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Prenominal Genitives: Locality, Theta-roles, and Quantifiers – and the difficulty of being *a man's friend* in German –

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Table of Contents

Introduction

Syntactic problems

Proposal – Part I

Semantic problems

Proposal – Part II

Summing up

Conclusions



Introduction

NP analysis in the 70's (Chomsky 1970; Jackendoff 1977; Vater 1979; a.o.)

DP analysis since the 80's (Lyons 1977; Vennemann & Harlow 1977; Brame 1982; Hellan 1986; Abney 1987; Haider 1988; Olsen 1991; Vater 1991; Netter 1994; Van Langendonck 1994; Alexiadou et al. 2007; a.o.)

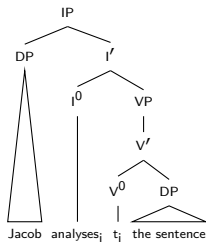
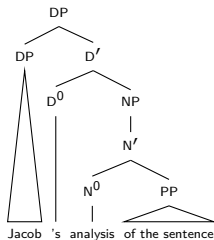
- hypothesis of a **universal structure** for all phrasal types,
- unified analysis of **functional projections**,
- **endocentricity**

Pro-NP discussion (Vater 1986; Pollard & Sag 1994; Demske 2001; Payne & Huddleston 2002; Van Eynde 2003, 2006; Müller 2013, 2016; Machicao y Priemer 2017; a.o.)

... also **back to NP/nP** in newer **generative analyses** (Bruening 2009; Chomsky 2007; Chomsky et al. 2019; Georgi & Müller 2010; a.o.)

DP analysis

- ▶ **Relations** between elements are determined by their **structural positions**.
- ▶ **Phrasal structure** is equal for all types of phrases.
- ▶ Relation between **functional** and **lexical** material is equal for all types of phrases.





- ▶ The **IP analysis for German** clauses has been challenged by many researchers: Bayer & Kornfilt 1989; Haider 1993; Berman 2003; a.o.
- ▶ Without IP in German,
 - ▶ there is **no universal** IP/DP parallel structure,
or
 - ▶ a **rich UG** would have to be assumed (cf. Cinque & Rizzi (2010) for a rich UG; Hauser et al. (2002) against it).
- ▶ **Our assumptions** (cf. Müller & Machicao y Priemer 2019):
 - ▶ lexicalist theory HPSG (Pollard & Sag 1987, 1994)
 - ▶ no movement (in the transformational sense)
 - ▶ avoiding empty elements without language internal evidence
 - ▶ two comparable analyses X and Y for a phenomenon, but X reflects generalisations in another language, then take X
(cf. Müller 2014, 2015)
- ▶ **Our phenomenon:** prenominal genitives in German



Introduction

Syntactic problems

Proposal – Part I

Semantic problems

Proposal – Part II

Summing up

Conclusions



Syntactic problems: Distribution

In German, the prenominal position can be occupied by an element in genitive – similar to English prenominal genitives.

- (1) **Jacobs** **Behandlung** des Patienten
- (2) **Jacob's** **treatment** of the patient

When the prenominal position is occupied by an element in genitive, the determiner cannot appear.

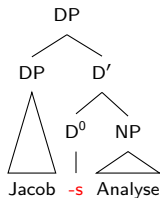
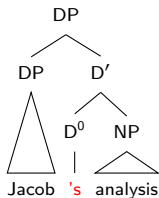
- (3) * **die** **Behandlung** des Patienten
- (4) * **die** **Jacobs** **Behandlung** des Patienten

Their **complementarity** suggests that determiners and prenominal genitives occupy the **same position** or at least “have **something in common**”.

Syntactic problems: POSS as head

Olsen (1991) – building on Abney's (1987) analysis for English – proposes a parallel treatment for German PreGen.

The **D position** is occupied by *-s*, opening a **possessive relation** between the specifier *Jacob* and the complement *Analyse*.



But German and English show some differences w.r.t. their PreGens.

