

The Role of Gender in Word Recognition

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Words as Social Markers

- hella ~ California speaker
- typist ~ older speaker
- finna ~ Southern English

Words as Social Markers

- what's the origin of these intuitions?
 - simple learned associations?
 - principled mechanism determining these associations?

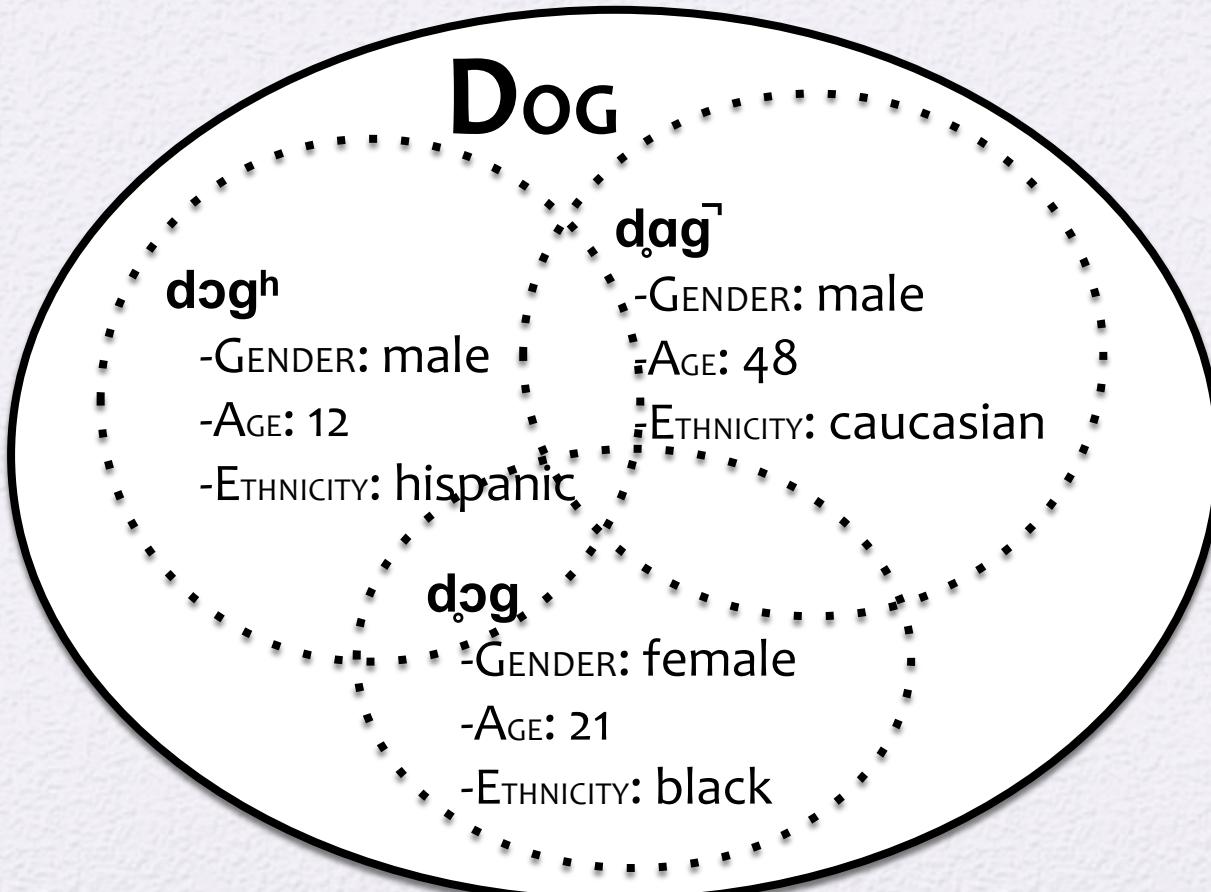
Roadmap

- background
 - exemplar theory
 - lexical decision tasks
- experiments
 - word rating study
 - lexical decision task
- discussion and conclusion

