

*Rethinking the German three-way system of spatial demonstrative
adverbs: evidence from electronic corpora*

Johnathan L. W. Gajdos

johnathan-gajdos@uiowa.edu

Department of German

University of Iowa

October 9, 2009

AAAL 2009, University of Alberta

Context

- Demonstrative adverbs: speakers refer to objects in the context of the location relative to the speaker-hearer interaction (the local anchor and the location identified by the adverb are both relevant).
- English: *here, there*
- German: *hier* 'here', *dort* 'there', *da* 'here/there'

English

- Deictic choice that depends on speaker location
- Can have anaphoric use, but generally deictic function
- The speaker must use *here* if (s)he is in London at the time of utterance and *there* if (s)he is not. There is a deictic relationship between source and target (Lyons 1977):
 - a. I was born in London and have lived here all my life.
 - b. I was born in London and have lived there all my life.

German

- Tripartite system in German: rough equivalents *hier* ‘here’ and *dort* ‘there’, but also a third choice—
- Have deictic function, but can also function anaphorically
- Karl Valentin ist in München geboren, und er ist hier/dort/da auch aufgewachsen. (Lenz 2001)
‘Karl Valentin was born in Munich, and he also grew up here/there/here-there.’

CLAIM: *da* as neutral form—no information provided about location of speaker

German

- Ich bin vor vier Jahren von Düsseldorf nach Nijmegen gegangen und *hier/dort/da* will ich vorläufig bleiben. (Ehrich 1982)

‘Four years ago I moved from Düsseldorf to Nijmegen, and here/there/here-there I want to stay for some time.’

CLAIM: *hier* can only be used when speaker is in Nijmegen and *dort* only if not in Nijmegen; is *da* more versatile?

Defining *da* Wahrig (2005)

- “*hier, an dieser Stelle; dort, an jener Stelle*”
‘here, at this place; there, at that place’
- a single numbered definition in the entry for *da*

Defining *da*

Duden Universalwörterbuch (2006)

- Two definitions of *da*—*dort*-focused and *hier*-focused
- *dort*-centric (10 examples total)
 - da ist die Haltestelle
‘there is the (bus) stop’
 - es muss noch Brot da
‘there must still be bread (Ø/here/there)’
 - diese Dinge sind dazu da, dass man sie benutzt
‘these things are here/there to be used’
 - er wohnt da
‘he lives there/here’

Defining *da*
Duden Universalwörterbuch (2006)

- Two definitions of *da*—*dort*-focused and *hier*-focused
- *Hier*-centric (3 examples total)
 - da sind wir
‘here/there we are’
 - ist da jemand
‘is someone there/here? ’
 - da, nimm das Geld
‘here, take the money’

An empirical approach—
corpus data and survey/judgment data

Research questions

- What can account for the distribution and use of the members of the German three-way demonstrative adverb system of spatial deixis?
 - Are corpus data consistent with native speaker survey data?
 - What is the meaning that should be assigned to *da*?
 - What accounts for the selection, preference, or dispreference for *da* in an utterance?

Research questions, continued

- How do L1 child learners of German make use of these spatial expressions, and how is it the same or different from adult native and non-native speakers of German?

Further research questions

- How is this system influenced by semantic-pragmatic conditions?
- Is there evidence for variation based on type of discourse (e.g., spoken v. written)?
- Is there evidence for regional variation?

Research questions from related research (survey data/grammaticality judgments)

- How do L2 speakers of German interpret and use the members of this demonstrative adverb system?
 - Is there a learner gap? If so, at which levels of learning?
 - Does there appear to be L1 transfer for English native speakers learning German?
 - Do highly advanced non-native-speakers of German exhibit learner-like, native-like, or distinct patterns?

Part I: Corpus analysis

Overview of corpora used (Figure 1)

	Number of words	Time period	Number of works	Contents
Juilland-D	500,000	1920-1939	398	<i>Distribution by number of words:</i> Drama: 20% Novels, short stories: 20% Essays: 20% Journalism: 20% Scientific writing: 20%
DWDS Core Corpus (Kerncorpus)	122,816,010 (2,224,542 distinct words)	1900-2000	79,830	<i>Distribution by number of words:</i> Fiction: 26% Technical writing: 22% Scientific writing: 24% Newspapers: 28% <i>Distribution by number of texts:</i> Literature: 26% Journalism: 27% Technical writing: 20% Spoken transcriptions: 5%
Spoken (gesprochene Sprache)	2,500,000	1900-2000	756 speakers (multiple texts per speaker)	<i>Distribution by number of words (approximate):</i> Speeches (1947-1961): 8% Radio speeches (1929-1944): 16% Austrian parliament minutes (1948-1956): 8% TV literary interviews (1988-2001): 18% Interviews with German immigrants in Israel (1989-1994): 12% Bundestag minutes (1998-1999): 12% Austrian parliament minutes (1948-1956): 8%
DDR corpus	9,000,000	1949-1990	1150	Currently, public documents
<i>Die Zeit</i> corpus	106,000,000	1946-2008	493,380	A single German-language newspaper

Part I: General text corpus analysis

Basic corpus search patterns for corpus sentences

<i>hier</i>	<i>Da</i>	<i>dort</i>
+	-	-
-	+	-
-	-	+
+	+	+
+	+	-
+	-	+
-	+	+
+	+ or -	+ or -
+ or -	+	+ or -
+ or -	+ or -	+

