

Motivation

UX is built upon the perception of the interaction but users also perceive time during HCI. Thus, they might use their perception to evaluate the interaction.

Method

IVs: Think Aloud (TA) (w/ vs. w/out)

Usability (low vs. high)

Length of interaction (task#)

Setting: Performing typical usability tasks on a website

Analysis: Model reduction with linear mixed models (random effects for participants and tasks)

Research questions

Does time perception underlie typical distortions during UX testing scenarios (e.g. task demands during Think Aloud)?

How affect usability and task demands (e.g during Think Aloud) appraisal of perceived duration?

Does appraisal of perceived duration covary with other components of UX?

Duration estimation (for each task)
PTR = estimated time / total task time

Appraisal of perceived duration (for each task)
perceived quickness of interaction (1 to 11)

UX evaluation (after all tasks)
overall evaluation and usability from meCUE¹⁾

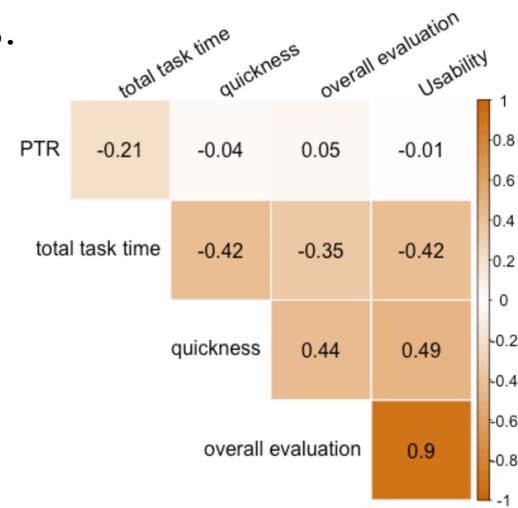
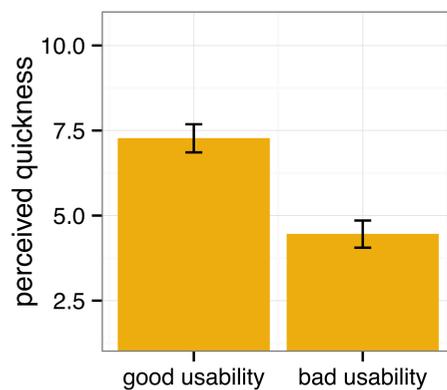
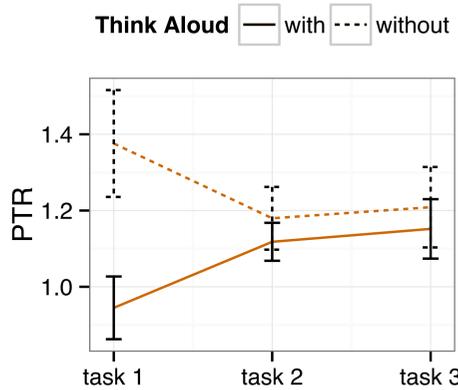
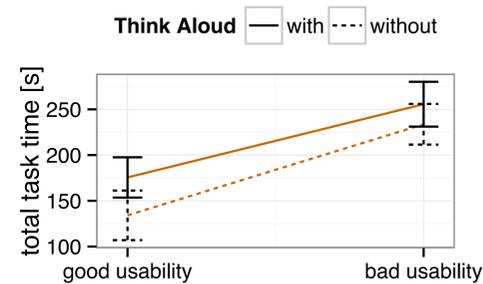
Study 1

