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Byproducts and side effects – Nebenprodukte und Nebeneffekte

André Meinunger (Ed.)

Foreword

These days, most academic research is done in official projects. The standard case is that researchers work on a certain prescribed topic within a broader or narrower affiliation. Very often the concrete and specific work opens new horizons that were not necessarily connected with the initial investigated issues. People get new insights into areas which are not the very focus of their actual field of study. Such insights eventually lead to concrete results such as talks, posters or articles. The present volume is a collection of such papers. These studies are the results of thinking about linguistic structures, about what the essence of language is, and as such these "side products" also participate in shaping our knowledge of language. They push ahead a number of original topics that are currently relevant and, in the best of all cases, will also lead to new insights and innovative changes.

The papers collected in this volume have very diverse topics – such as prosodic peculiarities (Meinunger and Hamlaoui & Roussarie), morphological items (McFadden and Steriopolo), or phenomena concerning syntax and its interfaces, such as syntax-morphology (Kamali), syntax-parsing (Winkler), or syntax-pragmatics (Bittner & Dery). The languages considered range from quite prominent German and French via Turkish to very exotic Nuuchahnulth or no longer spoken Old and Middle English. However, all contributions center around structural phenomena and provide analyses in terms of grammatical theory.

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André Meinunger

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#*Je suis Charlie*
Semantic and prosodic anatomy of an empathic copular sentence*

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"Je suis Charlie" was used over 619.000 times in the two days that have followed the attack of the editorial team of *Charlie Hebdo* (*Le Progrès*, *The Huffington Post*) and has regularly been taken up in both written and spoken form since. In this paper, we argue that the structure of this sentence actually clashes with its meaning. More specifically, whereas its word order and default rightmost sentence stress are compatible either with an all-focus reading or a narrow focusing of *Charlie*, the context of use of this sentence as well as the solidarity/empathy message it intends to communicate suggest that its subject is narrowly focused. We will propose that two strategies have emerged to solve this conflict: (i) various alternative forms have appeared that allow proper subject focusing and (ii) speakers have reinterpreted the structure so as to pragmatically retrieve the (additive) focused nature of the subject.

1 Introduction

The sentence "Je suis Charlie", which has become tragically popular since January 2015, was first published as a logo by Joaquim Roncin, an art director and music journalist, less than an hour after the attack of *Charlie Hebdo*'s editorial team. J. Roncin declared to the press that he created this image because, in these terrible circumstances, he was lacking the words to fully express his feelings:

* Heartfelt thanks go to Joseph Dodd for discussing the paper with us, sharing his intuitions as an English native speaker and first suggesting the connection with *Spartacus* to us. Many thanks also go to the Romanistik students at the Universität zu Köln who participated in a small pilot study on *Ich bin Charlie*, to Jonas Engelmann for his help in the preparation of this study, and to the audience of the Linguistisches Kolloquium der Romanistik (LKR) at the Universität zu Köln, in particular to Marco García and Martin Becker. The usual disclaimers apply.

> "Ce que je voulais dire, c'est que c'est comme si on m'avait touché moi, je me sens personnellement visé, ça me tue, quoi"[1] (*Le Progrès*)

Writing or pronouncing this type of copular structure to express empathy and/or solidarity with a person or a group of people is not unprecedented, as illustrated by the sentences in (1) and (2).

(1) Ich bin ein Berliner.
'I am a Berliner.' (JFK, 06.26.1963)

(2) Nous sommes tous américains.
'We are all Americans.' (Serge Halimi, *Le Monde diplomatique*, 10.2001)

Recent events also show that this structure is quite productive as, since January 2015, *Charlie* has regularly been substituted with other first names (in the memory of other victims) and with various nouns and adjectives (in solidarity with other targeted communities). This is illustrated in (3).

(3) " Je suis flic, je suis juif, je suis musulman, je suis baptisé, je suis Charlie".
'I am a cop, I am Jewish, I am Muslim, I'm baptised, I'm Charlie.' (*Nouvel Obs*)

In popular culture, a famous instance of this type of copular structure goes back to the movie *Spartacus* (S. Kubrick, 1960). Comparisons were indeed drawn by the media between J. Roncin's sentence and the one produced by the slaves in the famous exchange in (4) (e.g. www.managementtoday.co.uk).

(4) **Herald**: I bring a message from your master Marcus Licinius Crassus commander of Italy. By command of His Most Merciful Excellency your lives are to be spared. Slaves you were and slaves your remain. But the terrible penalty of crucifixion has been set aside on the single condition that you identify the body or the living person of the slave called Spartacus.
Antonius: I'm Spartacus!
Slaves *one at a time, then overlapping*: I'm Spartacus! I'm Spartacus! I'm Spartacus!

Crucially, in this exchange, the slaves provide an answer to the implicit question "Who is Spartacus?" and the prosody of their answers (with sentence main prominence located on the subject pronoun) indicates that the grammatical subject of this sentence is narrowly focused.

In our view, "Je suis Charlie" and its translation in various languages answer a similar implicit question, which puts the subject of the sentence under narrow focus. Null-subject Romance languages such as Italian and Spanish, in which

[1] *What I wanted to say is that it is as if it was me that they had hit, I feel personally targeted, what was done/these events just kill me.*

the translation of "Je suis Charlie" in (5) and (6) features an overt subject also suggest that this structure involves subject-focusing.

(5) Io sono Charlie.
'I am Charlie.' (www.huffingtonpost.it)

(6) Yo soy Charlie.
'I am Charlie.'(www.cronicadelquindio.com)

The grammar of French (both Standard and Colloquial) disfavours prominence shift to the subject "je". As argued by Hamlaoui (2007, 2009), the association between a focused subject and sentence stress, which is required by the stress-focus correspondence principle (Reinhart 1995, 2006; Szendrői 2001, 2003), is preferably achieved through the use of structures that allow to preserve default rightmost sentence stress. Additionally, the pronoun "je", which is analysed as a clitic in Standard French and more recently as an affix in Colloquial French (Zribi-Hertz 1994; Côté 2001; Culbertson 2010) does not constitute a prosodic word of its own and is thus not eligible to carry sentence stress. "Je suis Charlie" thus simply displays a (default) rightmost sentence stress. In our view, this French sentence presents a case of form/meaning clash. Whereas its prosody is compatible with the information-structural organisations in (7) or (8), the context of its use favours the interpretations in (9) or (10).

