



INFLECTION AND NP-ELLIPSIS IN THE ACQUISITION OF GERMAN: SOME INSIGHTS FROM A CORPUS STUDY

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Background: German *ein*-word inflection and NP-ellipsis

	“ein” det			“mixed” adj		
	M	N	F	M	N	F
Nom				-e	-er	-es
Acc	-en			-e	-en	-es
Dat	-em	-em	-er	-en	-en	-en
Gen	-es	-es	-er	-en	-en	-en

(2) a. dein-Ø groß-er Hund und mein-Ø klein-er (Hund)
your big-ST.M.NOM dog(M) and my small-ST.M.NOM
‘your big dog and my small one’

b. dein-Ø neu-es Haus und mein-Ø alt-es (Haus)
your new-ST.N.SG.NOM/ACC house(N) and my old-ST.N.NOM
‘your new house and my old one’

Exceptional Strong Inflection (ESI)

- (3) a. dein-Ø Hund und mein-er (Hund)
your dog and my-ST.M.NOM
‘your dog and mine’
b. dein-Ø Haus und mein-es (Haus)
your house and my-ST.N.NOM
‘your house and mine’

• *ein*-words: indefinite *ein*-, negative *kein*-, possessive *mein*-, *dein*-, *sein*-, *ihr*-, *unser*-, *eu(e)r*-

Traditional grammar (e.g. Helbig & Buscha 2001, Duden 2009)

determiners (*ein*, *kein*, *mein*) vs. pronouns (*einer*, *keiner*, *meiner*)

Generative grammar (e.g. Lobeck 1995, Wiltschko 1998, Brandt & Fuß 2014)

pronoun = determiner + NP-ellipsis (cf. Elbourne 2001) with exceptional strong inflection

This project

Observation: Children sometimes erroneously inflect a possessive determiner (**comission error**, 4a) or leave a possessive pronoun uninflected (**omission error**, 4b).

- (4) a. ***mein-er** Papa
my-ST.M.NOM dad
‘my dad’
b. *Das ist **mein-Ø** (Papa).
this is my dad
‘That’s mine.’

Expectation:

- Traditional grammar: **error rates should be equal or skewed towards comission** (because determiners like *d-er*, *dies-er* do inflect in this position)
- Lobeck (1995): **higher error rate for comission errors** (NPE licensed but not applied) than for omission errors (NPE not licensed but applied)
- Murphy (2018): **different rates possible** as different mechanisms are involved (context-sensitive spellout generates a zero affix; failed Lowering leads to overt spellout)

Corpus study

- 9 German-language corpora of TD children (*Caroline*, *Grimm*, *Koch*, *Leo*, *Miller*, *Rigol*, *Stuttgart*, *Szagan*, *Wagner*) through the CHILDES database (MacWhinney 2000)
- Age 2;0 (onset 2-word stage & case-marking on articles, Clahsen 1984, Mills 1986) to 5;0
- Query for possessive determiners ending in *-(e)r* and *-(e)s* in all persons and genders in various orthographic variants and with ± 2 lines of surrounding discourse
- Hits ($N = 5779$) checked for M.NOM or N.NOM/ACC (based on inflection and/or context in cases of NPE) as opposed to F.DAT/GEN or M/N.GEN (cf. 1) or others
- Annotated for NPE (1 vs. 0) and inflection (1 vs. 0)

Results

(5) Counts	inflection			total error rate
	NPE	yes	no	
yes	712	133	845	18.7%
no	67	2476	2543	2.7%
total	779	2609	3388	

(6) Error rates by person/gender		NPE	total error rate
<i>mein</i> (1.SG)	yes	639	15.8%
	no	1777	1.5%
<i>dein</i> (2.SG)	yes	184	12.5%
	no	424	0.5%
<i>sein</i> (3.SG.M/N)	yes	4	25%
	no	149	1.3%
<i>unser</i> (1.PL)	yes	13	46.2%
	no	127	18.9%
<i>euer</i> (2.PL)	yes	2	50%
	no	4	75%
<i>ihr</i> (3.SG.F/3.PL)	yes	3	33.3%
	no	62	16.1%