Background

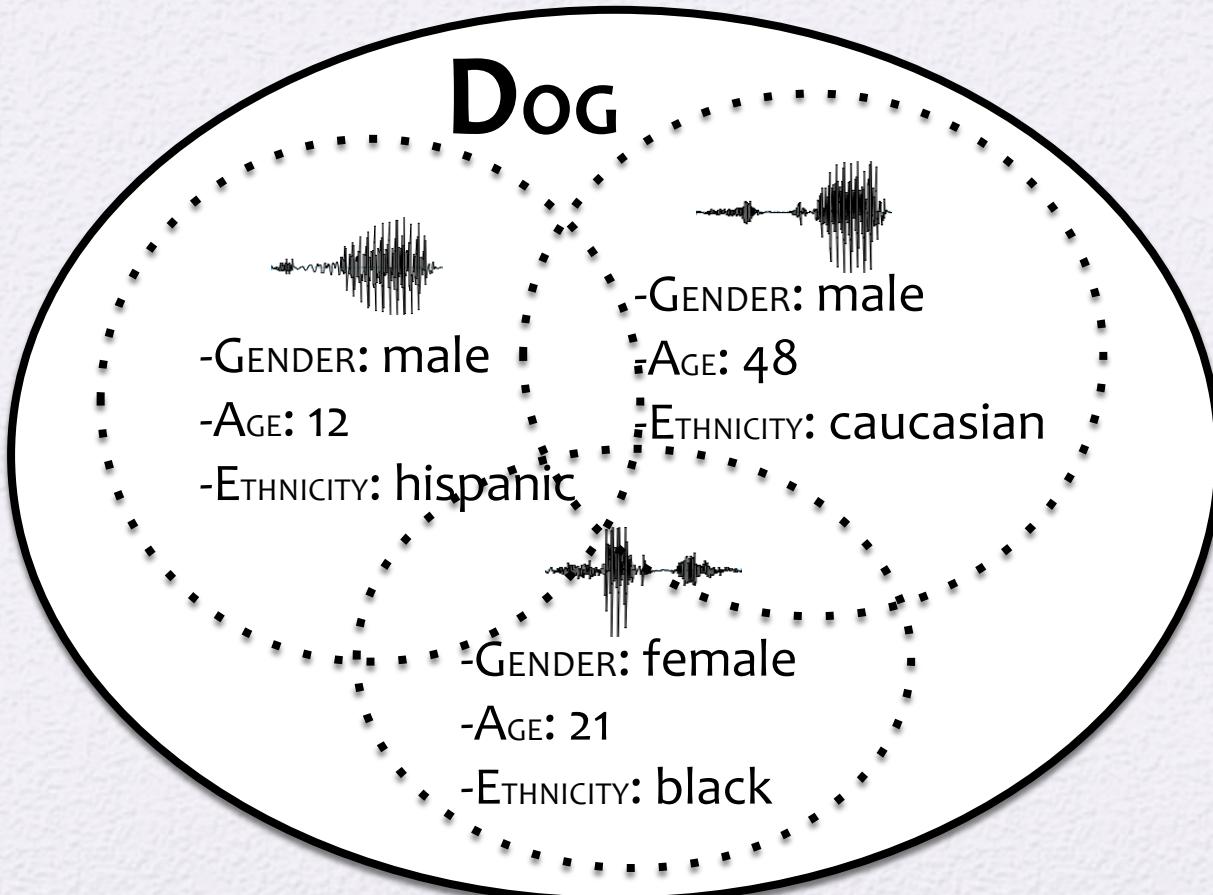
Background

- exemplar theory



Background

- exemplar theory



Background

- lexical decision tasks
 - present a word
 - ask if it's a word
 - measure response times
 - certain factors increase or decrease response times

Background

- how do we test and see if something is associated with a certain word?
 - add a priming component
 - a prime is something presented before the word is shown
 - if there is a relationship between the prime and word, it should affect reaction times

Testing a Word's Gender

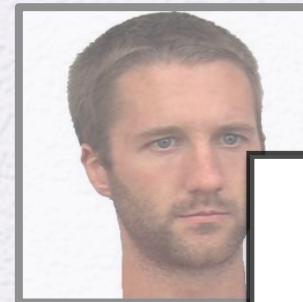
- how would we see if words are associated with a certain non-grammatical gender?
 - lexical decision task
 - **prime:** images of men and women
 - **target word:** words we believe to be associated with a certain non-grammatical gender

Predictions

1. image gender and word gender are the same



zest



weld

Predictions

1. image gender and word gender are the **same**
→ reactions times will be **faster**



Predictions

1. image gender and word gender are the **same**
→ reactions times will be **faster**



