

Separate contributions of words and pictures in an infant priming task for one-year-olds

# What's in a Prime?

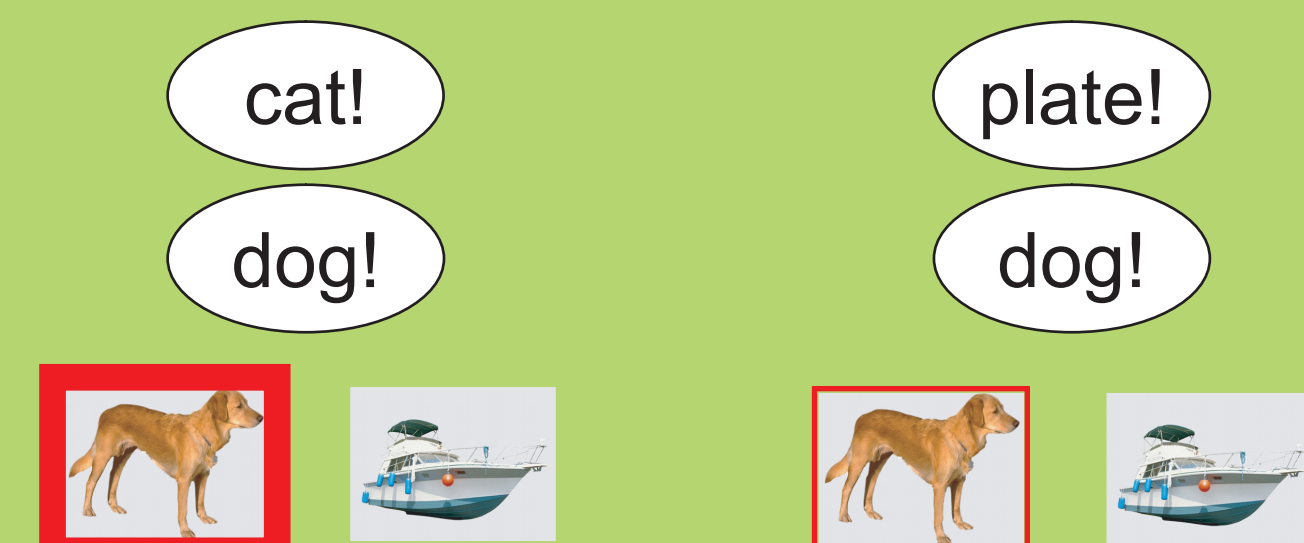
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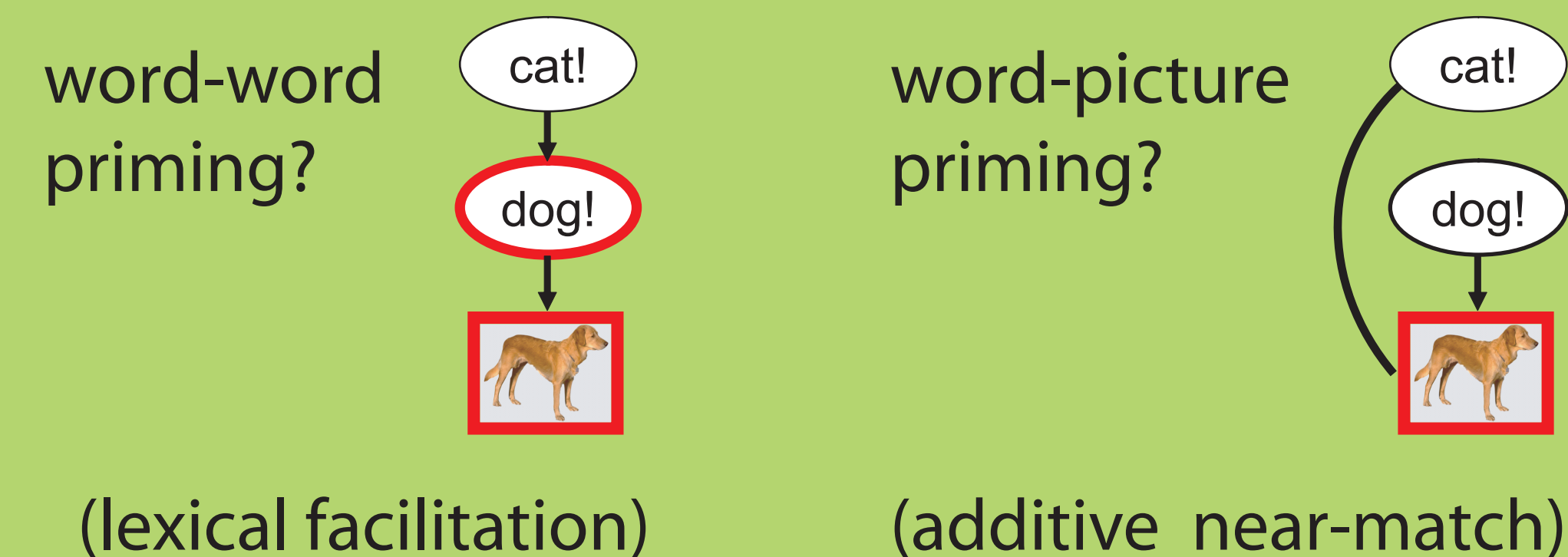