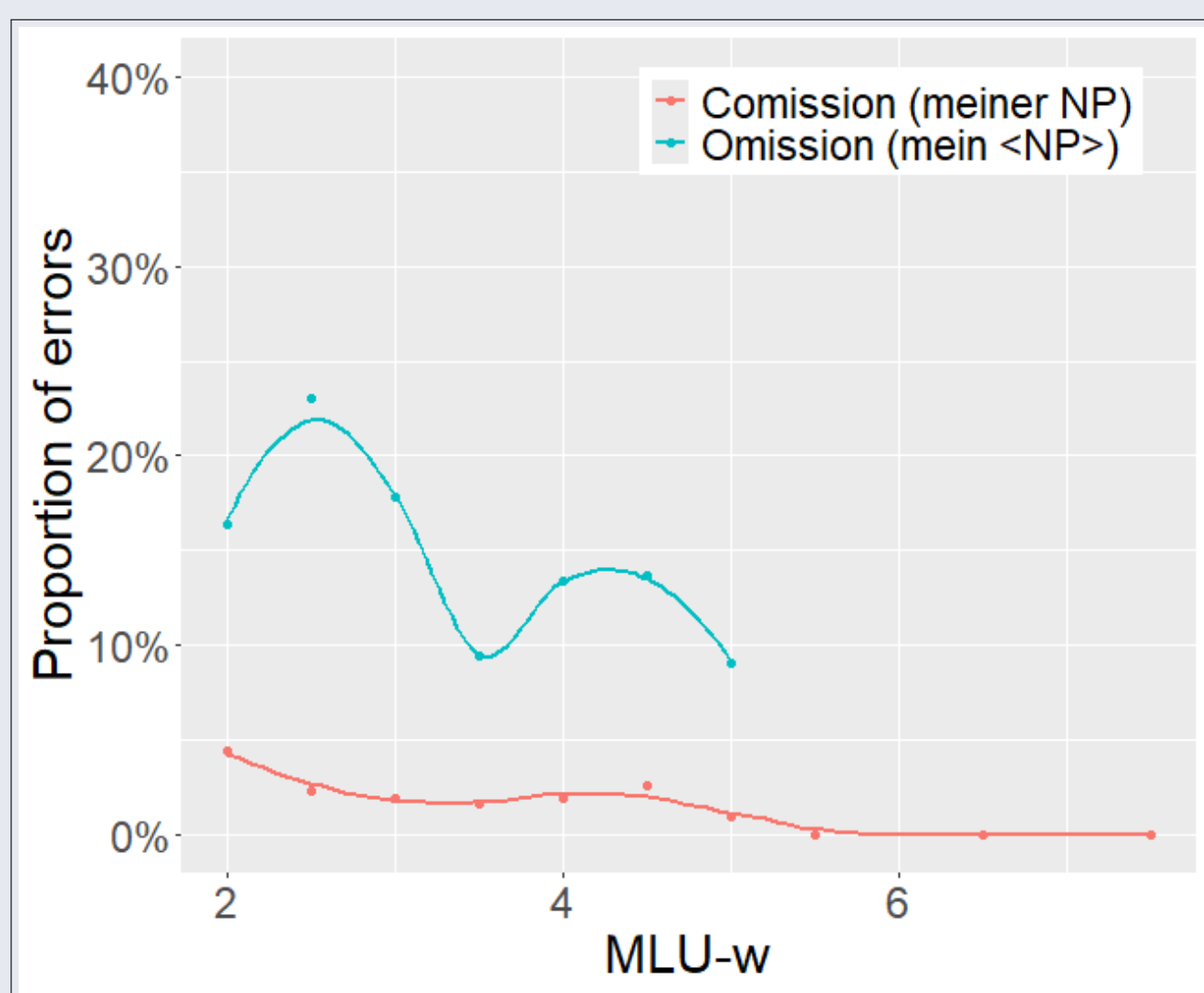


Fig. 1: Error rates over MLU-w

- (7) **Comission error** (Falko 2;01, Szagan 2001)
a. CHI: das **mein-er** Kaffee is(t).
this my-M.NOM coffee is
‘This is my coffee.’
b. MOT: dein Kaffee is(t) das.
your coffee is this
‘This is your coffee.’
- (8) **Omission error** (Simone 3;07, Miller 1979)
a. TOM: will der mein-(e)s trinken.
wants he my-N.ACC drink
‘Does he want to drink mine?’
b. CHI: nee, der will **mein**.
no, he wants my
‘No, he wants mine.’