Predictions

2. image gender and word gender are **different**



weld



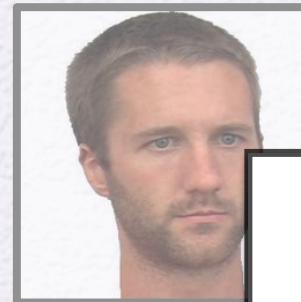
zest

Predictions

2. image gender and word gender are **different**
→ reactions times will be **unfacilitated**



weld



zest

Predictions

2. image gender and word gender are different
→ reaction times will be unmodulated

DIFFERENT

weld

=

zest

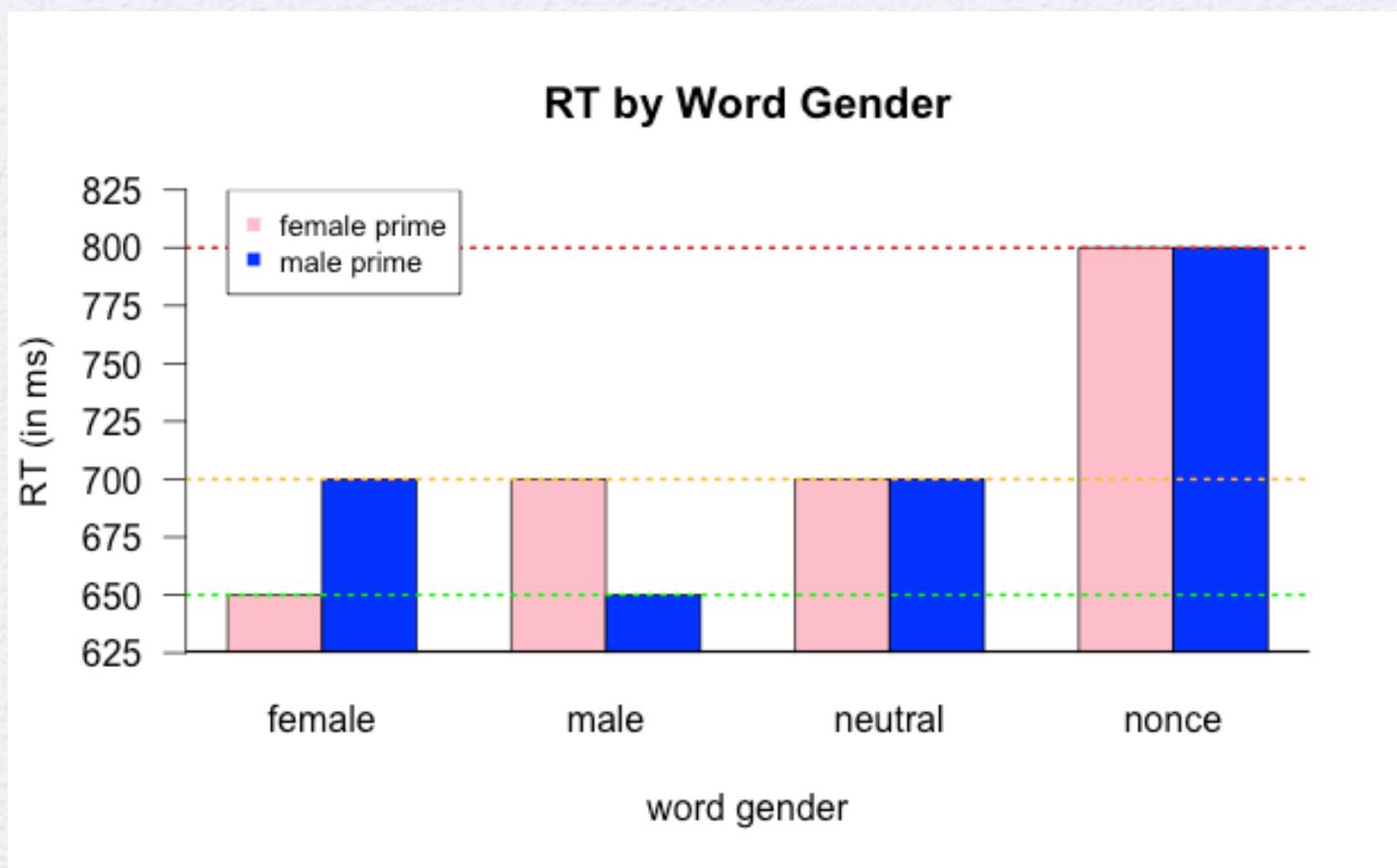
NO SPEED BOOST

Predictions

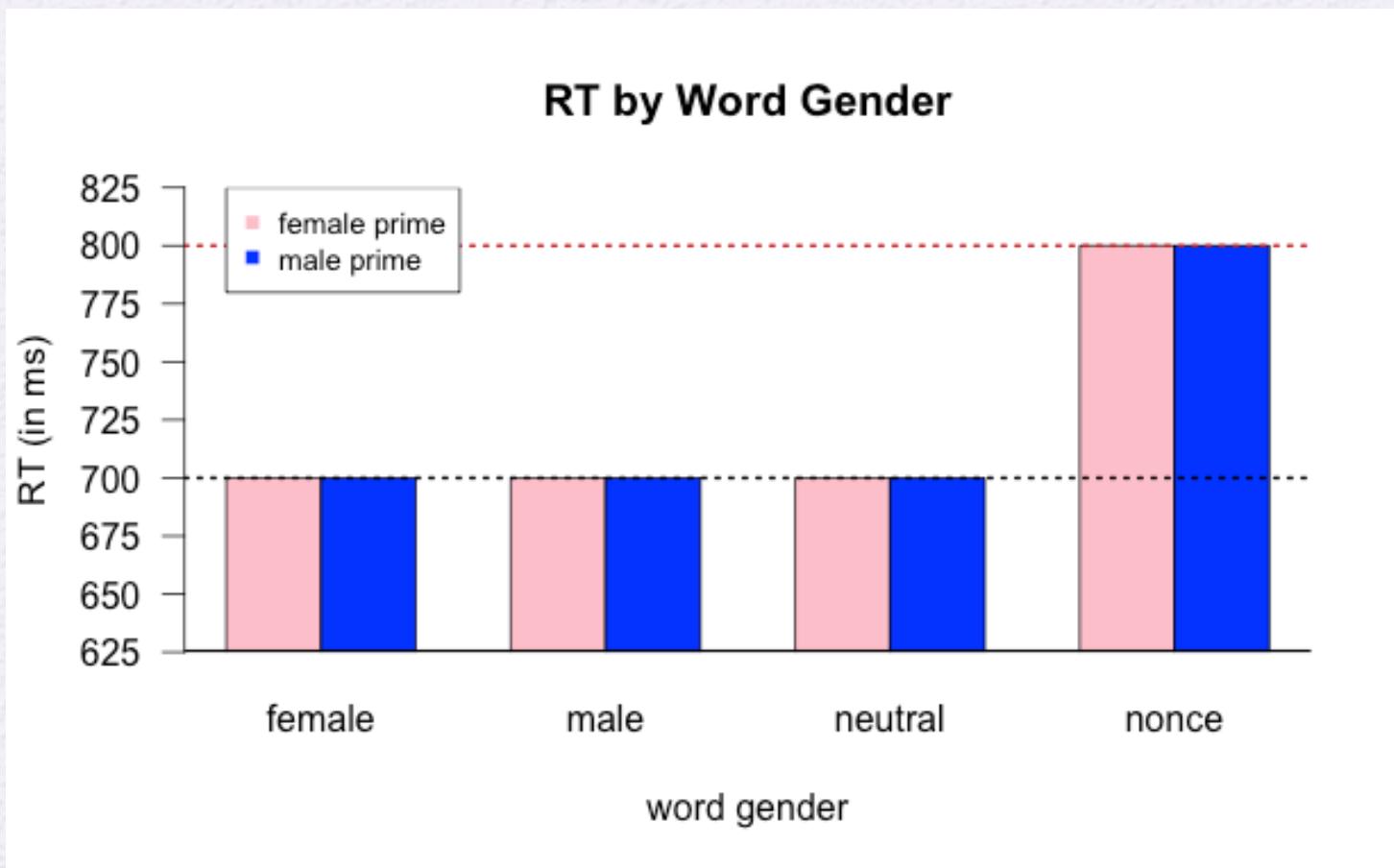
3. RTs for nonce words shouldn't differ depending on image gender



Hypothetical (Alter.)



