

Björn 't Hart

That's frowned upon

Using facial EMG to track evaluation and simulation during affective language processing.

This dissertation investigates the way affectively salient language describing emotions and emotional events is processed. The main aim in the experiments presented here is an investigation of the claim made by the theory of grounded language comprehension regarding the presence of simulation (whether necessary or epiphenomenal) during (affective) language comprehension. This is investigated in a narrative context where the characters to whom the affective language pertains are manipulated to be viewed favourably or unfavourably by the reader. Through this manipulation, language-driven simulation and emotional evaluation are contrasted. These processes of simulation and evaluation are measured through the use of facial electromyography (EMG) to measure action potentials in the *corrugator supercillii*, or 'frowning muscle'.

The main finding in this thesis is that a simulation-only account of corrugator activity during language processing is untenable. At the same time, the results also do not support an interpretation of the facial EMG results in terms of only evaluation. Rather it seems both cognitive processes are active simultaneously and make their influence felt on the corrugator during online language comprehension.

This book is of interest to theoretical linguists, as well as experimental cognitive & psycholinguists working on questions regarding how language comprehension comes about. At the same time, the work herein should also be of interest to narrative researchers engaged with questions regarding our engagement with story characters. More generally, communication & media and (social) psychology researchers may find this work relevant in relation to our affective engagement with disliked or immoral people.

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