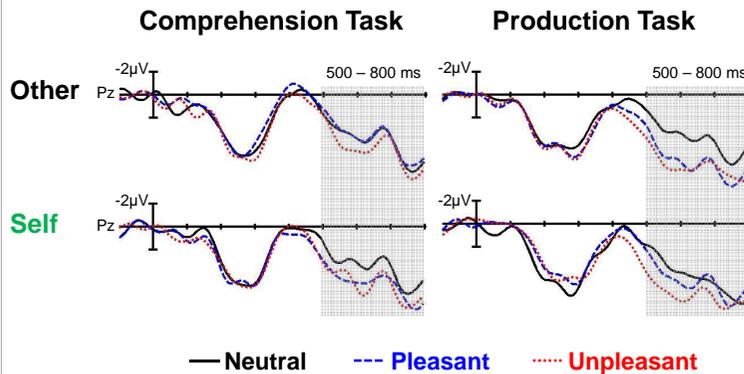


Introduction

► In previous work^{1,2}, we have examined the interaction of emotion and self-relevance on the late positive component (LPC) of the ERP under two tasks:

- A comprehension task² that did not require attention to emotional properties of scenarios
- A production task¹ that required attention to emotional properties of scenarios



► Interaction of self-relevance and emotion differed by task:

- Replicating other work^{3,4,5}, the emotion effect was only significant for self-relevant scenarios with the comprehension task.
- When emotional properties of words were made task-relevant (production task), both other-relevant and self-relevant stimuli showed effects of emotion.

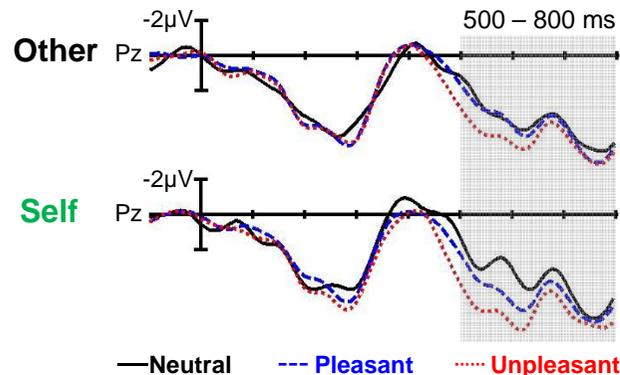
► In the present work we examined whether the mood of the participant would influence the interaction of self-relevance and emotion on the LPC

Methods

- We recorded ERPs while participants read two-sentence scenarios from a self (2nd person) or other (3rd person) perspective. There was a pleasant, unpleasant, or neutral critical word (CW) in the second sentence.
- Task: Yes/no comprehension questions on intermittent trials
- Happy or sad mood (between subjects) was induced via a slide show of IAPS pictures⁴ set to mood-matched music.

Other Condition	A man knocks on Sandra's hotel room door. She sees that he has a <u>gift</u> / <u>tray</u> / <u>gun</u> in his hand.
Self Condition	A man knocks on your hotel room door. You see that he has a <u>gift</u> / <u>tray</u> / <u>gun</u> in his hand.

Results



► No differences between Happy and Sad mood conditions.

► The emotion effect was significant for both self-relevant and other-relevant scenarios (no self-relevance x emotion interaction).

Discussion

► With the comprehension task and no mood induction, the most inherently motivationally relevant scenarios (both self-relevant and emotional) captured attention and processing.

► When either the task or the mood state of the participant drew attention to the emotional properties of the scenarios, an emotion effect was seen regardless of self-relevance.

► These results suggest we allocate processing resources (as reflected by the LPC) to emotional and non-emotional stimuli in a highly dynamic manner sensitive to multiple interacting aspects of the context.

References

1. Fields EC & Kuperberg GR (2012). It's all about you: An ERP study of emotion and self-relevance in discourse. *NeuroImage* 62(1):562-574.
2. Fields EC & Kuperberg GR (under review). Dynamic effects of self-relevance and task on neural processing of emotional words in context.
3. Herbert C, Herbert BM, Ethofer T, & Pauli P (2011) His or mine? The time course of self-other discrimination in emotion processing. *Social Neuroscience* 6(3):277-288.
4. Herbert C, Pauli P, & Herbert BM (2011) Self-reference modulates the processing of emotional stimuli in the absence of explicit self-referential appraisal instructions. *Social Cognitive and Affective Neuroscience* 6(5):653-661.
5. Shestiyuk AY & Deldin PJ (2010) Automatic and strategic representation of the self in major depression: Trait and state abnormalities. *American Journal of Psychiatry* 167(5):536-544.

CONTACT: Eric.Fields@tufts.edu

Acknowledgements: This research was supported by NIMH (R01 MH071635) and NARSAD (with the Sidney Baer Trust) to GK.