N = 62 (39 ♂), M = 25.2 years

$$PTR \sim TA + task\# + TA:task\# + (1|id) + (1|task)$$

$$perceived\ quickness \sim Usab. + (1|id)$$

$$Total\ task\ time \sim Usab. + TA + (1|id) + (1|task)$$



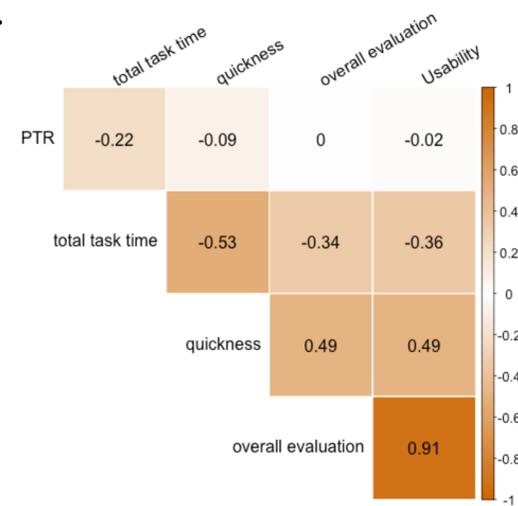
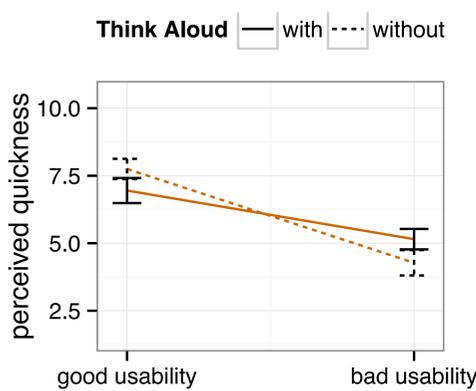
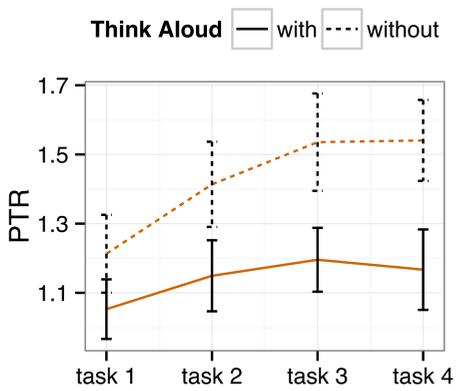
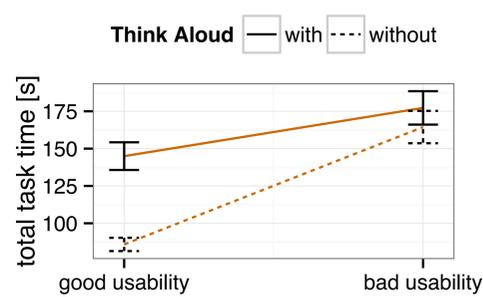
Study 2

N = 80 (40 ♂), M = 25.1 years

$$PTR \sim TA + task\# + (1+task\#||id) + (1|task)$$

$$perceived\ quickness \sim Usab. + TA + task\# + Usab.:TA + (1|id) + (1|task)$$

$$Total\ task\ time \sim Usab. + TA + Usab.:TA + (1|id) + (1|task)$$



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Literature

1) Minge, M., Thüring, M., Wagner, I., & Kuhr, C. V. (2017). The meCUE Questionnaire: A Modular Tool for Measuring User Experience. In M. Soares, C. Falcão, & T. Z. Ahram (Eds.), *Advances in Ergonomics Modeling, Usability & Special Populations*, Vol. 486, pp. 115–128. Cham: Springer International Publishing.

Task demands lead to a distortion. However, usability manipulation shows no distortion.

Strong effect of usability on duration evaluation. Very small effect of task demand as a moderator in study 2.

UX ratings do not covary with strength of over/under-estimation but with total task time and with perceived quickness.

Conclusion: Users tend to overestimate the total task time but estimates are not distorted by usability manipulations. Appraisal of duration is based on an adequate time perception and reflects the difference in total task time. Task demand, however, leads to distortion. Hence, users cannot account for the time loss when rating perceived quickness. Regarding UX, appraisal of duration covaries with dimensions of UX indicating a relation to be further investigated.