## Are words connected in the infant lexicon?

An infant version of adult **priming** methodology has been developed. 18m & 24m infants **look more** at named pictures if they have heard a related prime very shortly before the image name.



## What is infant 'priming'?



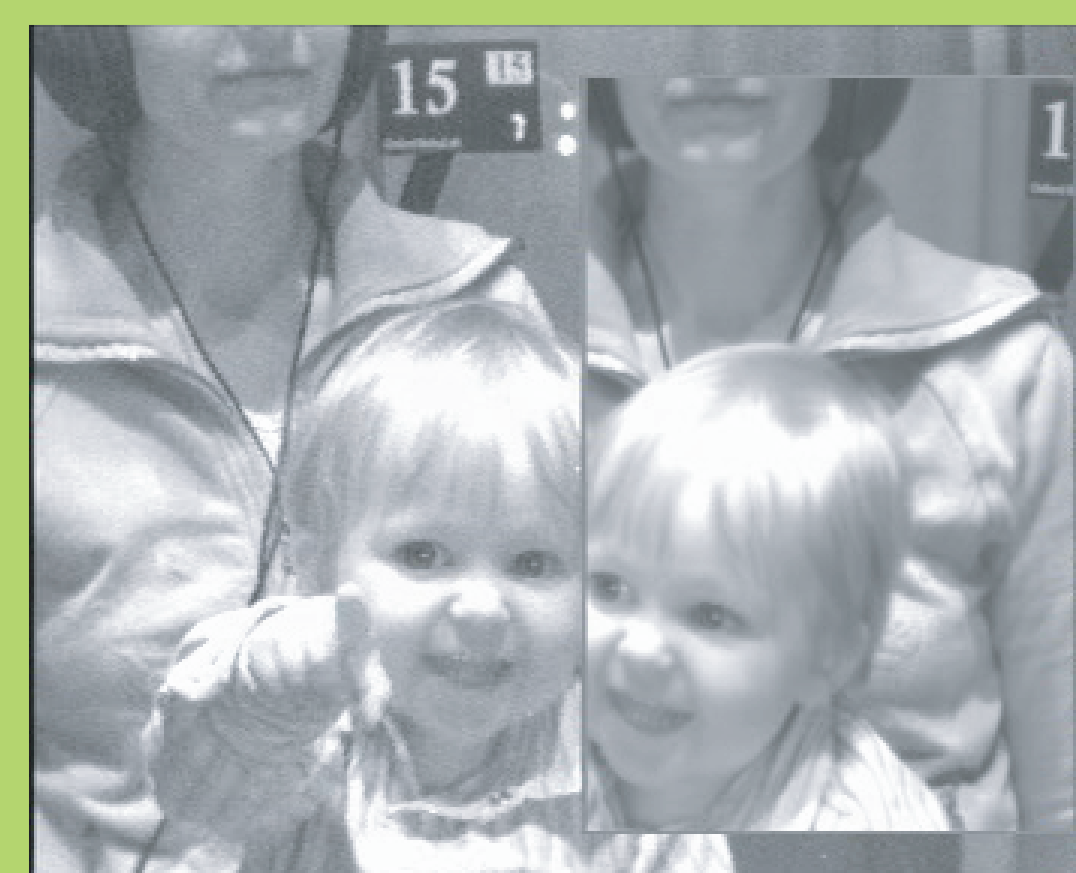
Is greater interest in the named target caused by lexical facilitation of the target word, or by additive interest in the target from the prime?