(7) Je suis $[\text{Charlie}]_F$

(8) $[\text{Je suis Charlie}]_F$

(9) $[\text{Je}]_F$ suis Charlie

(10) $[[\text{Je}]_F$ suis Charlie$]_F$

Two strategies have emerged to reconcile the form and meaning of "Je suis Charlie". First, alternative structures were spontaneously created that fare better in satisfying the stress-focus correspondence principle. Second, "Je suis Charlie" has been re-interpreted by French speakers so as to obtain a reading quasi-equivalent to subject focus (without actually having to prosodically focus the subject). Before we turn to the above mentioned information-structural considerations, let us first discuss the interpretation of solidarity-expressing copular sentences of the type "I am X".

2 Semantic structure

2.1 The presumptive message

From a truth-conditional perspective, there seems to be two ways of interpreting a sentence like "Je suis Charlie". In the straightforward equative-referential reading, the speaker identifies himself with the entity known by the audience as

Charlie. The proper name is simply treated as a referential expression of type e, denoting a unique and identified entity in the context. The truth-conditional content of this sentence can then be summed up by the formula in (11).

(11) $i = \mathsf{c}$
where c is a constant denoting the individual Charlie and i is an indexical variable referring directly to the speaker in the current context of utterance

In the context relevant in the present paper, this formula is however plainly false, as the speaker is *not* Charlie. Also, in contrast to Antonius in *Spartacus*, J. Roncin is not trying to pass himself off as (someone called) *Charlie*. By virtue of the Gricean maxim of quality, hearers infer that the speaker most probably means something else.

We propose that this "something else" is the second possible interpretation of the sentence: a predicative reading, in which the speaker assigns himself a certain property. This reading corresponds to the formula in (12).

(12) $\mathsf{Charlie\text{-}p}(i)$
where $\mathsf{Charlie\text{-}p}$ is a one-place predicate (type $\langle$e,t$\rangle$).

First, the predicative reading seems more on a par with J. Roncin's acknowledged intention—namely to express his solidarity—as a predicate denotes a set of (possibly many) individuals. The utterance of "Je suis Charlie" can thus be understood as a way for the speaker to volunteer the information that he belongs to a group, viz. the extension of $\mathsf{Charlie\text{-}p}$. In this context, this group could be *Charlie Hebdo*'s editorial team, all the victims of this attack, or even all the other people who feel hurt by these events.

Second, the predicative reading appears to be corroborated by attested French variants of "Je suis Charlie" in (13), using an indefinite NP. The structure "I am an X", illustrated in (14), is indeed a typical predicative construction in French.

(13) a. Je suis un Charlie.
I am a Charlie.
b. Nous sommes (tous) des Charlie.
We are (all) Charlies.

(14) Je suis un hipster/un imbécile/un génie.
I'm a hipster/an idiot/a genius.

The predicative reading in (12) and (13) may be an instance of the *appellative use* of proper names (also known as *antonomasia* in the French tradition, i.e. the figurative conversion of a proper name into a common noun). The precise specification of the content of the $\mathsf{Charlie\text{-}p}$ property (i.e. what it means politically/morally/socially to "be Charlie") does not have to be dealt with by

compositional semantics, as antonomasia is a figure of speech involving some *a posteriori* pragmatic reasoning. Our analysis however can (and should) prepare the ground for the eventual interpretation by making the semantic structure consistent with the information packaging (cf. examples (7) to (10)), that is by assigning the sentence a semantic structure of a predicate–argument form.

2.2 The predicative Charlie

So, how can a proper name give rise to a predicate?[2] Generally speaking, the mechanism of antonomasia that is at work in "Je suis Charlie" can be viewed as yielding the predicate in (15) for the name *Charlie* (instead of the constant c).

(15) $\lambda x.R(x, \mathsf{c})$
where R is a relational free variable whose value is to be supplied by the context

In standard cases of antonomasia, R will be resolved as a relation expressing resemblance, imitation, analogy, etc. In our example however, the relation may be less conventional, merely intending at expressing some form of solidarity with c, i.e. *Charlie* (whoever he or it is). For what matters here, let us however assume that the introduction of R in (15) is a stylistic type-shifting operation that turns a term of type e into a predicate of type ⟨e,t⟩.

Note that the predicative reading comes for free if one adopts the position, argued for by e.g. Matushansky (2015), that proper names are inherently naming predicates. Along these lines, a name like *Charlie* is analysed as (16).

(16) $\lambda x \lambda N.N(x, \text{ʃaʁli})$
where N ranges over a set of naming conventions (e.g. *is-called*, *is-nicknamed*, *is-known-as*)

N is thus a relation between an individual (x) and a name (i.e. a phonological string, here /ʃaʁli/). The usual referential use of a proper name (i.e. as an argument NP) is treated as a definite description, with an implicit definite article, as shown in (17) for the analysis of the name *Charlie*.

(17) [~~*the*~~ *Charlie*] $\rightsquigarrow \imath x\, N(x, \text{ʃaʁli})$
i.e. the unique individual called or known as Charlie in the context

N (a free variable) is supplied by the context as the unambiguous naming convention in force between a speaker using a proper name and her addressee(s).

[2] Naturally one can directly get a predicate from a term by applying the type-shifter ident ($\lambda y \lambda x.[x = y]$), which turns an individual into the singleton set containing this individual (Partee 1987). Here it will yield the property of being identical to Charlie ($\lambda x.[x = \mathsf{c}]$), which in the end is equivalent to the referential reading of the proper name.

The predicative use of *Charlie* ($\lambda x.N(x, \text{ʃaʁli})$) is exemplified in (18) for "Je suis Charlie", to be compared with the referential reading in (19) for "I'm Spartacus".

(18) $N(i, \text{ʃaʁli})$

(19) $i = \imath x N(x, \text{spɑːtəkəs})$

(18) literally means "my name is (one way or another) Charlie", but again, it is not to be interpreted literally. Rather, it means that the speaker belongs to the group of people who are *symbolically* named Charlie. (18) allows this interpretation, as N is a free variable and can be contextually resolved as a less conventional naming relation.

