

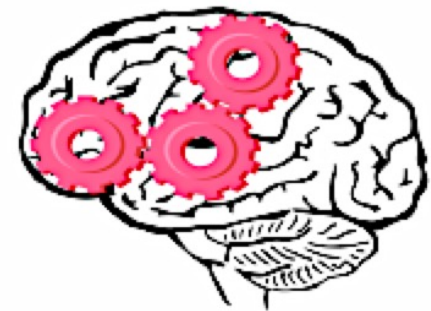
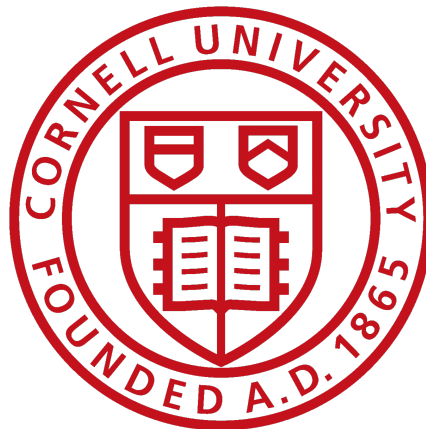
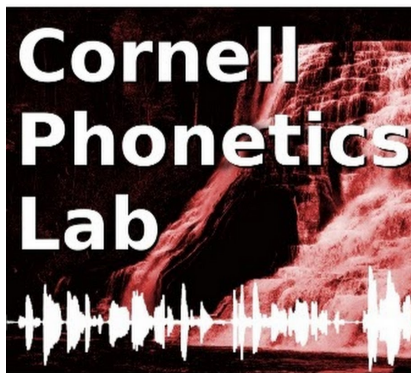
# How speakers select synthetic and analytic forms of English comparatives: an experimental study

**Naomi Enzinna**

Cornell University

 @sloppyidentity

LSA 2017 - Jan. 5-8, 2017



Cognitive Science @ Cornell

Which would you say?

Which would you say?

- 1) Children are easier to manipulate than adults.
- 2) Children are more easy to manipulate than adults.

Which would you say?

- 1) I was a national celebrity,  
famouser even than  
Captain Kangaroo.
- 2) I was a national celebrity,  
more famous even than  
Captain Kangaroo.

The less-preferable sentences occurred in the COCA corpus:

Unlikely according to previous studies and intuition

(a) Children are more easy to manipulate than adults.

(b) I was a national celebrity, famouser even than Captain Kangaroo.

# English has two comparative forms

(1) Synthetic      *easier*

(2) Analytic      *more famous*

What causes speakers to prefer  
the synthetic or analytic comparative form?

This talk examines the role of

1. prosodic shape
2. frequency
3. recency **\*NEW\***

Why do less-preferable  
comparative forms occur?

Preferences are flexible!

Recency causes default preferences  
to be flexible.



Previous studies say that the following influence comparative form preferences:

Prosodic shape

Number of syllables

Word ending

Stress

Frequency

Number of syllables influences  
comparative form preferences

Monosyllabic: synthetic

Disyllabic: it's messy

Trisyllabic+: analytic

For disyllabic ADJs, some word endings are preferred with the **synthetic** comparative form

<u>Word Ending</u>	<u>Example</u>
-y	<i>easier</i>
-ly	<i>lovelier</i>
-le	<i>simpler</i>
-ow	<i>narrower</i>

For disyllabic ADJs, some word endings are preferred with the **analytic** comparative form

<u>Word Ending</u>	<u>Example</u>
-er	<i>more clever</i>
-nt	<i>more brilliant</i>
sibilant & final stress	<i>more famous</i> <i>more acute</i>

# Studies note exceptions to preferences

Exceptions to  
preference for  
monosyllabic ADJs  
to occur in the  
synthetic form

\**apter*

some color words like

\**roser*, \**golder*

(but redder & greener are OK)

\**chicer*

# Frequency influences comparative form preferences

High frequency: *smarter*  
*\*more smart*

Low frequency: *\*chicer*  
*more chic*

# *Chicer* often occurs even though previous studies say it should not

1	2015	MAG	People	A	B	C	# Skip an unsightly hair tie and go for a clear elastic. It's <b>chicer!</b> Then spritz sea-salt spray all over to make it
2	2012	MAG	HarpersBazaar	A	B	C	contemporary but not overtly trendy, " explain the designers. Could there be a <b>chicer</b> way to celebrate? # ONE
3	2010	MAG	GoodHousekeeping	A	B	C	and boost the silver: " The look is not only much glossier, but <b>chicer</b> and more youthful, too. " And given gray
4	2009	MAG	HarpersBazaar	A	B	C	strong impact in different variations of the simple yet striking palette. There's nothing <b>chicer</b> than an elegant w
5	2007	SPOK	ABC_GMA	A	B	C	stuff to do. ELIZABETH-VARGAS-# (Off-camera) I remember she was very chic, a lot <b>chicer</b> than I was. LEE-W
6	2007	MAG	HarpersBazaar	A	B	C	41691 Few things are sexier than a woman who bounces back from a breakup looking <b>chicer</b> , happier, and mo
7	2006	MAG	Bazaar	A	B	C	is a must, and keeping it tonal is best. " There is nothing <b>chicer</b> than an all-white outfit, " says Gn. Weightless
8	2006	MAG	Bazaar	A	B	C	for casual Nantucket nights, but for urban and more professional environments, nothing is <b>chicer</b> . Beyond the r
9	2004	MAG	Bazaar	A	B	C	again and again is mat it's a transformative must-have. " There is nothing <b>chicer</b> , " maintain Mark Badgley and
10	2002	MAG	Bazaar	A	B	C	my big round brown belly. But for now I can't think of anvthina <b>chicer</b> than a strapless white one-piece. You ca
11	1999	MAG	TownCountry	A	B	C	Wall Street. In the past we were more middle class than many of the <b>chicer</b> East Coast watering holes, but nov
12	1998	SPOK	NPR_Weekly	A	B	C	NOISE SUSAN STAMBERG, NPR REPORTER: In Paris, opera audiences are younger, <b>chicer</b> (ph), although there
13	1998	SPOK	NPR_Morning	A	B	C	culturally deprived. NPR's-special-corr# SOUNDBITE-OF-CROWD# SUSAN-STAMBERG-NP: In Paris, opera audie



COCA corpus

# *Chicer* often occurs in magazines, so maybe recent forms influence preferences

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MAG =  
magazines

COCA corpus



I address the following questions:

What causes speakers to prefer the synthetic or analytic comparative form?

Can recency change these preferences?

# How speakers select synthetic and analytic forms of English comparatives

## 1. Unprimed study-

examines role of prosodic shape & frequency

## 2. Primed study-

additionally examines role of recency

**Unprimed study:** Do the following factors influence comparative form selection?

1. Prosodic shape
2. Frequency

# Unprimed study: Forced-choice acceptability-judgment task

Which would you say?

properer

more proper

# Unprimed study: Target prosodic shapes

1) monosyllabic

2) disyllabic & ending in

*-y, -er,*

*-ly, -nt*

*-ow,* a sibilant,

*-le,* & final stress

# **Unprimed study: Target frequencies**

high: ~10,000-20,000

low: ~100-1,000

instances in NYT2000-2010 & COCA

# **Unprimed study: Stimuli & Participants**

**180 adjective pairs:**

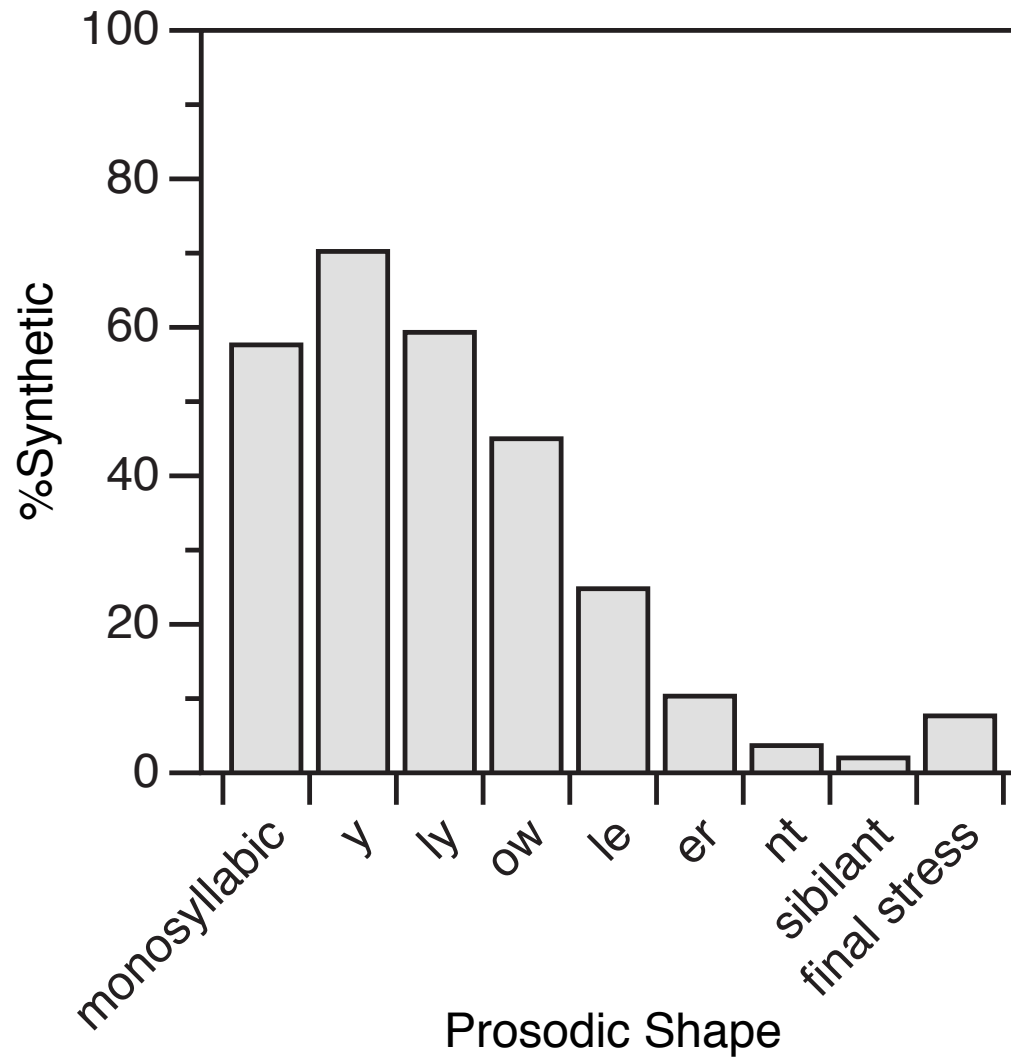
60 target – half high & low frequency

120 fillers – ranged in acceptability

**50 Mechanical Turk workers**

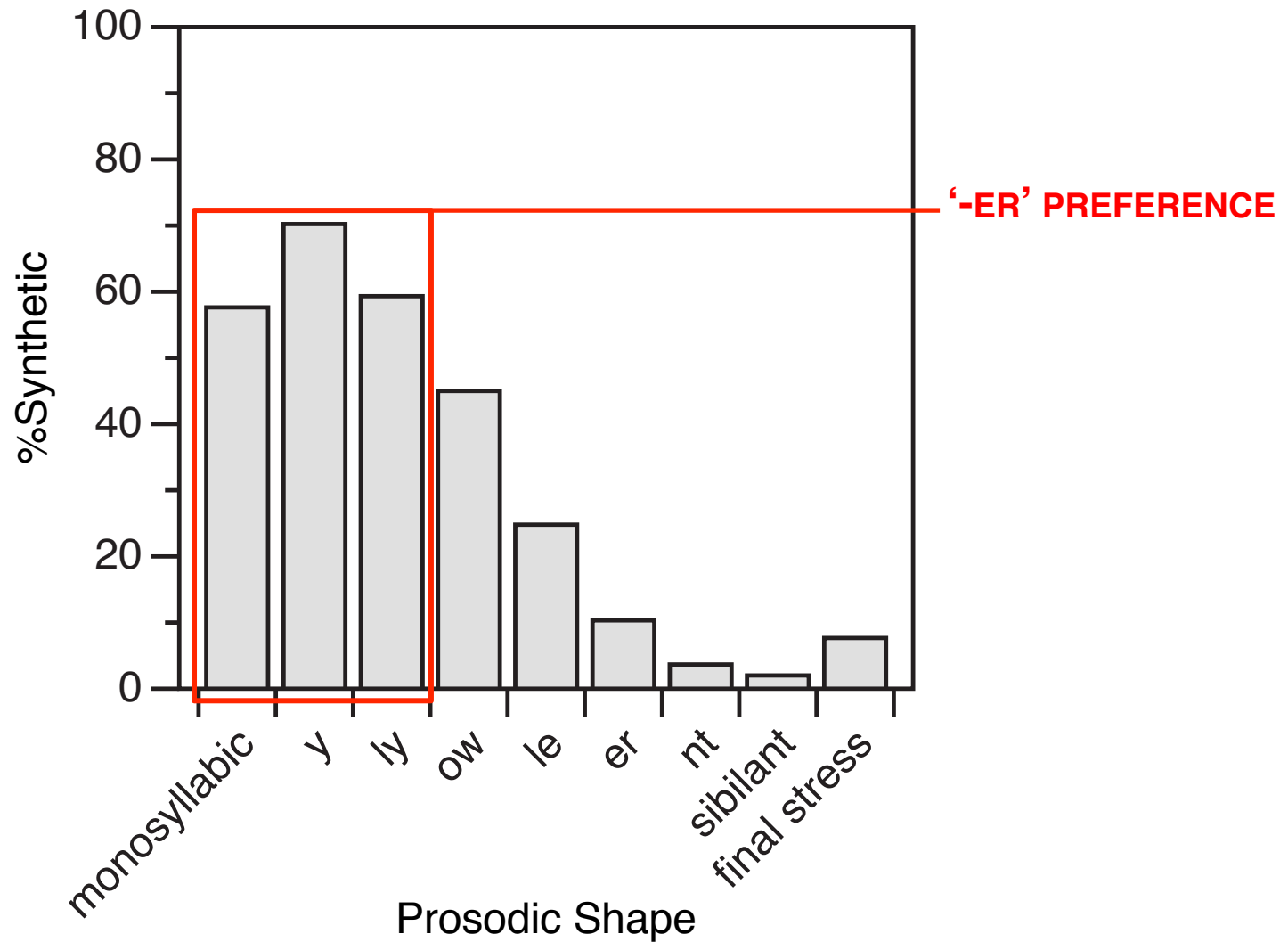
native English speakers, in U.S.

