On the Syntax-Socio Interface

Implications of Sociolinguistic Variation for Competence Grammar

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Introduction

- Non-categorical grammatical constraints on variation are nonetheless systematic, and shared across communities.
- What underlies this systematic behavior?
  - Functional constraints on linguistic behavior
  - Other properties of the grammar
  - Direct knowledge of the constraints

What is grammar a model of?

- E-language vs. I-language
- Intensional vs. extensional models
- Grammaticality vs. other patterns
- Static or evolving systems

A social theory of language

It is impossible for a social theory of language to view *langue* as a pre-existing convention, for a social theory of language must be about the process of conventionalization. By the same token, it is impossible for a social theory of language to view the individual speaker's competence as a simple internalization of convention. Convention and individual competence are mutually produced and reproduced in practice, thus linguistic practice is not simply the consensual use of a common system.

A social theory of language

Convention is not a thing but a process, and the possibility of convention resides in speakers' ability to hypothesize about others' behavior and to take interpretable action, along with a commitment to doing so within a particular social unit. Our speaker, or speaking subject, can not be a clone but must be an agent in the process of convention-making.

(Eckert 2000:45)

Linguistic competence in a social theory of language

- Knowledge of language used in linguistic processing
- Includes the usual plus:
  - social meanings
  - prefabricated units (collocations)
  - frequentistic information
- Continually evolving with experience

Overview

- Experimental evidence for knowledge of non-categorical constraints (AAVE copula absence)
- Sketch of a formal approach in sign-based grammar
- Kinds of linguistic knowledge
- Heuristics for determining the boundaries of competence grammar
- Future work

Experimental Evidence

- (Preliminary) case study of AAVE copula absence
  - Description of variable
  - Discussion of social meaning
  - Methodology
  - Results

AAVE copula Absence

- (1) a. She is my piano teacher.
  b. She's my piano teacher.
  c. She my piano teacher.

- Labov (1972, 1995): Phonological deletion (extension of OAD process of contraction)

- Predicts that absence should be possible only if contraction is. Cleanest if absence is possible *everywhere* contraction is.

AAVE copula absence

- (2) a. I'm tired and so's my dog.
  b. *I'm tired and so my dog.

- (3) a. How old you think his baby is?
  b. How old you think his baby?
  c. *How old you think his baby's?

- (4) a. Tha's the man they say is in love.
  b. Tha's the man they say in love.
  c. *Tha's the man they say's in love.

AAVE copula absence

- Bender (2001) proposes a syntactic account.
- Somewhat surprisingly, not possible without phonologically empty category of some sort.
- Two possibilities: null form of the copula, or a potentially phonologically null construction.

Non-categorical grammatical constraints

- Pronoun vs. full-NP subject (robust)
- Part of speech of the predicate (robust)
- Preceding phonological environment (less robust)
- *is* vs. *are* (less robust)

Following grammatical environment

Studies			Environments				
Form	Location	Citation	__NP	__Loc	__Adj	__V+ing	__gon
is	NYC-t	Labov 69	.2	.36	.48	.66	.88
is	NYC-j	Labov 69	.32	.52	.36	.74	.93
is	NYC-c	Baugh 79	.14	.31	.72	.59	.78
is+are	Detroit	Wolfram 69	37%	44%	47%	50%	79%
is	LA	Baugh 79	.32	.29	.56	.66	.69
are	LA	Baugh 79	.25	.69	.35	.62	.64
is+are	Texas (c)	Bailey & Maynor 87	.12	.19	.25	.41	.89
is+are	Texas (a)	Bailey & Maynor 87	.09	.15	.14	.73	.68
is+are	EPA	Rickford et al 1991	.29	.42	.47	.66	.77

(Rickford 1998:190)

Following grammatical environment

- What causes this pattern?
- Do speakers have knowledge of it?
- If so, in what way do they use that knowledge?

Social meaning

- Linguistic variation is socially meaningful (Labov 1963, Eckert 2000, Eckert & Rickford (eds) 2001)
- Social and grammatical constraints interact.

> The relatively high frequency with which zero realization is found preceding intentional future *gonna* among middle-class informants suggests that zero-realization preceding *gonna* is less stigmatized than zero realization in other environments.
>
> (Wolfram 1969:172)

Kinds of social meaning

- Forms like *Please, Good morning, uh huh*
- Forms associated with some situation type
- Forms associated with some stance
- Forms associated with some property (of the speaker)

Properties of social meaning

- Social meanings boil down to expectations about how interlocutors will react to certain forms (cf. Harder 2000).
- Such expectations are grounded in speakers' experience with linguistic practice.
- Grammaticized social meanings are abstract and get vivified in context.
- Social meanings can be relativized to particular types of addressees.
- Social meanings are *fluid* to the extent that they are *local*.

