

IS1404 E-READ: Evolution of Reading in the Age of Digitization
Position paper

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WG3, Experiential and emotional aspects of reading (Balling, Jacobs, Kuzmicova)

Potential research contributions:

My overarching research question is *if and how immersive and aesthetic reading processes are altered by digital reading*. Thus, my work will focus on the development and further empirical testing of the neurocognitive poetics model of literary reading (Jacobs, 2011; 2015), as both a comprehensive theoretical guide for many of the E-READ studies, and a qualitative/quantitative prediction tool for neurocognitive experiments. For example, the model i) specifies the broad conditions facilitating immersive reading processes on the basis of emotional involvement (empathy, suspense) and thus allows to *generate research questions* about the differential impact of reading medium (analogue vs. digital), genre (novels vs. poems; fact vs. fiction), or reader personality (hi vs. lo fantasy scale score) on immersion, empathy, and deep reading; and ii) allows *falsifiable predictions* at three levels of measurement (subjective ratings, directly observable behavior, and brain activity) about effects of relevant reading variables (e.g., narrative structure, foregrounding devices, reader personality/skills) on both emotional/immersive and aesthetic/reflective processes which are assumed to most often exclude (or inhibit) each other.

In cooperation with WG2 I would also like to investigate the emotional development of children through language and reading. We have developed both written and auditory versions of the kidBAWL, an adaptation of the Berlin Affective Word List (BAWL) for children (Jacobs et al., 2015). A huge methodological challenge of E-READ I would like to tackle is the problem of how to deal with the higher familiarity of almost all of our subjects with the 'old' analogue reading formats. How can we deal with this confound when comparing say print vs. kindle without having the means for year-long longitudinal studies? Taking children as subjects is one approach.

Finally, I intend to familiarize/train E-READ members with/in the multiple neurocognitive methods of the D.I.N.E. and the 'methods must fit the questions' principle. A striking example is the obvious dilemma that as soon as we try to measure 'immersion' on-line with rating methods, we already interfere with it (or kill it entirely), whereas when we measure it post-hoc with subjective methods (after the reading act), memory processes etc. can lead to significant distortions and illusions. Hence, the need for indirect, more objective additional measurements, such as peripheral-physiological (e.g., heart rate, EDA, corrugator activity), oculo- and pupillometric, EEG, fMRI, fNIRS, or TMS, which all have their own costs and benefits, and are difficult, if at all, applicable to studies using (analogue) books as stimuli.

1. Relevant previous work (already published; see refs list below).
2. Pilot studies (not yet published). Subjective Immersion in excerpts from novels, narratives, popsongs, and poems: iPad & Kindle vs. book(lets).
3. Planned work in cooperation with Balling, Mangan, Kuzmicova and others.

Relevant references (available either on Science Direct or ResearchGate).

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