# Result: Comparative form preferences differ by prosodic shape

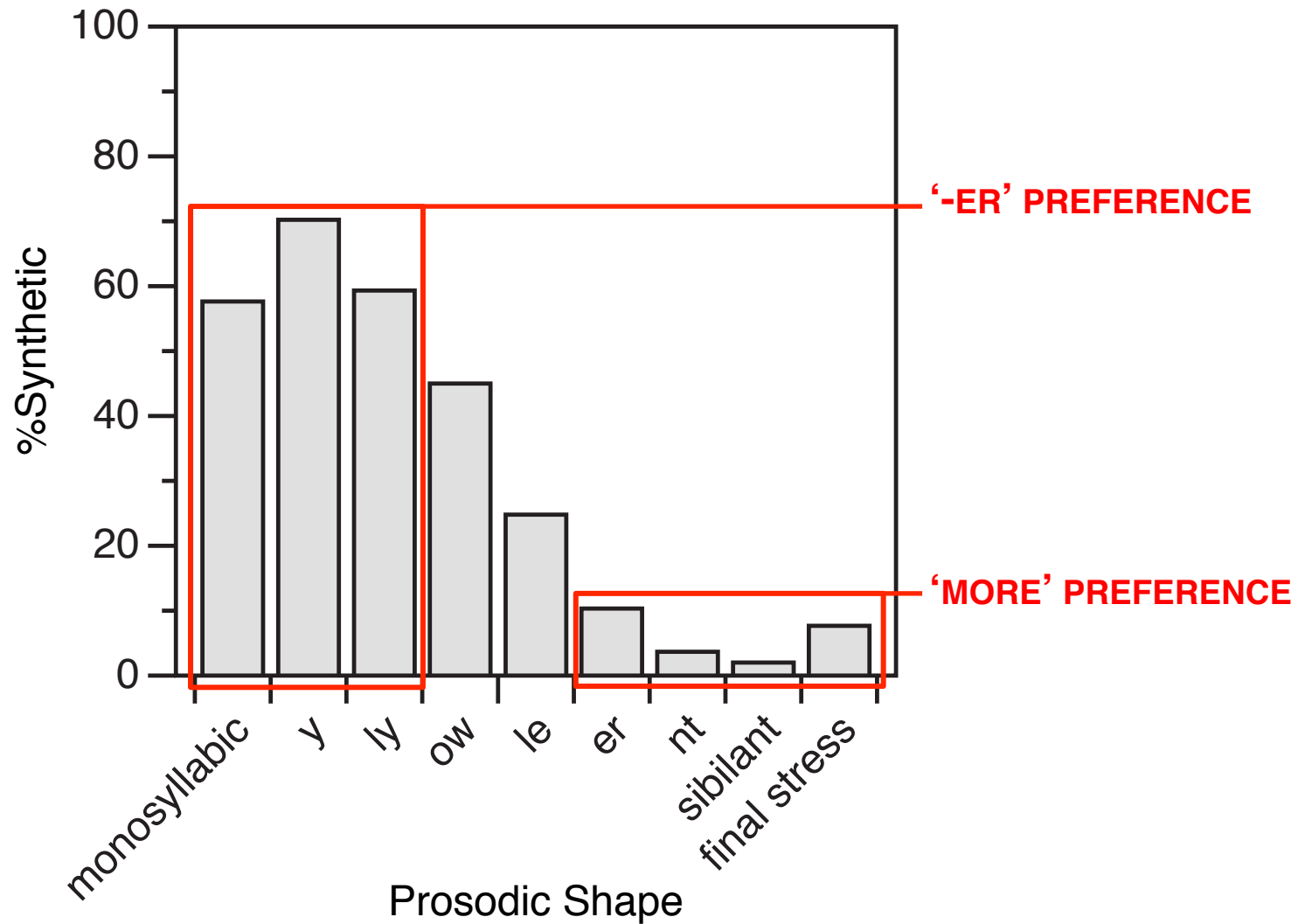




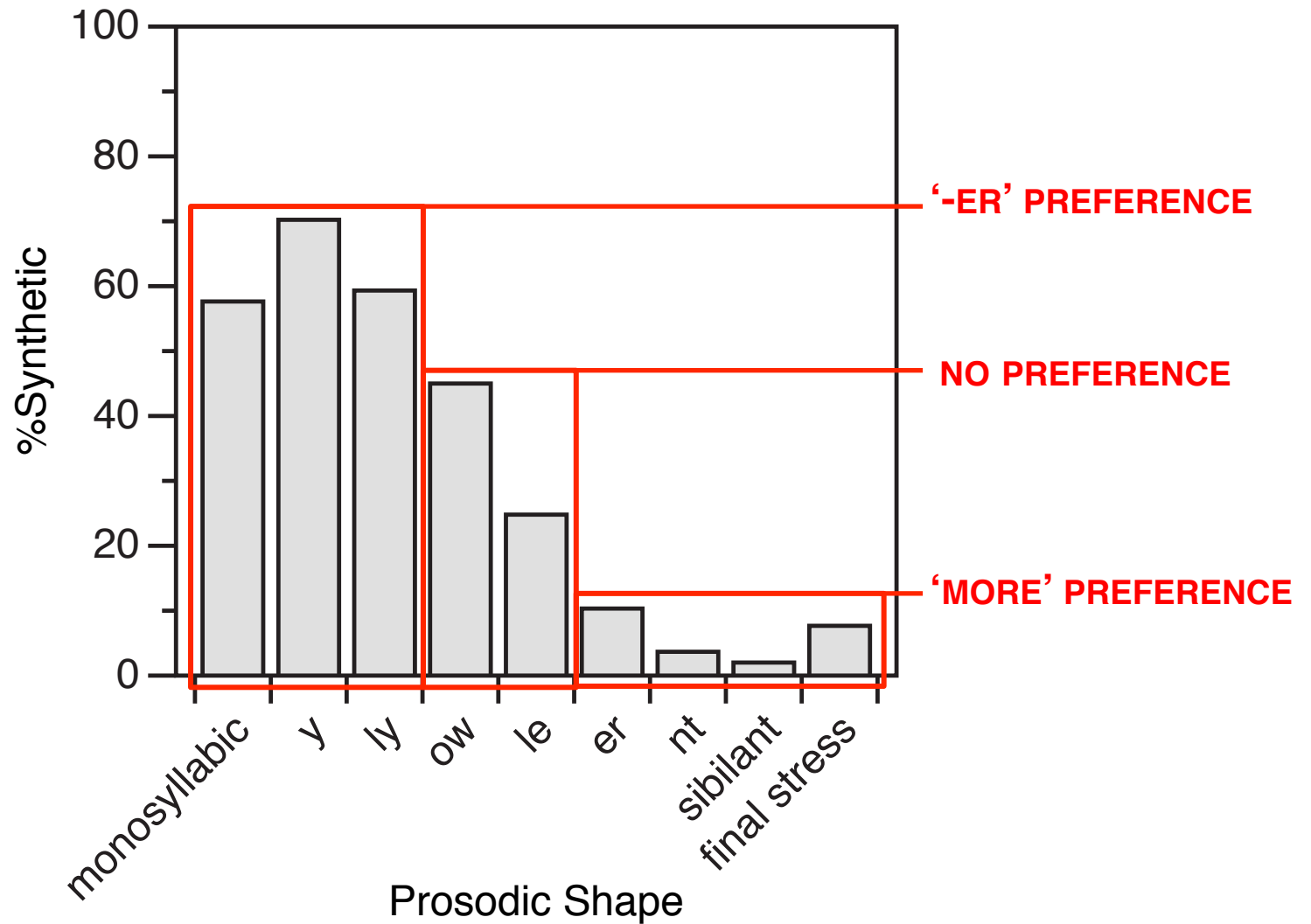
**Result:** Some prosodic shapes are strongly preferred in the synthetic form



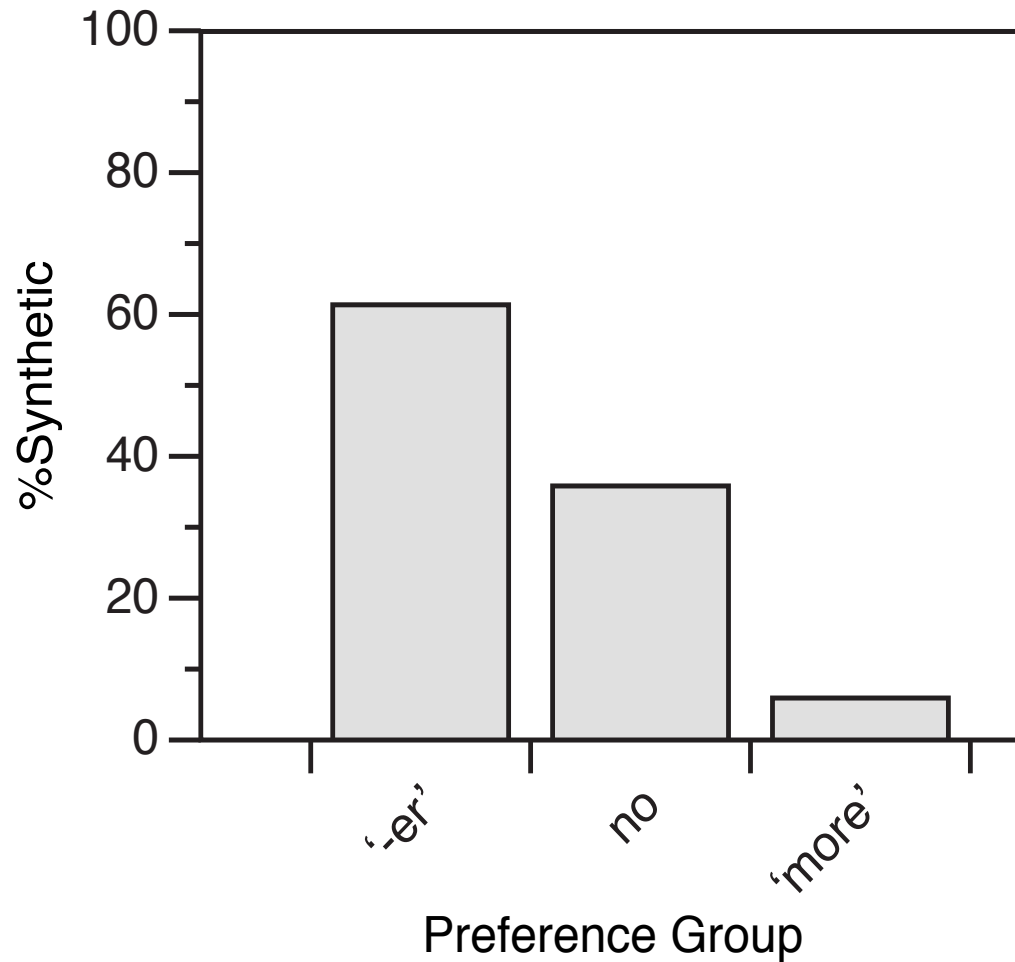
**Result:** Some prosodic shapes are strongly preferred in the analytic form