Syntactic problems: Against POSS as head

- (5) [the queen of England]'s **hat** (Haider 1988: 36)
- (6) * [die Königin von England]'s **Hut**
- (7) [des Kaisers] neue **Kleider** (Haider 1988: 37)

German prenominal genitive is **morphological** case marking:

- ▶ English 's marks a **phrase**,
- ▶ in German, **every element** in the PreGen phrase must be case marked.
- ▶ PreGens in German correspond to the word forms in the paradigm for genitives (cf. Vater 1991).

- (8) [des Biograph-**en**] **Hinweis** (Vater 1991: 23)
 the.GEN biographer-GEN hint

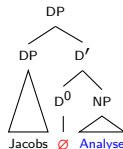
German does not work like English.

Syntactic problems: PreGen in Spec

Sternefeld (2015) proposes an analysis with the **PreGen in the specifier position of the DP** and with a **phonetic empty D element**.

(cf. also Adger 2004: 257).

- ▶ Empty D marks a phrase in spec position with genitive.
- ▶ **morphological genitive** for all elements in spec position
- ▶ **Complex PreGens** are possible.



- (9) **eines jedes Mannes Zier**
 a.GEN every.GEN man.GEN adornment
 'the adornment of every man'

- (10) Wodka Gorbatschow – **des Wodkas** reine **Seele**
 the.GEN vodka.GEN pure soul
 'the pure soul of vodka'

(Sternefeld 2015: 212)

Syntactic problems: PreGen in Spec

Functional heads should not assign a θ -role: the θ -role of the PreGen must be assigned by the head noun.

- (11) a. Jacobs_{AG} **Behandlung** des Patienten_{PAT}
 Jacob.GEN treatment the.GEN patient.GEN
- b. * des Patienten_{PAT} **Behandlung** Jacobs_{AG}
- c. Jacobs_{EXP} **Amüsement**
 Jacob.GEN entertainment

Selectional difficulties: “[...] verbs that select nominal arguments never select for particular determiners [...]” (Bruening 2009), they select properties of the noun (cf. Bruening 2009; Chomsky 2007; Chomsky et al. 2019).

- (12) Mary bought {a / the / this} car.



Introduction

Semantic problems

Syntactic problems

Proposal – Part II

Proposal – Part I

Summing up

Conclusions



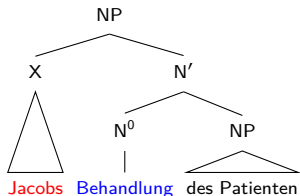
Proposal – Part I: Locality

Assuming **Selectional Localism** (Sag 2012: 149):

For purposes of **category selection** (subcategorization), **case assignment**, (non-anaphoric) **agreement**, and **semantic role assignment**, a lexical head has access only to the signs it selects via some feature (e.g. ARG-ST or SELECT), i.e. the elements that it is connected to via a grammatical relation (subject of, modifier of, etc.).

(cf. also Chomsky et al. 2019: 3)

Therefore, we go back to an NP-analysis:



- ▶ **Case** can be locally assigned.
- ▶ **θ -roles** can be locally assigned.
- ▶ NP (or properties of N) can be **selected from outside**.
- ▶ Problem: What is X? And how to treat determiner-noun agreement?

Proposal – Part I: Parallel structures

In some varieties of German, there is a construction with an **NP in dative** preceding a **possessive** determiner (cf. Tappe 1989; Sternefeld 2015).

- (13) Das ist [dem Fischer seine Frau].
 this is the.DAT fisher.DAT his.NOM wife.NOM
 'This is the fisher's wife.' (Sternefeld 2015: 221)

The possessive determiner (*seine*) **agrees** with the head noun (*Frau*).

- (14) [...] [Klaus sein Händler] hat auch noch ein paar.
 Klaus.DAT his.NOM dealer.NOM has too still a pair
 'Klaus' dealer also has some of it.' (DECOW 2015)

Since the construction can appear in the **pre-field** of a sentence and cannot be divided, it behaves as one constituent.