## Subjects

48 x 18-month-olds  
56 x 21-month-olds  
(Ranges: 17.5-18.5, 20.5-21.5)

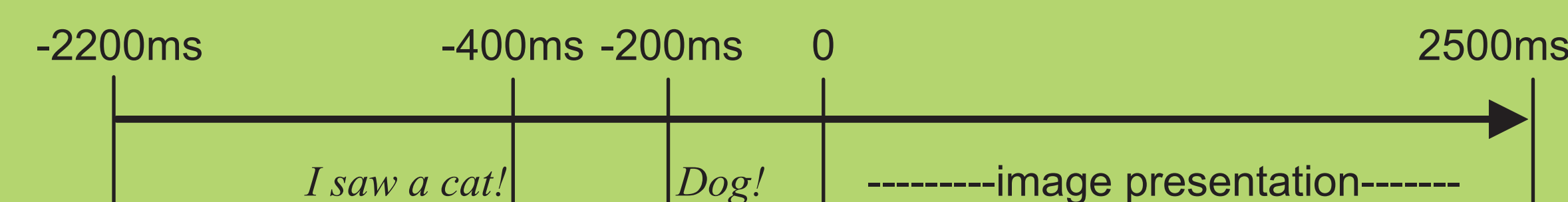
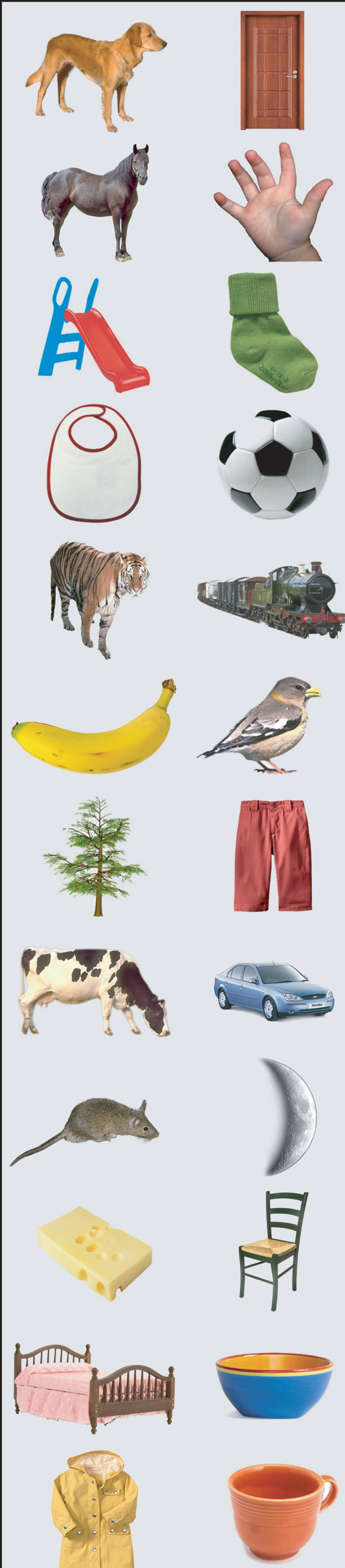
## Procedure

- 12 x paired presentations
- Word-pair precedes images
- No repetition of words
- Only known words analysed



