Thank you to the members of LADN and especially to the Research Assistants and to Dr. Mario Liotti for making this research project possible.

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The NAP Effect: Dissociating Priming Effects for Negative and Positive Words
Susanna Piasecki, Regard M. Booy, and Mario Liotti

INTRODUCTION

- Depression is characterized by negative schemas that lead to a processing bias for negative material (1).
- The Negative Affective Priming (NAP) task measures inhibition for negative material (3).
- Relative to controls, depressed individuals show severely reduced inhibition for negative words on the NAP task (2).
- Due to previous designs, it is not clear if the NAP effect is driven by facilitatory or inhibitory mechanisms of selective attention, if depressed trait is effectively isolated from state factors, or if positive and negative material is affected differently.
- The current study compared attended repetition (AttRep) and ignored repetition (IgnRep) priming scores for positive, negative, and neutral words.

METHODS

PARTICIPANTS
93 female Simon Fraser University undergraduate students ($M_{age}=19.74, SD=2.55, Min=17, Max=37$) with normal or corrected to normal vision, and without a history of depression or anxiety, were recruited via the online Research Participation System at Simon Fraser University.

DESIGN
In the NAP task subjects respond to one word while ignoring another.
Ignored Repetition (IgnRep): Previous distractor and current target share a valence.
Control: Previous distractor was neutral.
NAP Effect: NAP = RT IgnRep – RT Control

RESULTS

DEPRESSED TRAIT GROUP
The main effect for Word Valence was not significant, $F_{1,37,27.40}=1.26, p=.30, \eta^2_{p}=.08$. The main effect for Priming Type and the two-way interaction were significant, $F_{2,33.25.62}=7.54, p=.003, \eta^2_{p}=.35$ respectively. The PE on AttRep trials to positive words differed significantly from neutral words, $t_{14}=2.59, p=.02$.

POSITIVE TRAIT GROUP
The main effect for Word Valence was not significant. The main effect for Priming Type was significant, $F_{1,57,23.51}=1.65, p=.50, \eta^2_{p}=0.04$, and $F_{1,110}=24.47, p<.001, \eta^2_{p}=.62$ respectively. The two-way interaction was not significant, $F_{1,67,25.09}=3.33, p=.06, \eta^2_{p}=1.8$. The PE on AttRep trials to negative words differed significantly from neutral words, $t_{11}=2.28, p=.04$.

The groups were significantly different on the NEO-PI-R N3 and E6 scores, $t_{27.47}=14.33, p<.001$ and $t_{18.74}=8.82, p<.001$ respectively.
BDI scores were significantly different between the groups, $t_{29}=4.52, p<.001$.

CONCLUSION

- Mechanisms underlying mood-congruent biases depend largely on dispositional factors.
- Depressed individuals may not be characterized by a negative bias as previously thought.
- Biases are first obvious in stronger priming conditions such as on AttRep trials.
- On AttRep trials, individuals vulnerable to depression may initially engage in compensatory mechanisms to improve their mood, resulting in a facilitation for positive material.
- On AttRep trials, individuals with positive affect may be more affected by their innate threat detection system, resulting in a facilitation for negative material.
- These results are more consistent with an emotion regulation account of negative priming than the inhibitory account typically used in the NAP literature.

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REFERENCES