Search restricted to sentence boundaries—

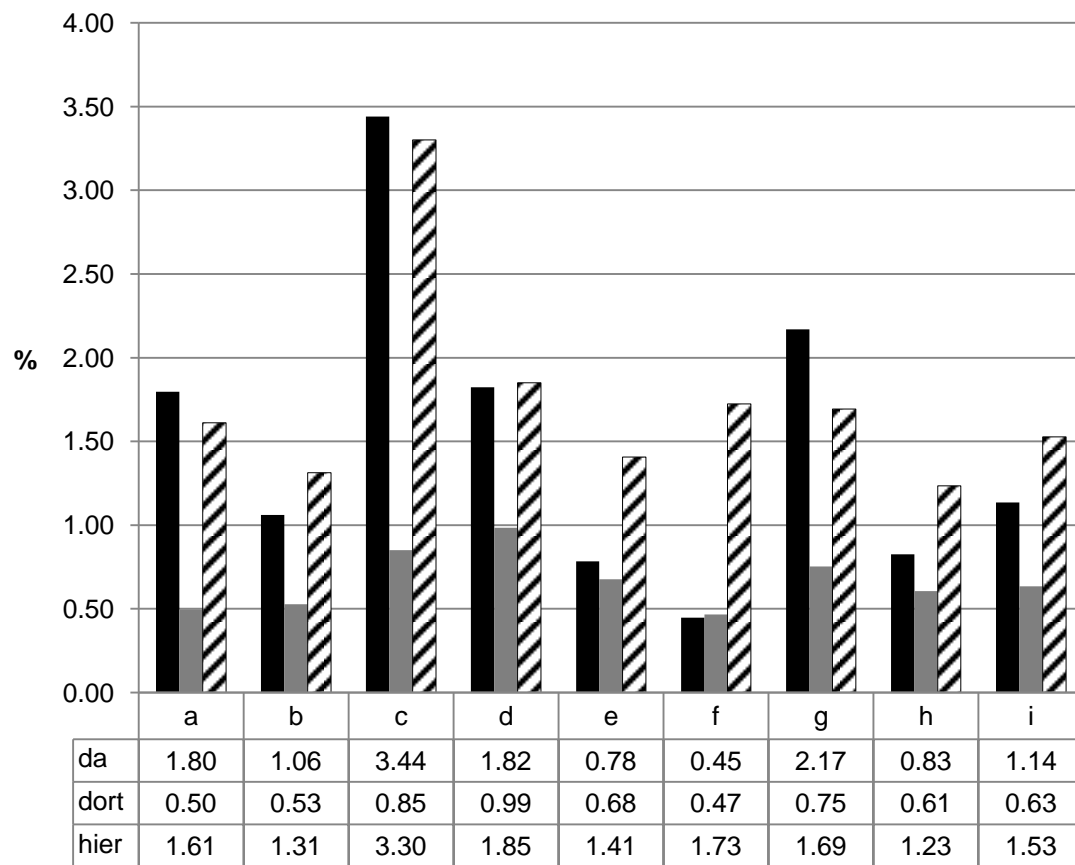
Where do these words co-occur?
Can indicated locations be determined?

Figure 2

Percent of corpus sentences containing/excluding specified words (Figure 3)

<i>Search terms</i>		<i>Searched corpus (# of sentences)</i>								
Words present in single sentence	Words not present in single sentence	Juilland-D (32,846)	DDR (396,047)	Spoken (139,633)	Die Zeit (17.7M)	DWDS Core: Technical writing	DWDS Core: Scientific texts	DWDS Core: Fiction (1.8M)	DWDS Core: newspapers (1.4M)	DWDS Core: All genres (6.0M)
<i>da</i>		1.796	1.061	3.441	1.823	0.783	0.448	2.169	0.825	1.135
<i>da</i>	<i>hier, dort</i>	1.681	0.997	3.214	1.745	0.735	0.410	2.046	0.770	1.065
<i>da, dort, hier</i>		0.003	0.002	0.007	0.002	0.002	0.001	0.004	0.001	0.002
<i>dort</i>		0.496	0.527	0.851	0.985	0.676	0.467	0.753	0.606	0.634
<i>dort</i>	<i>da, hier</i>	0.411	0.475	0.731	0.903	0.636	0.403	0.659	0.565	0.573
<i>hier</i>		1.611	1.314	3.301	1.851	1.407	1.725	1.693	1.234	1.527
<i>hier</i>	<i>da, dort</i>	1.498	1.233	3.085	1.736	1.348	1.649	1.563	1.169	1.441
<i>da, dort</i>	<i>hier</i>	0.043	0.017	0.062	0.021	0.013	0.012	0.041	0.015	0.022
<i>dort, hier</i>	<i>da</i>	0.040	0.034	0.051	0.059	0.025	0.050	0.048	0.025	0.038
<i>hier, da</i>	<i>dort</i>	0.070	0.046	0.158	0.054	0.033	0.025	0.077	0.040	0.046

