

Tracking Lexical and Syntactic Alignment in Conversation

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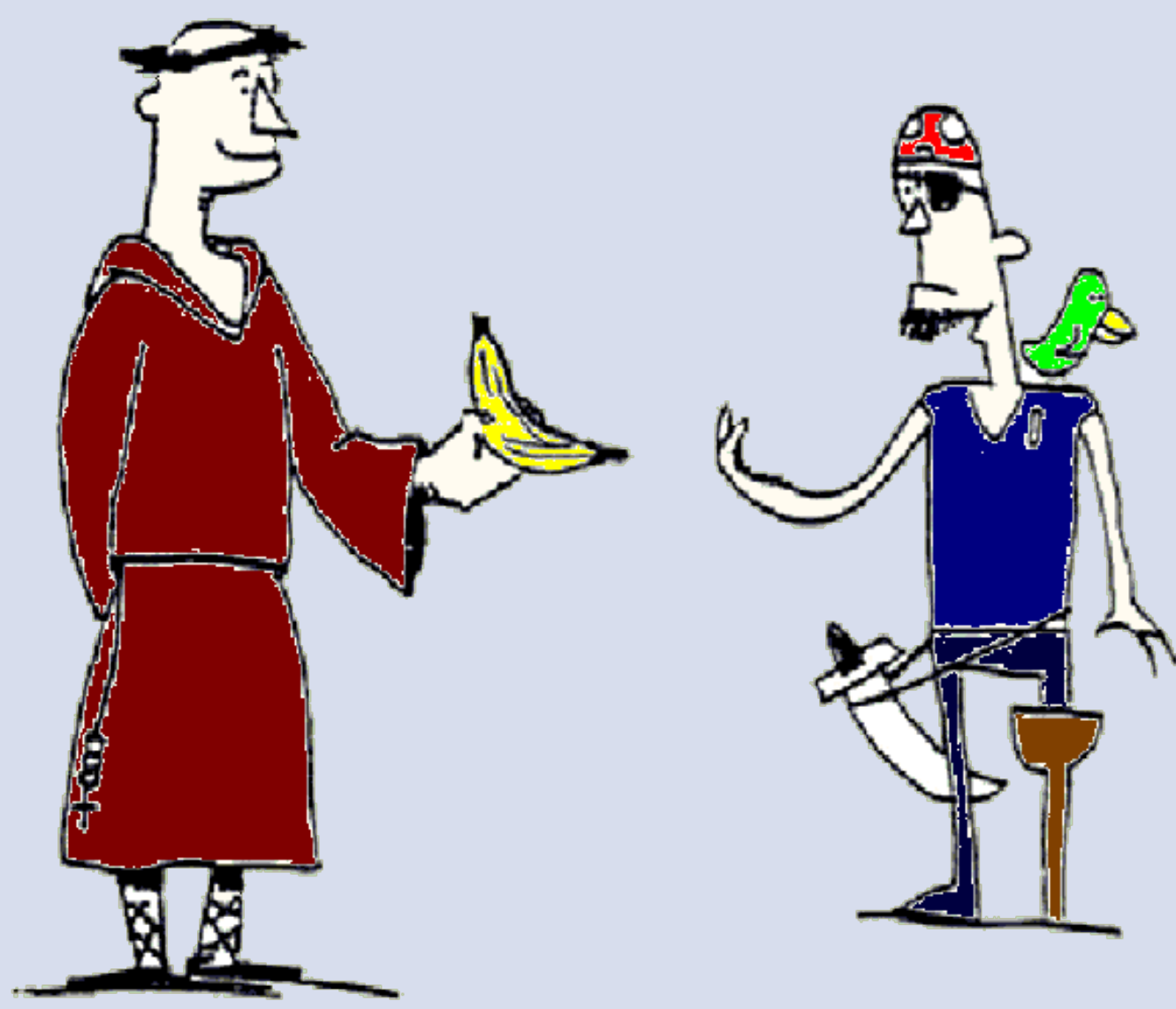


Syntactic alignment

The apparent tendency for speakers to repeat their own or others syntactic or structural choices in conversation

Experimental and corpus studies use specific constructions to show conversational participants are more likely to reuse the version they have just heard or produced

Dative alternation



Two semantically equivalent descriptions:

PREPOSITIONAL:

The monk giving the banana to the pirate

OR

DITRANSITIVE:

The monk giving the pirate the banana

BUT data used in these studies is not adequately representative of ordinary dialogue

AND there is no control condition

→ do sentences in real conversations have more turn-by-turn structural matching than would occur by chance?