## Coding

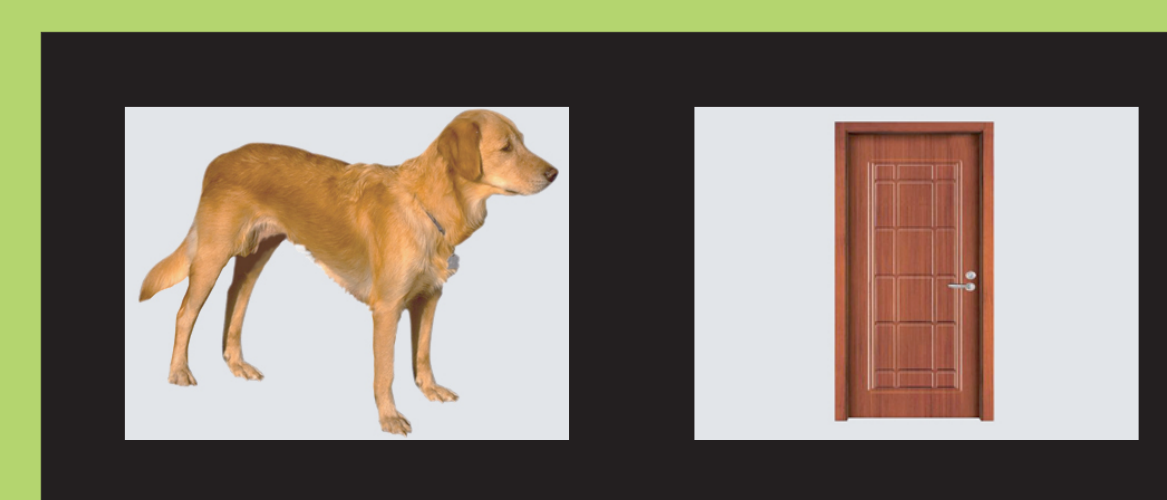
Offline, blind, frame-by-frame  
40ms temporal resolution