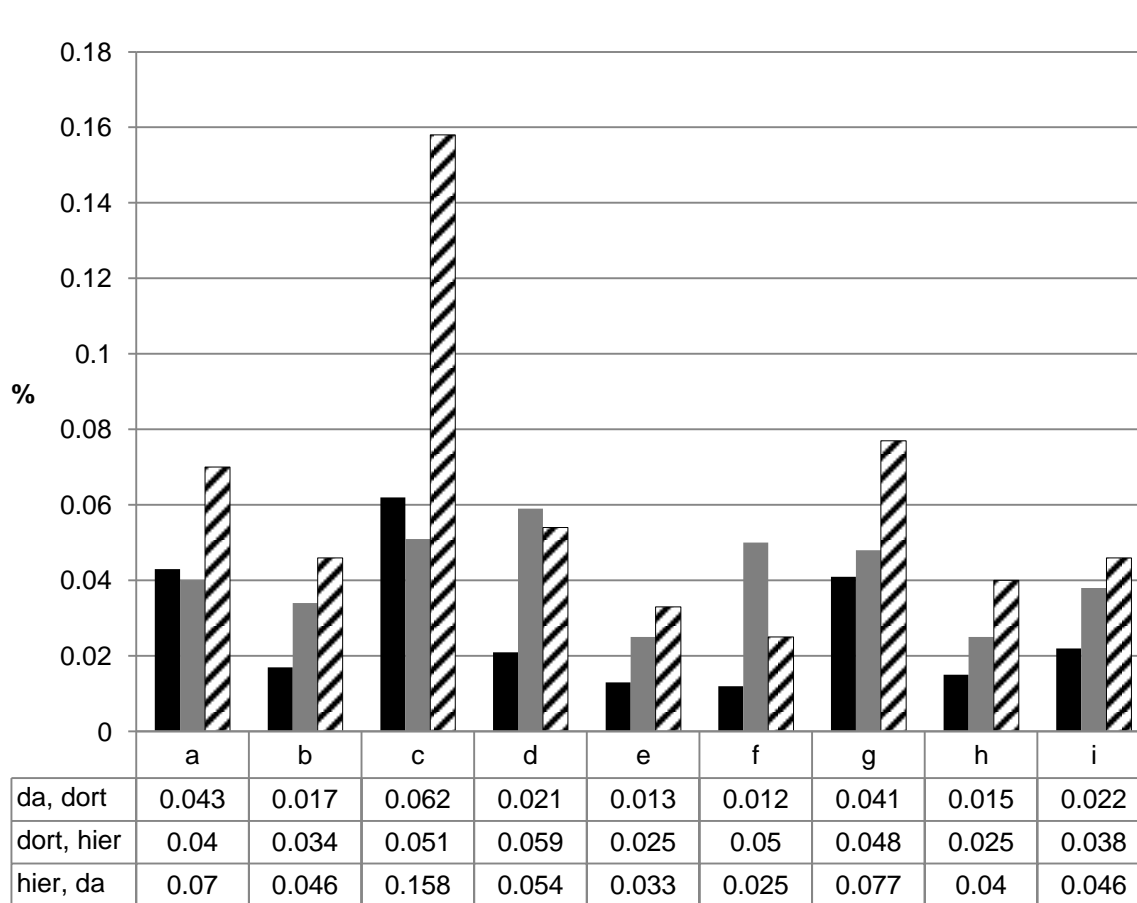
% of sentences containing *da*, *dort*, and *hier*, by corpus (Figure 4)



- a Juilland-D
- b DDR
- c Spoken
- d Die Zeit
- e Technical writing (core)
- f Scientific texts (core)
- g Fiction (core)
- h newspapers (core)
- I Entire DWDS core

Figure 4

% of sentences with exactly two of the three adverbs (Figure 5)



- *da, dort*
- *dort, hier*
- ▨ *hier, da*

Sentences containing the third word are excluded

- a Juilland-D
- b DDR
- c Spoken
- d Die Zeit
- e Technical writing (core)
- f Scientific texts (core)
- g Fiction (core)
- h newspapers (core)
- l Entire DWDS core