In sum, we have argued that in the context relevant to the present paper, the sentence "Je suis Charlie" is associated with a predicative reading of the proper name *Charlie*. We have also seen that there are several (potentially complementary) means of giving this sentence a predicate–argument structure. Importantly, the structure conveys that the speaker belongs to a set which, as we will discuss in Section 4, will be crucial for French speakers to pragmatically retrieve the (additive) focus reading of the subject pronoun "je". Let us now turn to the information-structural organisation of "Je suis Charlie".

3 Information structure

3.1 Focus/Background

The information structure of an assertion is traditionally defined as a focus-(back)ground partition (Vallduví & Engdahl 1996; Engdahl 2006), where the focus is the informative or new part, and the ground the known, given or contextually bound one. In particular, for an assertion that is a full answer to a question in a dialogue, the ground corresponds to the question asked, and the focus is the locus of the answer. The information structure of an assertion can thus be identified by determining which question (even implicit) it provides an answer to, which issue it resolves.

Accordingly, "Je suis Charlie" can answer different questions, and then (theoretically) be assigned at least 3 different information structural organisations given in S1 to S3 below. We adopt the Structured Meaning approaches (a.o. von Stechow 1982; Krifka 2001, 2006) which implements the information structure directly in the semantic representation by splitting the truth-conditional content into a pair ⟨Focus, Background⟩.[3] In these structures, Charlie-p represents the general contribution of *Charlie* in the form of a predicate. It can stand for

[3] The Background (i.e. the ground) is a function, and the functional application Background(Focus) yields the traditional truth-conditional content of the sentence.

the predicates $\lambda x.R(x, \mathsf{c})$ or $\lambda x.N(x, \text{ʃaʁli})$ discussed in Section 2, or even for $\lambda x.[x = \mathsf{c}]$ if we hadn't discarded the referential reading of *Charlie*.

S1 $\langle \mathsf{Charlie\text{-}p}, \lambda P.P(i) \rangle$ Je suis [Charlie]$_F$
the speaker introduces himself answering "Qui es-tu ?" [Who are you?] or simply gives some information about himself answering "Tu es quoi ?"[What are you?/What about you?]

S2 $\langle i, \lambda x.\mathsf{Charlie\text{-}p}(x) \rangle$ [Je]$_F$ suis Charlie
the speaker identifies Charlie (as being himself) answering "Qui est Charlie?" [Who is Charlie?]

S3 $\langle \mathsf{Charlie\text{-}p}(i), \lambda Y.\mathcal{R}(Y, X) \rangle$ [Je suis Charlie]$_F$
the speaker provides full-fledged all focus information, for instance answering "Pourquoi X ?" ("Pourquoi vous manifestez ?") [Why X?, Why do you demonstrate?]

If J. Roncin's "Je suis Charlie" is to be related to the famous scene of *Spartacus*, its information structure corresponds to S2. This would be consistent with the idea that someone is looking for Charlie (in order to harm him/it) and by identifying himself as Charlie, the speaker participates in protecting him/it. In contrast with the exchange between the slaves and the Roman soldiers, no virtual, explicit request is made to J. Roncin to identify Charlie, which, if we are on the right track, makes his utterance an out-of-the blue sentence (S3) with an instance of nested focus on the subject. This structure is illustrated in S4 (corresponding to (10)).

S4 $\langle \langle i, \lambda x.\mathsf{Charlie\text{-}p}(x) \rangle, \lambda Y.R(Y, X) \rangle$

Furthermore, in the context under consideration in the present paper (*Charlie Hebdo*'s attack), "Je suis Charlie" is not likely to fit with S1, as the speaker who produces this sentence as a means to express his solidarity does not constitute the topic of the sentence (i.e. he is not (primarily) providing a piece of information about himself that the hearer/addressee should store (Reinhart 1982)). The most discourse-salient, topical item of the sentence is Charlie (and not the person who produces the sentence), and what matters in this context is rather how many members the Charlie-set contains (how big the set is), rather than whether an individual ("a man in the street") can list Charlie-p as one of his/her properties.

3.2 Focus and prosodic prominence

In the European languages discussed in the present paper, prosody participates in encoding information structure (Ladd 2007; Zubizarreta 1998; Samek-Lodovici 2005), and the principle in (20) (Reinhart 1995, 2006; Szendrői 2001, 2003) or

its Optimality-Theoretic counterpart in (21) (Truckenbrodt 1995) are expected to apply .

(20) *Focus Rule* or *Stress-Focus Correspondence Principle*
The focus of a clause is a(ny) constituent containing the main stress of the intonational phrase, as determined by the stress-rule.

(21) Stress-focus
For any XP_f and YP in the focus domain of XP_f, XP_f is prosodically more prominent than YP.

Within an out-of-the-blue simple sentence, in French (as well as in English, German, Spanish or Italian), the stress rule in (22) ensures that sentence stress is rightmost (Truckenbrodt 1995).

(22) ALIGNIP, RIGHT, HEAD(IP), R
Align the right boundary of every intonational phrase with its head.

Assuming Selkirk's (1984, 2011) prosodic hierarchy (Intonational phrase (ι) > Phonological phrase (ϕ) > Prosodic word (ω)), the head of the rightmost phonological phrase is promoted to the status of head of the intonational phrase (noted in bold).

(23) a. ((I'm)$_\phi$(**Charlie**)$_\phi$)$_\iota$
b. ((Je suis **Charlie**)$_\phi$)$_\iota$
c. ((Yo)$_\phi$ soy **Charlie**)$_\phi$)$_\iota$
d. ((Io)$_\phi$ sono **Charlie**)$_\phi$)$_\iota$

According to the principle in (20), the focus of (23) can either be the noun *Charlie*, the VP or the entire clause (cf. this is the phenomenon known as focus projection).

To encode that the subject is in narrow focus, Germanic languages shift sentence main prominence to the left, onto the subject. This is what happens in the exchange between the slaves and the herald in *Spartacus*, repeated below, where "I" is prosodically prominent and the discourse-given material following it is reduced. In this respect, functional words like subject pronouns behave just like lexical, full subject noun phrases.

(4) **Herald**: I bring a message from your master Marcus Licinius Crassus commander of Italy. By command of His Most Merciful Excellency your lives are to be spared. Slaves you were and slaves your remain. But the terrible penalty of crucifixion has been set aside on the single condition that you identify the body or the living person of the slave called Spartacus.
Antonius: I'm Spartacus!