The determiner and the head noun can get case assignment from a preposition (*von* assigns dative).

- (15) schon was von [laki seinem tape] gehört?
 already something about laki his.DAT tape.DAT heard
 ‘Have you already heard something about Laki’s tape?’
 (DECOW 2015)

A similar construction is also available in other registers: a **von-PP** can appear preceding a **definite determiner**.

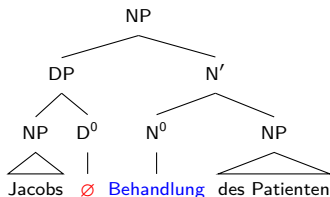
- (16) [Von einem Freund die Lebensgefährtin] verträgt keine
 of a friend the partner tolerates no
 Duftstoffe.
 fragrances
 ‘The partner of a friend doesn’t tolerate any fragrances.’
 (DECOW 2015)

Proposal – Part I: D-head

Since

- ▶ no noun in German selects for **dative NPs**, and
- ▶ these two constructions give us evidence for **overtly realised determiners selecting a specifier** (alternative: unary projection) (definite → *von*-PP, possessive → dative NP),

we have (language internal and inter-dialectal) evidence for a **phonetic empty determiner** selecting a PreGen as specifier.





Introduction

Syntactic problems

Proposal – Part I

Semantic problems

Proposal – Part II

Summing up

Conclusions

Semantic problems

It has been proposed that PreGens are

- ▶ always **definite**
(cf. Woisetschlaeger 1983 for English, Hartmann & Zimmermann 2003 for German)
- ▶ **non-recursive** structures
(cf. Hartmann & Zimmermann 2003; Kobele & Zimmermann 2012; Chomsky et al. 2019)
and
- ▶ **reanalysed** as heads – if they are complex
(cf. Hartmann & Zimmermann 2003)

Hartmann & Zimmermann's (2003) proposal for PreGens builds on the following assumptions (cf. also Olsen 1991):

- ▶ **Only proper nouns** (cf. (17)) are allowed in prenominal position (since the most natural PreGens in German are proper nouns).
- ▶ Other PreGens in German (cf. (18)) are **(re-)interpreted** as proper nouns or as generics.
- ▶ PreGens are interpreted as a type of **def. D**, where the genitive -s is a function of type $\langle e, \langle et, e \rangle \rangle$ (cf. (19)) (following Partee 1997).
- ▶ The prenominal **genitive** is **semantic**, not morpho-syntactic.

(17) Sarahs **Verein** 'Sara's club'

(18) [Des Mannes liebstes **Spielzeug**] ist sein Auto.
'A man's most favourite toy is his car.'

(19) $[-s] := \lambda y \lambda P \iota x [P(x) \wedge R(x, y)]$
 $[[Sarahs]] := \lambda P \iota x [P(x) \wedge R(x, Sarah)]$
 $[[Sarahs Verein]] := \iota x [club(x) \wedge R(x, Sarah)]$

Problems of the account

Corpus data challenges this analysis:

- (20) [Des Sommers Feste] sind nun ausgefeiert.
the.SG.GEN summer.SG.GEN celebrations are now out.celebrated

‘The celebrations of the summer are now over.’ (DECOW 2015)

- (21) [Des Gärtners größter Fluch] sind Unkraut und
the.SG.GEN gardener.SG.GEN biggest curse are weed and
Besuch.
visitors

‘The biggest curse of a gardener are weed and visitors.’
(DECOW 2015)

Recursive structures are less frequent – because they are difficult to parse (cf. (24)) – but they are possible:

(22) seines Vaters Vaters Vater
 'his father's father's father' (DECOW 2015)

(23) [...] Einschüsse auf [Peters Bruders Harley]
 bullet.holes on Peter.GEN brother.GEN Harley
 'bullet holes on Peters brothers Harley' (Google)

(24) $\llbracket \textit{Peters Bruders Harley} \rrbracket :=$
 $\iota x [\text{Harley}(x) \wedge R(x, \iota y [\text{brother}(y) \wedge R'(y, \textit{Peter})])]]$

There are also PreGens with **indefinites** which do not necessarily have to be interpreted as definites.