% of sentences containing only one of the three adverbs

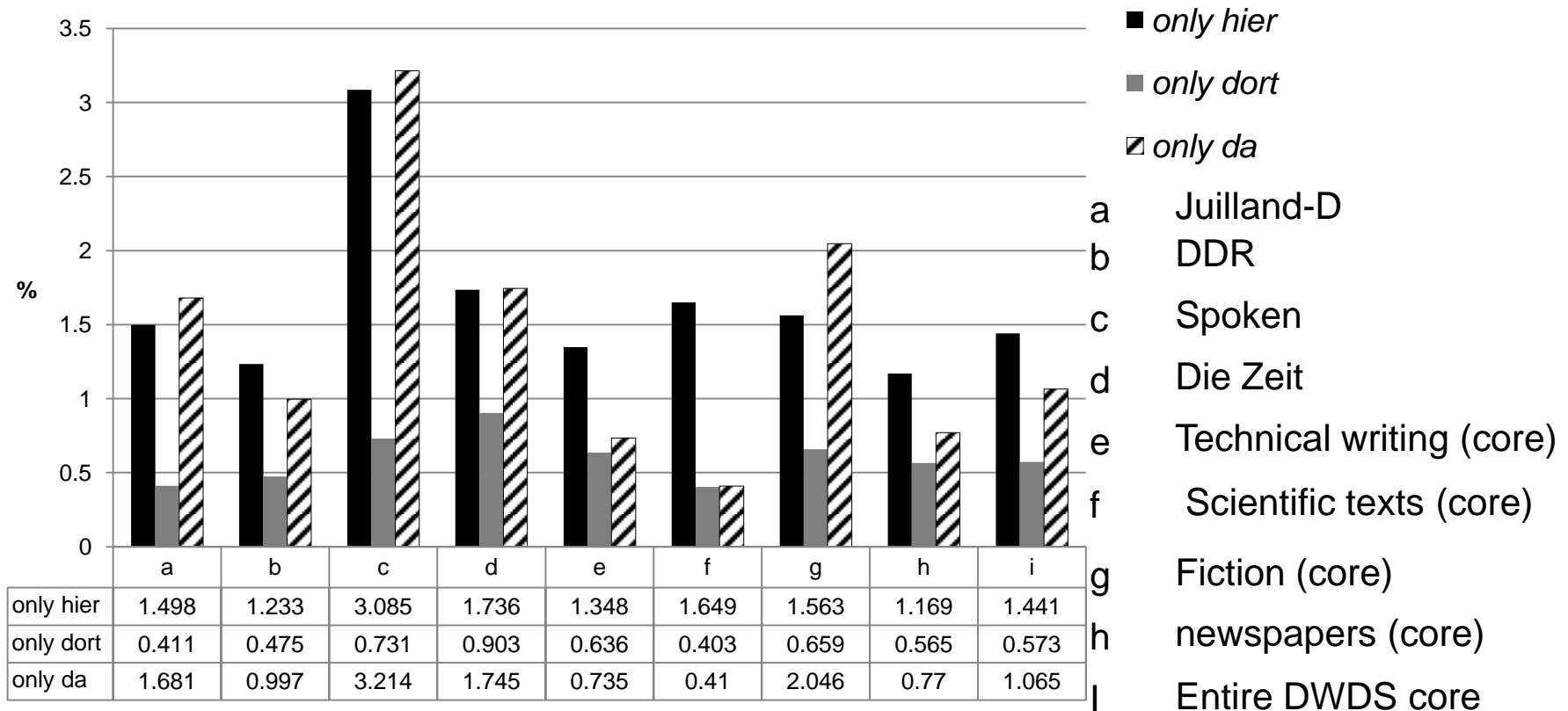


Figure 6

Ratios—sentences containing/excluding specified words::sentences containing *da* (Figure 7)

Search terms		Searched corpus											
Words present in single sentence	Words not present in single sentence	<i>range</i>	<i>median</i>	<i>mean</i>	Juillard-D	DDR	Spoken	Die Zeit (newspaper)	DWDS Core: Technical writing	DWDS Core: Scientific texts	DWDS Core: Fiction	DWDS Core: newspapers	DWDS Core: All genres
		<i>da</i>		0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<i>da</i>	<i>hier, dort</i>	0.05	1.07	1.07	1.07	1.06	1.07	1.04	1.06	1.09	1.06	1.07	1.07
<i>da, dort, hier</i>		608.4	545.7	606.7	590.0	700.5	480.5	808.2	493.5	344.6	544.0	953.0	545.7
<i>dort</i>		3.08	1.85	2.19	3.62	2.01	4.04	1.85	1.16	0.96	2.88	1.36	1.79
<i>dort</i>	<i>da, hier</i>	3.60	2.02	2.49	4.37	2.23	4.71	2.02	1.23	1.11	3.29	1.46	1.98
<i>hier</i>		1.02	0.81	0.83	1.12	0.81	1.04	0.98	0.56	0.26	1.28	0.67	0.74
<i>hier</i>	<i>da, dort</i>	1.12	0.86	0.89	1.20	0.86	1.12	1.05	0.58	0.27	1.39	0.71	0.79
<i>da dort</i>	<i>hier</i>	47.72	55.87	55.82	42.14	62.73	55.87	84.87	59.33	37.15	52.29	56.06	51.93
<i>dort, hier</i>	<i>da</i>	58.74	31.37	35.99	45.38	31.37	67.68	31.01	31.29	8.94	45.23	32.96	30.02
<i>hier, da</i>	<i>dort</i>	15.74	23.91	24.39	25.65	23.09	21.74	33.62	23.91	17.88	28.08	20.87	24.66

Corpus examples

All 3 co-occur; refer to 3 locations

1. Aber alles in Zusammenhang mit Pippi hat sich über die Jahre so verändert, heute taucht sie hier_{Loc1} als Puppe und dort_{Loc2} als Bild und da_{Loc3} als Filmfigur auf. (Die Zeit, 46/2007)
'But everything in connection with Pippi has changed so much [that] today she appears here as a doll and there as a picture and there as a movie character.'
2. Das Buch kommt denen entgegen, die gern hier_{Loc1} und da_{Loc2} und dort_{Loc3} naschen ... (Die Zeit, 49/2004)
'The book goes against those who prefer to nibble from here, there, and there.'
3. Wenn es dann losgeht, jammert jeder: da_{Loc1} nicht, dort_{Loc2} nicht und hier_{Loc3} nicht. (Die Zeit, 6/2003)
'When that begins, everyone whines: not here/there, not there, and not here.'
4. Dort_{Loc1} lag der Wasservogel, hier_{Loc2} das Pferd und da_{Loc3} der kleine Löwenmensch (Die Zeit, 1/2003)
'There lay the waterfowl, here the horse, and there the small lion man'

Corpus examples

All 3 co-occur; unclear # of locations

Und was sie da_{Loc2} alles entdeckt haben: Cafés und Jazzkeller, Antiquariate und gut bestückte Geschäfte, die voller Devisenhunger bis spät in den Abend ihre Türen geöffnet hatten aber wer sollte dort_{Loc2/Loc3} sein Geld ausgeben, wenn doch alle hier_{Loc1} saßen? (Zeit 51/2002)

‘And all that they found there: cafés and jazz bars; antique stores and well-stocked stores, which, eager for foreign currency, stayed open until late in the evening. But who was to spend money there, if they all stayed here (*in their hotels*)?’