• Error rate for comission errors is generally much lower than that for omission errors

Two Approaches to Exceptional Strong Inflection

ESI licenses NPE (Lobeck 1995, cf. Bernstein 1993, Kester 1996a, b)

- Ellipsis sites are empty categories (i.e. *pro*).
- A terminal can license an ellipsis site iff it bears ‘strong agreement features’ (e.g. case)

(9) *mein* lacks strong features
[DP mein_[-pl] *pro*]
X

(10) *mein-es* has strong features
[DP mein-es_[+case, -pl] *pro*]
✓

ESI emerges from NPE (Murphy 2018, cf. Saab & Lipták 2016, Hein 2025)

- Strong inflection on ϕ lowers to *n* and receives a contextually determined Ø spellout.
- Ellipsis of *nP* blocks Lowering (11) and the stranded affix re-attaches to the determiner.

(11) **Ellipsis-Morphology Generalization** (Elmo; Saab & Lipták 2016)
For every morphological operation MO that affects the domain of X, where X contains the target of MO, MO cannot apply in X if X is subject to ellipsis.

(12) Uninflected determiner before NP
[DP mein_{[φP} [nP *n-es* Haus]]]
(13) Inflected determiner before NPE
[DP mein-es_{[φP} [nP *n* Haus]]]
X

(14) a. /-Ø/ ↔ [φ, M, SG, NOM] / [n n ____]
b. /-er/ ↔ [φ, M, SG, NOM]

Discussion & potential analysis

- Error rate for omission errors may contain cases of interruptions, breaks, and ‘swallowed’ or untranscribed M.ACC *-(e)n* (15) or M/N.DAT *-(e)m*

(15) Caroline (2;04, von Stutterheim 2024)
MOT: I’m going to paint a very big river(M).
CHI: ich auch mein.

(expected M.ACC possessive: *mein-en*)

I too my

- Comission rate dovetails rates of comission errors in other domains (English past tense: 2.8%, Hein et al. 2024; Negative concord in German: 1.7%, Driemel et al. 2023)
- Omission errors (i.e. *mein* (NP)) are 9 times more frequent than comission errors (i.e. *meiner NP*) and it seems unlikely that over 80% of the former are interruptions or mistranscriptions.
- This imbalance is unexpected from the perspective of traditional grammar and its direction is surprising under Lobeck’s (1995) view.

Murphy (2018): Two different mistakes give rise to two different errors

- Comission error:** Secondary Feature Negligence (SFN)

Children occasionally **ignore secondary features** during Vocabulary Insertion.

- cf. comission errors in English past tense: e.g. *ate-d* (2.8% error rate)
- Omission error:** Lowering into ellipsis site in violation of Elmo

Children occasionally **fail to respect Elmo** (or apply Lowering before ellipsis).

- p_{SFN} may differ from p_{Elmo} in both directions, hence it can be $p_{SFN} < p_{Elmo}$

⇒ Possessive pronouns are possessive determiners plus exceptional strong inflection (ESI)
⇒ ESI as a consequence of rather than a prerequisite for NPE best accounts for the data.

Selected References: Hein et al. (2024). Errors of Multiple Exponence in Child English: A study of past tense formation. *Morphology*.
• Helbig & Buscha (2001) *Deutsche Grammatik: Ein Handbuch für den Ausländerunterricht*. Berlin: Langenscheidt. • Kester (1996a). Adjectival inflection and the licensing of empty categories in DP. *Journal of Linguistics* 31. • Lobeck (1995). *Ellipsis: Functional heads, licensing, and identification*. Oxford: Oxford University Press. • MacWhinney (2000). *The CHILDES Project: Tools for analyzing talk*. Mahwah, NJ: Lawrence Erlbaum Associates. • Mills (1985). The acquisition of German. In: *The Crosslinguistic Study of Language Acquisition*. Lawrence Erlbaum Associates. • Murphy (2018). Pronominal inflection and NP ellipsis in German. *J. Comp. German. Linguistics* 52. • Saab & Lipták (2016). Movement and deletion after syntax: Licensing by inflection reconsidered. *Studia Linguistica* 70. • von Stutterheim (2024). CHILDES Database German Caroline Corpus. doi:10.21415/T5NS55. • Szagan (2001). Learning different regularities: The acquisition of noun plurals by German-speaking children. *First Language* 21.
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