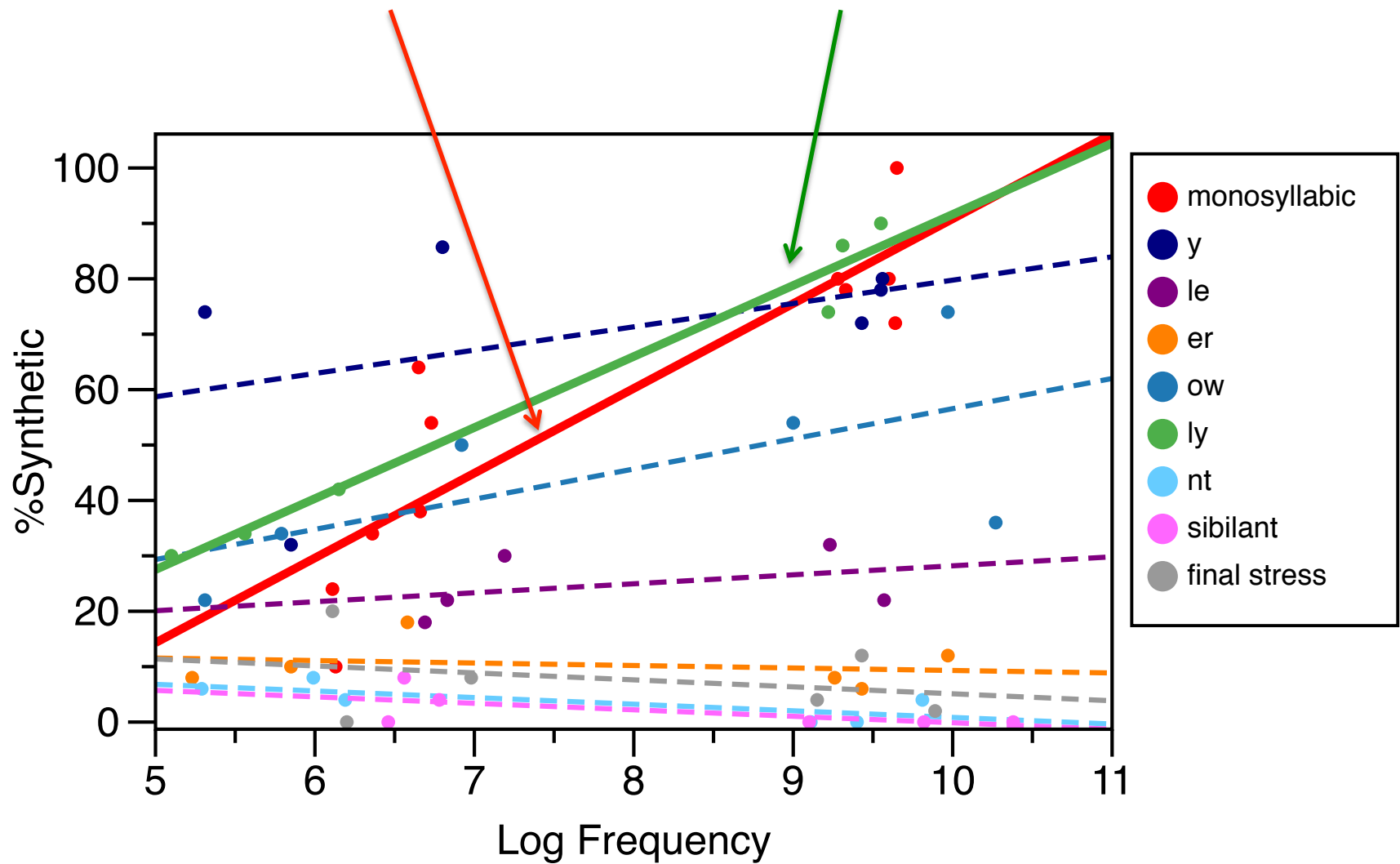
**Result:** Some prosodic shapes have moderate preference for either comparative form



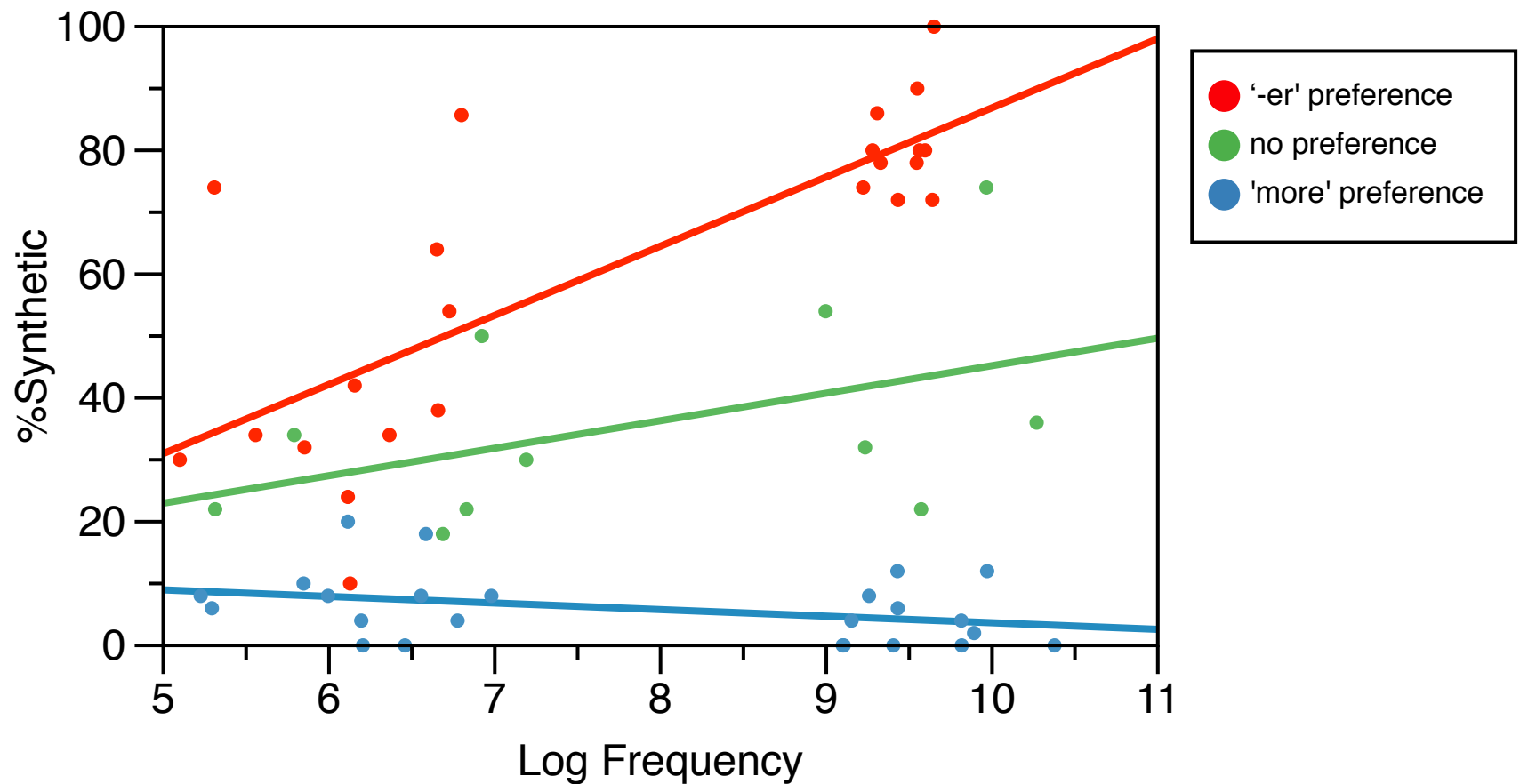
**Result:** Adjectives fall into 1 of 3 preference groups: '-er', 'more', and no preference



**Result:** Frequency only influences preferences for **monosyllabic ADJs** and **disyllabic -ly ADJs**



**Result:** Adjectives fall into 1 of 3 preference groups: '-er', 'more', and no preference



# Unprimed study: Conclusions

Comparative form preferences differ by prosodic shape

Some prosodic shapes are preferred more strongly with ‘-er’ or ‘more’

Frequency influences monosyllabic ADJs and disyllabic -ly ADJs only

# How speakers select synthetic and analytic forms of English comparatives

## 1. Unprimed study-

examines role of prosodic shape & frequency

## 2. Primed study-

additionally examines role of recency



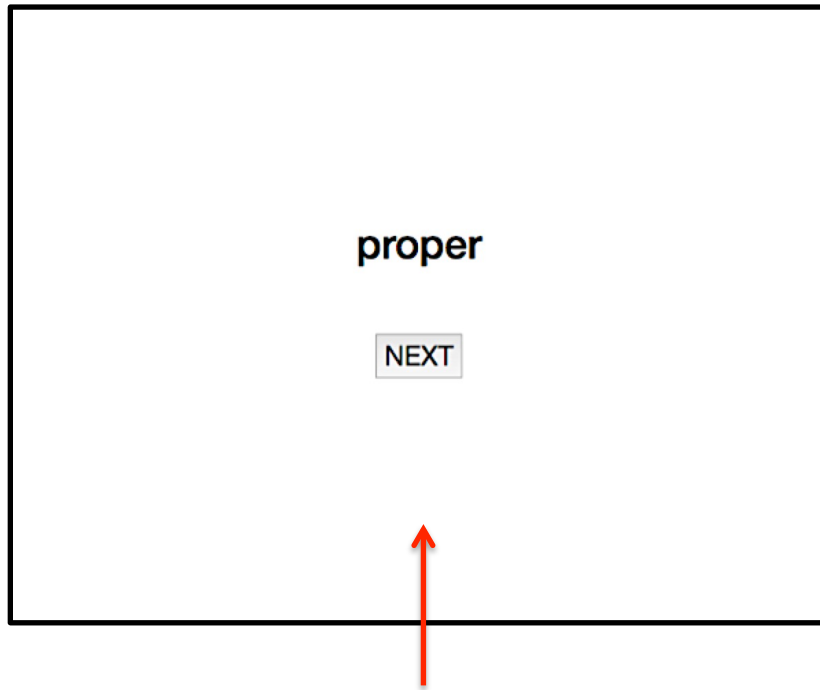
**Primed study:** Does recency of one of the following increase preference for the synthetic form?

Ex: target = *famous*

1. Base only *famous*
2. Same synthetic *famouser*
3. Different synthetic *roomier*

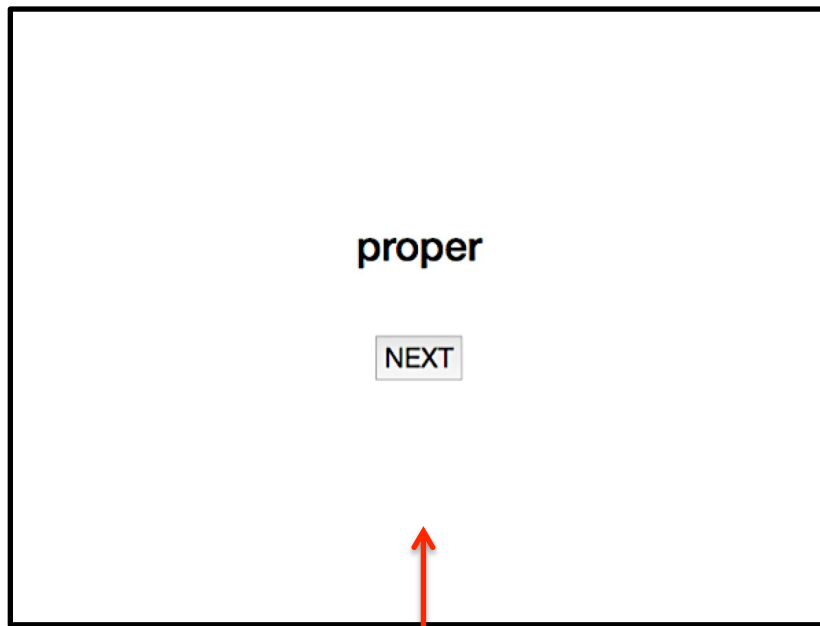
**Primed study:** Forced-choice  
acceptability-judgment task with priming

# Primed study: Forced-choice acceptability-judgment task with priming

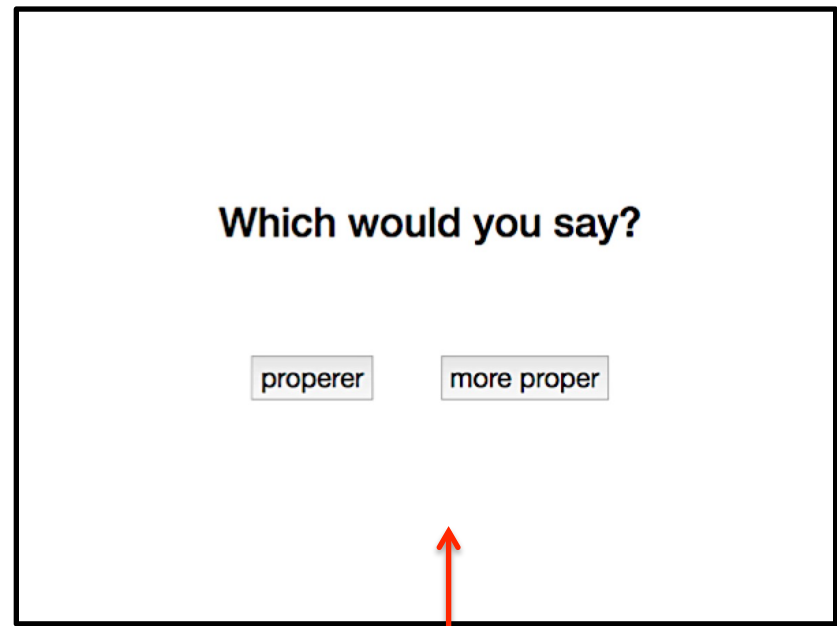


priming screen

# Primed study: Forced-choice acceptability-judgment task with priming



priming screen



task screen

# Primed study: Target stimuli & primes

Same target ADJs as unprimed study

3 primes per target word:

Ex:	target =	<i>famous</i>
base only:		<i>famous</i>
same synthetic:		<i>famouser</i>
different synthetic:		<i>roomier</i>

# Primed study: Primes were distributed across 3 versions of the experiment

Target	Version1	Version2	Version3
pure	pure	purer	rosier
firm	firmer	merrier	firm
weird	speedier	weird	weirder

