

A Germanic Sandwich 2015
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**ON THE DISTRIBUTION AND THE
ACQUISITION OF THE GERMANIC *NEEDS***

GERMAN BETWEEN DUTCH AND ENGLISH

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THIS TALK

Focus: three verbal NPIs in Dutch, English and German;

Discuss: two factors affecting language acquisition:

- (1) opacity
- (2) robust input evidence

Conclude: German between Dutch and English



A Germanic sushi?

NEGATIVE POLARITY ITEM (NPI)

NPIs = words or expressions that survive only in negative contexts

(cf. Ladusaw 1979)

English: (1) *Max has *(not) finished yet.*

Dutch: (2) *Het kan mij *(niet) schelen.*
'I don't care.'

German: (3) *Mit großen Herren ist *(nicht) gut Kirschen essen.*¹
'It is best not to tangle with the superiors.'

¹Taken from Richter and Soehn (2006: 428: (12)).

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FOCUS OF THIS TALK

Three verbal NPIs expressing necessity:

English: *need*

Dutch: *hoeven* ‘need’

German: *brauchen* ‘need’

GERMANIC *NEEDS* AS NPIS

English *need*

- (4) *We need (no) water.* (lexical verb)
- (5) *We (don't) need to drink water.* (modal verb)
- (6) *We need ***(not)** drink water.* (modal auxiliary)

→ *need* is an NPI only when used as an auxiliary (i.e., (6)).

(Iatridou and Zeijlstra 2013, among others)

GERMANIC *NEEDS* AS NPIS

Dutch *hoeven*

(7) *Wij hoeven *(geen) water.* (lexical verb)

‘We don’t need water.’

(8) *Wij hoeven *(geen) water te drinken.* (modal verb)

‘We don’t need to drink water.’

→ *hoeven* is always an NPI, independent of its lexical or modal use.

(Zwarts 1981; Van der Wouden 1997; Hoeksema 2000)

GERMANIC *NEEDS* AS NPIS

German *brauchen*

(9) *Wir brauchen (kein) Wasser.* (lexical verb)

‘We (don’t) need water.’

(10) *Wir brauchen *(kein) Wasser zu trinken.* (modal verb)

‘We don’t need to drink water.’

→ *brauchen* is an NPI only when used as a modal verb (i.e., (10)).

(Zwarts 1981; Van der Wouden 1997; Hoeksema 2000)

GERMANIC *NEEDS*

German between Dutch and English:

NEEDs	Lexical verb	Modal verb	Auxiliary
English <i>need</i>	-NPI	-NPI	+NPI
German <i>brauchen</i>	-NPI	+NPI	*
Dutch <i>hoeven</i>	+NPI	+NPI	*

GERMANIC NEEDS

German between Dutch and English:

NEEDs	Lexical verb	Modal verb	Auxiliary
English <i>need</i>	-NPI	-NPI	+NPI
German <i>brauchen</i>	-NPI	+NPI	*
Dutch <i>hoeven</i>	+NPI	+NPI	*

An opacity hierarchy:

English *need* > German *brauchen* > Dutch *hoeven*

OPACITY

Opacity here is defined as the degree of the transparency between a certain phonological form and its possible function(s) or meaning(s).

[need]: the most opaque; 1 form with 3 functions of which only one is an NPI;

[brauchen]: less opaque; 1 form with 2 functions of which one is an NPI;

[hoeven]: the least opaque; though 1 form with 2 functions, both functions show NPI-distribution.

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[hoeven]: the least opaque; though 1 form with 2 functions, both functions show NPI-distribution.

PREDICTION FOR ACQUISITION

Given the opacity hierarchy:

English *need* > German *brauchen* > Dutch *hoeven*

Acquisitional pace:

NPI *need* < NPI *brauchen* < NPI *hoeven*

BUT ...

Opacity is not everything!

Distribution of the NPIs in language input is at play:

NPI-need frequently attested in the input?

Acquisition may be facilitated due to robust input evidence.

NPI-hoeven seldom used towards Dutch acquiring children?

Acquisition may be delayed despite the least opacity.