Corpus examples

4 occurrences in a sentence; 4 locations

- Da_{Loc1} und dort_{Loc2} gibt es ein paar Abgründe, hier_{Loc3} und da_{Loc4} ein paar Leute, die außer dem Internet nichts haben. (Die Zeit, 9/2005)
'Here and there there are a few abysses; here and there a few people, who except for the Internet, have nothing.'
- Das Kind stellt Gefäße unter die Rinnsale, aus Plastik, aus Glas, aus Metall, es trommelt hier_{Loc1} , und da_{Loc2} klatscht es, dort_{Loc3} prasselt es, und hier_{Loc4} zirpt es, die Wassermusik füllt das Haus. (Die Zeit, 7/2005)
'The child places containers under the gutters—plastic, glass, and metal—it drums here, there it claps, it crackles there, and here it chirps; the water music fills the house.'

Part 2: Child-language corpus analysis (CHILDES)

Overview of corpora used

- CHILDES
- 6 German-language corpora
 - German language—83 children total
 - Age range: 0.15-12.23 yrs.
 - Median age: 3.05 yrs.
- Also includes speech of parents or other adults

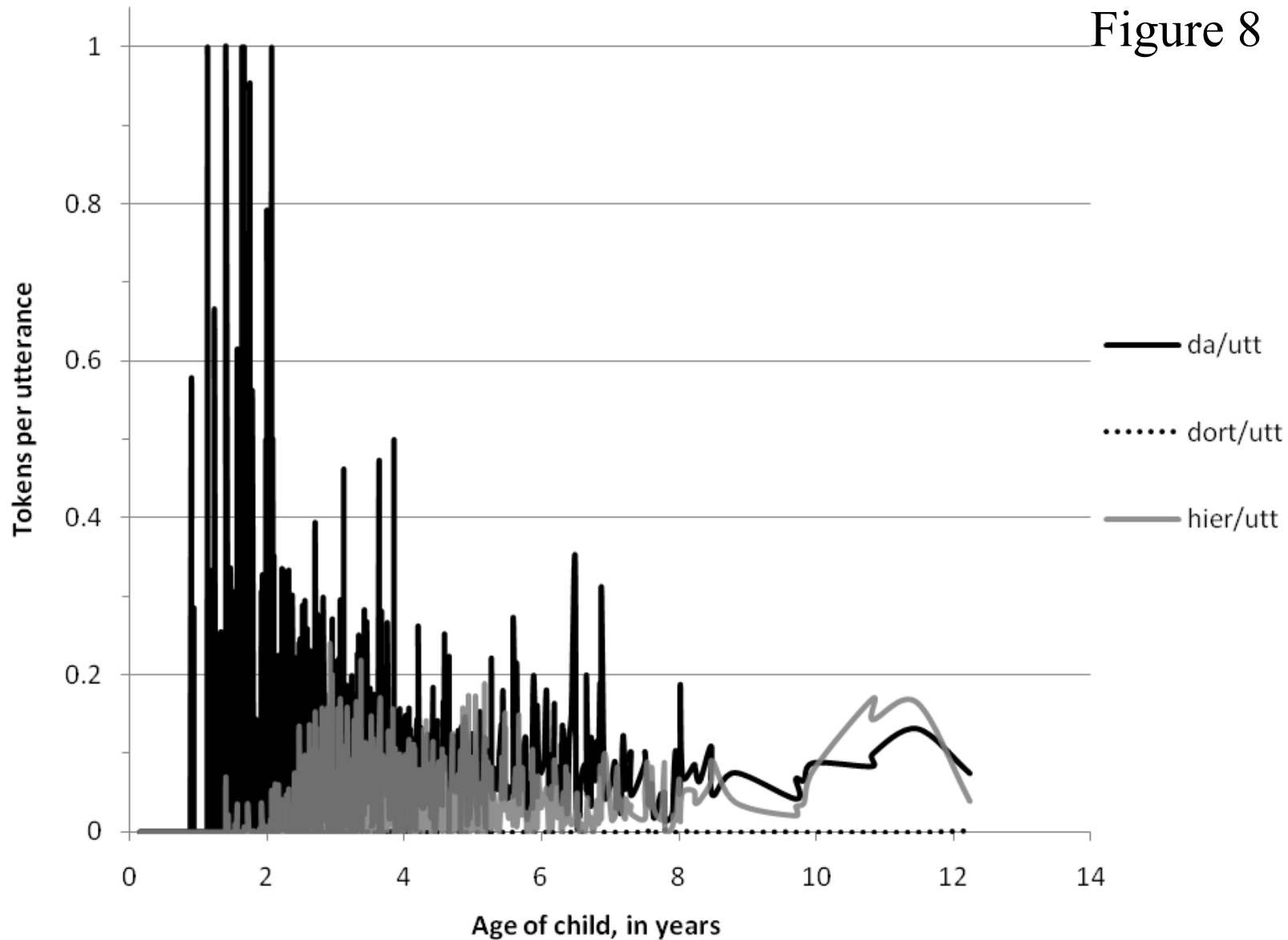
Part 2: Child-language corpus analysis (CHILDES)

Specific corpora used

- Caroline; ages 0;10 – 4;3; 1 child
- Miller; ages 0;10-4;0; 3 children
- Rigole; ages 0-7; 4 children
- Szagun; ages 1;6-3;48 children
- Wagner; ages 1;5–14;13 children
- Weissenborn; ages 7–11; 14 children