- (25) [Eines Gottes Sohn] ist ein Gott.
 a.GEN god.GEN son is a god
 'A god's son is a god.' (DECOW 2015)
- (26) Wenn [eines Mannes Freund] heiratet, ist es aus zwischen
 if a.GEN man.GEN friend gets.married is it over between
 ihnen.
 them
 'If a man's friend gets married, their friendship is over.'
 (Google)
- (27) Jeder Gauner hat [eines Bankiers Tochter] ausgeraubt.
 every trickster has a.GEN banker.GEN daughter robbed
 'Every trickster has robbed a banker's daughter.' (MyP 2017)



Introduction

Semantic problems

Syntactic problems

Proposal – Part II

Proposal – Part I

Summing up

Conclusions



Proposal – Part II: PreGen's interpretation

(28) eines Mannes Freund 'a man's friend'

The quantifier in genitive *eines* is treated as a **relation between two predicates**. (cf. (29)).

(29) $\llbracket \textit{eines} \rrbracket := \lambda P \lambda Q \exists x [P(x) \wedge Q(x)]$

The quantified NP in genitive *eines Mannes* is treated as a **function from predicates to truth values** (cf. (30)).

(30) $\llbracket \textit{eines Mannes} \rrbracket = \lambda Q \exists x [\textit{man}(x) \wedge Q(x)]$



Since **proper names** and **quantified NPs** can be **coordinated** (cf. (31)), it is necessary for proper names to be **type-shifted** from an element of type $\langle e \rangle$ to an element of type $\langle et, e \rangle$ (cf. (32)) (cf. Partee 1987).

(31) **Jacobs** und **eines anderen Mannes Freund** waren da.
'Jacob's and another man's friend were there.'

(32) $[[\textit{Jacobs}]] := \lambda Q[Q(\textit{jacob})]$

This ensures that the **same empty head** can be used for **proper names** and **quantified genitive NPs**.



The **compositional work** is taken care of by the empty determiner. It imposes specific **restrictions** to its **specifier** (i.e. the PreGen) and to the **head N** it combines with (cf. also Francez 2009).

1. **PreGen**: $\langle\langle et \rangle, t \rangle$ (cf. (34))
2. **head N**: relational noun $\langle e, e \rangle$ (cf. (35)) (cf. Barker 1995, 2011)
3. In case the **head N is not relational** (cf. (35b)), it has to be converted into a relational N: between head N and PreGen **there is always a relation**, either underspecified or specified by the head N (cf. Bücking 2010).

$$(33) \quad [\emptyset] := \lambda Q' \lambda f [\lambda P [Q' (\lambda x [P (f(x))])]] \\ Q' \in D_{\langle\langle et \rangle, t \rangle}; f \in D_{\langle e, e \rangle}; P \in D_{\langle e, t \rangle}; x \in D_{\langle e \rangle}$$

$$(34) \quad \text{a. } [\textit{eines Mannes}] = \lambda Q \exists x [\textit{man}(x) \wedge Q(x)] \\ \text{b. } [\textit{Jacobs}] = \lambda Q [Q(\textit{jacob})]$$

$$(35) \quad \text{a. } [\textit{Freund}] = \lambda x \sigma y [\textit{friend}(x)(y)] \\ \text{b. } [\textit{Fahrrad}] = \lambda x \sigma y [\textit{bike}(y) \wedge R(x)(y)]$$



$$\begin{aligned}
 (36) \quad & \llbracket \text{eines Mannes } \emptyset \rrbracket := \\
 & \lambda Q' \lambda f [\lambda P [Q' (\lambda x [P(f(x))])]] (\lambda Q \exists x [\text{man}(x) \wedge Q(x)]) \\
 & = \lambda f [\lambda P [\lambda Q \exists x [\text{man}(x) \wedge Q(x)] (\lambda x [P(f(x))])]] \\
 & = \lambda f [\lambda P [\exists x [\text{man}(x) \wedge \lambda x [P(f(x))](x)]]] \\
 & = \lambda f [\lambda P [\exists x [\text{man}(x) \wedge P(f(x))]]]
 \end{aligned}$$