Slaves *one at a time, then overlapping*: **I**'m Spartacus! **I**'m Spartacus! **I**'m Spartacus!

To express focus on a subject, null-subject Romance language like Italian and Spanish have the possibility of using a full subject pronoun in preverbal position and, just like in English (or German), this functional word is eligible to carry prosodic prominence (Pešková to appear: and references therein).

French, and in particular Colloquial French, has been argued to generally disfavour this type of prosodic prominence shifting and, rather, resort to changes in word order or syntactic structure that allow to retain rightmost sentence stress (Hamlaoui 2007, 2009). Note that, as shown in (24), in the French (dubbed) version of the exchange in (4), the slaves use both the canonical word order and its cleft-like alternative.

(24) **Herald**: Je suis chargé de vous lire ce message de votre maître, Marcus Licinius Crassus, commandant les légions d'Italie. Obéissant à un sentiment de pitié, nous décidons que vos vies seront épargnées. Esclaves vous étiez, esclaves vous demeurerez. Mais nous avons écarté le châtiment terrible de la crucifixion à la seule condition que vous nous aidiez à identifier le corps ou la personne vivante de l'esclave Spartacus.
Antonius: Je suis **Spartacus** !
Slaves *one at a time, then overlapping*: C'est **moi**, Spartacus ! Je **suis** Spartacus ! Je suis **Spartacus** ! C'est **moi**, Spartacus ! C'est **moi**, Spartacus ! ...

In both Standard and Colloquial French, the subject pronoun "je" is unable to carry sentence main prominence as, be it analysed as a clitic or as an agreement marker, it does not constitute a prosodic word of its own and thus, *a fortiori*, a phonological phrase. The strong form "moi" ('I') is the form that constitutes a prosodic word of its own (e.g. it can be pronounced in isolation). This form can be focused and in "C'est moi" in (24), this is done by having it follow the verb. In this postverbal position, the pronoun is aligned with the right edge of the clause/intonation phrase and thus satisfies (20). Note that the forms in (25) and (26), taken from (24), are inappropriate in this context, as they fail to answer the (implicit) subject *wh*-question.

(25) "Je suis **Spartacus** !"

(26) "Je **suis** Spartacus !"

If we are on the right track concerning the fact that "Je suis Charlie" provides an answer to the implicit question "Qui est Charlie?" (Who is Charlie?), the French version of this assertion violates the principle in (20), as rightmost sen-

tence stress does not encode the focused nature of the subject. The form of this French sentence then clashes with its meaning. As shown in (27), it is inappropriate/incongruent in this context.

(27) A: Qui est Charlie?
B: #Je suis **Charlie**.

4 Form/meaning-clash resolution

4.1 "Je suis Charlie"–variants

In our view, two strategies have appeared in French to solve this conflict between subject focus and the requirement for main prominence to be rightmost. First, a number of alternatives to "Je suis Charlie" have spontaneously emerged, that better satisfy the stress-focus correspondence in (20). The most common alternative is probably the one in (28).

(28) Nous sommes **tous** (des) Charlie.

The postverbal location of the floated quantifier places it closer to the right edge of the clause and allows this subpart of the focused subject left in Spec,vP/VP (Sportiche 1988) to carry sentence stress. At the present stage, it is unclear to us whether "tous" is aligned with an (extra) intonational phrase boundary, as in (29), in violation of phonology-syntax mapping principles that associate intonational phrase edges with clausal edges (Selkirk 2011), or whether the head of the intonation phrase is simply shifted to the left, as in (30), in violation of (21). Nothing however hinges on this here.

(29) [[Nous sommes **tous**]$_\iota$ (des) Charlie]$_\iota$

(30) [Nous sommes **tous** (des) Charlie]$_\iota$

Prominence shifting is not absolutely banned in French (Féry 2001; vander Klok et al 2014), it is dispreferred whenever another – equivalent – structure is available that satisfies rightmost main prominence. Note that in the configurations in (29) and (30), *Charlie* is also prosodically reduced. This is consistent with the fact that in the context at issue, it is (somehow) discourse-given.

Another alternative structure was contributed for instance by the cartoonist Uderzo (one of the fathers of *Asterix and Obelix*) that fares better that "Je suis Charlie" on the association between stress and focus. It is given in (31).

(31) Moi **aussi**, je suis un Charlie !

The additive adverb *aussi* explicitly evokes alternative individuals to the speaker. As is common with adnominal focus-sensitive operators, it is the adverb that carries prominence, rather than its focused associate. This is however not a ma-

jor issue as, if the adverb and its associate form a single syntactic phrase (as argued e.g. in Siemund (2000)), it is expected under common stressing rules that the prosodic head of the phonological phrase they form be rightmost. As in (28), the prominence on *aussi* is consistent with several prosodic structures. The structure in (32) would involve a prominence shift to the left, in violation of (21).

(32) [Moi **aussi**, je suis (un) Charlie]$_\iota$

(33) [[Moi **aussi**]$_\iota$, je suis (un) Charlie]$_\iota$

Unless the material following "moi aussi" is somehow syntactically right dislocated, the prosodic structure in (33) violates phonology-syntax mapping constraints by inserting an intonation phrase break that does not correspond to the right edge of the clause. Again we leave this issue open for future research.

4.2 Towards an additive reading

So far, we have seen that to solve the conflict posed by the French version of "Je suis Charlie", French speakers naturally came up with alternative structures that fare better on associating prosodic prominence with the subject of this sentence. Another way of solving the form/meaning clash presented by the French sentence "Je suis Charlie" is for French speakers to pragmatically retrieve the focused nature of the subject. As was already brought up in Section 2, the predicative reading of "Je suis Charlie" means that the speaker assigns himself a certain property, the Charlie-p property. This amounts to say that he belongs to a certain set which, we have proposed, could be the set of all individuals who stand in an empathic antonomasia-relation with the iconic individual Charlie ($\lambda x.R(x, \mathsf{c})$, in (15)) or the set of all individuals who are symbolically named Charlie ($\lambda x.N(x, \text{ʃaʁli})$, from (16)). The sentence "Je suis Charlie" by itself does not presuppose anything about this set, but we assume that the original context of utterance (J. Roncin's spontaneous tweet) contains the pragmatic presupposition, that is, a publicly shared knowledge being part of the Common Ground (Stalnaker 1974), that the set denoted by Charlie-p already contains several individuals. In a way, the first "Charlies" are the members of the editorial team, many of whom were victims of the attack. By taking this presupposition into account, the full message of the original utterance of the slogan amounts to (34).