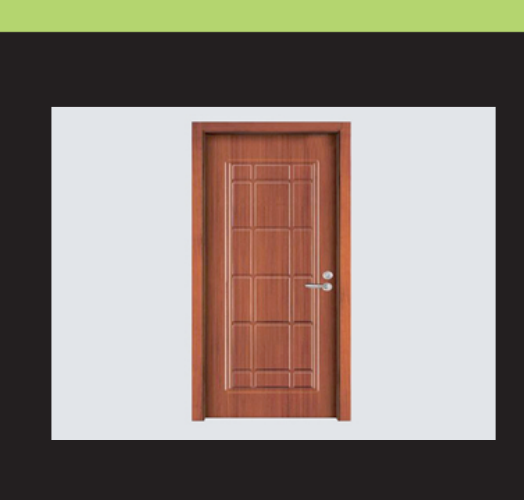
## Related word-pair



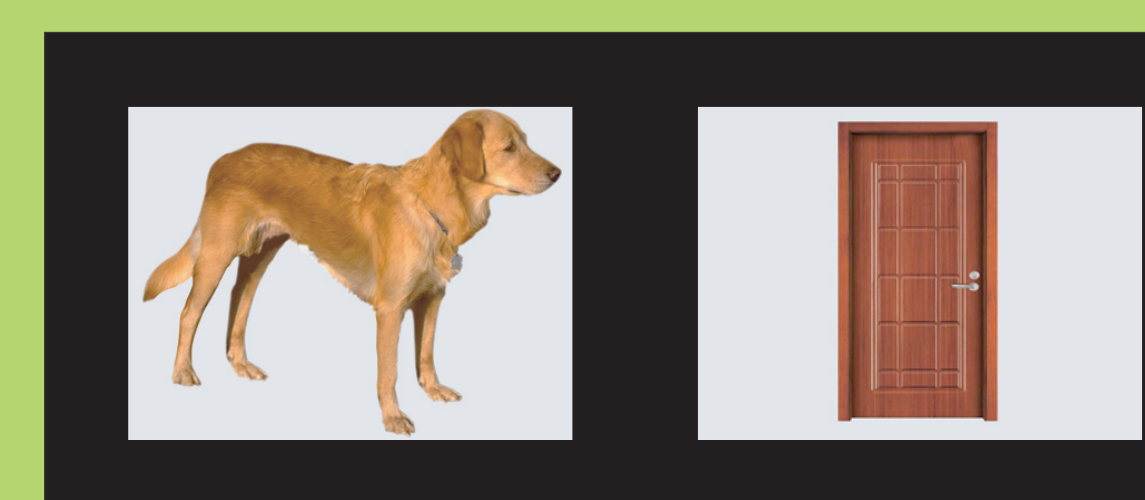
## Unrelated word-pair



