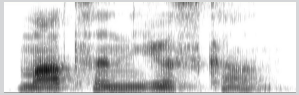
Knowing what you want to hear

Salience and exemplar priming

Albert-Ludwigs-Universität Freiburg



UKLVC10 York
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Exemplar priming

Niedzielski 1999; Hay, Nolan und Drager 2006; Hay und Drager 2010

method

- play identical material to subjects
- provide social information about speaker

results

- social information influences perception
- people hear Canadian (Australian) vowels when they are told the speaker is from there

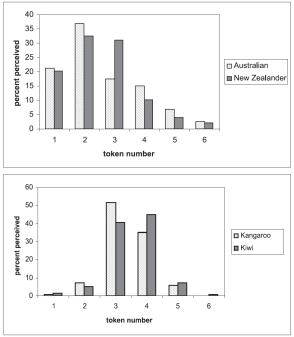
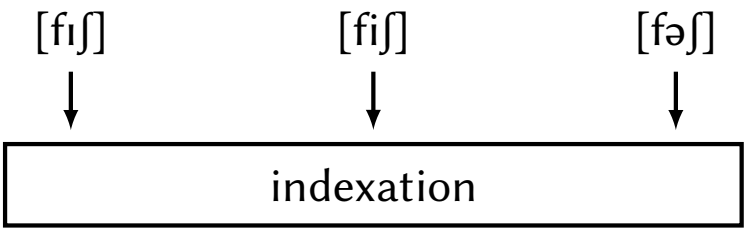


Figure 5. *Results for [ɪ] from Hay et al. (2006a) (top panel), and the stuffed toy manipulation (bottom panel). Data shown are for female participants only. Lower token numbers reflect more Australian-like variants*

(Hay und Drager 2010)

Exemplar theory

Pierrehumbert 2006



- Britain
- female
- 30s
- sarcastic

- Australia
- male
- 40s
- excited

- New Zealand
- female
- 20s
- drunk

The next step

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1. gaps
   - previous research has exclusively looked at vowels
   - the potential role of social salience has not been a major focus
   - most studies seem to have focused on heavily stereotyped features
2. hypotheses
   - priming should also work with consonants
   - salient variables will create a more pronounced priming effect in perception than non-salient ones

Why Liverpool?

- Scouse is “well known to most British people, and very distinctive” (Trudgill 1999: 70)
- Scouse is among the most heavily stigmatised varieties in the UK (Montgomery 2007)

Variables

vowels

happy-tensing
happy realised with a tense [i] instead of a lax [ɪ]

NURSE-SQUARE merger (towards [ɛ])
fair and *fur* are (near-)homophones for many Liverpool speakers

consonants

velar nasal plus
<ng> is realised as [ŋg], *singer* rhymes with *finger*

(non-salient)

lenition of /k/
/k/ is either an affricate [kx], or a fricative [ç, x], e.g. *speaker*

(highly salient)

(among others: Trudgill 1999; Watson und Clark 2013; Honeybone und Watson 2013; Juskan in preparation)

Stimulus generation - general

1. 48 carrier sentences (6 pairs per variable) were recorded by a linguist from Manchester
   example:
   - People in that town almost never went to **church**.
   - In that town **church** was not popular with people.
2. using Praat scripts, keywords were extracted automatically from the sentences and four different versions were resynthesised
   (1) hyper-Mancunian/standard version
   (2) actual Mancunian/standard sound as heard in the sentence
   (3) light Scouse version
   (4) very Scouse version

Online test

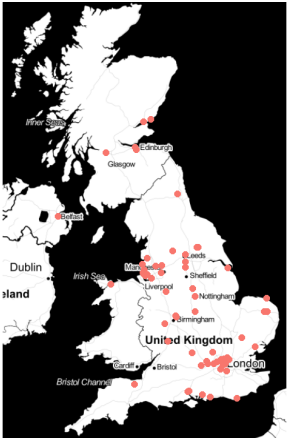
- administered using SoSciSurvey.de
- participants are randomly assigned to one of two groups
  I. first group led to believe the speaker was from Liverpool
  II. control group was (correctly) told the speaker was from Manchester
- 'Manchester' or 'Liverpool' displayed at the top of every page
- new randomised order for every subject
- answer and reaction time automatically recorded and saved (observations with RTs of -2000ms or smaller were discarded)
- information on subject's gender, age, regional origin, education, and profession collected