Hypothesis

I. Copula absence/presence in AAVE is associated with some social value.

II. Copula absence/presence in AAVE is more strongly associated with that social value the more marked the environment is for each variant.

Experimental methodology

- Matched-guise experiment (Lambert et al 1975)
- 4 speaker each recorded saying each of 4 test sentences
- contrast copula absence vs. presence, following noun vs. V+*ing*
- listeners rated each utterance on seven 7-point scales

Test sentences

- Yeah I know her. She's teachin me piano at Music World. (PV)
- Yeah I know her. She's my piano teacher at Music World. (PN)
- Yeah I know her. She teachin me piano at Music World. (AV)
- Yeah I know her. She my piano teacher at Music World. (AN)

Scales

- comical-not comical
- confident-not confident
- well educated-not well educated
- good job-not a good job
- likeable-not likeable
- polite-impolite
- reliable-unreliable

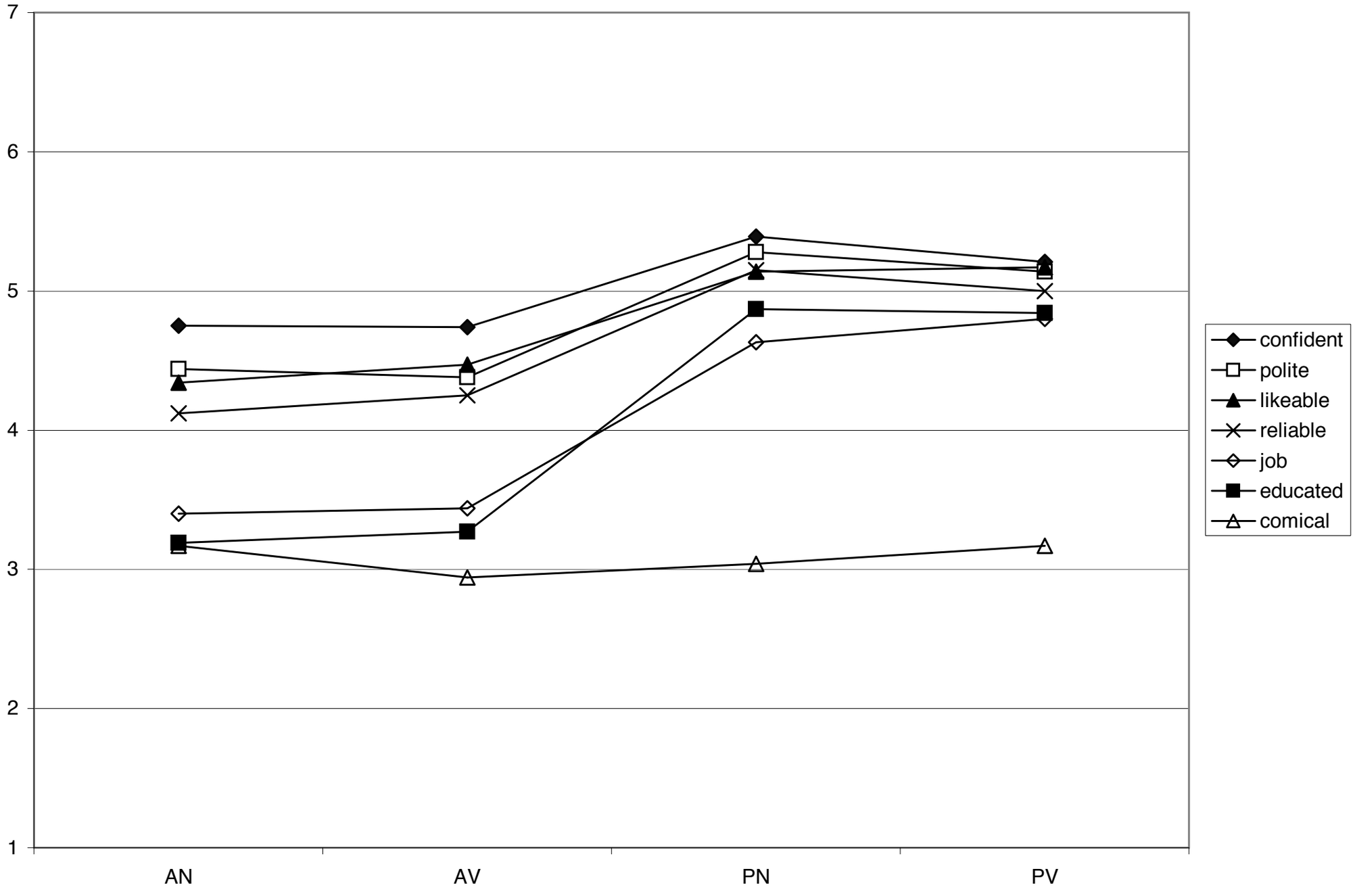
Participants

- AAVE speakers (N=11)
- African-Americans familiar with AAVE (N=4)
- non-African-Americans familiar with AAVE (N=7)
- native English speakers not familiar with AAVE (N=6)
- non-native English speakers not familiar with AAVE (N=7)

