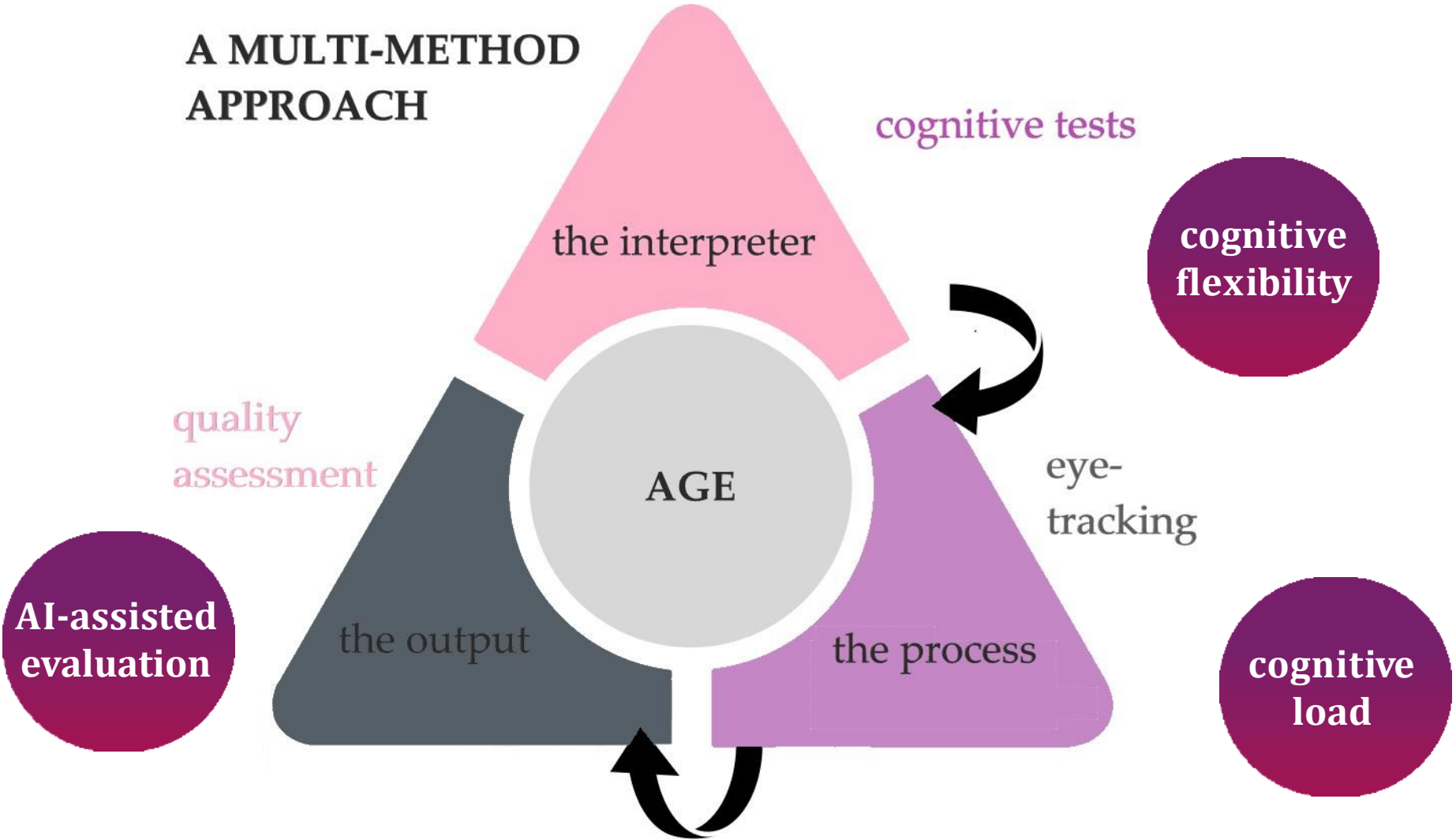
No objective assessment of age effects on interpreting process or performance



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A MULTI-METHOD APPROACH



Tests

- ❑ reading/listening span (WM)
- ❑ WCST (domain-general flexibility)
- ❑ eye-tracking study (domain specific flexibility)
- ❑ AI-training & quality assessment

Reading Span Test

3 sentences

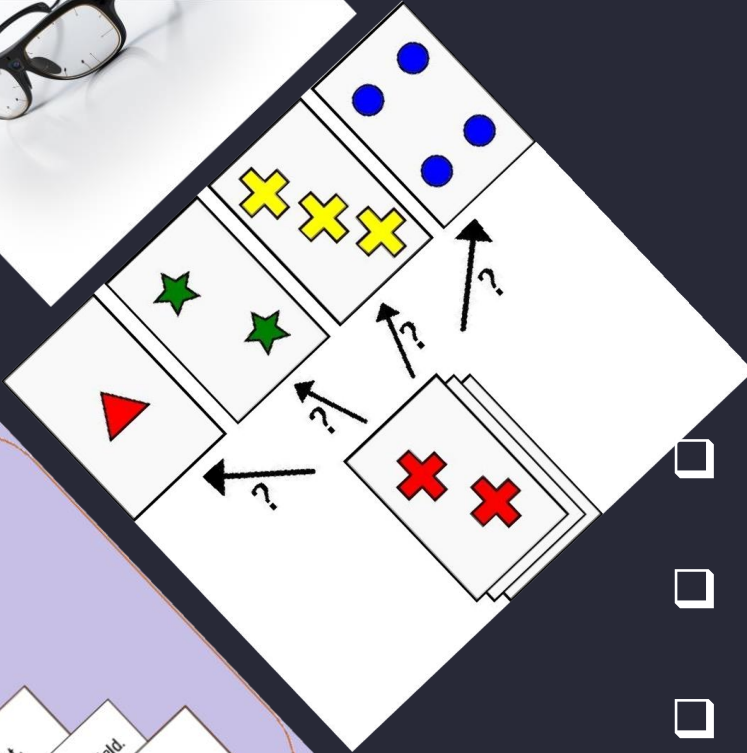
The child dropped food on his jacket and made stains.

The boys got together in the cave at midnight.

The man's dream was to create his own baseball field.

???

..., stains, midnight, field



Practical implications

- ❑ training programs and professional development initiatives
- ❑ workload and job assignments reflecting changes in needs and skills
- ❑ remote interpreting, health checks

Broader implications:

- ❑ healthy aging, multilingual societies & work environments
- ❑ cognitive reserve
- ❑ relationship between cognitive flexibility and other cognitive functions (inhibition, working memory)



Thanks!

Follow my project 😊

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Flexi-aging