Online test - screenshot

Participants

58 subjects from outside of Liverpool (2508 observations)

	‘Liverpool’		‘Manchester’	
	F	M	F	M
wc	2	3	1	1
mc	17	6	9	16



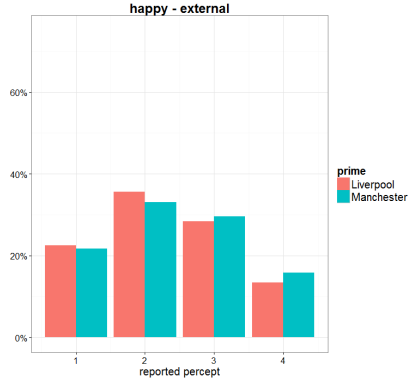
mixed linear effects models

- mixed linear effects models were fit by hand
- random intercept for subject
- random slope for subject : order of stimuli

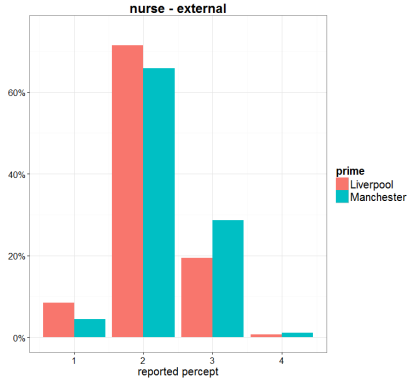
significant factors:

- happʏ
  - frequency; $p < 0.001$
  - position; $p < 0.001$
  - (age); $p = 0.069$
- /ŋg/
  - prime; $p < 0.029$
  - environment; $p = 0.002$
- NURSE
  - prime; $p < 0.022$
  - position; $p < 0.001$
  - (stimulus order); $p = 0.093$
- /k/
  - prime; $p < 0.030$
  - class; $p = 0.002$
  - environment; $p < 0.001$
  - (frequency); $p = 0.090$