(34) It is known that there are several persons who are Charlie and I *too*, am Charlie.

(34) corresponds to an *additive* reading—that is, what is usually expressed by *also* or *too* and *aussi* in French: a predication uttered *in addition* to some similar and alternative propositions presupposed in the context (König 1991). In this

reading (34) the "first Charlies" appears as a set of alternatives (in the sense of Rooth (1992)) with respect to the subject *I*, which in turn is focused and added to the set.

This additive flavour becomes more obvious when the slogan is later publicly taken up by thousands of followers adding themselves to the growing set of Charlies in order to show and build a massive solidarity. This is still strengthened in the variant involving an indefinite (35):

(35) Je suis un Charlie.

In French, singular indefinite NPs in a copular sentence are often understood as denoting a non singleton set. In this example, this can be explained on a pragmatic basis. (35) can be glossed as in (36).

(36) There is an individual who is Charlie and who is me.

This is weaker than "all Charlies are me" (i.e. "I'm the unique Charlie"), which allows to infer the scalar implicature in (37).

(37) Not all Charlies are me (= there are other Charlies).

This implicature together with the truth conditions of (37) bring about the additive reading again. This is made very explicit in Uderzo's cartoon, with the sentence in (31), repeated below.

(31) Moi aussi je suis un Charlie !

In sum, we have argued that whereas languages like English (or also German), Italian and Spanish have at their disposal prosodic means of encoding the focused nature of a subject pronoun, in the context of the sentence "Je suis Charlie", French speakers retrieve it by means of pragmatic inferences.

5 Conclusion

Used over 619.000 times in two days, the sentence "Je suis Charlie", both in its written and its spoken form, has been a means for people all over the world to express their solidarity with the editorial team of the satirical magazine. In this paper, we have tried to show that this type of – productive – empathic copular structure raises a number of interesting linguistic issues. We have first argued that in this context, where it is meant to express solidarity and/or empathy, the proper name is associated with a predicative reading. In other words, by uttering "Je suis Charlie", the speaker conveys that she belongs to a set, that she assigns herself a Charlie-p property.

Second, we have argued that, from a communicative perspective, the sentence "Je suis Charlie" contributes an answer to the implicit question "Who is Charlie?" and thus involves narrow focus on its subject. In contrast with Germanic

languages and other Romance languages like Spanish and Italian, French subject pronouns are however not eligible to carry sentence main prominence. "Je suis Charlie" simply displays a default rightmost sentence stress on "Charlie". This prosodic configuration violates the required association between stress and focus, and creates a clash between the form of this sentence and its meaning.

We have proposed that two strategies have naturally appeared to solve this conflict: (i) several variants to "Je suis Charlie" have emerged that allow proper prosodic highlighting of the subject and (ii) speakers have reinterpreted the structure so as to pragmatically retrieve the (additive) focus nature of the subject.

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Preverbal *ge-* in Old and Middle English

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1 Background

This paper aims to work toward a proper understanding of the role of preverbal *ge-* in Old English (henceforth OE) and its disappearance in the course of Middle English. This prefix is reminiscent of its cognates in Modern German and Dutch (also written *ge-*)[1] in its distribution, but even a cursory examination of the details reveals it to be quite distinct, as we will see. The proper characterization of that distribution, and of its diachronic development, has proven to be extremely difficult. I have thus carried out a large-scale corpus study using the *York-Toronto-Helsinki parsed corpus of Old English prose* (Taylor et al. 2003)[2] and the *Penn-Helsinki parsed corpus of Middle English*, 2nd ed. (Kroch & Taylor 1999),[3]. This paper will report the results of the first phase of the project, involving patterns in the data that could be identified primarily on the basis of automatic searches in the corpora. These patterns serve as the empirical basis for an improved description of the facts, and ultimately for a more precise theoretical hypothesis about the nature of *ge-* than any found in previous work. I will propose specifically that *ge-* in OE was the default realization of a *res(ultative)* head in the sense of Ramchand (2008). It is important to note at the outset that the results I will present are preliminary. The predictions of the proposed analysis must still be tested in a planned second phase of the project, involving a close reading of a manageably sized sample of relevant clauses from the corpus, examining in particular details of interpretation that are not reflected in the corpus annotation and cannot be searched for electronically. The second phase will also apply more sophisticated statistical methods to the data, in particular a multivariate analysis that can test more systematically for interactions between variables than I have been able to do here.

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[1] These are also written *ge-*, but have quite different pronunciations, due to the effects of regular sound changes in the three languages. While (Standard) German has [gə], and Dutch has [χə], the Old English pronunciation was something like [jɛ] or [jə]

[2] `http://www-users.york.ac.uk/~lang22/YCOE/YcoeHome.htm`

[3] `http://www.ling.upenn.edu/hist-corpora/`

1.1 Germanic comparisons

The prefix *ge-* is the descendant of a common Germanic element **ga/gi*, the cognates of which are found in most of the other (old) Germanic languages. The traditional analysis of the original prefix in its preverbal use in Proto-Germanic is that it marked perfectivity or resultativity (Streitberg 1891; Lloyd 1979; van Kemenade & Los 2003 and see further below), but our understanding is complicated by the distinct developments it has undergone in the daughter languages.[4]

In the Scandinavian branch, the reflex of **ga/gi* was lost prehistorically, just like the other unstressed verbal prefixes, so that by the Old Norse period it no longer appears as a prefix.[5] In Gothic, the cognate *ga-* was a prominent part of the language, in the verbal morphology and elsewhere. Its distribution shows strong similarities to what we find in OE and the old West Germanic languages, though the relatively small corpus available to us makes it difficult to achieve a clear understanding of its exact role. Nonetheless, there is an extensive (mostly older) literature attempting to do just that (see especially Streitberg 1891; Lloyd 1979; Eythórsson 1995 for data and discussion).

