Neurocognitive Poetics or How the Brain Works in Literature

Arthur M. Jacobs Freie Universität Berlin

Reading is not only (cold) information processing, but involves affective and aesthetic processes that go far beyond what current models of word recognition, reading, or text comprehension can describe. The Neurocognitive Poetics perspective (Jacobs, 2015a,b; Willems & Jacobs, 2016) emphasizes such affective-aesthetic processes during the reading of verbal materials in more natural and ecologically valid tasks and contexts going from 'micropoems' in the form of single words (Jacobs, 2017) or metaphors (Jacobs & Kinder, 2018) to entire poem corpora (Jacobs et al., 2017, Jacobs, 2018). It also provides methods, e.g. Quantitative Narrative Analysis/QNA tools like the Berlin Affective Wordlist/BAWL (Jacobs et al., 2015), as well as models (e.g., the Neurocognitive Poetics Model/NCPM; Jacobs, 2015a; Jacobs & Willems, 2017) for quantifying the wealth of distinctive features of all kinds of verbal materials used in such tasks and predicting their effects on reader responses, e.g. for use as parametric regressors in fMRI studies on literature reception. In this paper I address the issue of how the brain works in literature within the framework of the *NCPM*. Its predictions are discussed in the light of empirical results from studies on word recognition, metaphor comprehension or poetry reception.

- Jacobs AM (2015a) Neurocognitive poetics: methods and models for investigating the neuronal and cognitive-affective bases of literature reception. Front. Hum. Neurosci. 9:186. doi: 10.3389/fnhum.2015.00186
- Jacobs, A. (2015b). The scientific study of literary experience: Sampling the state of the art. *Scientific Study of Literature*, 5(2), 139-170.
- Jacobs AM, Võ ML-H, Briesemeister BB, Conrad M, Hofmann MJ, Kuchinke L, Lüdtke J and Braun M (2015) 10 years of BAWLing into affective and aesthetic processes in reading: what are the echoes? Front. Psychol. 6:714. doi: 10.3389/fpsyg.2015.00714
- Jacobs, A. M., and Kinder, A. (2018). What makes a metaphor literary? Answers from two computational studies, Metaphor and Symbol, 33:2, 85-100, DOI: 10.1080/10926488.2018.1434943
- Jacobs, A.M., & Willems, R. (2017). The fictive brain: neurocognitive correlates of engagement in literature. Review of General Psychology, Advance online publication. http://dx.doi.org/10.1037/gpr0000106
- Willems, R. & Jacobs, A.M. (2016). Caring about Dostoyevsky: The untapped potential of studying literature. Trends in Cognitive Sciences, 20, 243-245.

Bio blurb. Arthur Jacobs is Professor of Experimental and Neurocognitive Psychology and founding director of the Dahlem Institute for Neuroimaging of Emotion (D.I.N.E.) at Freie Universität Berlin (FUB). As part of the highly interdisciplinary "Languages of Emotion" project of FUB, Professor Jacobs led a team investigating the "Affective and Aesthetic Processes of Reading". He is (co-)author of more than 250 scientific publications in the fields of reading research, psycholinguistics, affective neuroscience, and neurocognitive poetics, among which the book 'Gehirn und Gedicht' (Brain and Poetry, 2011; with Raoul Schrott).