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

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@sloppyidentity

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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:

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

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

unlikely according to previous studies and intuition
English has two comparative forms

(1) Synthetic   

(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

<table>
<thead>
<tr>
<th>Word Ending</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>–y</td>
<td>easier</td>
</tr>
<tr>
<td>–ly</td>
<td>lovelier</td>
</tr>
<tr>
<td>–le</td>
<td>simpler</td>
</tr>
<tr>
<td>–ow</td>
<td>narrower</td>
</tr>
</tbody>
</table>

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

<table>
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<tr>
<th>Word Ending</th>
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<tbody>
<tr>
<td>–er</td>
<td>more clever</td>
</tr>
<tr>
<td>–nt</td>
<td>more brilliant</td>
</tr>
<tr>
<td>sibilant</td>
<td>more famous</td>
</tr>
<tr>
<td>&amp; final stress</td>
<td>more acute</td>
</tr>
</tbody>
</table>

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

(Graziano-King 1999 citing Aranoff 1976, Fodor 1985, Ballinger 1991)
Frequency influences comparative form preferences

High frequency: smarter
   *more smart

Low frequency:  *chicer
   more chic

(Graziano-King 1999, Adams 2014)
Chicer often occurs even though previous studies say it should not
Chicer often occurs in magazines, so maybe recent forms influence preferences

<table>
<thead>
<tr>
<th>Year</th>
<th>Source</th>
<th>Magazine</th>
<th>A</th>
<th>B</th>
<th>C</th>
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<tr>
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<td>MAG</td>
<td>People</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<tr>
<td>2012</td>
<td>MAG</td>
<td>HarpersBazaar</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<tr>
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<td>MAG</td>
<td>GoodHousekeeping</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<tr>
<td>2009</td>
<td>MAG</td>
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<td>B</td>
<td>C</td>
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<td>SPOK</td>
<td>ABC_GMA</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<td>HarpersBazaar</td>
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<td>B</td>
<td>C</td>
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<td>2006</td>
<td>MAG</td>
<td>Bazaar</td>
<td>A</td>
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<td>TownCountry</td>
<td>A</td>
<td>B</td>
<td>C</td>
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<tr>
<td>1998</td>
<td>SPOK</td>
<td>NPR_Weekly</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>1998</td>
<td>SPOK</td>
<td>NPR_Morning</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

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 –/y 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](image.png)
**Primed study**: Forced-choice acceptability-judgment task with priming

![Diagram](image)
**Primed study:** Target stimuli & primes

Same target ADJs as unprimed study

3 primes per target word:

Ex:

- target = *famous*
- base only: *famous*
- same synthetic: *famouser*
- different synthetic: *roomier*
**Primed study:** Primes were distributed across 3 versions of the experiment

<table>
<thead>
<tr>
<th>Target</th>
<th>Version1</th>
<th>Version2</th>
<th>Version3</th>
</tr>
</thead>
<tbody>
<tr>
<td>pure</td>
<td>pure</td>
<td>purer</td>
<td>rosier</td>
</tr>
<tr>
<td>firm</td>
<td>firmer</td>
<td>merrier</td>
<td>firm</td>
</tr>
<tr>
<td>weird</td>
<td>speedier</td>
<td>weird</td>
<td>weirder</td>
</tr>
</tbody>
</table>
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

![Bar chart showing preference in different preference groups for high and low frequency ADJs. The chart indicates that the 'more' group shows an increased preference, while the 'no' group shows a decreased preference. The p-value is less than .001.]
Result: ‘Different synthetic’ prime influenced comparative selection for high-frequency ADJs

$p < .002$
Result: ‘Base only’ prime did not influence comparative form selection

- big difference but $p < .11$
‘Same’ and ‘different’ synthetic primes affect ‘-er’ preference and ‘more’ preference ADJs differently.

The graph shows a scatter plot with the x-axis representing the percentage of synthetic unprimed items and the y-axis representing the primed-unprimed percentage synthetic. The plot includes data points for 'Same synthetic', 'Different synthetic', and 'Base only' conditions. The 'Same synthetic' condition shows an increased preference, while the 'Different synthetic' condition shows a decreased preference.

- 'more' preference
- ‘-er’ preference
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

![Bar chart showing mean reaction times for different preference groups. The y-axis represents mean reaction time in milliseconds, ranging from 0 to 2500. The x-axis represents preference groups: 'er', 'no', and 'more'. The chart compares analytic and synthetic groups. There is no significant difference in reaction times between the groups.](image-url)
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.
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.

There is no difference in reaction times.
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

(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.

- Priming influences preferences.
- "famouser" becomes MORE preferable.
- "easier" becomes LESS preferable.
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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References