In the old West Germanic languages, the prefix was well preserved, again playing an active role in the verbal morphology. In OE in particular, *ge-* was still an obviously productive part of the verbal system, with a behavior similar to that in Gothic, which has eluded straightforward characterization. It is clear that it interacts with aspect and aktionsart, argument structure and (lexical) semantics, but as is often the case when such factors are involved, and in particular when we don't have access to native speaker intuitions to help sort things out, it's far more difficult to say which of these factors defines its primary function. Indeed it may well be that some further, more abstract factor, which remains to be identified, is most important, with the superficial ones previously identified being only indirectly related. Matters are not helped by the fact that *ge-* was

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[4] The prefix could in fact attach to nouns, adjectives and even adverbs in the older languages, and the different uses clearly are ultimately related. However, their common origin lies quite far back in time, and by the time of the historically attested languages, the connection between them is rather tenuous, so that it no longer makes sense to propose a unified syntax/semantics for them. For this reason, I will focus here solely on the preverbal uses of the prefix and set the other ones aside.

[5] What actually seems to have happened is that pre-tonic unstressed vowels syncopated, and most of the resulting consonant clusters were subsequently simplified by deleting the first consonant. This effectively deleted the entire prefix in most instances, and even in cases where allowable initial clusters would have resulted, the consonant portion of the prefix was eliminated analogically. However, in at least some cases where the origin of this consonant in a productive prefix was obscured, i.e. where the relationship to non-prefixed forms of the same verb was severed, it remained.

lost as a productive element in the course of the Middle English (henceforth ME) period, as I will discuss in some detail in Section 4. Present Day English (henceforth PDE), like Old Norse, has only traces of *ge-* where its origins as a prefix have become obscure, mostly in non-verbal uses (e.g. the *e-* in *enough*). This means that we can get no clues from the modern language, where native speaker intuitions would have been available.

German and Dutch differ on this point, having preserved the prefix as a productive element of verbal morphology to the present day. This brings both advantages and disadvantages, however, as these languages have clearly undergone significant innovations in the use of the prefix. Due to the availability of native speakers (as well as vast corpora), we can achieve a very accurate description of the distribution of *ge-* in these languages. Whether this is really helpful for understanding OE *ge-* remains doubtful, however. While we find at first glance similarities between the three languages on this point, a quick comparison shows crucial differences in the details, hence taking the German and Dutch patterns as a starting point is likely to be misleading.

In Modern German and Dutch, the prefix has two distinct verbal functions. My presentation here will be based on the German facts, but the characterization applies in its essentials to both languages.[6] First, it appears productively on the participial form of the verb used (along with various auxiliaries) to form the periphrastic perfects and passives (henceforth the PPP, for perfect/passive participle). In German, this is restricted to verbs with stress on the first syllable, but is otherwise completely regular and productive.[7]

(1) a. **Initial stress:**

Inf.		**PPP**	**Gloss**
ˈzählen	~	gezählt	‘count’
ˈtrinken	~	getrunken	‘drink’
ˈmailen	~	gemailt	‘e-mail’

b. **Non-initial stress:**

Inf.		**PPP**	**Gloss**
erˈzählen	~	erzählt	‘tell’
spaˈzieren	~	spaziert	‘walk’

[6] The distribution of *ge-* is not identical in the two languages (see fn. 7), but the differences (as far as I am aware) are not relevant to the broader points being made here.

[7] The relevant condition is different in Dutch, where it is not stress-placement, but the presence or absence of a competing inseparable prefix that matters.

Second, it appears non-productively as a derivational prefix, as in the examples in Table 1. Note that there is no consistent semantic relationship between such *ge-* prefixed verbs and their non-prefixed counterparts, and in some cases it is obscure what connection there could be between them at all. This of course

Table 1: German derivational *ge-*

brauchen	'need, use'	*gebrauchen*	'use'
fallen	'fall'	*gefallen*	'please'
hören	'hear'	*gehören*	'belong to'
denken	'think'	*gedenken*	'commemorate'
stehen	'stand'	*gestehen*	'confess'

represents a fairly typical pattern with derivational morphology. When used productively, such morphology typically makes a consistent semantic contribution, but over time derived forms can become 'lexicalized', i.e. the connection to their original constituent parts can be weakened or lost, with the lexical item that was once productively derived henceforth following a distinct path of diachronic semantic development from its parts. Consider in this connection examples like English *transmission*, which have long played an important role in the theoretical discussion of derivational processes. This development seems to be especially favored when the derivational morphology involved ceases to be used productively in the language, as is the case in the German pattern at hand. While some of the other unstressed prefixes like *ver-*, *ent-* and *zer-* can still be used, at least occasionally, to create new verbs with reasonably predictable meanings, there is no such productive use of *ge-*.[8]

Whatever account we may adopt of these developments in German in particular or of 'lexicalization' in general, it seems clear that we must distinguish the two uses of *ge-* just described. We have nothing to gain from attempting to unify, in our synchronic grammar of German, the productive inflectional use on PPPs with the non-productive derivational use, or its counterparts in our synchronic grammar of Dutch. Instead, a historical explanation of the homonymy we observe seems appropriate. That is, we have here two prefixes that are pronounced the same because they represent divergent developments of a single prefix in the prehistories of these languages, but no longer have any connection in the synchronic grammars. A clue to the distribution of the original unified prefix comes from certain notable patterns in earlier historical stages of Ger-

[8] So e.g. *sich ver-X* can be created to mean something like 'to X in an erroneous fashion', *ent-X* to mean 'to de/un-X', and *zer-X* to mean 'to X to pieces'.

man. First, in Old High German we still find semi-productive alternations in the presence of the prefix with certain verbs, showing a consistent semantic effect. E.g. we find *sizzen* 'be sitting' alongside *gisizzen* 'sit down'. Second is the fact that, into the Middle High German period, the prefix is **not** used in the PPP of certain inherently perfective/resultative verbs like *quëman* 'come' (see Braune & Reiffenstein 2004 on both points). We'll see in Section 2.6 that this somewhat surprising fact is paralleled in Old English, and I'll offer an account for it in Section 3.3.