$$\begin{aligned}
 (37) \quad & \llbracket \text{eines Mannes } \emptyset \text{ Freund} \rrbracket = \\
 & \lambda f [\lambda P [\exists x [\text{man}(x) \wedge P(f(x))]]] (\lambda x \sigma y [\text{friend}(x)(y)]) \\
 & = \lambda P [\exists x [\text{man}(x) \wedge P(\lambda x \sigma y [\text{friend}(x)(y)](x))]] \\
 & = \lambda P [\exists x [\text{man}(x) \wedge P(\sigma y [\text{friend}(x)(y)])]]
 \end{aligned}$$

- ▶ Thus, *eines Mannes Freund* 'a man's friend' is interpreted as a **quantified NP**.
- ▶ It is a function from predicates to truth values, such that there is a man and a predicate applies to the sum entity for which it holds that this entity is a friend of the man (cf. Krifka 1996; Yoon 1996).



Introduction

Syntactic problems

Proposal – Part I

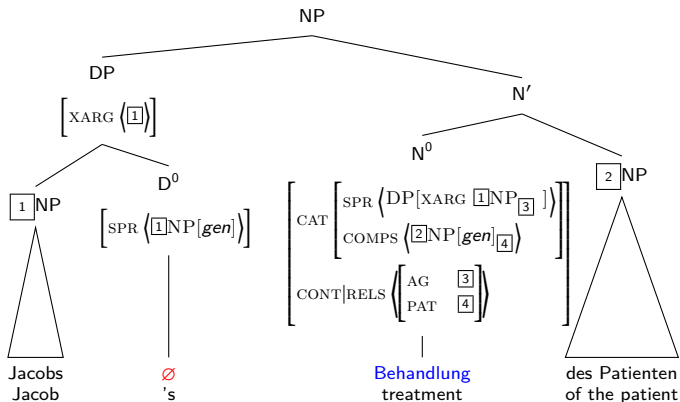
Semantic problems

Proposal – Part II

Summing up

Conclusions

Summing up



(cf. Sag 2007)



Introduction

Syntactic problems

Proposal – Part I

Semantic problems

Proposal – Part II

Summing up

Conclusions



Conclusions

- ▶ **Corpus data** suggest that constructions with **(complex) PreGens** are **not frequent but existent**.
- ▶ The analysis reflects the **complexity** of such constructions. It is expectable that they are not so frequent due to the parsing difficulties they present (psycholinguistic evidence is needed).
- ▶ unified analysis for **proper nouns**, **definite**, and **indefinite** PreGens and their **different interpretations**
- ▶ We can account for **recursive structures** without resorting to **reanalysis**.
- ▶ parallels to **similar constructions** in German and other languages
- ▶ A **further case** POSS (only for this construction) is not needed, and we can account for the **morphological genitive**.
- ▶ **local** account