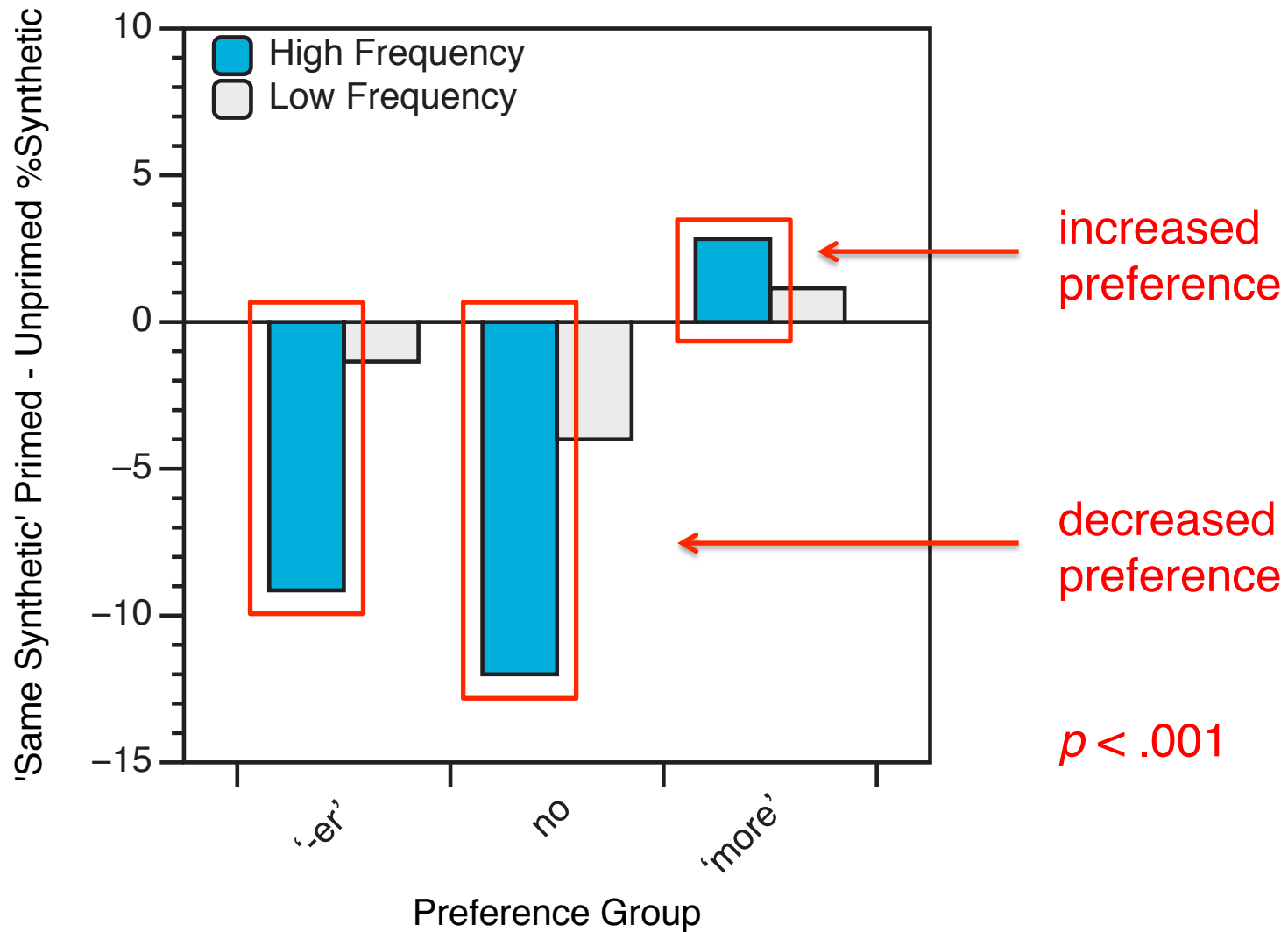
## **Primed study: Participants**

150 participants:

50 per 3 experiment versions

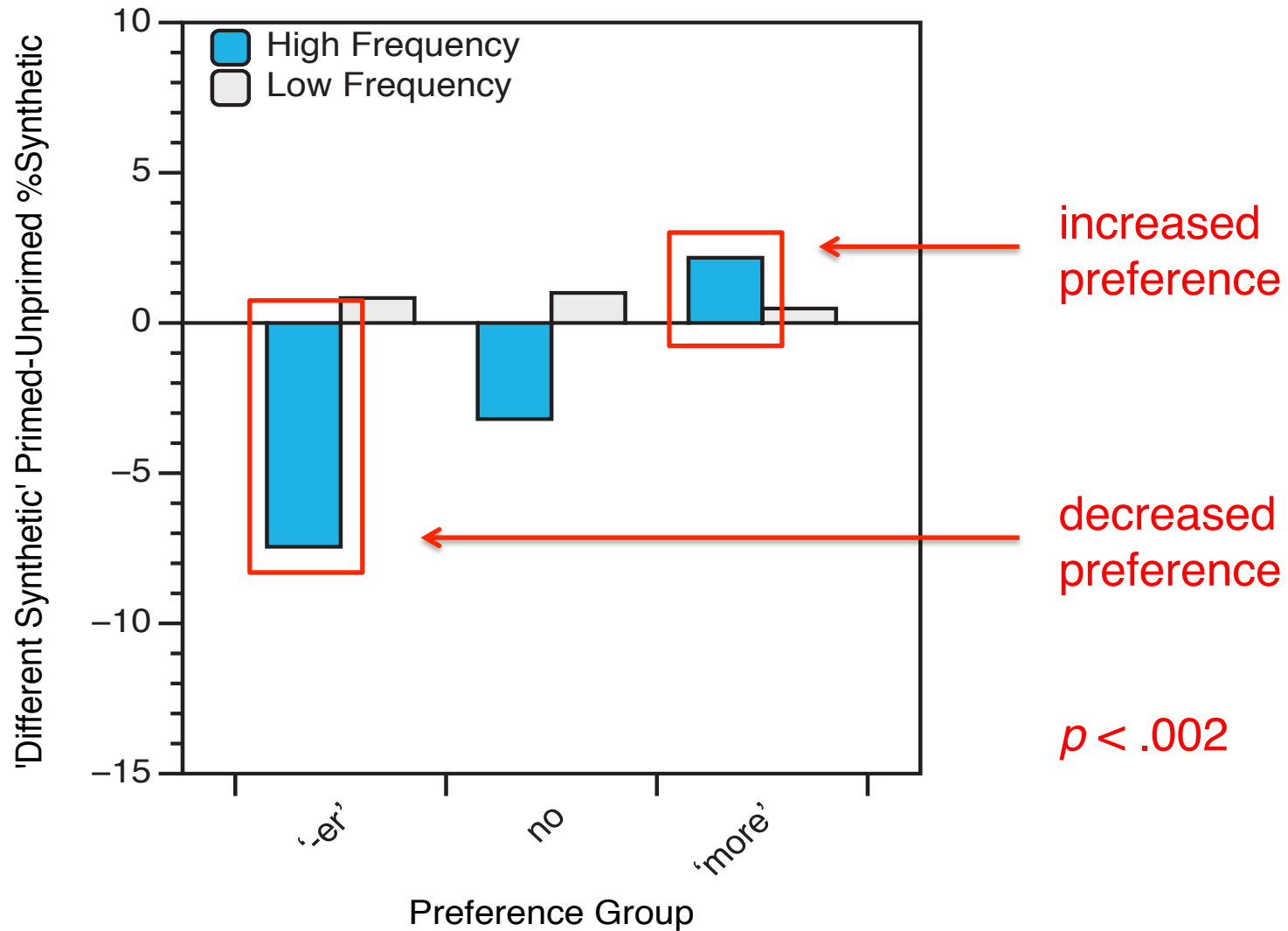
No participant completed more than 1  
version of the experiment