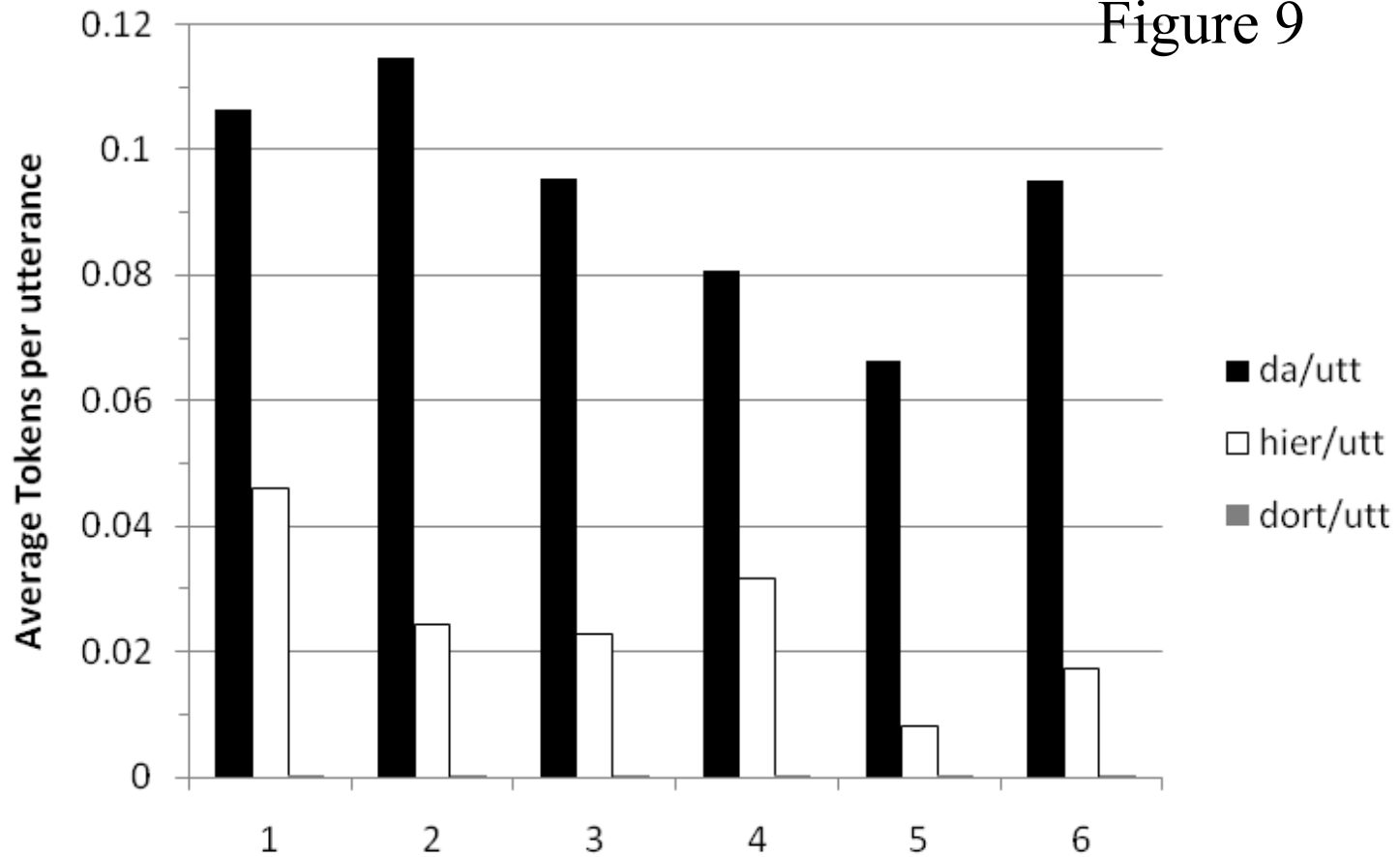
Use of *da*, *dort*, and *hier*, by age of child