- Abney, Steven P. 1987. *The English noun phrase in its sentential aspect*: Massachusetts Institute of Technology PhD thesis. <http://www.vinartus.net/spa/publications.html>.
- Adger, David. 2004. *Core syntax: A minimalist approach*. Oxford: Oxford University Press.
- Alexiadou, Artemis, Liliane Haegeman & Melita Stavrou. 2007. *Noun phrase in the generative perspective* (Studies in Generative Grammar 71). Berlin: Mouton de Gruyter.
- Barker, Chris. 1995. *Possessive descriptions* Dissertations in Linguistics. Stanford: CSLI Publications.
- Barker, Chris. 2011. Possessive and relational nouns. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning* (Handbooks of Linguistics and Communication Science 33.2), 1109–1130. Berlin: De Gruyter Mouton.
- Bayer, Josef & Jaklin Kornfilt. 1989. Restructuring effects in German. DYANA Report University of Edinburgh.
- Berman, Judith. 2003. *Clausal syntax of German: Studies in constraint-based lexicalism*. Stanford: CSLI.
- Brame, Michael. 1982. The head-selector theory of lexical specifications and the nonexistence of coarse categories. *Linguistic Analysis* 10(4), 321–325.
- Bruening, Benjamin. 2009. Selectional asymmetries between CP and DP suggest that the DP hypothesis is wrong. In Laurel MacKenzie (ed.), *The 32nd annual Penn Linguistics Colloquium*, vol. 15.1, 26–35. Pennsylvania: University of Pennsylvania. <http://repository.upenn.edu/pwpl/vol15/iss1/5>.
- Bücking, Sebastian. 2010. Zur Interpretation adnominaler Genitive bei nominalisierten Infinitiven im Deutschen. *Zeitschrift für Sprachwissenschaft* 29(1), 39–77.
- Chomsky, Noam. 1970. Remarks on nominalization. In Roderick A. Jacobs & Peter S. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184–221. Waltham: Ginn & Company.
- Chomsky, Noam. 2007. Approaching UG from below. In Uli Sauerland & Hans-Martin Gärtner (eds.), *Interfaces + recursion = language?: Chomsky's Minimalism and the view from syntax-semantics* (Studies in Generative Grammar 89), 1–30. Berlin: De Gruyter.
- Chomsky, Noam, Ángel J. Gallego & Dennis Ott. 2019. Generative grammar and the faculty of language: Insights, questions, and challenges. Manuscript. To appear in *Catalan Journal of Linguistics*. <https://ling.auf.net/lingbuzz/003507>.
- Cinque, Guglielmo & Luigi Rizzi. 2010. The cartography of syntactic structures. In Bernd Heine & Heiko Narrog (eds.), *The Oxford handbook of linguistic analysis*, 51–65. Oxford: Oxford University Press.
- Demske, Ulrike. 2001. *Merkmale und Relationen: Diachrone Studien zur Nominalphrase des Deutschen*. Berlin: Walter de Gruyter.
- Francez, Itamar. 2009. Quantified possessives and direct compositionality. In Ed Cormany, Satoshi Ito & David Lutz (eds.), *19th Semantics and Linguistic Theory (SALT 19)*, 165–179. The Ohio State University: eLanguage. <https://journals.linguisticsociety.org/proceedings/index.php/SALT/article/view/2529>.
- Georgi, Doreen & Gereon Müller. 2010. Noun-phrase structure by rejection. *Syntax* 13(1), 1–36.
- Haider, Hubert. 1988. Die Struktur der deutschen Nominalphrase. *Zeitschrift für Sprachwissenschaft* 7(1), 32–59.
- Haider, Hubert. 1993. *Deutsche Syntax – generativ: Vorstudien zur Theorie einer projektiven Grammatik*. Tübingen: Gunter Narr Verlag.