**Result: 'Same synthetic'** prime influenced comparative selection for high-frequency ADJs

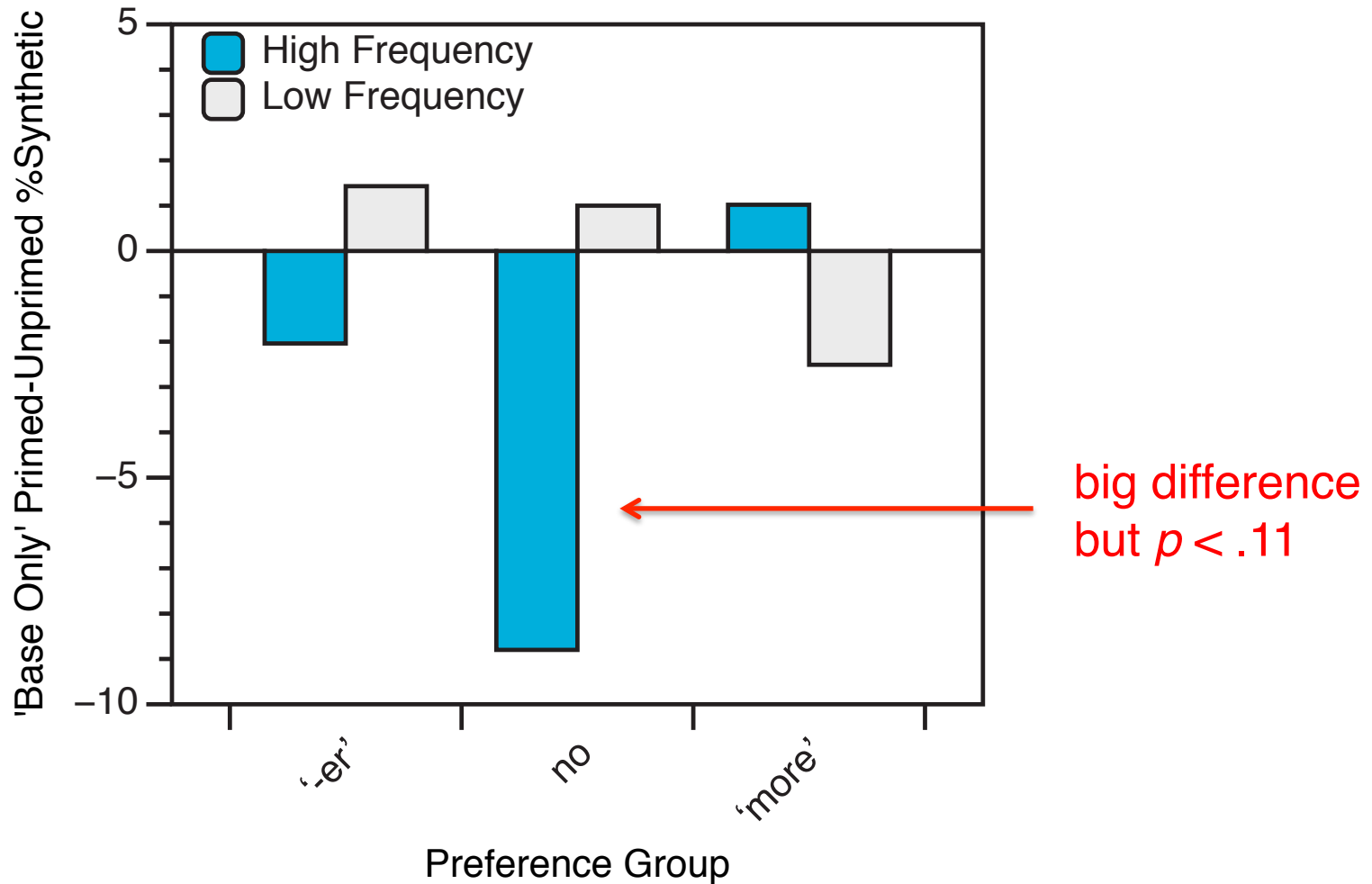




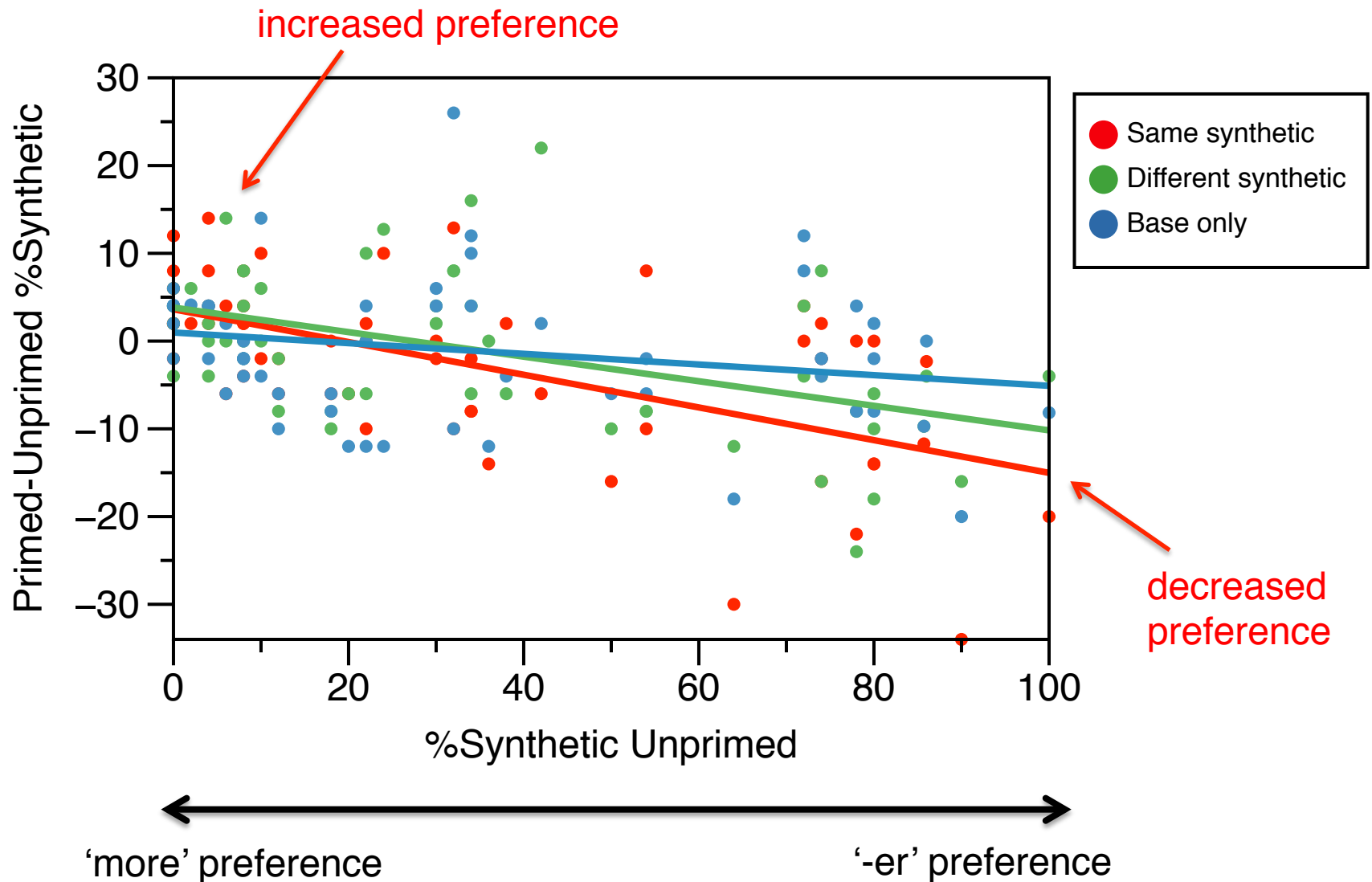
**Result: 'Different synthetic'** prime influenced comparative selection for high-frequency ADJs



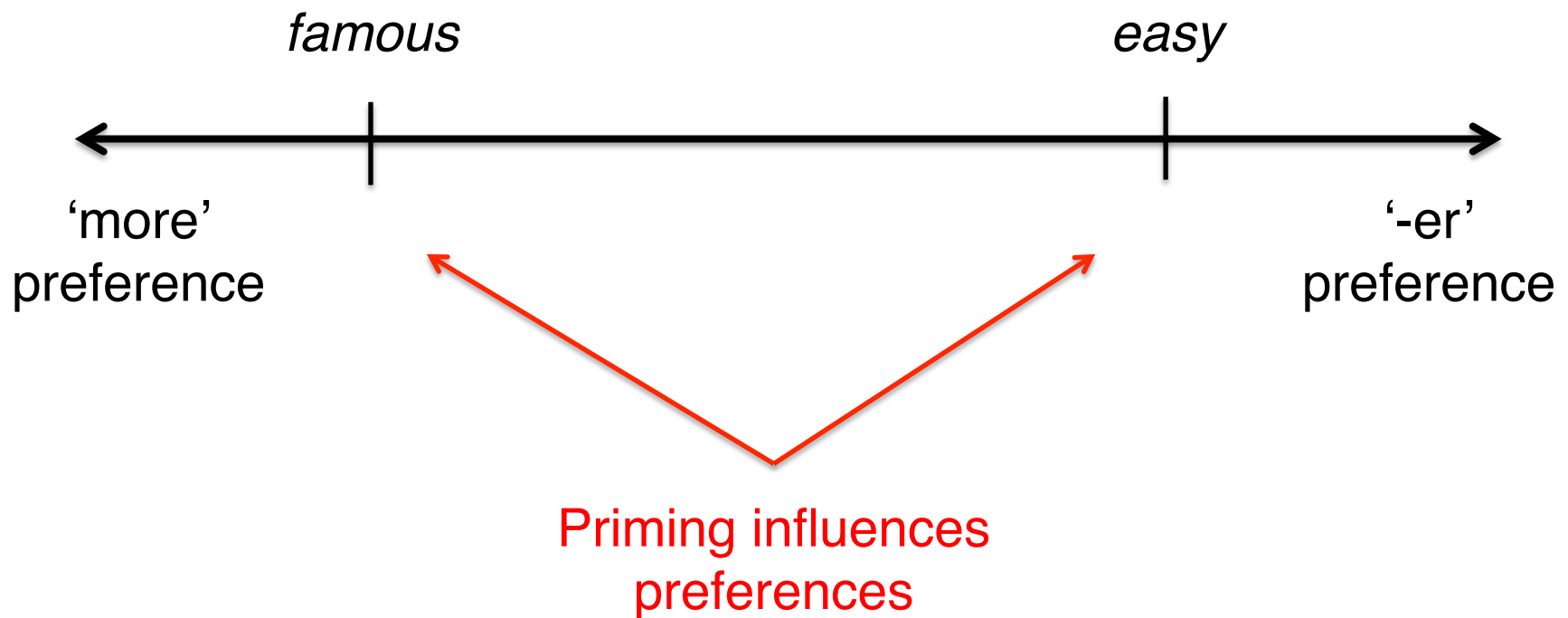
**Result: 'Base only' prime did not influence comparative form selection**



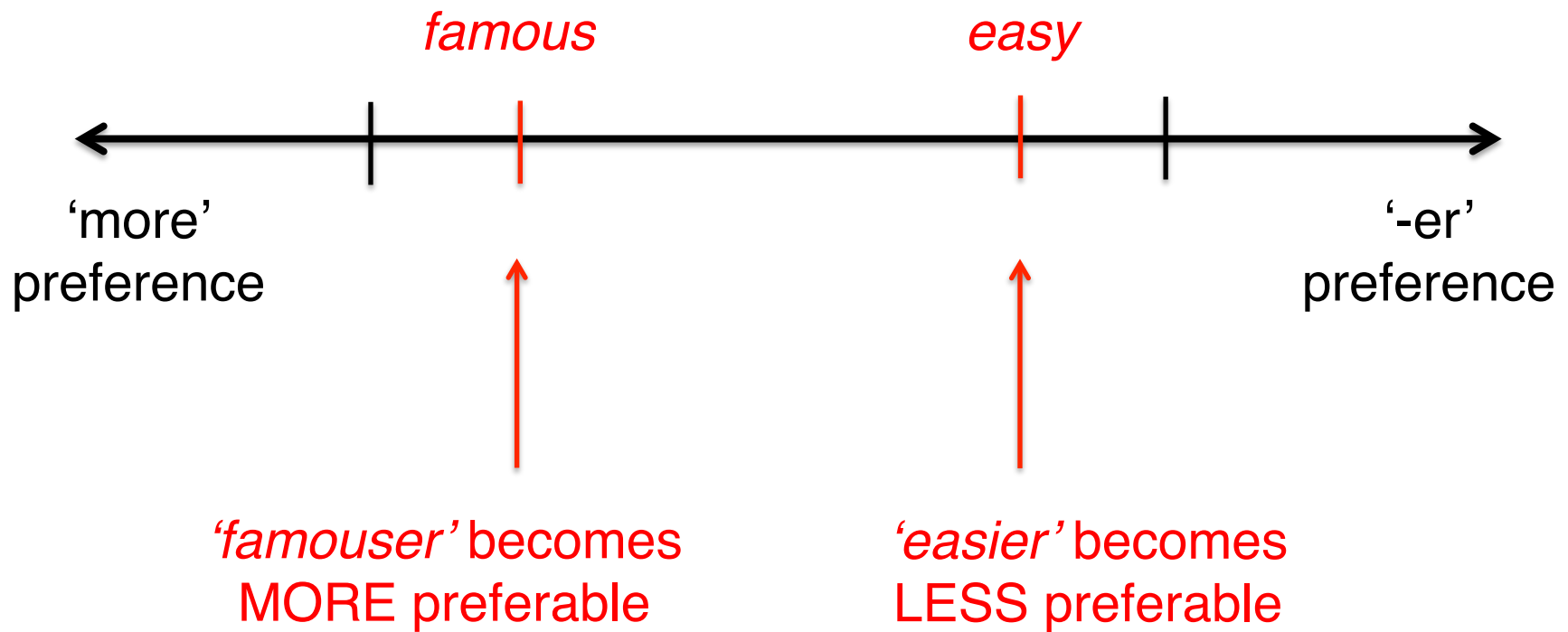
**'Same'** and **'different'** synthetic primes affect  
'-er' preference and 'more' preference ADJs differently



**Conclusion:** Preferences are flexible and can be influenced by recency of **'same'** or **'different'** synthetic forms



**Conclusion:** Recency affects ‘-er’ and ‘more’ preference ADJs differently



We are left with two questions:

1. Why does recency affect ‘-er’ preference and ‘more’ preference ADJs differently?
2. Why are high frequency ADJs affected the most?

Why does recency affect ‘-er’ preference and ‘more’ preference ADJs differently?

**‘more’ preference ADJs:**

facilitation effect because

speaker has little experience

with ADJ in synthetic form

Why does recency affect ‘-er’ preference and ‘more’ preference ADJs differently?