Figure 8



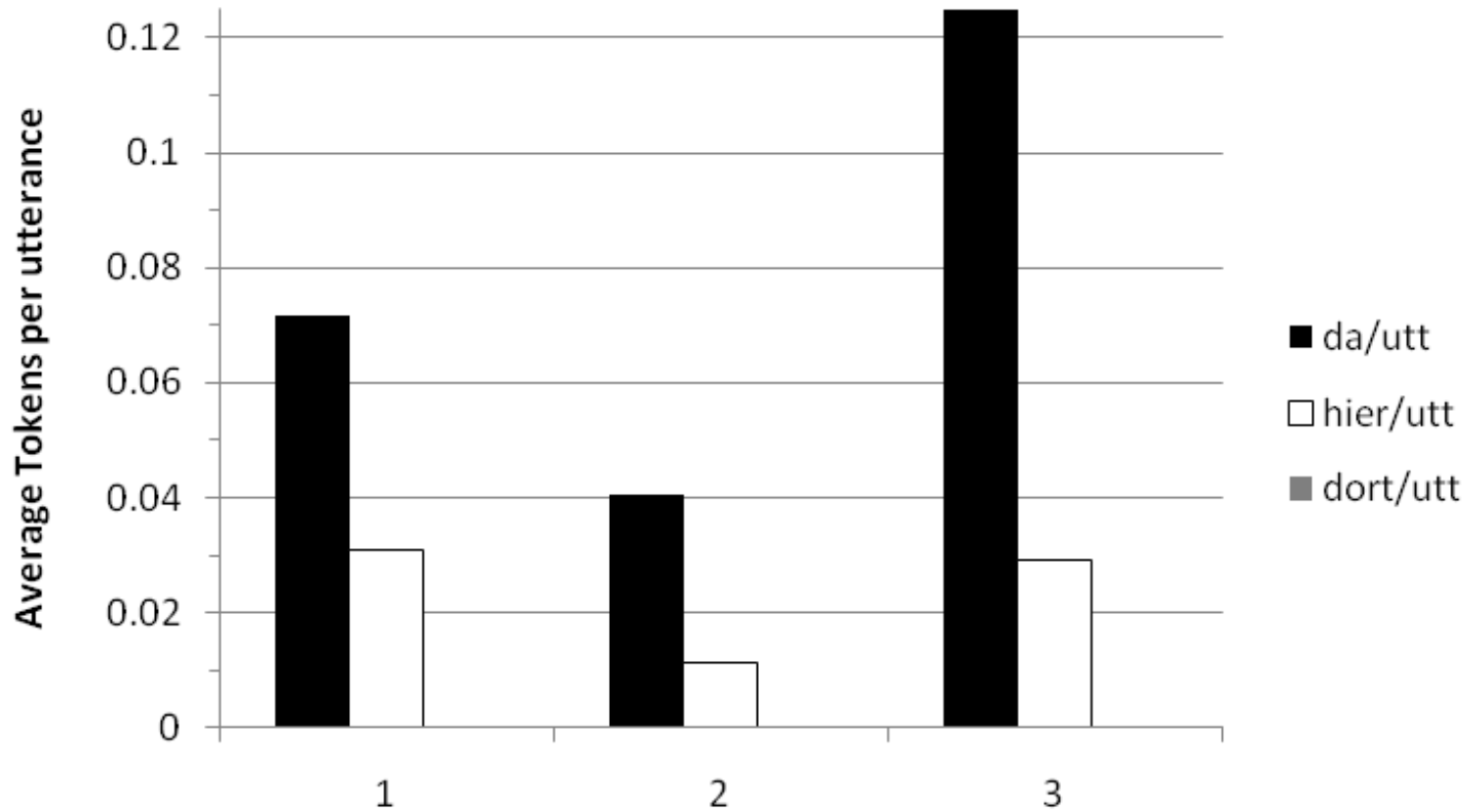
Overview of average tokens/utterance in six L1 child language corpora (CHILDES)

Figure 9



Overview of average tokens/utterance in six L1 child language corpora (CHILDES)--non-Child participants

Figure 10



Overview of average tokens/utterance in six L1 child language corpora (CHILDES)

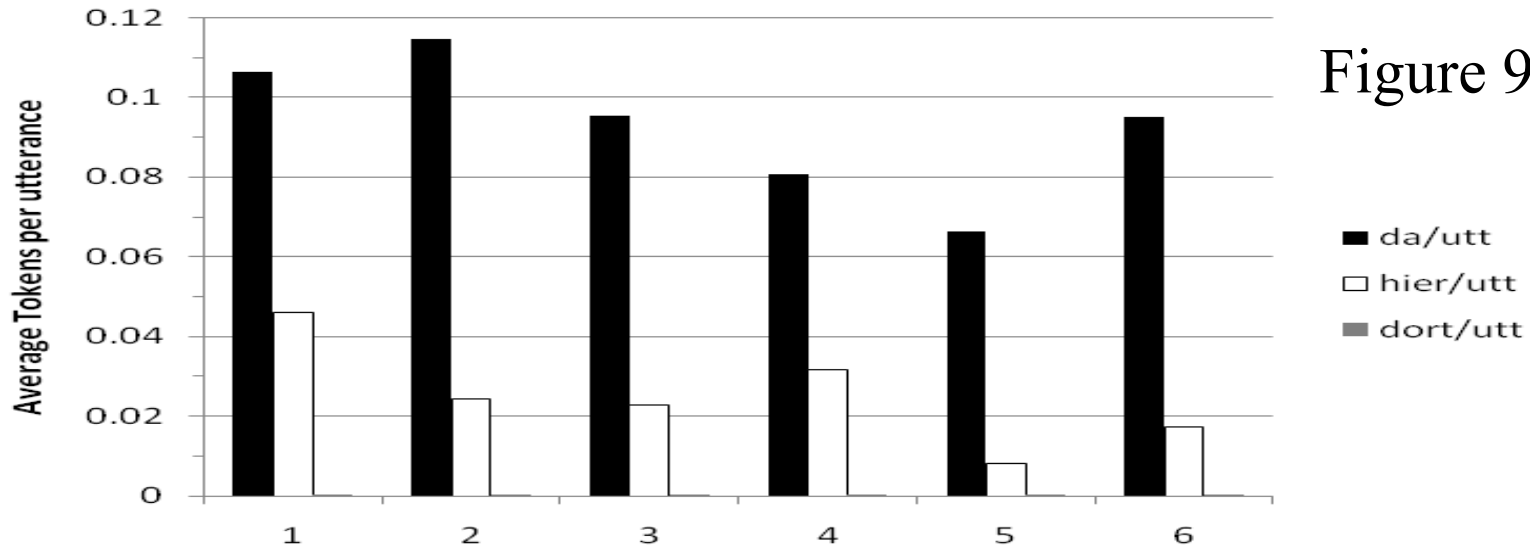


Figure 9

Overview of average tokens/utterance in six L1 child language corpora (CHILDES)--non-Child participants