Turning back to OE now, the main impression of similarity with German and Dutch comes from the fact that, here as well, *ge-* quite typically shows up on PPPs, e.g. in periphrastic 'perfect' constructions:[9]

(2) ac hēo hæfde **ge**coren Crist hyre to brȳdguman
but she had chosen Christ her to bridegroom
'. . . but she had chosen Christ as her bridegroom.'
(coaelive,+ALS_[Eugenia]:349.401)

(3) forðan þe his gebedda **ge**faren wæs of līfe
because his bedfellow gone was from life
'. . . because his wife had passed away.'
(coaelive,+ALS_[Maur]:131.1567)

However, unlike in German and Dutch, *ge-* is not an integral part of the PPP. A significant portion of PPP examples lack the *ge-* prefix, even though the verb is morphologically compatible with it, as in (4).

(4) sē gelēaffulla Oswold . . . wæs ∅-cumen to Cynegylse
the faithful Oswold . . . was come to Cynegils
'The faithful Oswold . . . had come to Cynegils.'
(coaelive,+ALS_[Oswald]:131.5455)

Furthermore, *ge-* is found with rather high frequency on other verb forms beyond the PPP, e.g. on the finite past form in (5):

[9] Examples taken from the corpora in the Penn-York series will be given with the source information from their ID tag in the corpus, which identifies the specific corpus, the source text and information on the page and sentence number. E.g. (2) comes from the YCOE, from Ælfric's Lives of Saints, in particular the life of St. Eugenia, and is (part of) token 401 (tokens correspond roughly to sentences and are numbered sequentially through the sample for a particular text) found on page 349 of the print edition used in the creation of the corpus. I direct the reader to the documentation of the corpora for details on how to identify source details on the basis of the ID tags.

(5) Sē **ge**worhte ealle þing
he created all things
'He created all things.'
(coaelive,+ALS_[Christmas]:66.51)

Crucially, *ge-* in examples like this does **not** look like the derivational *ge-* in German verbs like *gefallen* (though it may be similar to its ancestor). As we will see, it is far too frequent, too widespread across lexical verbs, and too regular in its semantic contribution.

1.2 Prior approaches

The wide range of rather tricky facts about the distribution of OE *ge-* and its cognates has led to an array of proposals about its meaning, function and grammatical status, which are typically quite abstract, often vague, and sometimes even completely empty. The most extreme view was that *ge-* was simply meaningless. According to Thomas Benson, *Vocabularium Anglo-Saxonicum* (1701) "*Ge-* apud Saxones semper fere superfluum" ('Among the Saxons, *ge-* is almost always superfluous'). While later scholars have generally not adopted this view, they have repeatedly thought it worthy of mention as an indication of how difficult it is to pin the prefix down. Another approach, which was developed at length by Lindemann (1970), but has found little resonance, is that *ge-* expresses abstract direction. According to him, "the action expressed by any verb to which [*ge-*] is prefixed is directed toward some thing or in a direction forward and outward" [p. 37].

The most popular proposal, not just for OE, but also for its cognates in the other old Germanic languages, is that *ge-/ga-/gi-* is a marker of perfective aspect. The idea is associated in particular with Wilhelm Streitberg, who was inspired by comparisons with aspectual prefixes in the Slavic languages Streitberg (1891: etc.). This view soon fell into disrepute, as it became clear that the distribution of the prefixes in the Germanic languages was rather different in detail from the patterns observed in Slavic. An approach in terms of aspect has been rehabilitated more recently, however, in work (e.g. by Lloyd 1979; Eythórsson 1995) that attempts to take into account the differences in the aspectual systems of the two language families. The guiding idea here is that, difference from what is found in Slavic does not imply that what is involved is not aspect. Lloyd in particular discusses the differences between Slavic and early Germanic aspect in detail and argues in the end that a single system of primitives underlies both systems, but that they differ in exactly which distinctions in those primitives they mark. Thus, if the term 'perfective' is reserved for

the aspectual category marked by prefixation in Slavic, what we find marked by the Germanic prefix *ge/ga/gi* must be something else, which Lloyd dubs the 'complexive'.[10]

The approach that I will argue is most promising is related to these aspectual proposals, but operates at a slightly different level. This is that *ge-* expresses resultativity. While it is often true that perfectives are resultative, the converse is often not the case. That is, an inherently resultative predicate (like *break the window*) can quite easily be used imperfectively, e.g. with an additional progressive component (like *I was just breaking the window when the police arrived*). A role for resultativity in the prefix *ge-* has been proposed e.g. by van Kemenade & Los (2003) for various stages of Dutch and English. This also connects to analyses of verbal particles in some of the modern Germanic languages (see e.g. Ramchand & Svenonius 2002; McIntyre 2003), where parallels are quite apparent.

In Section 2 I will present in detail the findings of my corpus study on the distribution of our prefix in OE and in particular how it interacts with other identifiable properties of the verb or the clause containing it that might be expected to be relevant. Then in Section 3 I will propose a specific version of the resultative analysis of *ge-*, taking it to be the default spellout of Ramchand (2008)'s *res* head. I will show how this can account not only for the broad facts of its distribution, but also for the small but consistent details that don't seem to fit with a naïve idea of resultativity. I turn in Section 4 to developments in the ME period, when the prefix began to disappear from the language. While I will not be able to propose a clear answer to why *ge-* was lost, I will show that my analysis of its structural status in OE can provide some insight into how this loss interacted with other contemporary changes, in particular in the periphrastic perfect system.

2 The distribution of preverbal *ge* in OE

In this section I will present the main OE data which will serve as the basis for the analysis developed in subsequent portions of the paper. I am reporting here the results of a study of the complete YCOE (Taylor et al. 2003), a corpus con-

[10] What Lloyd claims specifically is that the aspectual function of Gothic *ga-* was to mark "the complexive report of a completed action" [p. 85]. He uses the term complexive aspect to refer to when the observer/reporter describes an eventuality from a perspective that is outside of time, from which she can view all phases of a completed action. Discussing how this differs from the Slavic perfective (which for Lloyd is built on, but distinct from, the complexive) would take us too far afield here.

taining approximately 1.5 million words of OE prose, tagged for part of speech other grammatical features and parsed for syntactic structure. The searches were carried out with the CorpusSearch program (`http://corpussearch.sourceforge.net`), which was designed to search corpora in the Penn-Treebank format on the basis of lexical forms, POS tags and structural notions like dominance and precedence. This makes it possible to execute quite sophisticated searches efficiently.