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NPIS IN THE INPUT

- **Child-directed speech in CHILDES (MacWhinney 2009);**
- **Dutch: 710 files** (*BolKuiken; CLPF; DeHouwer; Gilles; Groningen; Schaerlaekens; VanKampen; Wijnen*)
- **English: 1492 files** (*Belfast; Cruttenden; Fletcher; Forrester; Howe; Lara; Manchester; Thomas-Heritage; Wells*)
- **German: 917 files** (*Caroline; Leo; Miller; Szagun; Wagner; Rigol*)

NPIS IN THE INPUT

NEEDs	Lexical verb	Modal verb	Auxiliary	TOTAL
<i>need</i>	3458 (67.63%)	1653 (32.33%)	2 (0.04%)	5113
<i>brauchen</i>	1191 (86.9%)	180 (13.1%)	*	1371
<i>hoeven</i>	142 (38.4%)	228 (61.6%)	*	370

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NPIS IN THE INPUT PER HOUR

NEEDs	Freq. as NPIS	Total hours recorded	Freq. per hour
<i>need</i>	2	N.A.	N.A.
<i>brauchen</i>	180	1130	0.16
<i>hoeven</i>	370	331.5	1.12

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Amount and robustness input evidence:

English *need* < German *brauchen* < Dutch *hoeven*

PREDICTION FOR ACQUISITION

Given the robustness hierarchy:

English *need* < German *brauchen* < Dutch *hoeven*

Acquisitional pace:

NPI *need* < NPI *brauchen* < NPI *hoeven*

SUMMARY

Both *opacity* and *input evidence* predict:

**NPI *hoeven* is acquired earlier than NPI *brauchen*,
which is in turn acquired earlier than NPI *need*.**

METHOD: CORPUS RESEARCH

Language	Age range	N of files	N of children
English	1;00 - 4;12	710	59
Dutch	1;00 - 4;12	1492	145
German	1;00 - 11;12	917	41

The same subcorpora were analyzed as for the child-directed speech.

RESULTS: NPI *HOEVEN*

Age	NPI <i>hoeven</i>		TOTAL
	As a lexical verb	As a modal verb	
1-year-olds	1 (100%)	0	1
2-year-olds	80 (80.8%)	19 (19.2%)	99
3-year-olds	56 (82.3%)	12 (17.7%)	68
4-year-olds	32 (65.3%)	17 (34.7%)	49

RESULTS: NPI *BRAUCHEN*

Age	Non-NPI <i>brauchen</i>	NPI <i>brauchen</i>	TOTAL
	As a lexical verb	As a modal verb	
1-year-olds	4 (100%)	0	4
2-year-olds	163 (97%)	5(3%)	168
3-year-olds	129 (94.9%)	7(5.1%)	136
4-year-olds	27 (90%)	3(10%)	30
5-year-olds	30 (96.8%)	1 (3.2%)	31
6-11-year-olds	77 (72%)	30 (28%)	107

RESULTS: NPI *NEED*

Age	Non-NPI <i>need</i>		NPI <i>need</i>	TOTAL
	As a lexical verb	As a modal verb	As an auxiliary	
1-year-olds	8 (100%)	0	0	8
2-year-olds	1818 (84.3%)	340 (15.7%)	0	2158
3-year-olds	707 (80.5%)	171 (19.5%)	0	878
4-year-olds	288 (55.8%)	230 (44.8%)	0	518

RESULTS

(1) NPI *hoeven* emerges already from age 2;

(similar results are also reported in Van der Wal 1996; Lin et al. 2015)

(2) *Brauchen* appears only 4.3% of the time on average as NPI below age 6;

(3) NPI *need* is never attested in child English till age 5.

→ NPI *hoeven* is acquired earlier than NPI *brauchen*, which is in turn acquired earlier than NPI *need*.

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CONCLUSION

- ❑ Opacity of the Germanic *needs* with respect to their NPI uses:

English *need* > German *brauchen* > Dutch *hoeven*

- ❑ Robustness of the Germanic *needs* in the input:

English *need* < German *brauchen* < Dutch *hoeven*

- ❑ Acquisitional pace of the Germanic *needs*:

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GERMAN BETWEEN DUTCH AND ENGLISH

IMPLICATIONS FOR CHANGE

- (1) NPI *hoeven* acquired early on, before the critical age (i.e., 6 or 7 years);
- (2) NPI *brauchen* acquired right after the critical age (i.e., 6 or 7 years);
- (3) Acquisition of NPI *need* seems to be an instance of late acquisition.

→ Different learning mechanisms responsible for the acquisition.

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- Different learning mechanisms responsible for the acquisition.

IMPLICATIONS FOR CHANGE

NPI *hoeven*: stable in the language;

NPI *brauchen*: (only) in marked constructions?

NPI *need*: disappearing from natural language use?

DISCUSSION (1)

NPI *brauchen*, i.e., the modal verb, emerges after age 6.

Modal use more difficult to acquire or use than lexical use??

DISCUSSION (1)

While looking at how Dutch children use *hoeven*:

22% of attested *hoeves* (48 out of 217) as modal before age 5;

Whereas in child German:

only 4.3% of attested *brauchens* (16 out of 169) as modal before age 6.

DISCUSSION (2)

Opacity and *input evidence* predict the same.

Based on the presented data, impossible to tear apart the impact/
influence of each factor during acquisition.

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THANKS!
QUESTIONS?

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