- Hartmann, Katharina & Malte Zimmermann. 2003. Syntactic and semantic adnominal genitive. In Claudia Maienborn (ed.), *(A-)symmetrien – (A-)symmetries: Beiträge zu Ehren von Ewald Lang*, 171–202. Tübingen: Stauffenburg.
- Hauser, Marc D., Noam Chomsky & W. Tecumseh Fitch. 2002. The faculty of language: What is it, who has it, and how did it evolve? *Science* 298(5598). 1569–1579.
- Hellan, Lars. 1986. The headedness of NPs in Norwegian. In Pieter Muysken & Henk van Riemsdijk (eds.), *Features and projections*, 89–122. Dordrecht: Foris Publications.
- Jackendoff, Ray. 1977. *X-bar syntax: A study of phrase structure*. Linguistic Inquiry Monographs. Cambridge: MIT Press.
- Kobele, Gregory & Malte Zimmermann. 2012. Quantification in German. In Edward Keenan & Denis Paperno (eds.), *Handbook of quantifiers in natural language* (Studies in Linguistics and Philosophy 90), 227–283. Berlin: Springer.
- Krifka, Manfred. 1996. Pragmatic strengthening in plural predications and donkey sentences. In Teresa Galloway & Justin Spence (eds.), *6th Semantics and Linguistic Theory (SALT 6)*, 136–153. Rutgers University: Cornell University. <https://journals.linguisticsociety.org/proceedings/index.php/SALT/issue/view/103>.
- Lyons, John. 1977. *Semantics*, vol. 2. Cambridge: Cambridge University Press.
- Machicao y Priemer, Antonio. 2017. *NP-arguments in NPs: An analysis of German and Spanish noun phrases in Head-Driven Phrase Structure Grammar*. Humboldt-Universität zu Berlin Phd thesis.
- Machicao y Priemer, Antonio. 2018. Kopf. In Stefan Schierholz & Pál Uzonyi (eds.), *Grammatik: Syntax* (Wörterbücher zur Sprach- und Kommunikationswissenschaft (Online) 1.2), Berlin: De Gruyter.
- Machicao y Priemer, Antonio, Andreas Nolda & Athina Sioupi (eds.). 2014. *Zwischen Kern und Peripherie: Untersuchungen zu Randbereichen in Sprache und Grammatik* (Studia grammatica 76). Berlin: De Gruyter.
- Müller, Stefan. 2013. *Head-driven Phrase Structure Grammar: Eine Einführung*. Tübingen: Stauffenburg.
- Müller, Stefan. 2014. Kernigkeit: Anmerkungen zur Kern-Peripherie-Unterscheidung. In Antonio Machicao y Priemer, Andreas Nolda & Athina Sioupi (eds.), *Zwischen kern und peripherie: Untersuchungen zu randbereichen in sprache und grammatik*, 25–39. Berlin: De Gruyter.
- Müller, Stefan. 2015. The CoreGram Project: Theoretical linguistics, theory development and verification. *Journal of Language Modelling* 3(1). 21–86. <https://hpsg.hu-berlin.de/~stefan/Pub/coregram.html>.
- Müller, Stefan. 2016. *Grammatical theory: From Transformational Grammar to constraint-based approaches* (Textbooks in Language Science 1). Berlin: Language Science Press. <http://langsci-press.org/catalog/book/25>.
- Müller, Stefan & Antonio Machicao y Priemer. 2019. Head-Driven Phrase Structure Grammar. In András Kertész, Edith Moravcsik & Csilla Rákosi (eds.), *Current approaches to syntax – A comparative handbook* (Comparative Handbooks of Linguistics 3), Berlin: De Gruyter Mouton. <https://www.degruyter.com/view/product/486143>.
- Netter, Klaus. 1994. Towards a theory of functional heads: German nominal phrases. In John A. Nerbonne, Klaus Netter & Carl Pollard (eds.), *German in Head-Driven Phrase Structure Grammar*, 297–340. Stanford: CSLI.
- Olsen, Susan. 1991. Die deutsche Nominalphrase als Determinansphrase. In Susan Olsen & Gisbert Fanselow (eds.), *'DET, COMP und INFL': Zur Syntax funktionaler Kategorien und grammatischer Funktionen*, 35–56. Tübingen: Niemeyer.