Hypothetical (Null)



Experiments

Goal

- test and see if words are associated with a non-grammatical gender using lexical decision task
- **crucial:** establish gender of words before hand

Word Rating Study

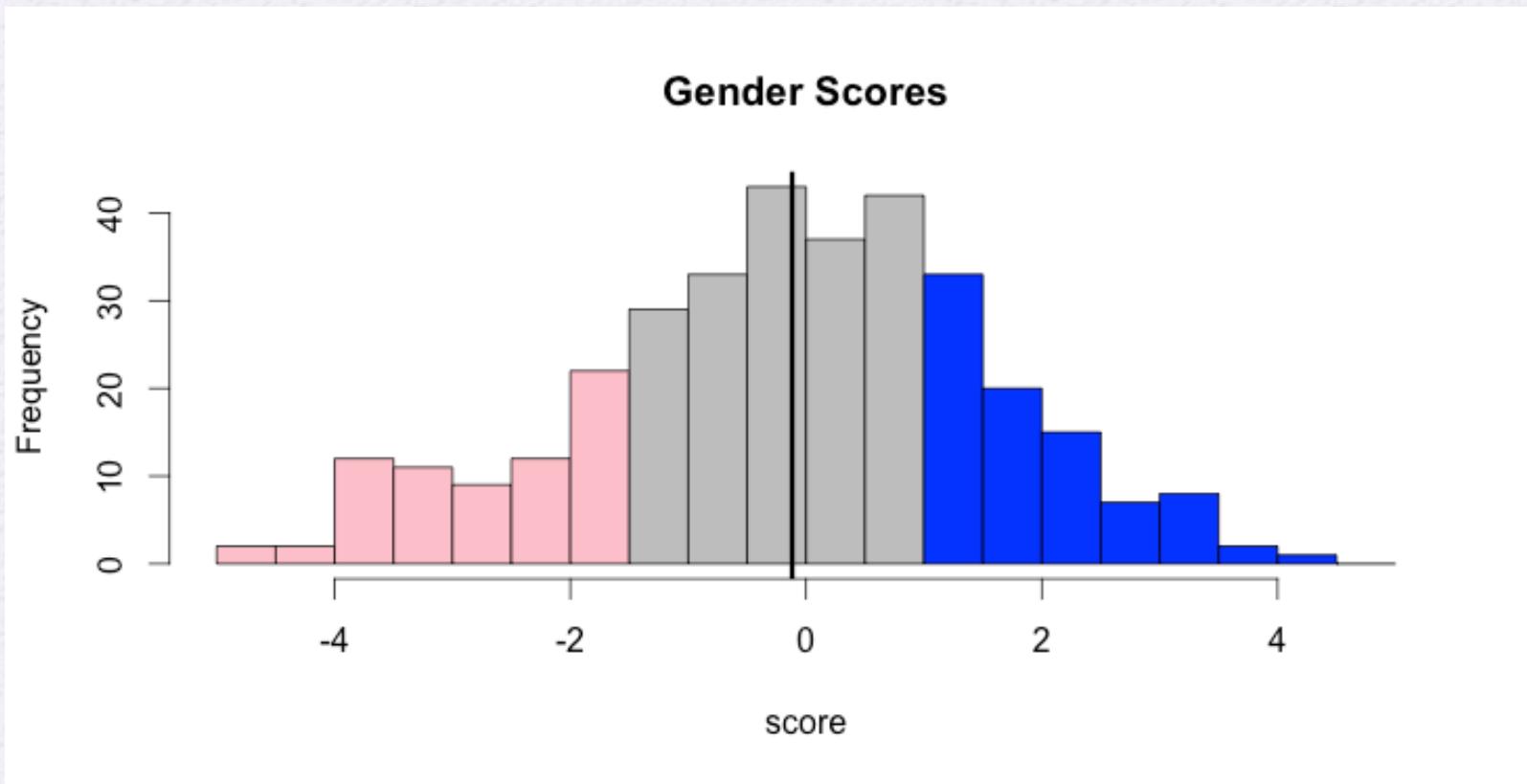
- participants
 - 24 (female = 13)
- items
 - 340 words
- instructions
 - “for each the following words please tell us...”
 - what gender is more likely to say it (males or females)
 - how confident you are in gender rating (1-3 scale)

Word Rating Study

- calculating a word's gender
- coding
 - female = -1
 - male = +1

$$\frac{\sum f(\text{word}_i) \times \text{conf}(\text{word}_i) + m(\text{word}_i) \times \text{conf}(\text{word}_i)}{\text{total number of ratings}}$$

Word Rating Study



Word Rating Study

- sample of words



female

~0

neutral



male

word	score
zest	-4.29
whisk	-3.94
plush	-3.73

word	score
scrawl	-0.05
hoard	0
slosh	+0.05

word	score
weld	4.29
punt	3.92
spar	3.71

Lexical Decision Task

- when a word appears...
 - if it's a word ~> shout 'yes!'
 - if it's not a word ~> shout 'no!'