**‘-er’ preference ADJs:**

inhibition effect

= more “errors” and slower RTs



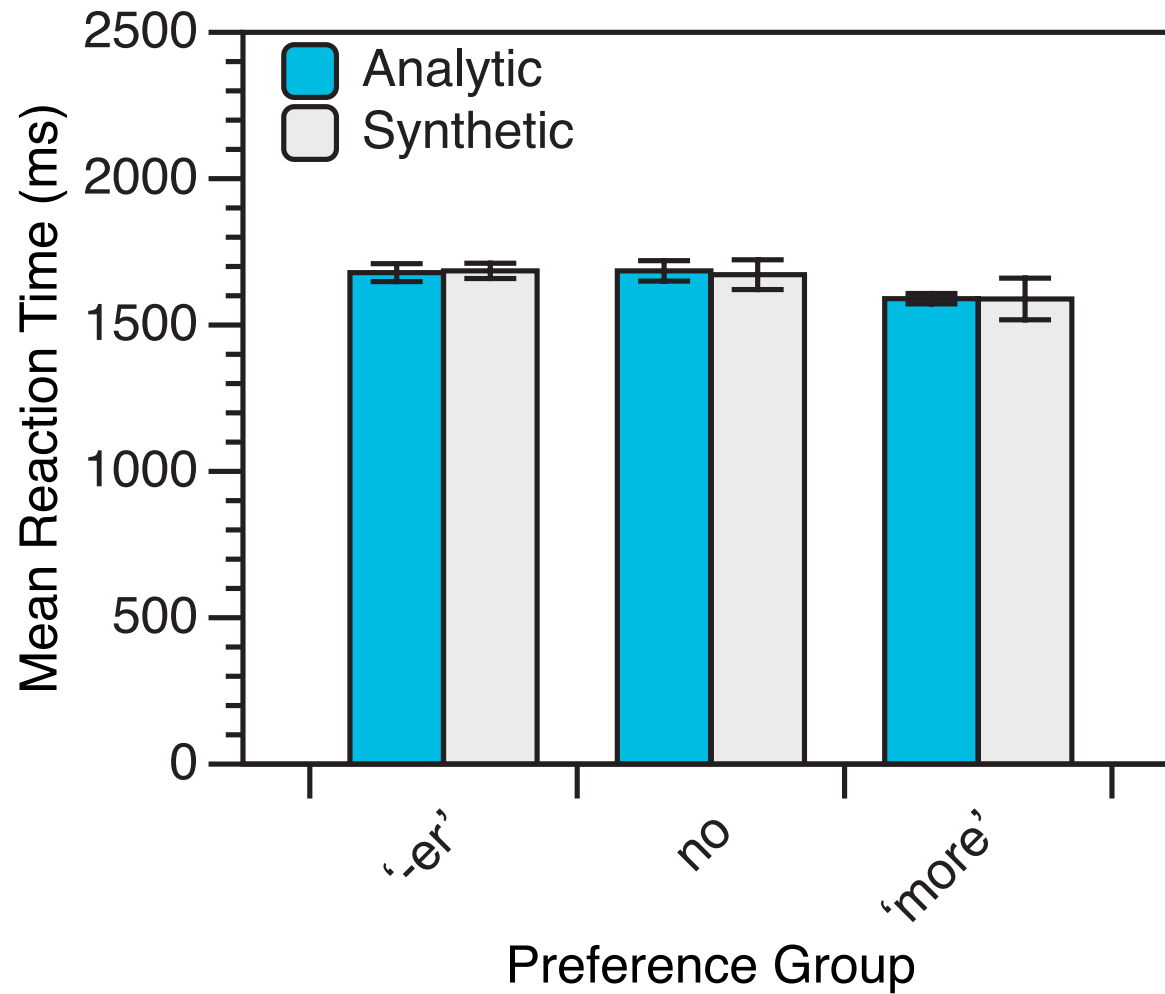
decreased  
‘-er’ preference



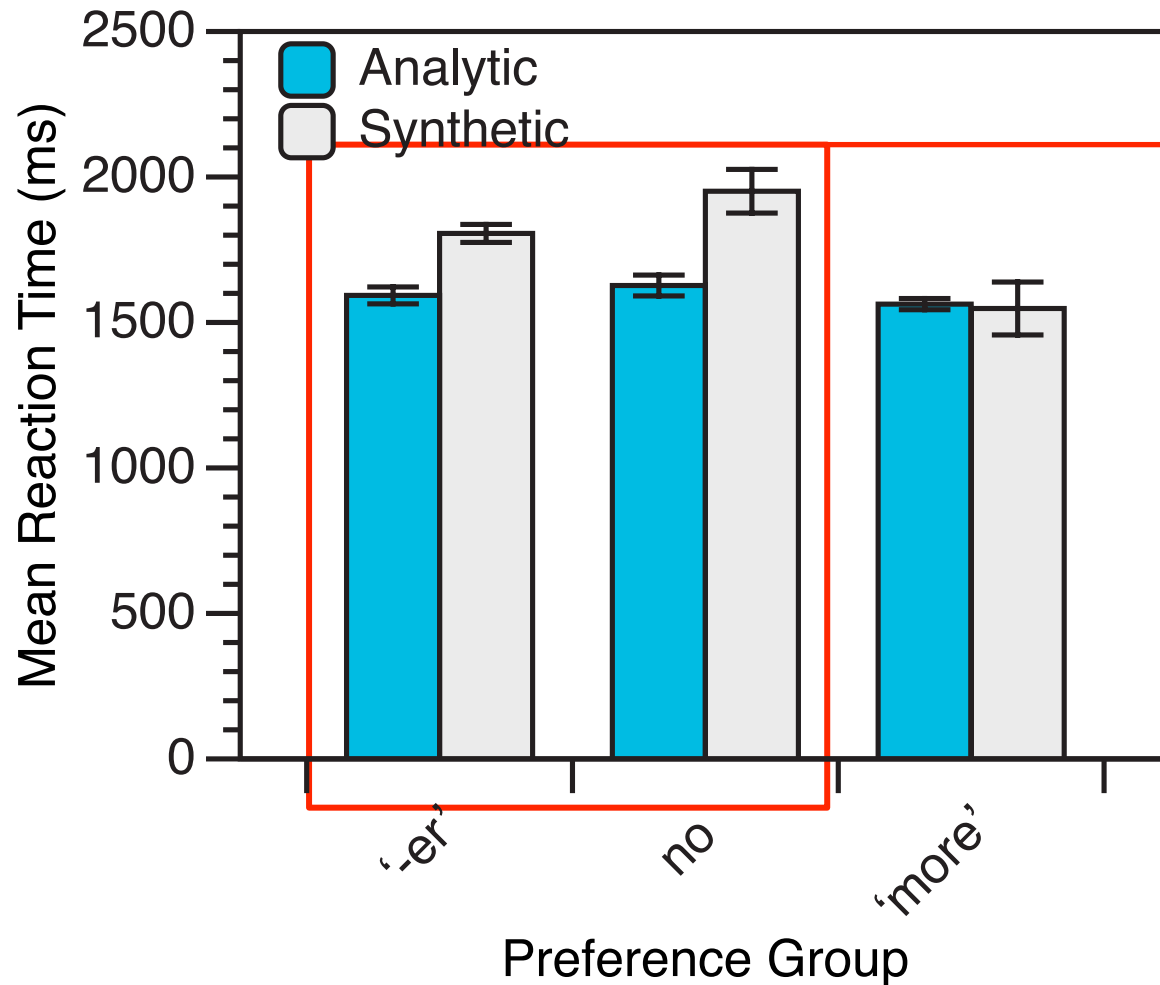
This happens too!



When unprimed, there is no difference in reaction times



When primed with a **'same synthetic'** prime, RTs were longer for '-er' & no preference ADJs when participants selected the synthetic form



Choosing synthetic comparative is more difficult!

Inhibition occurs when  
participants ignore a stimulus

Example: Stroop color-word task

Instructions: For each word, name the color  
of the ink as quickly as possible.

red



Participant ignores “red”  
and says “green” here.

blue

purple

yellow

Ignoring a stimulus and then trying to recall it slows down the participant and causes errors

1. blue

2. purple

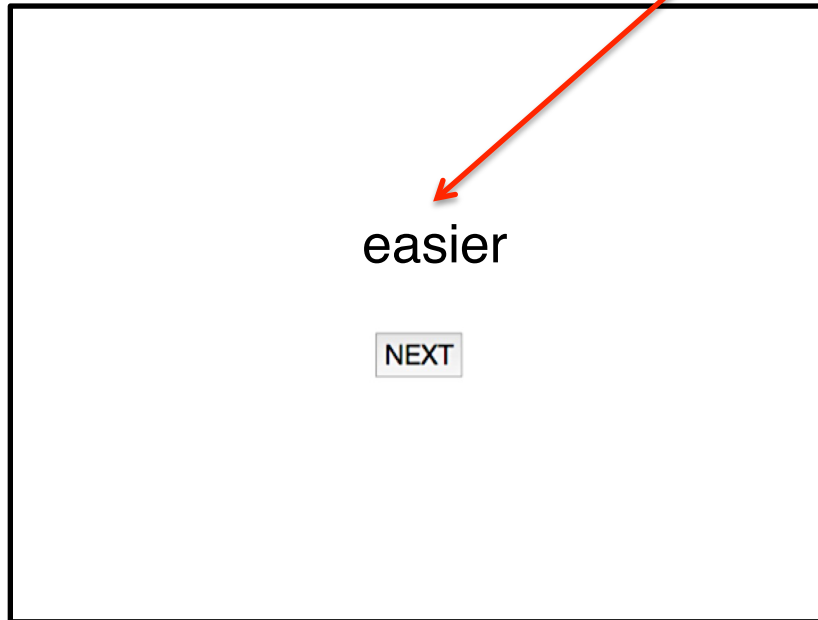
3. yellow

Purple is ignored

Ignoring "purple" in (2) causes longer RTs and more errors in (3)

When primed with a synthetic comparative, participants ignore the synthetic option

ignored



easier

NEXT

The diagram shows a rectangular box representing a screen. Inside the box, the word "easier" is centered. Below it is a small rectangular button with the word "NEXT" inside. A red arrow points from the word "ignored" (located above and to the right of the box) down to the word "easier".

Which would you say?

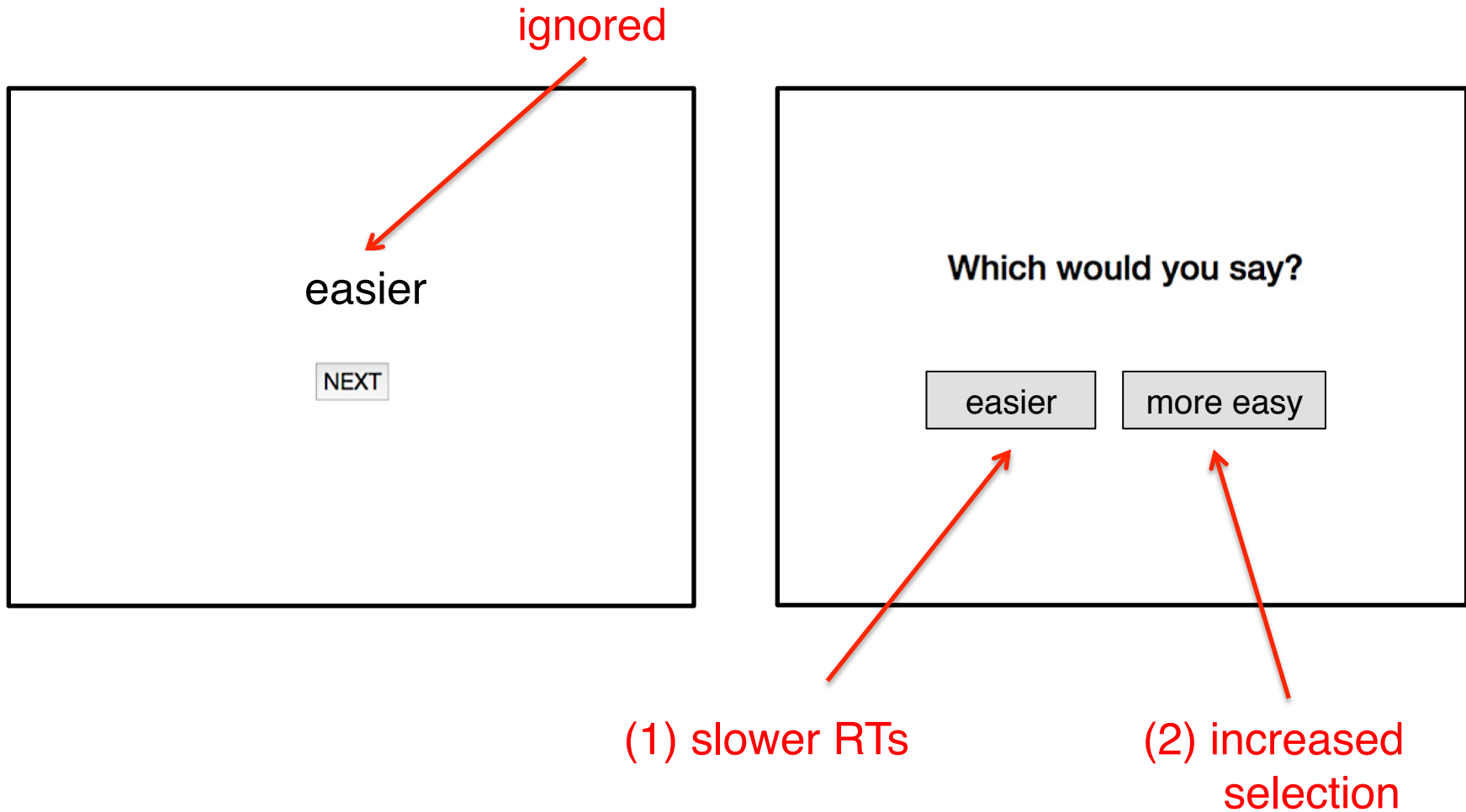
easier more easy

The diagram shows a rectangular box representing a screen. At the top, the question "Which would you say?" is centered. Below the question are two rectangular buttons. The left button contains the word "easier" and the right button contains the words "more easy".



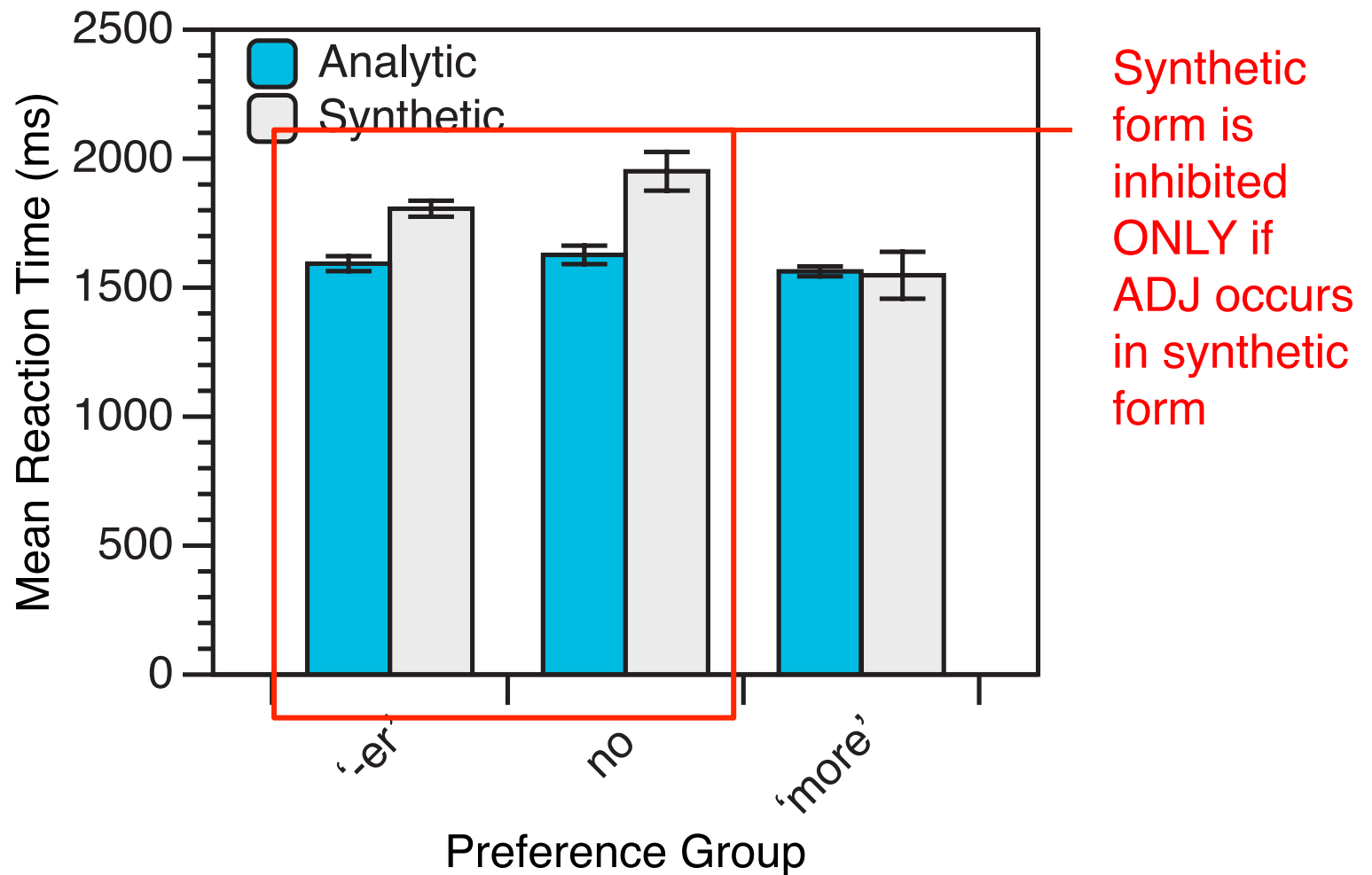
Ignoring the synthetic option causes two effects:

