

Tracking the Dative Alternation in Conversation

The strongest evidence for specifically structural alignment (the apparent tendency for speakers to repeat their own or others syntactic or structural choices in conversation) in dialogue comes from experimental studies of task-oriented dialogue (e.g. Branigan, Pickering and Cleland, 2000) and corpus studies that track frequency of use of particular constructions (e.g. Gries, 2005).

However, the data used in these studies is not adequately representative of ordinary dialogue; in the experiments, the confederate is scripted and Gries (2005)'s corpus is biased towards written and spoken monologue, with a significant proportion of the dialogues it samples involving specialised institutional settings, e.g. legal cross examinations and broadcast interviews. Lexical similarity is also known to increase structural alignment, though the relative contribution of the two effects in genuine dialogue has not been thoroughly examined.

Additionally, as these studies have tended to track the frequency of use of specific constructions across participants and time, the chance level of structural matching is unknown and effects such as conversational genre cannot be discounted (cf. Tannen (2007)).

In order to address these issues, we conducted two experiments which tested the degree of match of dative alternation structures in the Diachronic Corpus of Present-Day Spoken English (DCPSE), a corpus of naturally occurring dialogue data. We compared this measure to control conditions for the same genuine conversational data manipulated to create fake dialogues from turns actually occurring in different conversations (see table 1).

Experiment 1 coded each dative alternation sentence (1 if it uses the form of the most recent prime sentence, 0 otherwise) and then compared normalised figures for control versus fake dialogues, to test whether sentences in real conversations have more turn-by-turn structural matching than would occur by chance.

Experiment 2 coded prime-target pairs to replicate Gries' (2005) corpus study using only spoken dialogue data (the DCPSE contains the spoken part of the ICE-GB corpus on which Gries conducted his analysis). This allows us to test whether the form of the prime (CPRIME) predicts the form of the target (CTARGET) and whether there is a different effect if the lemma of the ditransitive verb (VLEMMMAID) is the same in prime and target.

The results of Experiment 1 (table 2) show that, for the dative alternation construction, sentences in the DCPSE do not show reliably more structural matching than would occur by chance. However, people are reliably more likely to repeat their own constructions than those used by their conversational partners. This is consistent with the finding that production-production priming is higher than comprehension-production.

In Experiment 2, we observe priming for both the ditransitive and prepositional dative forms, as Gries did: observed target frequencies of each are greater than expected frequencies when following a prime of the same form, and lower than expected after a prime of the other form (see table 3). However, although the form of the prime did predict the form of the target, this effect is stronger if the verb lemma is identical in both prime and target, and there is no effect if the lemma is not the same.

These results suggest that whilst there are genuine alignment effects being observed, we cannot rule out the possibility that they are lexically specified, or collocational, rather than specifically syntactic or structural. These findings do not contradict Gries (2005), as his major finding was that individual verbs differ in their sensitivity to priming effects, a finding that is supported by the evidence that the variation in our data can be accounted for by those cases in which the lemma is identical between prime and target.

In ordinary conversation, we have found no unequivocal evidence of syntactic priming effects for the dative alternation. Individuals do tend to repeat the same structure, however, they are no more likely to converge on the same version of each structure with their conversational partners than would be expected by chance. In addition, the overall likelihood of a match in syntactic structure across turns appears to be accounted for by the repetition of specific words.

While there is insufficient data in the DCPSE corpus to definitively prove that structural priming effects are absent in ordinary conversation, these results indicate that the strength and ubiquity of structural priming (see e.g. Pickering and Ferreira (2008)) may have been overstated.

Data

Table 1: Real versus Fake Dialogues

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	
RANDOM-SPEAKER CONTROL (R1):	RANDOM-SENTENCE CONTROL (R2):
A: Are you going to go to all of the phonology lectures	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	D: Uhm one of the few. Oh George was impossible
A: Yes. I think you had. Yeah	E: Just normal water
C: Uhm I was down there the other day and I got some excellent salmon	F: Yes. What do they call it
A: I think I'll go to most of them. But I won't go to all of pragmatics the day before	G: Oh dear. It does not bode very well

Table 2: Results Experiment 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		

Table 3: Results Experiment 2

All data - Observed (Expected)						
CTARGET:		Ditransitive	Prepositional	Total		
CPRIME	Ditran	527 (497.1)	319 (348.9)	846		
	Prep	318 (347.9)	274 (244.1)	592		
	Total	845	593	1438		
All data		$\chi^2_{(1)}=$	10.6	p = 0.001		
Identical Lemma		$\chi^2_{(1)}=$	105.6	p = 0.001		
Non-identical Lemma		$\chi^2_{(1)}=$	0.5	p = 0.500		

References

- Branigan, H., Pickering, M., & Cleland, A. (2000). Syntactic co-ordination in dialogue. *Cognition*, 75, 13–25.
- Giles, H., Coupland, N. & Coupland, J. (1991). Accommodation theory: Communication, context, and consequence, In *Contexts of Accommodation*, Giles, H., Coupland, J. & Coupland, N., eds. 1-68
- Gries, S. (2005). Syntactic Priming: A Corpus-based Approach. *Psycholinguistic Research*, 34 (4), 365–399.
- Pickering, M. J., & Ferreira, V. S. (2008). Structural priming: A critical review. *Psychological Bulletin*, 134 (3), 427–459.
- Tannen, D. (2007). *Talking voices: Repetition, dialogue and imagery in conversational discourse*. Cambridge: Cambridge University Press. (Second Edition).