+



zest

+



slamp

+



chait

+



weld

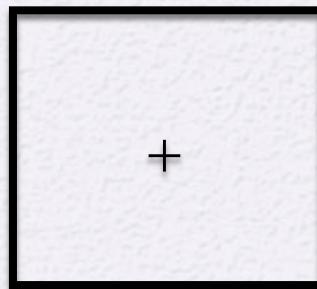
Experiments

- breakdown



1000 ms

trial start



250 ms

**fixation
cross**



500 ms

prime



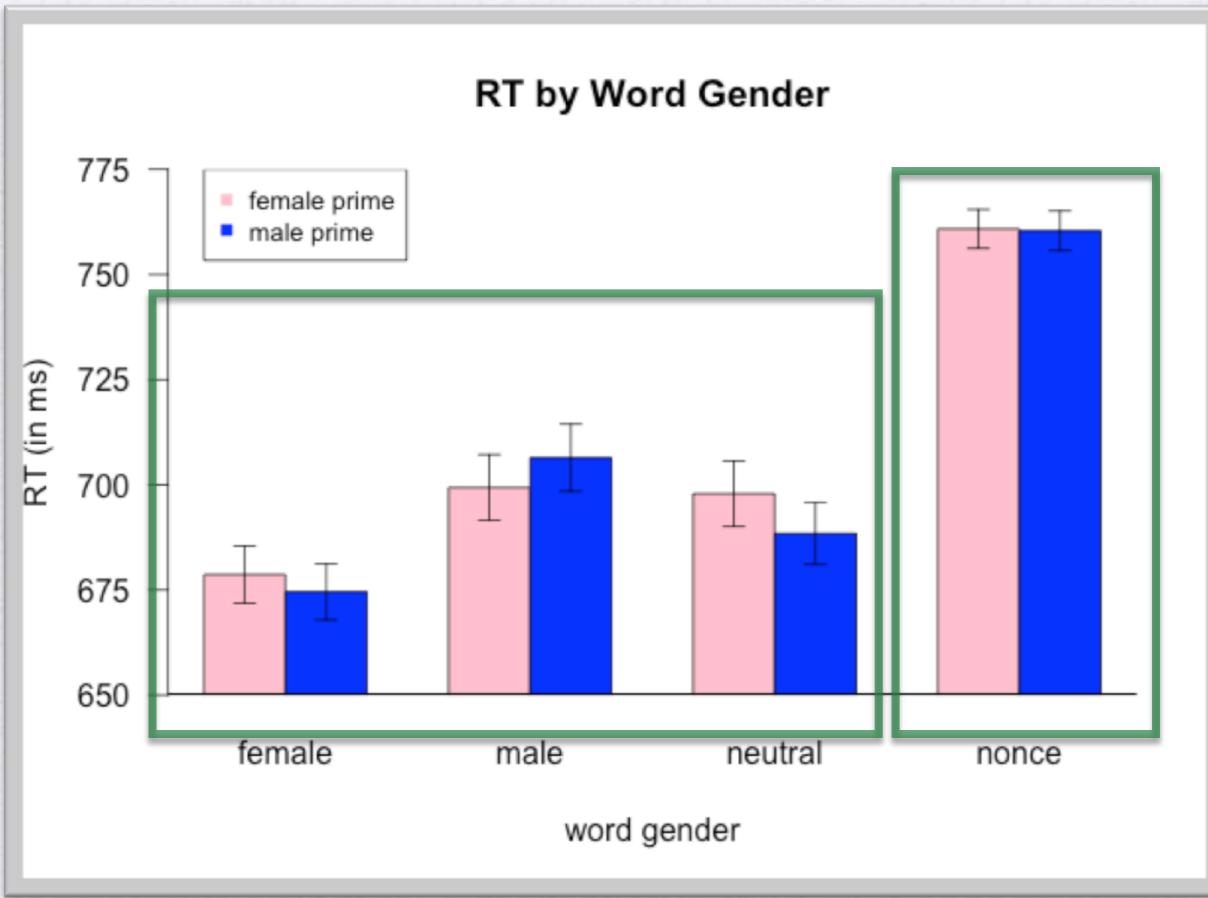
2000 ms

target

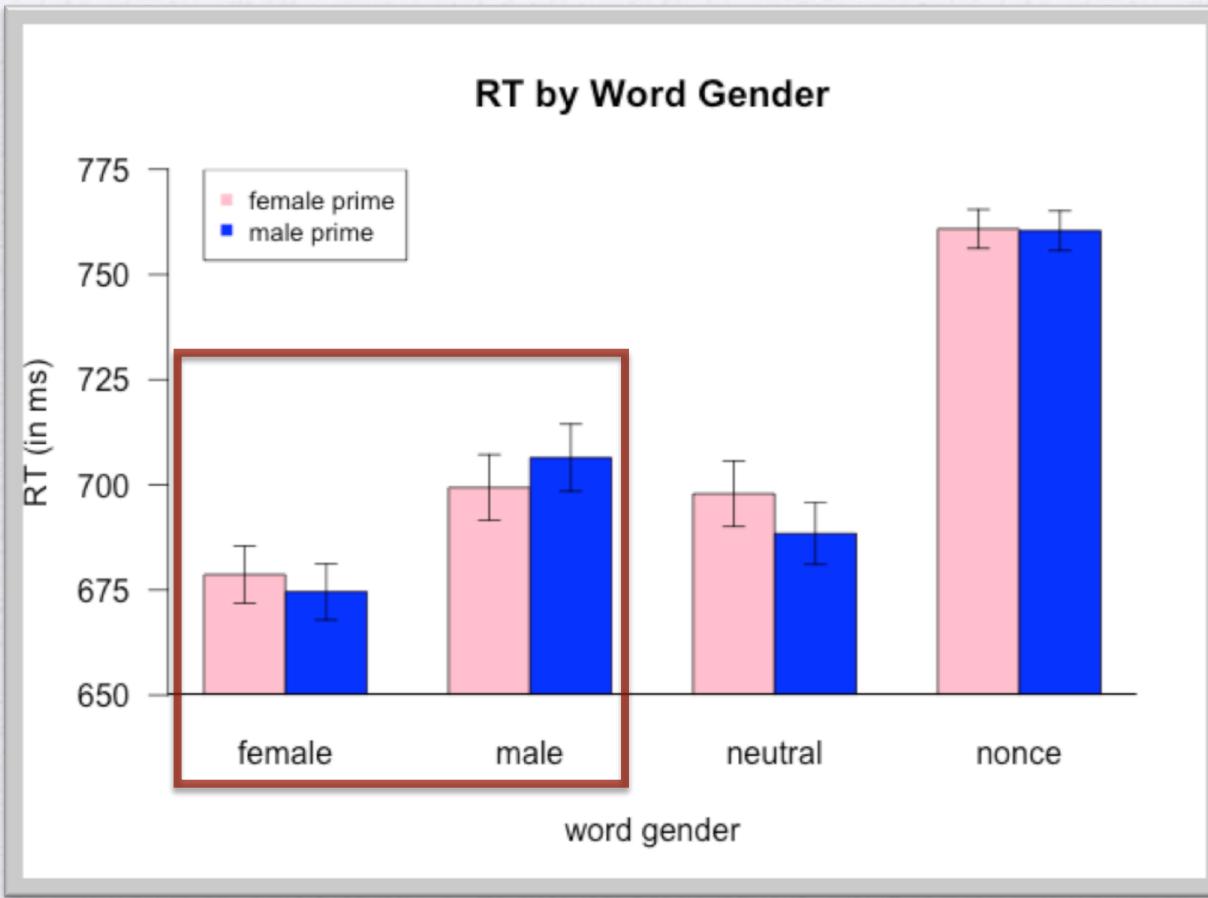
Lexical Decision Task

- images (n=112)
 - 56 unique faces
 - 2 different shots of each face
- participants (n=13)
 - 6 females/5 males
 - UCSC students for course credit
- instructions
 - help drunk people figure out if they said a real word of English or not

