The influence of social constraints on syntactic variation

Global and local patterns in the English dative alternation

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The English dative alternation

dialective dative

Mary gave [John] [the apple]
recipient theme

prepositional dative

Mary gave [the apple] to [John]
theme recipient
The English dative alternation

- **ditransitive dative**
  - Mary gave [him] [the apple]
    - recipient
    - theme

- **prepositional dative**
  - Mary gave [the apple] to [him]
    - theme
    - recipient
Explaining variation in syntactic alternations

- syntactic alternations = two standard variants (or more)
- focus on language-internal predictors ('cognitive' factors) such as
  - length of constituents: shorter > longer
  - semantics (e.g. verb semantics)
  - frequency of head lemmas
  - etc.

- **social factors** (age of speaker, gender of speaker, etc.) thought to have only marginal impact
Explaining variation in syntactic alternations

“Mainly, however, researchers have focused on language-internal constraints on variation, and the social dimension of grammatical variation has remained less studied. It has been argued, in fact, that syntactic variation is conditioned less by social factors than by internal, cognitive and situational constraints […], and that syntactic variation may rarely, if ever, serve the function of distinguishing social groups in the way that ‘classic’ phonological and morphological variants do […].

(Cheshire 2003: 245, emphasis mine)
Social factors in the English dative alternation

- in BrE and AusE, male speakers prefer the prepositional dative more than female speakers (Jenset et al. 2018, Theijssen et al. 2011)
- in CanE, female speakers prefer the prepositional dative across all age groups (Tagliamonte 2014)
- in JamE, male speakers prefer the prepositional dative more than female speakers (Röthlisberger 2018, Röthlisberger submitted)

→ different social dynamics between male and female speakers?
Objectives

On a global scale
What is the role of social factors in syntactic variation?

On a local scale
What is the effect of speaker-related factors in different varieties of English?
Data & Methodology
Corpus data
Corpus data

- International Corpus of English (ICE) - series
  - 60% spoken (transcriptions), 40% written texts = 1m words per subcorpus
  - 500 texts, 2,000 words per text
  - 12 different registers, same corpus structure

→ Focus on spoken data (availability of metadata)
Data extraction and annotation

(e.g. Bresnan et al. 2007)

• retrieval of dative variants using verb list and perl script
• restrict to choice context (incl. pronouns)
• code for numerous (language-internal) factors: length (weight ratio), complexity, pronominality, givenness, definiteness, person, animacy, concreteness of theme, verb sense
• code for language-external factors: Register and Mode (spoken vs written)
• restrict to spoken data only

\[ N = 5,474 \]
Data extraction and annotation

- Restrict dataset due to unavailable meta data (excl. SinE)
- Annotate for each dative token by
  - **Region**: 8 varieties of English
  - **Register**: formal (scripted & public) vs. informal (unscripted & private)
  - **Age**: various age groupings due to compilation (654 NAs)
    - grouped: teenies, twenties, thirties, fourties, fifties, sixties plus
  - **Gender**: female vs. male (595 NAs)
  - **First language**: English vs Other

\[ N = 3,535 \]
Distribution by region

Proportional distributions of double object and prepositional variants by region \((X^2(7) = 39.3, \ p < 0.001)\)
Distribution by register

Proportional distributions of double object and prepositional variants by register \((X^2(1) = 60.2, p < 0.001)\)
Distribution across time (age)

Proportional distributions of double object and prepositional variants by age group (\(X^2(5) = 22.6, p < 0.001\))
Distribution across time (text time)

Proportional distributions of double object and prepositional variants by text time ($X^2(2) = 1.3, p = 0.5337$)
Distribution across gender

Figure x. Proportional distributions of double object and prepositional variants by gender ($X^2(1) = 8.6, p = 0.0033$)
Distribution across first language

Proportional distributions of double object and prepositional variants by first language ($X^2(1) = 19.0, p < 0.001$)
Global vs local variation

1. What is the role of social factors in syntactic variation on a global scale?
   • mixed effects model with only social factors, no interactions considered
   • Factors included: Age, Gender, Variety, TextTime, Register & First language

2. What is the role of speaker-related factors on a local scale?
   • focus on age and gender
   • separate models by variety / locality
   • Factors included: gender, age, (TextTime), Register
Preparing the data

- Random intercepts for verb lemma, theme lemma and file ID / individual
- Variety is coded with sum coding instead of treatment coding
- Age and TextTime is coded with Helmert coding, comparing each new level against the previous levels
- 6 levels in age had to be conflated due to data sparseness in individual varieties:
  - teenies + twenties = tweenies
  - fifties + sixtiesPlus = fiftiesPlus
Results
Global variation in social factors

• **significant** predictors:
  - text time
  - register
  - variety

• **not significant** predictors:
  - gender
  - age
  - first language
The role of social factors

Effect of TextTime

- Data sampled in 1990-1995 is less likely to use the prepositional dative

Effect of Register

- Spoken formal registers are more likely to include the prepositional dative

Effect of Variety

- IndE and CanE are significantly different from the rest of the varieties
Local variation in social factors

• gender
  – no gender effects in the majority of varieties
  – gender effect in NZE and JamE with male speakers preferring the prepositional dative more than female speakers

• age
  – no age effect in the majority of the varieties
  – age effect in NZE and PhiE
The role of social factors

- age effect in NZE: thirties > tweenies
- age effect in PhiE: fiftiesPlus > fourties

- gender effect in JamE: male > female speakers
- gender effect in NZE: male > female speakers
In sum

- on a global scale → global large-scale parameters
  - i.e. text time, register and variety impact choice of dative variant
  - change over time towards more double object variants

- on a local scale → speaker-related factors minimally influential
  - in NZE & JamE: gender – prepositional variant preferred by male speakers
  - in NZE & PhiE: age – different preferences in varieties

- overall: local variation is very minimally influenced by speaker-related factors compared to the influence of global large-scale parameters
to conclude...
Take-home messages

→ Aggregating the data (global perspective) can obscure local variation.

→ Syntactic variation is not only influenced by language-internal predictors but is potentially also governed by social correlates related to text type, region as well as to speaker’s gender and age.
Thank you!

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References


Röthlisberger, M. (submitted). Between social and linguistic constraints: The role of gender in Jamaican English ditransitive constructions.


# Distribution of tokens by text time and variety

<table>
<thead>
<tr>
<th>Text time</th>
<th>CAN</th>
<th>GB</th>
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<th>IRE</th>
<th>JA</th>
<th>NZ</th>
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<tr>
<td>1990-1994</td>
<td>37</td>
<td>481</td>
<td>379</td>
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<tr>
<td>2001-2005</td>
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<td>0</td>
<td>148</td>
<td>0</td>
<td>108</td>
<td>9</td>
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