Experiment 1

take dyadic conversations from hand-coded corpus of dialogue (DCPSE)

GENUINE DIALOGUE:

A: Are you going to go to all of the phonology lectures

B: I think I ought to do that

A: Yes. I think you had. Yeah

B: I mean I don't know how much I'll take in

A: I think I'll go to most of them. But I won't go to all of pragmatics the day before

create control dialogues

RANDOM-SPEAKER CONTROL DIALOGUE (R1):

A: Are you going to go to all of the phonology lectures

C: Well uh ask one of the stallholders down Chapel Street. They'll all know

A: Yes. I think you had. Yeah

C: Uhm I was down there the other day and I got some excellent salmon

A: I think I'll go to most of them. But I won't go to all of pragmatics the day before

RANDOM-SENTENCE CONTROL DIALOGUE (R2):

A: Are you going to go to all of the phonology lectures

D: Uhm one of the few. Oh George was impossible

E: Just normal water

F: Yes. What do they call it

G: Oh dear. It does not bode very well

code each dative alternation sentence (1 if it uses the form of the most recent prime sentence, 0 otherwise)

normalise → compare real and control figures

Results 1

	N	Real	R1	R2
Mean	254	0.014	0.014	0.012
(s.d.)		(0.019)	(0.019)	(0.016)

ANOVAs Real v R1: $F_{(1,251)} = 0.11, p = 0.92$
Real v R2: $F_{(1,251)} = 1.07, p = 0.30$

real and control alignment are not different

Experiment 2

take same corpus

code prime-target pairs

→ does the form of the prime (CPRIME) predict the form of the target (CTARGET)?

→ is there a different effect if the lemma of the ditransitive verb (VLEMMAID) is the same in prime and target?

Results 2

All data - Observed (Expected)			
CTARGET:	Ditran	Prep	Total
Ditran	527 (497.1)	319 (348.9)	846
CPRIME Prep	318 (347.9)	274 (244.1)	592
Total	845	593	1438

$\chi^2_{(1)} = 10.573, p = 0.001^{**}$

Significant effects on CTARGET (ANOVA):

CPRIME: $F_{(1,1425)} = 76.364, p < 0.001^{**}$

The form of the prime strongly predicts the form of target

CPRIME × VLEMMAID:

$F_{(1,1425)} = 28.969, p < 0.001^{**}$

The effect is stronger if lemma is identical in prime and target

Identical Lemma - Observed (Expected)			
CTARGET:	Ditran	Prep	Total
Ditran	157 (129.4)	15 (42.6)	172
CPRIME Prep	10 (37.6)	40 (12.4)	50
Total	167	55	222

$\chi^2_{(1)} = 105.6, p < 0.001^{**}$

Post-hoc tests show NO effect if lemma is non-identical

NON-identical Lemma - Observed (Expected)			
CTARGET:	Ditran	Prep	Total
Ditran	370 (375.8)	304 (298.2)	674
CPRIME Prep	308 (302.2)	234 (239.8)	542
Total	678	538	1216

$\chi^2_{(1)} = 0.454, p = 0.50$

Conclusions

Experiment 1 shows syntactic matching of the dative alternation in real dialogues is not reliably different from controls

In ordinary conversation, there is no unequivocal evidence of syntactic alignment

→ Low power means we cannot reject the null hypothesis outright

→ Experiment 2 uses each prime-target pair in the DCPSE as a data point not each dialogue participant

Experiment 2 shows that the form of the prime predicts the form of the target, BUT the overall likelihood of a syntactic match across turns can be accounted for by the repetition of specific words

What syntactic matching there is can be accounted for by lexical matching

There is insufficient data to definitively prove that alignment effects are absent in ordinary conversation, but these results indicate that the strength and ubiquity of structural priming have been overstated

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