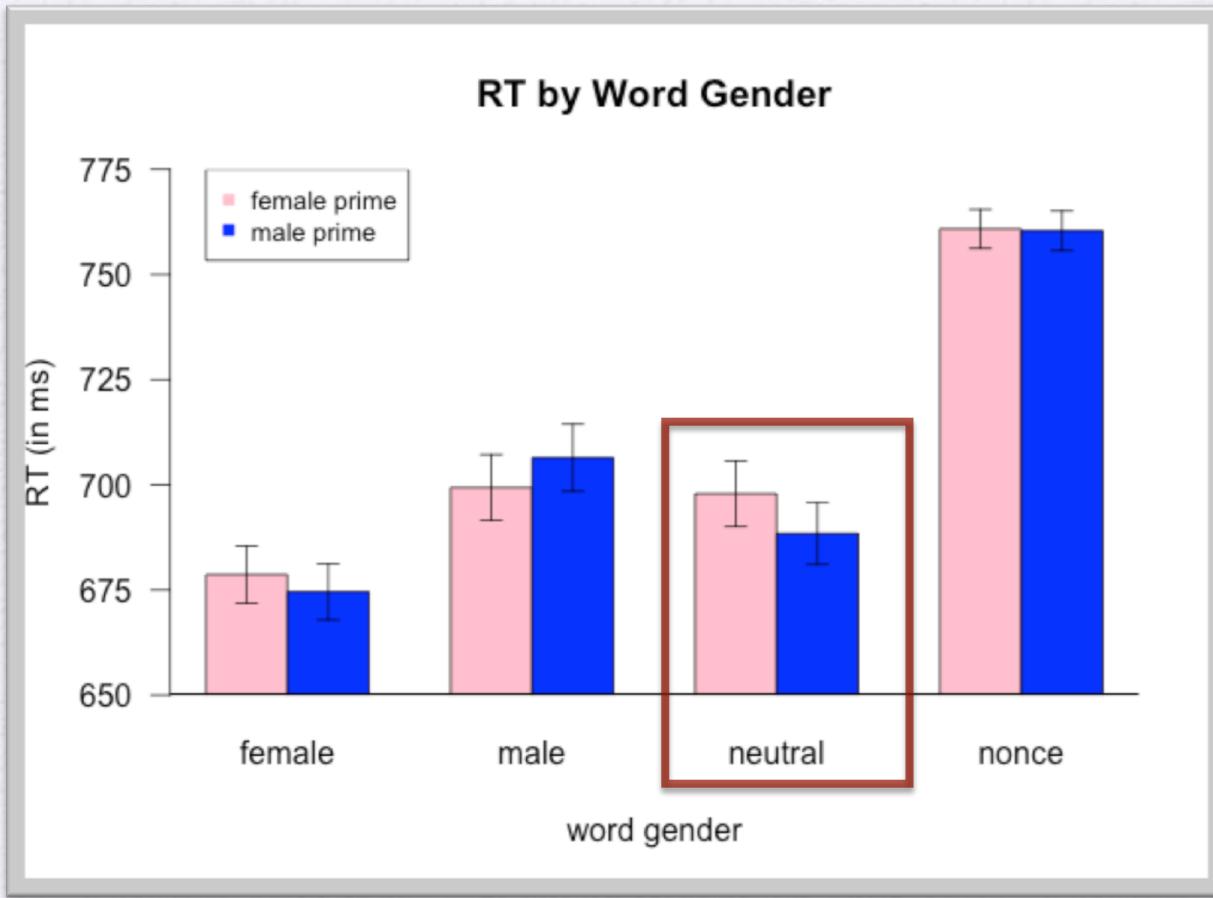
Results



1. RTs in real words **were** affected by primes;
RTs in nonce words **were not** affected by primes



2. for male and female words, the priming relationship was the opposite of what's predicted



3. neutral words were primed by male primes

Discussion and Conclusion

Discussion

- overall result
 - RTs for nonce words not affected by primes,
RTs for real words were (✓)
 - effect of the primes on real words was unexpected
 - a. males images primed female words (???)
 - b. female images primed male words (???)
 - c. male images primed neutral words (???)

Discussion

- big question
 - why is a word primed by an image of the opposite gender?
 - possible the word rating study was inappropriate for getting a word's gender
 - possible male and females have different gender associations for certain words

Discussion

- theoretical implications
 - words may be non-arbitrarily associated with a gender -> supports exemplar based accounts
 - prejudice formation

Summary

- words are associated with a non-grammatical gender

Thanks for listening!

- Generous thanks are due to Grant McGuire, Adrian Brasoveanu, Ben Munson, Jaye Padgett, Phlunch, and participants in the Winter 2013 Research Seminar for input, assistance, and support!*

*All mistakes were my own!