(1) slower RTs, (2) more analytic selection

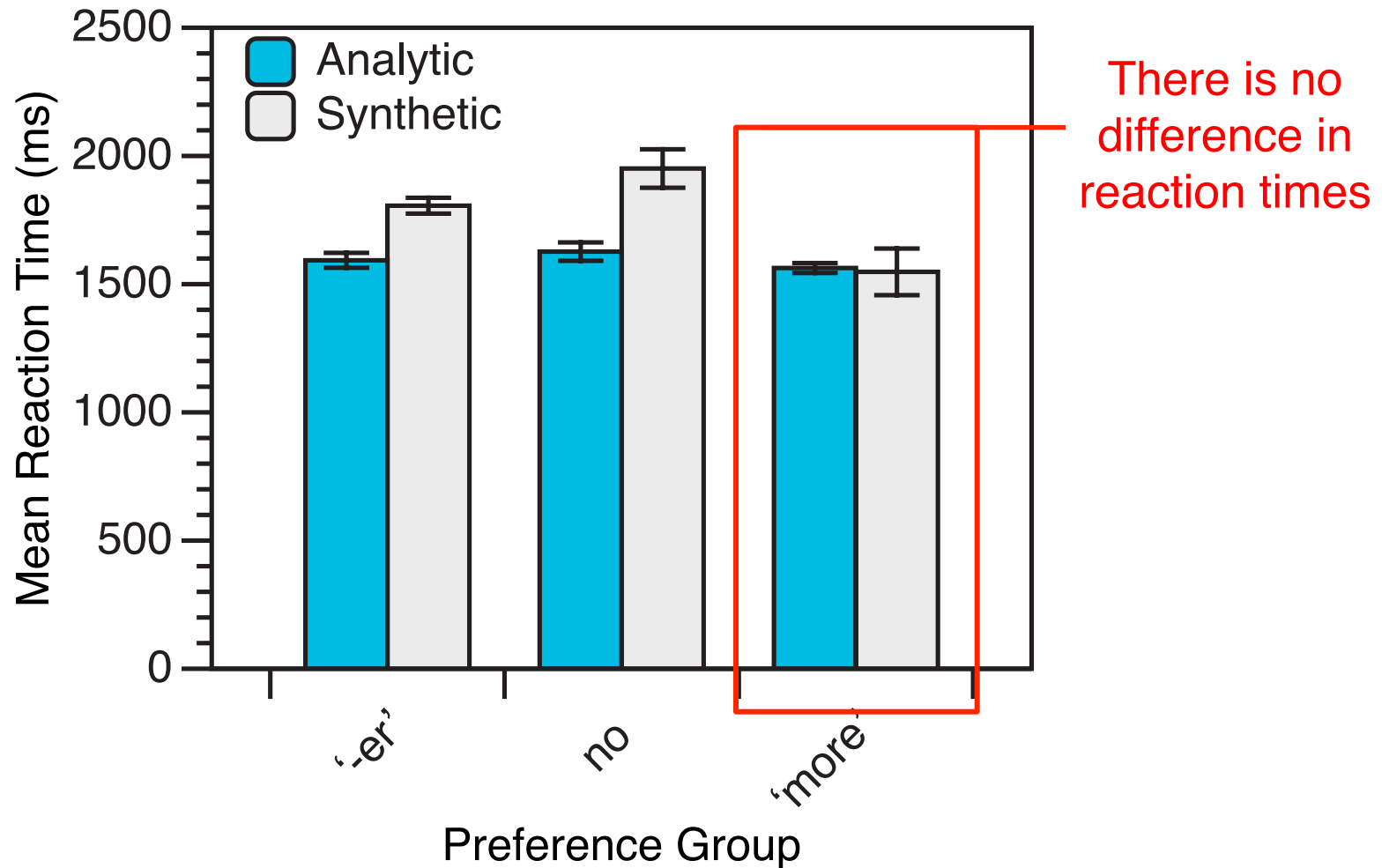


## For '-er' and no preference ADJs

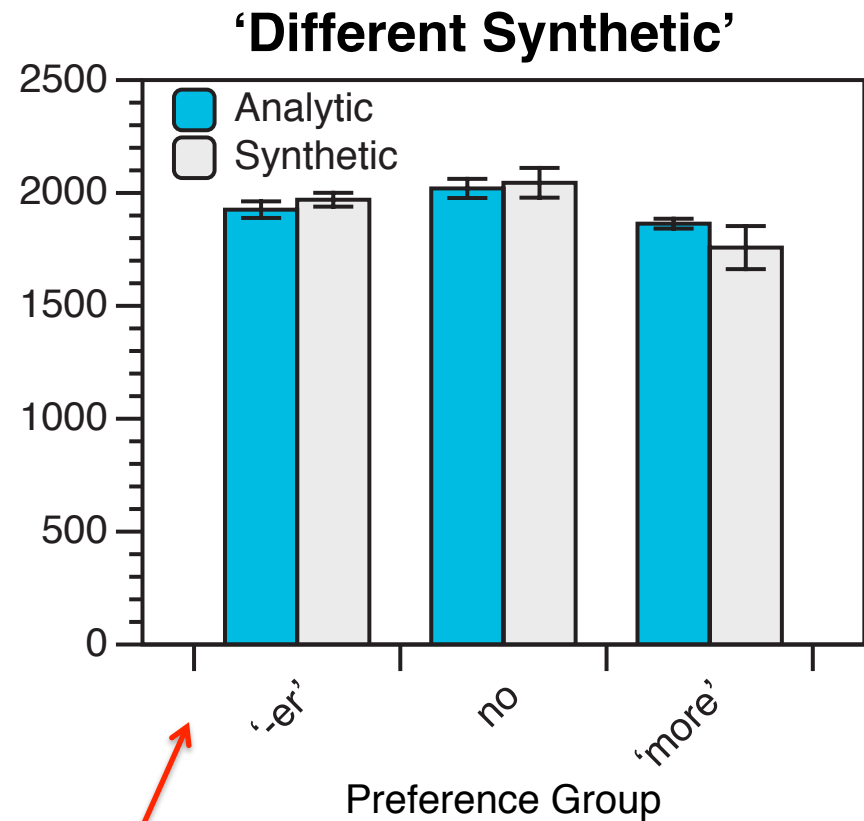
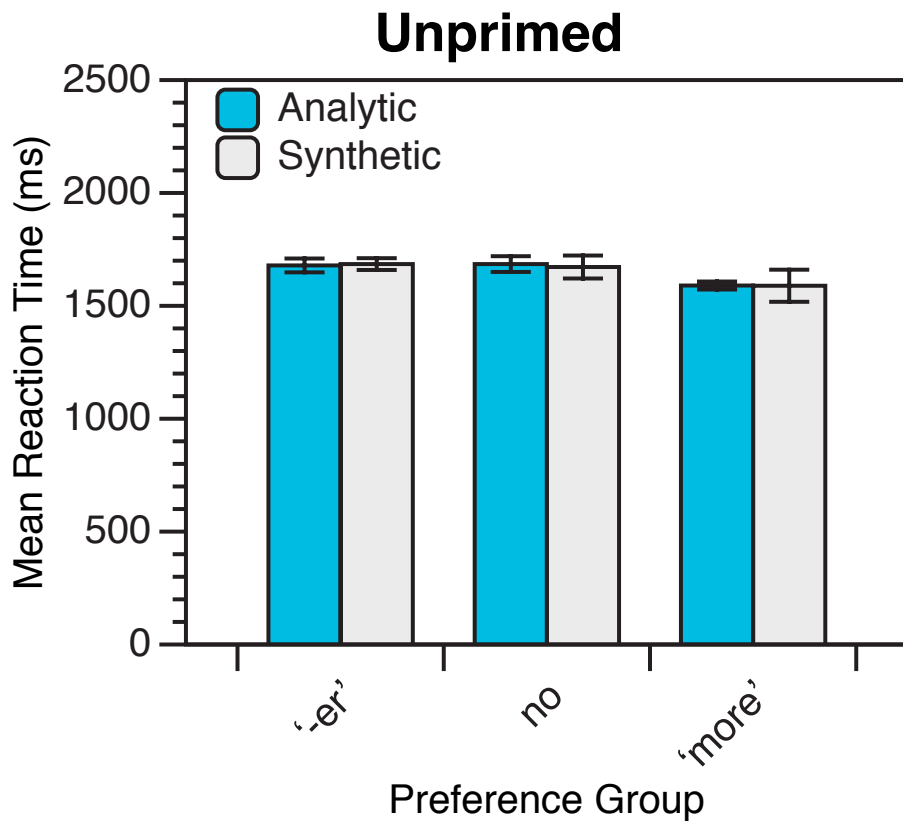
the synthetic form is ignored, causing (1) more analytic selection, and (2) longer RT for synthetic selection



For **'more' preference ADJs**, participants don't have enough experience with the synthetic form to inhibit it

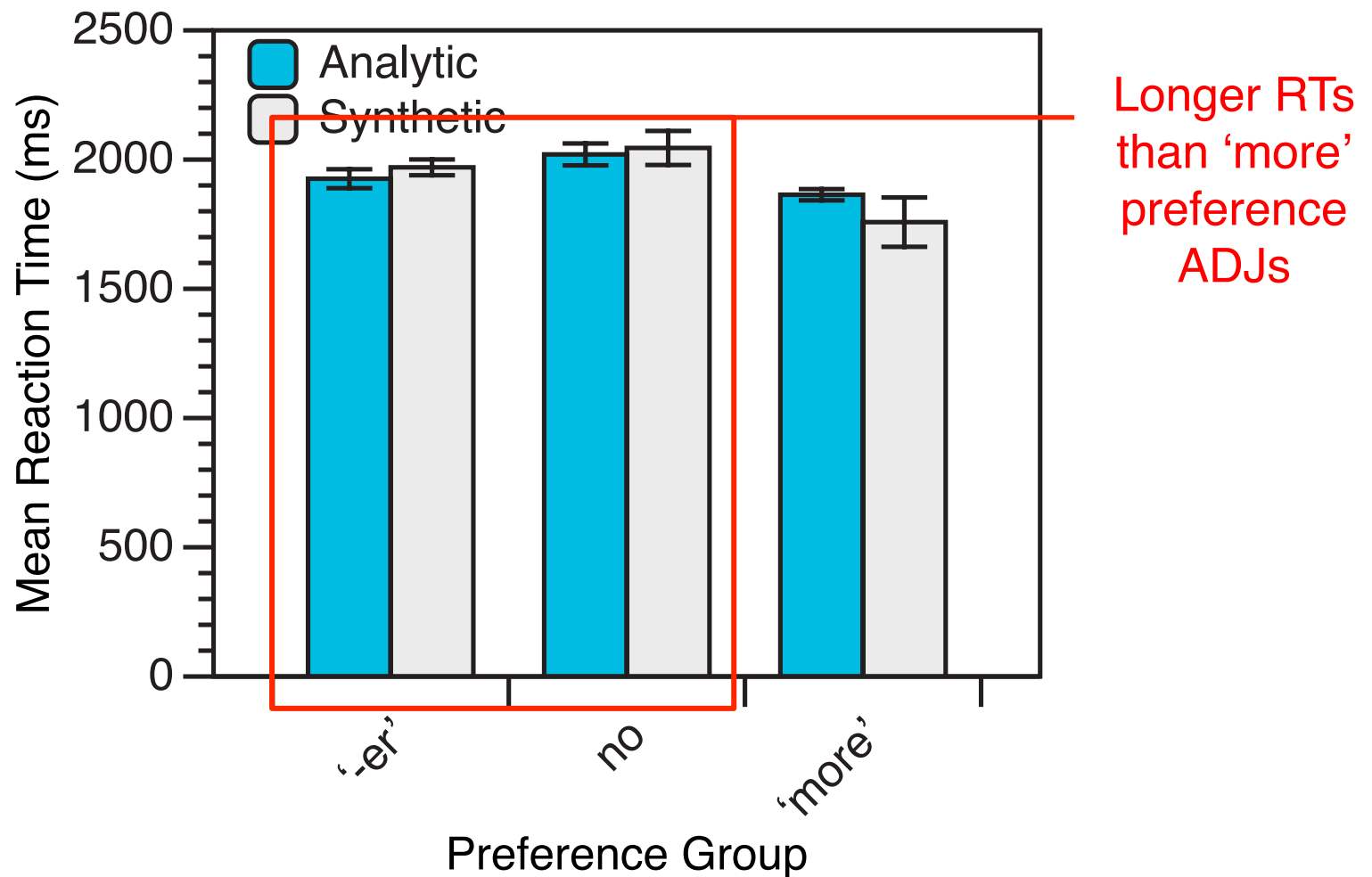


When primed with a **'different synthetic'** prime, RTs were longer than 'unprimed' for all preference groups and comparative forms



Priming with a semantically different word causes processing difficulty (longer RTs)