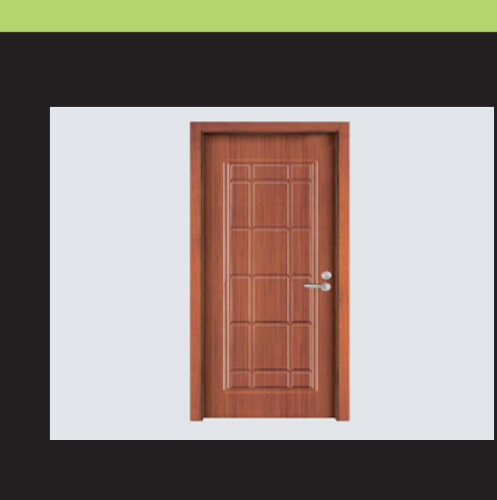
1  
prime-target



2  
prime-look

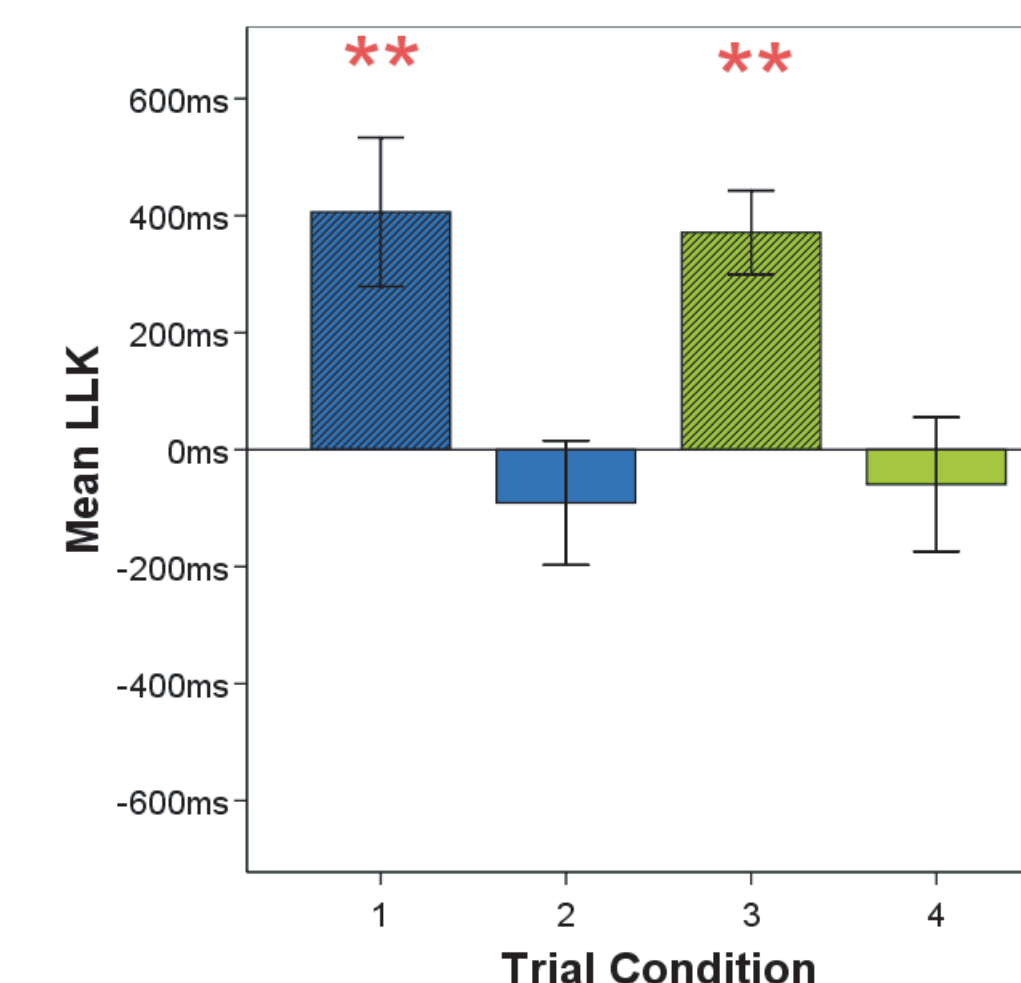
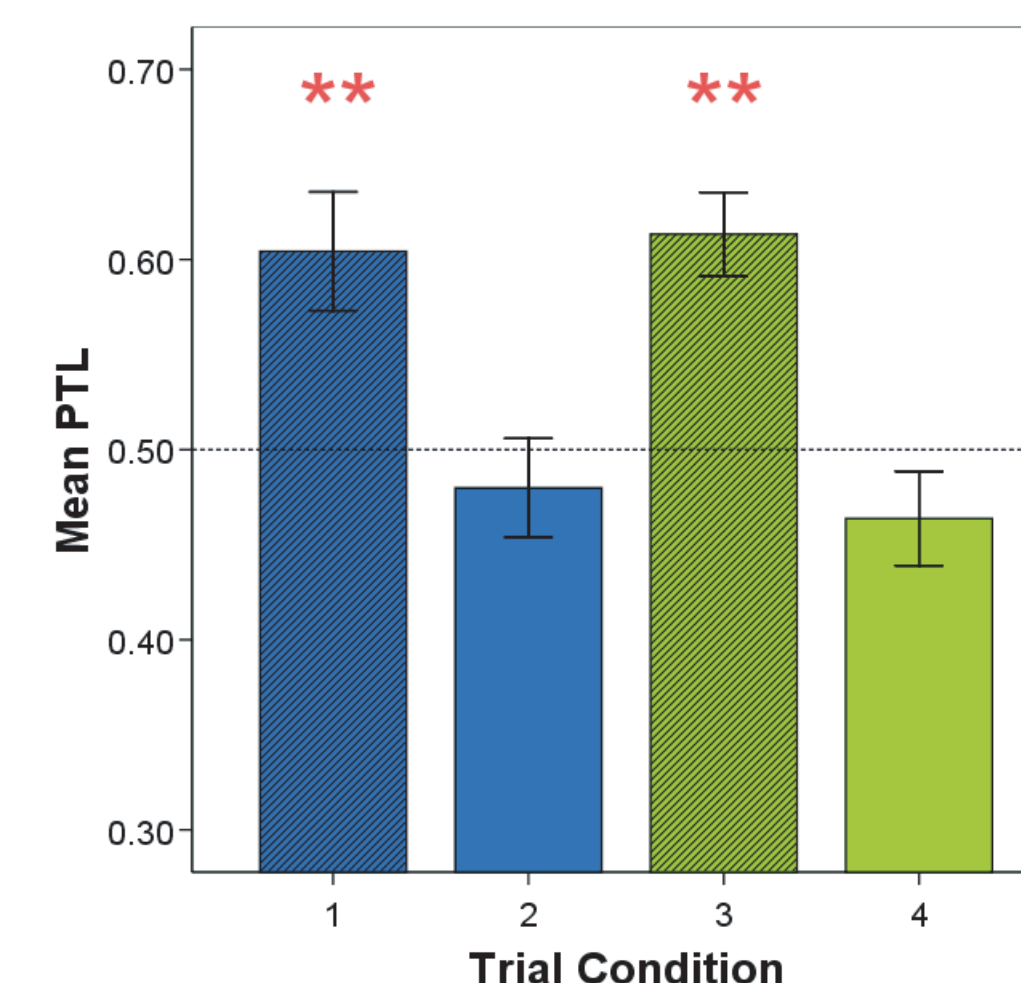


