Summary and Conclusions

Background and Rationale

Behavioral Results

- Dehaene et al. [1], used visual masking to render physically identical stimuli differentiable between seen and unseen stimuli.
- However, when the stimuli were relevant in the task-relevant condition, the P3b disappeared.
- Instead, we found an earlier N3 (VAN) that differentiated between seen and unseen stimuli.
- Unlike Dehaene et al. (2001), we found a robust P3b but only in electrode locations atypical for P3b.

Mass univariate analyses

- 25% masked critical stimuli
- 25% visible blanks
- 25% visible critical stimuli

EEG Results

- Mass univariate analyses: some positive amplitude differences from ~200-500ms, but only in electrode locations atypical for P3b.

Bayesian inference using task-relevant P3b as prior:

- Bayes factor = 0.001

Recognition Memory

- Yes, the N3 (VAN)!
- Does the P3b differentiate between seen and unseen stimuli when those stimuli are task-irrelevant?

Neural activity linked with visual awareness and task-relevance in a novel 2x2 design

Methods

1. Procedure (N=20):
   - 15x irrelevant blocks (64 trials each)
   - 15x relevant blocks (64 trials each)
   - 25% masked critical stimuli
   - 25% visible blanks
   - 25% visible critical stimuli

- EEG Results
  - No report paradigm
  - (i.e., in a ‘no-report’ paradigm?)
  - Stims presented in both conditions?
  - Yes, the N3 (VAN)!

- P3b statistics in ‘no report’
  - Does the P3b differentiate between seen and unseen stimuli?
  - AND, is the critical stimulus always task-relevant, as we asked?
  - P3b does not differentiate between seen and unseen stimuli

- Source Estimate 300-500ms

References


Acknowledgments

- Our thoughts

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