

Mood and conflict in discourse

Vicky Tzuyin Lai^{1,2}, Peter Hagoort^{1,2}, Jos van Berkum³

1. Neurobiology of Language Department, Max Planck Institute for Psycholinguistics, Nijmegen, Vicky.Lai@mpi.nl

2. Donders Center for Cognitive Neuroimaging, Radboud University Nijmegen

3. Department of Dutch studies, Utrecht Institute for Linguistics OTS, Utrecht University

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Research has shown that mood can influence language comprehension at various levels. However, little is known about how it affects discourse comprehension. While a few studies showed facilitation of mood-congruent contents (Egidi & Nusbaum, 2012), we explored how mood affects discourse processing with non-valenced contents.

Discourse processing involves dynamically creating a situation model, during which readers have to strike a balance between possibly conflicting general world-knowledge and what's being asserted specifically in the discourse, without being pulled into strong memory attractors that are currently irrelevant. Based on recent literature that negative affect sensitizes attention to conflict (van Steenbergen, 2010), we hypothesize that mood can influence how readers deal with the conflicts between general world-knowledge and the specific discourse.

To test this, we first created a sentence fragment (*with light on one can see ...*) that strongly cues familiar world-knowledge, supporting (s+) or disapproving (s-) the following critical word CW (more/less). Next, we embedded these sentences in a wider discourse whose meaning ultimately did (d+)/didn't (d-) support CW. Conflict potentially arises whenever CW is partially or not supported by predictions based on general world-knowledge and specific discourse. 240 such stimuli were created, matched between conditions and pretested with plausibility ratings. All stories described situations that could happen in the real world.

[d+s+]: [Discourse about driving at night]. *With light one sees more ...*

[d-s-]: [Discourse about driving at night]. *With light one sees less ...*

[d-s+]: [Discourse about stargazing at night]. *With light one sees more ...*

[d+s-]: [Discourse about stargazing at night]. *With light one sees less ...*

24 subjects participated in a 2-session EEG experiment (positive/negative-valence film-clips, one week apart). Within a session, they rated their initial mood first (baseline) and then did 5 consecutive blocks, each containing one clip, 30 stories, and end-of-block mood rating.

Mood ratings confirmed that our film-clips induced reliable mood differences. In both moods, we found N400 effects (300-500 ms, posterior) for [d-s-] relative to [d+s+] only. We also observed clear sustained late positivities 'LP' (500-900 ms, anterior) for [d-s-,d-s+,d+s-] relative to [d+s+], only after negative mood induction. Comparing moods directly, the LPs were larger after negative mood induction in [d-s-,d-s+,d+s-], and smaller after positive mood induction in [d+s+].

Assuming N400 reflects ease of conceptual memory retrieval, our findings suggest that as long as some aspect of the materials supported CW [d+s+,d-s+,d+s-], access to the concept behind it was easy, and not modulated by mood. We take LP to index some aspect of conflict-related processing, e.g., revising predictions (Otten & Van Berkum, 2008), updating discourse model with new info (Burkhardt, 2007), and/or continued processing of irresolvable conflict (Kuperberg, 2007). Critically, LP is sensitive to mood: Negative mood caused readers to attend more strongly to conflicting aspects of language, with difficulty to disengage (Bar, 2009).

Thus, mood influences conflict handling during discourse processing. Contributing to the language and emotion literature: Mood not only affects the processing of negative-valenced content in language, but also negativity at a more abstract processing level.

Egidi, G., & Nusbaum, H. C. (in press). Emotional language processing: How mood affects integration processes during discourse comprehension. *Brain and Language*.

van Steenbergen, H., Band, G.P.H., & Hommel, B. (2010). In the mood for adaptation: How affect regulates conflict-driven control. *Psychological Science*, 21, 1629-1634.