vowels - overview

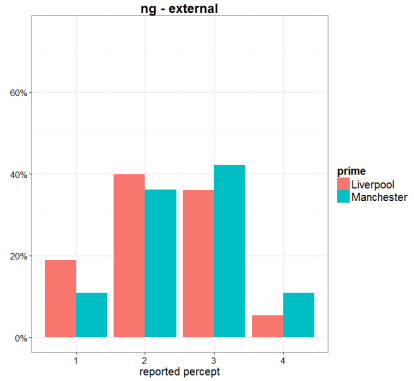


(a) happy, p = 0.771

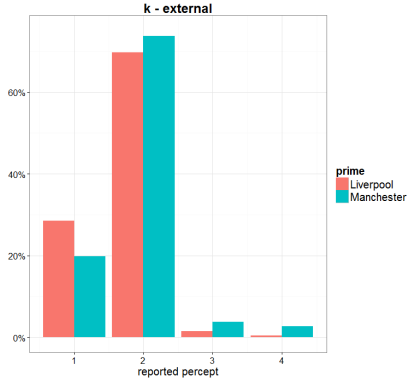


(b) nurse, p = 0.017

consonants - overview

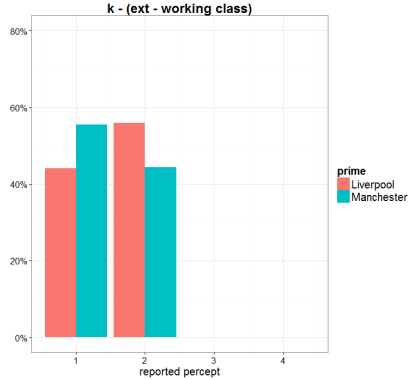


(a) /ŋg/, p = 0.003

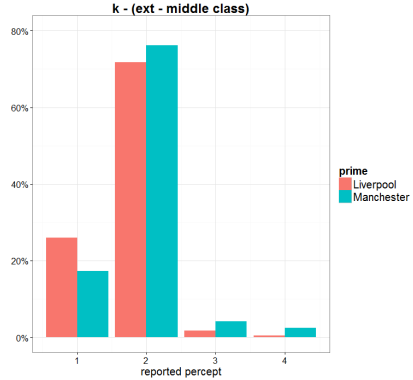


(b) /k/, p = 0.006

/k/ by social class

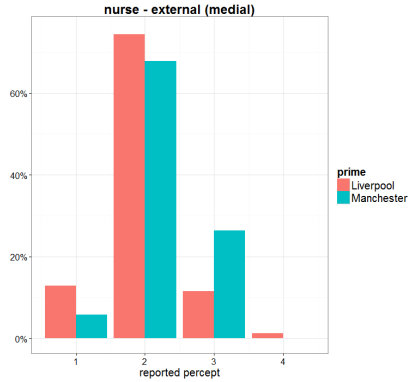


(a) /k/ working class, p = 0.622

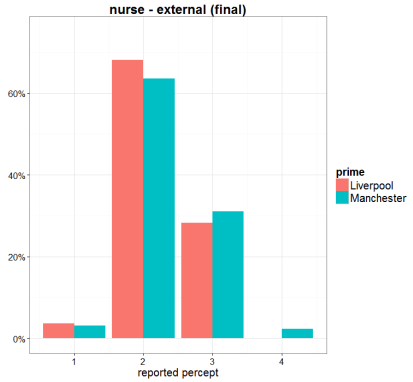


(b) /k/ middle class, p = 0.020

NURSE by position in carrier sentence

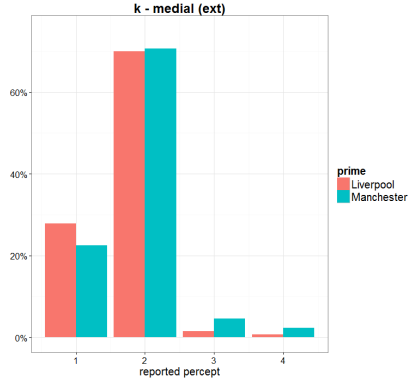


(a) nurse mid-sentence, p = 0.002

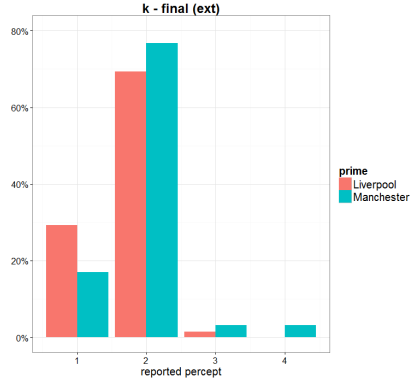


(b) nurse sentence-final, p = 0.274

/k/ by position in carrier sentence

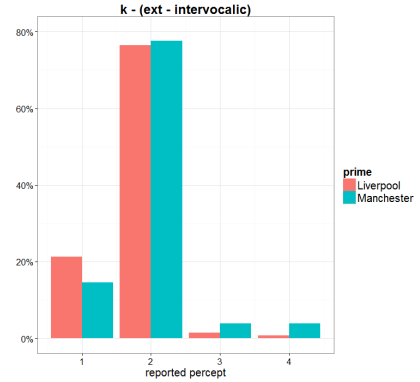


(a) /k/ mid-sentence, p = 0.253

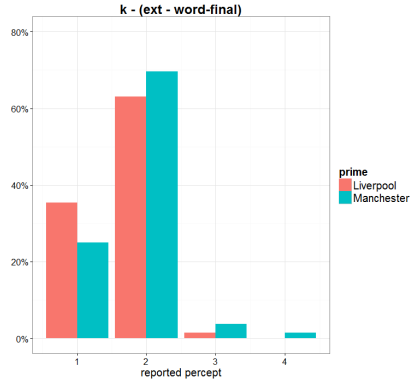


(b) /k/ sentence-final, p = 0.021

/k/ by phonological environment



(a) /k/ intervocalic, p = 0.114



(b) /k/ word-final, p = 0.089

Conclusions

1. priming works with vowels and with consonants
   - but presumably better with vowels
   - phonetic distance might be an issue
   - variables may not be easily comparable
2. direction of priming effect not always easily predictable
3. influence of time held in memory unclear (diverging evidence for NURSE and /k/)
4. salience of the variable seems to play a role
   - no priming effect for happy, weak one for velar nasal plus
   - relatively pronounced priming effects for NURSE and /k/-lenition
   - some evidence for impact of social factors (rather speculative!)

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