- Partee, Barbara H. 1987. Noun phrase interpretation and type-shifting principles. In Jeroen Groenendijk, Dick de Jongh & Martin Stokhof (eds.), *Studies in Discourse Representation Theory and the theory of generalized quantifiers*, 115–143. Dordrecht: Foris Publications.
- Partee, Barbara H. 1997. Genitives – A case study. In Johan van Bethem & Alice ter Meulen (eds.), *Handbook of logic and linguistics*, 464–470. Amsterdam: Elsevier. [Appendix to Theo M.V. Janssen, ‘Compositionality’].
- Payne, John & Rodney D. Huddleston. 2002. Nouns and noun phrases. In Rodney D. Huddleston & Geoffrey K. Pullum (eds.), *The Cambridge grammar of the English language*, 323–523. Cambridge: Cambridge University Press.
- Pollard, Carl & Ivan Sag. 1994. *Head-Driven Phrase Structure Grammar*. Chicago: University of Chicago Press.
- Pollard, Carl J. & Ivan A. Sag. 1987. *Information-based syntax and semantics. Volume 1: Fundamentals*. Stanford: CSLI Publications.
- Sag, Ivan. 2007. Remarks on locality. In Stefan Müller (ed.), *The 14th international conference on Head-Driven Phrase Structure Grammar (HPSG 2007)*, 394–414. Stanford University: CSLI Publications. <http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2007/sag.pdf>.
- Sag, Ivan A. 2012. Sign-Based Construction Grammar: An informal synopsis. In Hans C. Boas & Ivan Sag (eds.), *Sign-Based Construction Grammar (CSLI Lecture Notes 193)*, 69–202. Stanford: CSLI Publications.
- Schäfer, Roland. 2015. Processing and querying large web corpora with the COW14 architecture. In *Proceedings of challenges in the management of large corpora (CMLC-3)*, Lancaster: IDS Mannheim. <http://corpora.ids-mannheim.de/cmlc.html>. [quoted as DECOW: <http://corporafromtheweb.org/decow14/>].
- Schäfer, Roland & Felix Bildhauer. 2012. Building large corpora from the web using a new efficient tool chain. In Nicoletta Calzolari, Khalid Choukri, Thierry Declerck, Mehmet Uur Doan, Bente Maegaard, Joseph Mariani, Asuncion Moreno, Jan Odijk & Stelios Piperidis (eds.), *Proceedings of the eight international conference on language resources and evaluation (Irec’12)*, 486–493. Istanbul, Turkey: European Language Resources Association (ELRA). [quoted as COW: <http://corporafromtheweb.org>].
- Sternefeld, Wolfgang. 2015. *Syntax: Eine morphologisch motivierte generative Beschreibung des Deutschen*, vol. 1 (Stauffenburg Linguistik 31). Tübingen: Stauffenburg 4th edn.
- Tappe, Hans Thilo. 1989. The position of prenominal genitives in German. Manuscript.
- Van Eynde, Frank. 2003. On the notion ‘determiner’. In Stefan Müller (ed.), *The 10th international conference on Head-Driven Phrase Structure Grammar (HPSG 2003)*, 391–396. Michigan State University: CSLI Publications. <http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2003/toc.shtml>.
- Van Eynde, Frank. 2006. NP-internal agreement and the structure of the noun phrase. *Journal of Linguistics* 42(1). 139–186.
- Van Langendonck, Willy. 1994. Determiners as heads? *Cognitive Linguistics* 5(3). 243–260.
- Vater, Heinz. 1979. *Das System der Artikelformen im gegenwärtigen Deutsch* (Linguistische Arbeiten 78). Tübingen: Max Niemeyer 2nd edn.
- Vater, Heinz. 1986. Zur NP-Struktur im Deutschen. In Heinz Vater (ed.), *Zur Syntax der Determinantien* (Studien zur deutschen Grammatik 31), 123–145. Tübingen: Gunter Narr.
- Vater, Heinz. 1991. Determinantien in der DP. In Susan Olsen & Gisbert Fanselow (eds.), *‘DET, COMP und INFL’: Zur Syntax funktionaler Kategorien und grammatischer Funktionen*, 15–34. Tübingen: Niemeyer.



Vennemann, Theo & Ray Harlow. 1977. Categorical Grammar and consisten basic VX serialization. *Theoretical Linguistics* 4(1-3). 227-254.

Woisetschlaeger, Erich. 1983. On the question of definiteness in "an old man's book". *Linguistic Inquiry* 14(1). 137-154.

Yoon, Youngeun. 1996. Total and partial predicates and the weak and strong interpretations. *Natural Language Semantics* 4(3). 217-236.

Zwicky, Arnold M. 1985. Heads. *Journal of Linguistics* 21(1). 1-29.