Responses

- 35 listeners judged 16 sentences (4 talkers x 4 test sentences) on 7 scales
- Ideally, 3920 data points
- 338 (8.6%) are missing

Results: absence vs. presence



Contrast significant for all scales except ‘comical’ (two-tailed Wilcoxon signed rank test)

Results: absence vs. presence by group

I. educated, job, likeable, reliable

II. confident, educated, job, likeable, polite, reliable

III. educated, job, likeable, polite, reliable

IV. confident, educated, job, likeable, polite, reliable

V. educated, job, likeable, reliable

Results

- Hypothesis I supported
- Hypothesis II predicts:

not well educated		AN	AV		PN	PV		well educated
	*	*	*	*	*	*	*	

Results: __N vs. __V

Group	AN < AV	PN < PV
I	n.s.	0.019
II	0.009	0.005
III	n.s.	n.s.
IV	n.s.	n.s.
V	n.s.	n.s.

p values, one-tailed Wilcoxon sign-rank test

Results

- Preliminary evidence suggests that AAVE copula absence/presence is associated with some social value
- Further, Groups I and II evaluated copula absence/presence differently depending on the grammatical environment
- This evaluation depends on knowledge of relative markedness of different environments
- For further details, see Bender 2001 and Bender forthcoming.

Sign-based grammar

- Morphemes, words and phrases are all pairings of form and meaning (i.e., Saussurean signs)
- A grammar consists of descriptions of such pairings: lexical entries, lexical rules, and phrasal constructions.
- 'Meaning' can include social meaning
- Lexical entries and constructions can serve as a place to 'hang' probabilities

Sketched formalization

.4 $\begin{bmatrix} \textit{copula-be} & \\ \text{COMPS} & \langle \text{NP} \rangle \\ \text{CTXT} \mid \text{SOCIAL} & \textit{`educated'} \end{bmatrix}$ **.6** $\begin{bmatrix} \textit{silent-copula-ph} \\ \text{ARGS} \quad \langle \text{NP} \rangle \end{bmatrix}$

.2 $\begin{bmatrix} \textit{copula-be} & \\ \text{COMPS} & \langle \text{VP[prp]} \rangle \\ \text{CTXT} \mid \text{SOCIAL} & \textit{`educated'} \end{bmatrix}$ .8 $\begin{bmatrix} \textit{silent-copula-ph} \\ \text{ARGS} \quad \langle \text{VP[prp]} \rangle \end{bmatrix}$

Generation

- Like parser of Jurafsky 1996, select the most probable tree that can be generated from input semantics
- Copula absence will always win, unless speaker wants to express the social meaning associated with copula presence.
- It takes more to override preference for copula absence before a V+*ing* than before an NP

Linguistic competence in a social theory of language

- Linguistic experience is experience with signs
- Grammar is a collection of generalizations (of varying degrees) over those signs
- Social meaning can attach to signs
- Frequency/probability information reflects effect of each new experience or (re)production on the grammar

Linguistic knowledge

- Prefabricated units, i.e., imperfect generalization (cf. usage-based models Langacker 1987, 1990, 2000; Kemmer & Barlow 2000)
- Frequency information (MacDonald 1994, Jurafsky 1996)
- Social meaning (Hudson 1996, Pollard & Sag 1994)

Heuristics

- Arbitrariness/language specificity (leaks)
- Structure: A system of contrasts
- Creativity of use
- Heideggerian *throwness* of use/acquisition

Future work: Japanese

- AAVE copula absence has well-studied grammatical constraints, but poorly understood social value.
- Japanese (or Korean) honorifics have well-studied social value (e.g., Okushi 1997) but poorly understood grammatical constraints.
- Honorifics are also an aspect of the prestige variety.

Future work: Computational Sociolinguistics

- Dialect detection, for parsing and appropriate generation
- Register and affect detection, for advanced natural language understanding
- Speech act interpretation (Terkourafi & Villavicencio 2003)
- Automatic code-switching detection (useful for endangered languages documentation)

Conclusion

- Syntacticians inherited a conception of language as a set of sentences from formal languages theory.
- The cognitivist position requires that we questions this conception.
- In a social theory of language, grammaticality judgments may reflect a speaker's linguistic system, but they are not the essence of it.

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