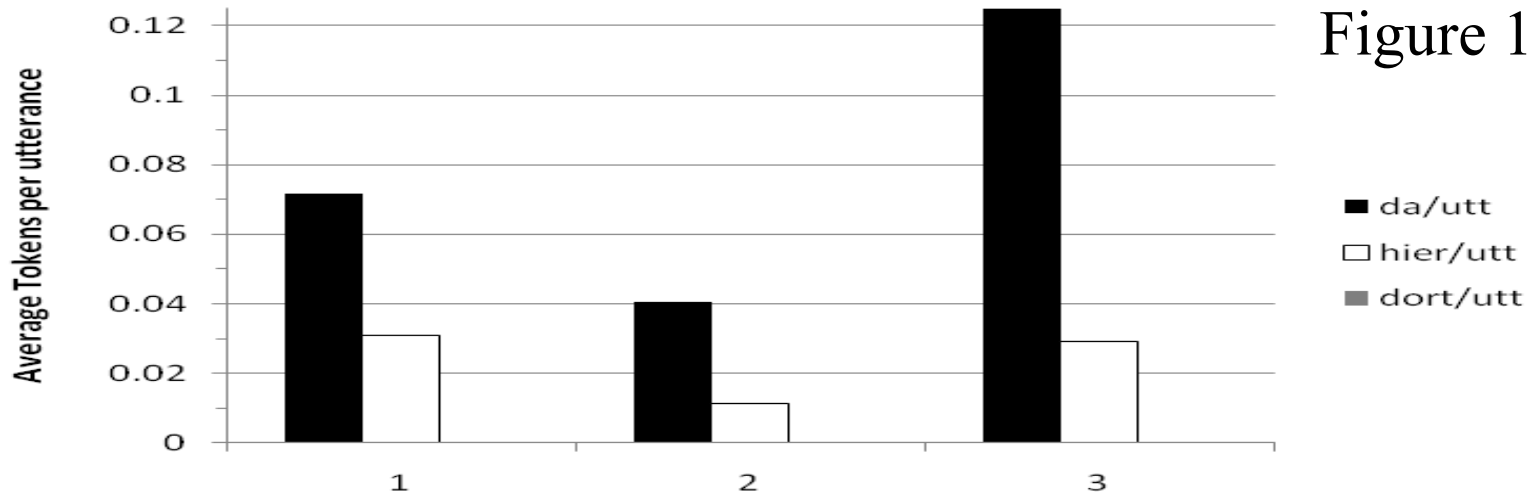


Figure 10

Conclusion

- a simple account of *hier/da/dort* use is problematic; previous accounts seem inadequate
- *da* should not be viewed as being devoid of semantic information
- *da* has neutral characteristics, but also *dort*-replacement tendencies

Further research/analyses

- MLU variation with L1
- Individual children in CHILDES corpora
- Further corpus searches; hand-coding of results
- Additional spoken-language corpora
- Incorporation of L2 data in the context of NS use
- L1 acquisition/early child L1 use
- Genre differences; speech v writing

References

- Ehrich, Veronika. 1982. Da and the system of spatial deixis in German. *Pragmatics and Beyond*, 1982, 3, 2-3 3. 43-63.
- Erdmann, Peter. 1978. There constructions in English and German. *IRAL, International Review of Applied Linguistics in Language Teaching*, 1978, 16, 3, Aug 16. 187-211.
- Herrmann, Theo. 1990. Vor, hinter, rechts und links. Das 6H-modell: psychologische Studien zum sprachlichen Lokalisieren. *Zeitschrift für Literaturwissenschaft und Linguistik* 20. 117.
- Kallmeyer, Werner. 1972. Verweisung im Text. *Der Deutschunterricht* 24. 29-42.
- Klein, Wolfgang. 1990. Überall und nirgendwo. Subjektive und objektive Momente in der Raumreferenz. *Zeitschrift für Literaturwissenschaft und Linguistik* 20. 9-42.
- Klein, Wolfgang. 1991. Spatial expressions. *Linguistische Berichte* 132. 77-114.
- Lenz, Friedrich. 2001. Here is hier, and there is dort, but where is da?: Contrastive reflections on English and German demonstrative adverbs. *Arbeiten aus Anglistik und Amerikanistik* 26. 39-51.
- Miller, Max, and Jurgen Weissenborn. 1977. Pragmatic Conditions on Learning How to Refer to Localities. *Stanford Child Language Research Forum (SCLRF)*, 1977.
- Moilanen, Markku. 1978. Zur pragmatischen Funktion der Demonstrativadverbien hier, da und dort. *Die Partikeln der deutschen Sprache*, ed. by Harald Weydt, 187-200. Berlin: de Gruyter.
- Schlieben-Lange, Brigitte. 1989. Elemente einer pragmatischen sprachtheorie in den grammaires générales um 1800/Elements of a pragmatological theory of language in grammars written about 1800. *Zeitschrift für Literaturwissenschaft und Linguistik* 19. 76-93.
- Sichelschmidt, Lorenz. 1989. Wo hier dort ist: Primär- und sekundärdeiktische Raumreferenz, ed. by Christopher Habel, Michael Herweg and Klaus Rehkämper. Tübingen.