3  
neutral-target

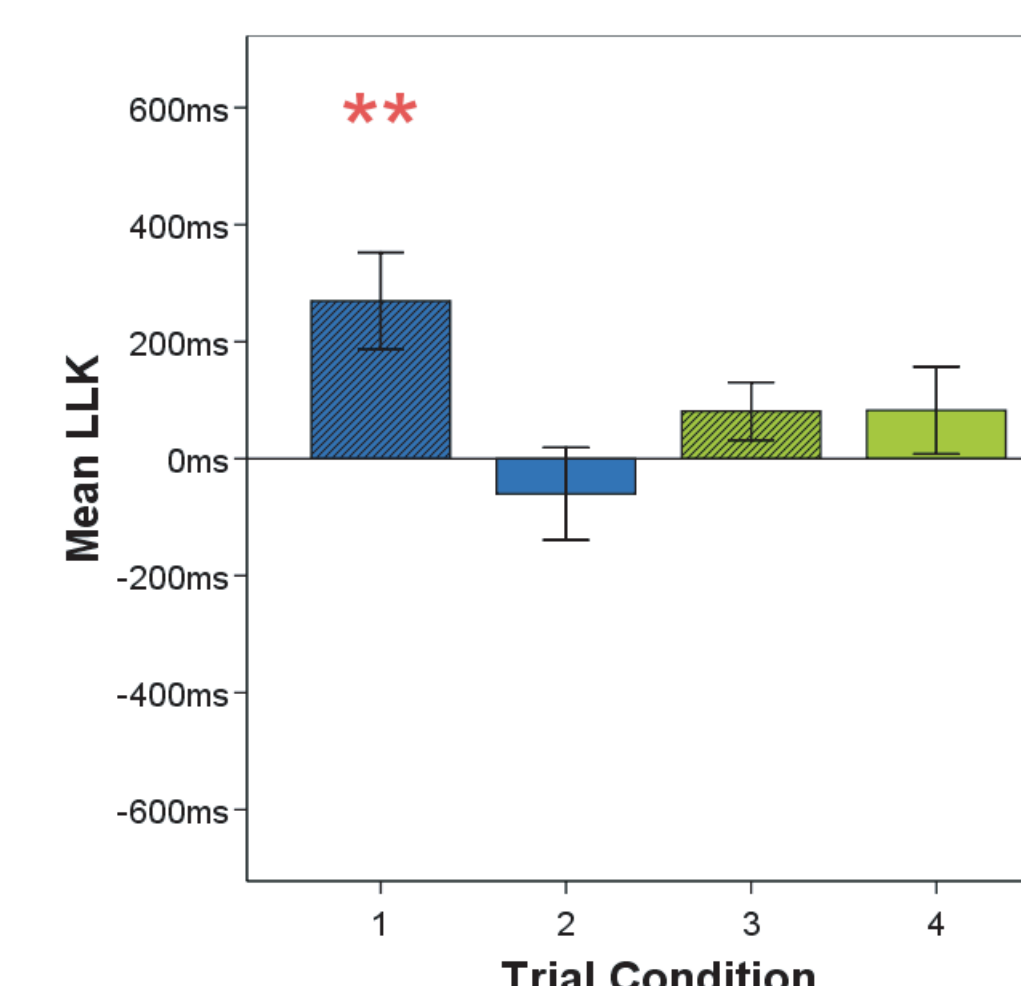
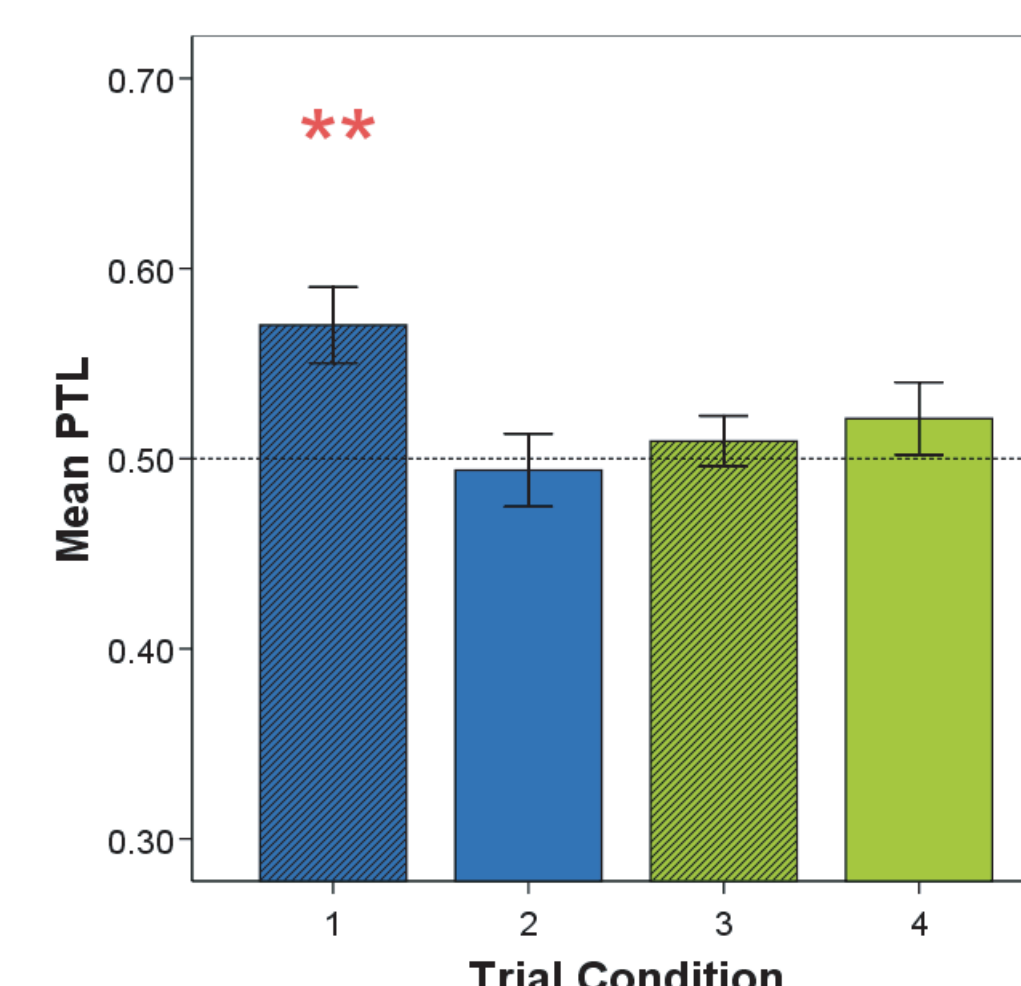


4  
neutral-look

## 18m:



## 21m:



## Measures

PTL: Proportion of target looking T/T+D. Chance = 0.5

LLK: Difference in single longest look to each image t-d (ms). Chance = 0 ms

## Summary

- 18 Months No Priming effect or interaction  
Target Name drives target preference  
No target looking in Prime-Look condition
- 21 Months **Prime x Target Interaction**  
Target looking only for Prime-Target  
**Inhibition when prime unrelated**
- Trajectory Inhibition develops between 18 and 21 months of age

## Conclusions

Infants are sensitive to relationships between two words presented one fifth of a second apart. This sensitivity develops between 18- and 21-months of age. **This suggests gradual integration of information stored in the infant lexicon.** Prime does not affect target looking when the target is unnamed, supporting the word-word priming interpretation: **Inhibition between unrelated words.**

## Further Questions

Duration of priming effect? 500ms?  
How robust is the effect? What impact does the distracter image have (semantics/phonology)?

## References

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