When primed with a **'different synthetic'** prime, RTs for '-er' and no preference ADJs were longer than 'more' preference ADJs



# Recency affects selection processes differently depending on speaker's experience with ADJ

ADJ often occurs in synthetic form:

recent synthetic forms inhibit

selection of synthetic form (variation)

ADJ doesn't often occur in synthetic form:

recent synthetic forms facilitate

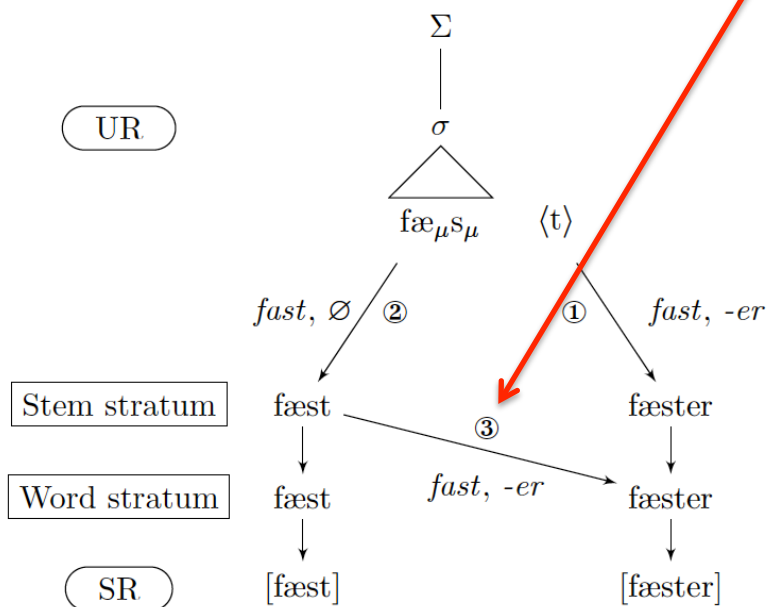
selection of synthetic form (learning)

We are left with two questions:

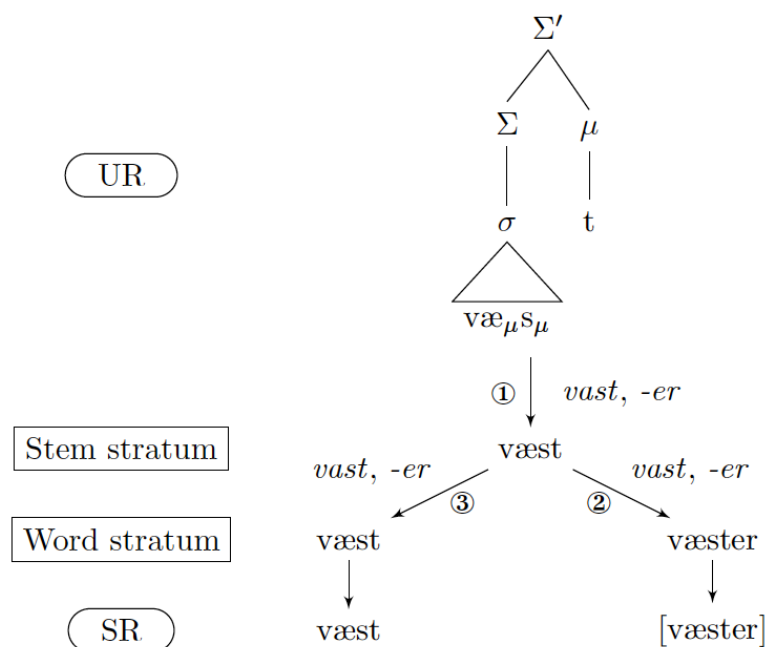
1. Why does recency affect ‘-er’ preference and ‘more’ preference ADJs differently?
2. Why are high frequency ADJs affected the most?

# The prosodic representation of high frequency ADJs permits more suffixation than low frequency ADJs

## High Frequency



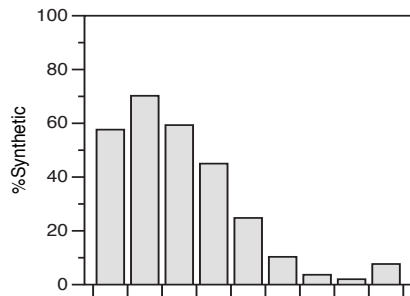
## Low Frequency



(Adams, 2014, p. 167-168)

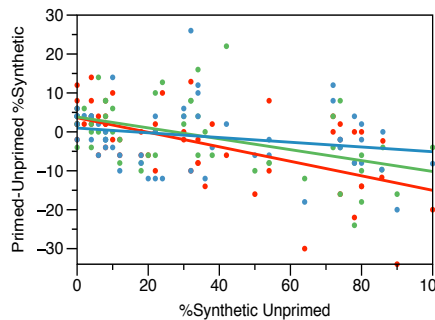


# How speakers select synthetic and analytic forms of English comparatives



## 1. Unprimed study-

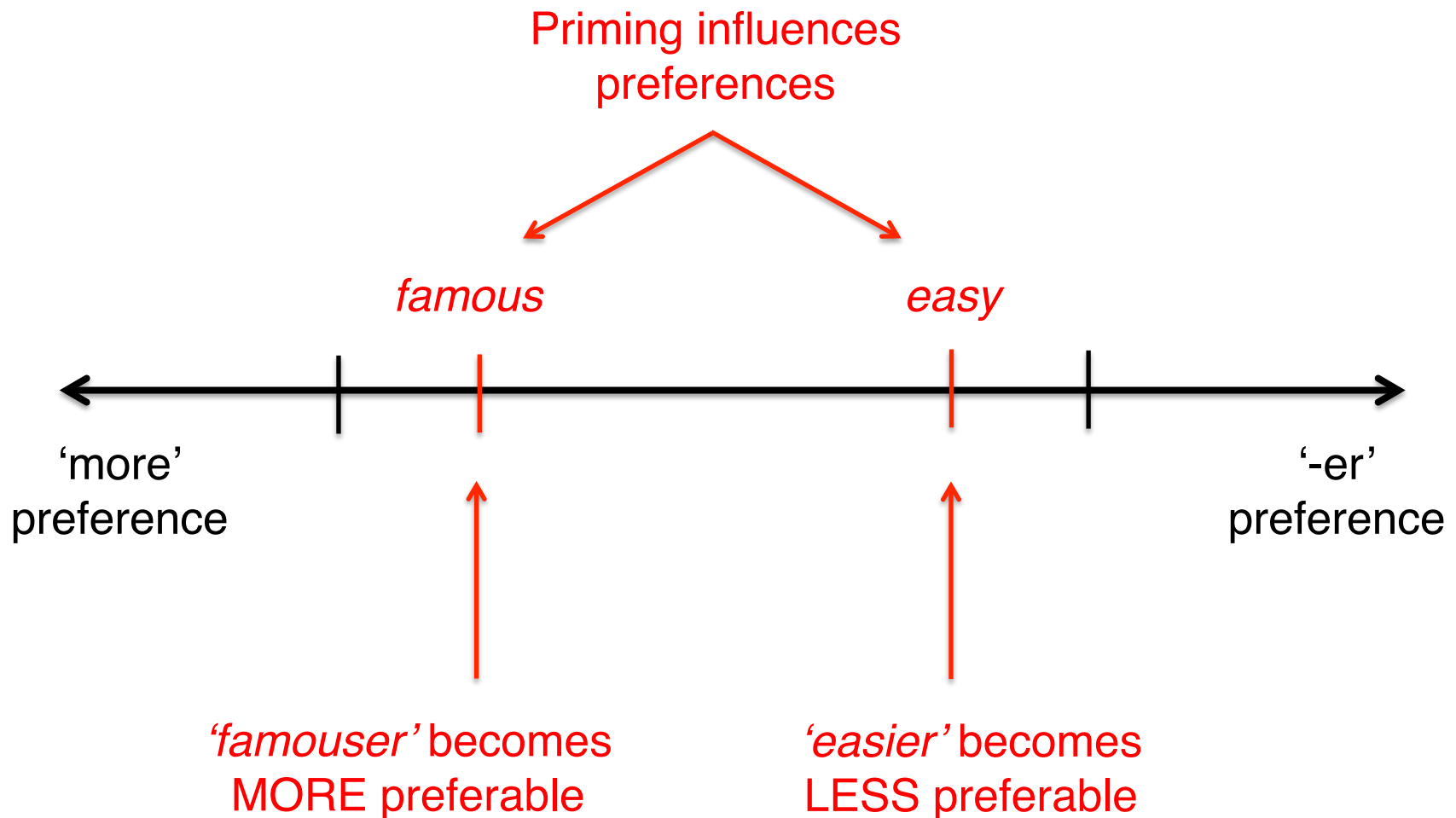
examines role of prosodic shape & frequency



## 2. Primed study-

additionally examines role of recency

# Take-away: Preferences are flexible and can be influenced by recency



This gives us insight into  
why less-preferable forms occur

Children are more easy  
to manipulate than adults.

I was a national celebrity,  
famouser even than  
Captain Kangaroo.

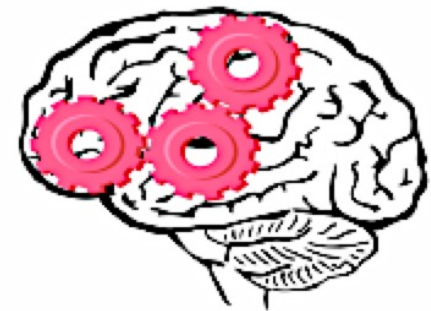
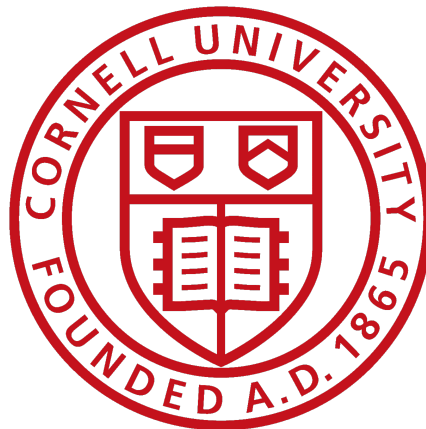
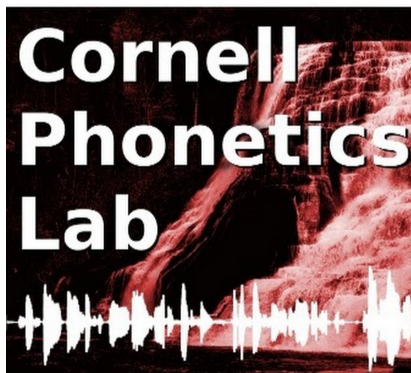
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LSA 2017 - Jan. 5-8, 2017



Cognitive Science @ Cornell

## References

- Adams, M. E. (2014). *The comparative grammaticality of the English comparative* (Unpublished doctoral dissertation). Stanford University.
- Aronoff, M. (1976). Word formation in generative grammar. *Linguistic Inquiry Monographs*(1), 1–134.
- Bader, M., & Häussler, J. (2010). Toward a model of grammaticality judgments. *Journal of Linguistics*, 46(02), 273–330.
- Ballinger, P. (1991). Curioser and curioser: usage of comparative -er: in American and British English. In *California Linguistik Notes* (Vol. 23). California State University Department of Linguistics.
- Bauer, L. (1994). *Watching english change: An introduction to the study of linguistic change in standard englishes in the twentieth century*. Longman.
- Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive psychology*, 18(3), 355–387.
- Culpeper, J., & Leech, G. N. (1997). The comparison of adjectives in recent British English. *To Explain the Present: Studies in the Changing English Language in Honour of Matti Rissanen*.
- Cygan, J. (1975). Synthetical comparatives in English. *Bulletin de la Societe Polonaise de Linguistique*, 33, 53–57.
- Graziano-King, J. (1999). *Acquisition of comparative forms in english* (Unpublished doctoral dissertation). CUNY.
- Jespersen, O. (1949). A Modern English Grammar. Part III: Syntax. *Copenhagen: Munksgaard*.
- Kytö, M., & Romaine, S. (1997). Competing forms of adjective comparison in Modern English: What could be more quicker and easier and more effective? In *To explain the present: studies in the changing English language in honour of Matti Rissanen* (Vol. 57, p. 329-352). Societe Neophilologique de Helsinki.
- Lindquist, H. (2000). Livelier or more lively? Syntactic and contextual factors influencing the comparison of disyllabic adjectives. *Language and Computers*, 30, 125–132.
- Mayr, S., & Buchner, A. (2007). Negative priming as a memory phenomenon. *Zeitschrift für Psychologie/ Journal of Psychology*, 215(1), 35–51.
- Pennington, J., Socher, R., & Manning, C. D. (2014). Glove: Global vectors for word representation. In *Emnlp* (Vol. 14, pp. 1532–43).
- Quirk, R., Crystal, D., & Education, P. (1985). *A comprehensive grammar of the English language* (Vol. 397). Cambridge University Press.
- Smeds, F. (2007). *Adjective comparison in contemporary British English: A corpus study of more than one hundred adjectives* (Bachelor's thesis). Karlstad University.
- Snider, T. (2015). *Continuations for comparatives*. Semanticsarchive.net.
- Sweet, H. (1891). *A new English grammar, I*. Oxford: The University Press.
- Zwicky, A. (1989). Quicker, more quickly,\* quicklier. *Yearbook of Morphology*, 2, 139–173.