In searching the corpus, I adopted the following strategy. First, I ran searches to identify the main verb of each clause, since this is where preverbal *ge-* is primarily expected to appear.[11] Second, I classified each such main verb according to whether it was prefixed with *ge-*, with some other prefix which might be expected to be in competition, e.g. *be-* or *for-*, or not prefixed at all.[12] Then I ran a series of searches to code each clause for properties that might be expected to have an effect on the distribution of *ge-*, either because they were reported to do so in the previous literature, or because I could imagine a plausible connection to other factors that had been discussed. Finally, for each such property I checked to what extent it did in fact correlate with the choice between *ge-* and no prefix. As we will see in the following, there is a great deal of variation in whether and how much these factors actually affect the distribution of *ge-*, which can provide clues about what the function of the prefix actually was.

2.1 The broad patterns

The first and simplest result of my searches of the corpus is that *ge-* is extremely common. Out of 166,544 clauses examined,[13] 42,366 (25.4%) had *ge-* on their main verb. Even setting aside PPPs, 30,862 of 153,622 main verbs (20.1%) had *ge-*. This is our first and perhaps clearest indication that *ge-* really did play an active and central role in the OE verbal system, and that it was quite un-

[11] The various (pre-)auxiliary verbs of the language essentially never have *ge-*, and I have elected, for the time being, to set aside verb forms used as attributive adjectives. This is by no means an innocuous move, but was motivated by the need to keep the volume of data manageable.

[12] The logic here is fairly simple – with some very few exceptions, a single verb form cannot bear two prefixes simultaneously, so *ge-* will be simply ruled out on a form prefixed with *be-*. This means that when we're trying to figure out the conditions on the appearance of *ge-*, a form prefixed with *be-* doesn't tell us the same thing as a form with no prefix. For the first stage of the research being reported here, I chose to set aside the examples with other prefixes, and to focus on differences between forms with *ge-* and forms with no prefix, though I did in some cases consult the data on other prefixes with specific lexical verbs, as we will see.

[13] As noted above, this excludes all clauses whose main verb has a prefix other than *ge-*.

like its modern German and Dutch cognates. Its productive use is quite simply not restricted to the participial forms showing up in periphrastic perfects and passives.

The second broad result is that I have found some basic confirmation of previous claims: *ge-* tends to be favored in environments suggestive of perfectivity, telicity and resultativity, and disfavored elsewhere. At this rough level, it is difficult to distinguish among the different prior proposals, as there is a tendential relationship between perfectivity and resultativity. It is only when we consider certain details that a particular kind of resultative analysis begins to stand out as the most appropriate. So before I introduce the specifics of my proposal, I will here go through the data on the different factors that are relevant to the distribution of *ge-*, or at least might have been expected to be.

2.2 The form of the main verb

Given the fact that *ge-* is a crucial component of the productive formation of PPPs in modern German and Dutch, we have reason to suspect that the specific form of the main verb will have some effect on the frequency of *ge-* in OE. We will see that this is indeed the case, and that here as well, *ge-* is extremely common on PPPs. However, a very important recognition is that, unlike in German and Dutch, *ge-* does show up, in significant numbers on **all** morphosyntactically defined forms of the main verb. Since this is unfamiliar from the other languages, it will be instructive to have examples demonstrating its appearance in each of them here.

First, we have the present participle, which corresponds to the PDE form in *-ing*, but was usually formed in OE with the suffix *-nde*, most commonly occurring with a form of auxiliary *be*.

(6) & swā wæs **geendiende** þis wilwendlice liif
and so was ending this temporal life
'and thus [he] was ending this temporal life'
(cobede,Bede_4:9.286.1.2881)

Then we have the *to*-infinitive, i.e. an infinitival form of the verb (in OE typically in the dative, ending in *-enne*), preceded by *to*. As in PDE, these can appear as the sole verb of a non-finite clause or in a periphrastic construction with auxiliaries *have* or *be*.

(7) and næfð nāne mihte [menn **to gehælenne**]
and not-has no power [men to heal]
'and has no power to heal men' (coaelhom,+AHom_4:86.569)

Next come finite verb forms, i.e. those marked for tense and agreement.

(8) Sē **ge**worhte ealle þing
he created all things
'He created all things.' (coaelive,+ALS_[Christmas]:66.51)

Then we have bare infinitives, which typically show up in combination with the pre-modals and other auxiliaries, but are also found occasionally in certain non-finite clause types (see Los 2007 for detailed discussion of the different types of infinitive and their distribution in OE and ME).

(9) þæt menn hit **gehyran** mihton;
that men it hear may
'so that men may hear it' (coaelhom,+AHom_1:451.233)

We also have examples of imperative forms of the verb, which show up in much the same contexts as in PDE.

(10) and þonne þū eft cymst, **geoffra** þīne lac.
and when you again come, offer your sacrifice
'and when you come back, make your offering'
(coaelhom,+AHom_16:19.2269)

And finally we have the PPP, which occurs primarily in periphrasis with auxiliary *have* or *be* in the perfect or passive.

(11) ac hēo hæfde **gecoren** Crist hyre to brȳdguman
but she had chosen Christ her to bridegroom
'. . . but she had chosen Christ as her bridegroom.'
(coaelive,+ALS_[Eugenia]:349.401)

All the same, even though *ge-* can show up on any form of the verb, its distribution across them is not even. Rather, there are marked differences in its frequency on the various forms, as shown in Table 2, ordered from the least to the most frequently occurring with *ge-*. What we see is that the distribution of *ge-* is skewed in the same direction as it is in German and Dutch, but not nearly so far. That is, *ge-* is extremely frequent with PPPs, but it is nowhere near categorical. Similariy, it is extremely infrequent with present participles, but far from categorically absent. This is in line with what we might expect if *ge-* has to do with perfectivity or resultativity — perfects and passives, where the PPP mostly shows up, tend to be perfective and resultative, while present participles tend to be used for the description of ongoing states or activities, which are generally imperfective and need not be resultative.

Table 2: Form of the main verb

Form	***ge-***	**no**	***% ge-***
Pres. Ptc.	107	1493	6.7
***to* Infin.**	430	2177	16.5
Finite	23723	102434	18.8
Bare Infin.	4329	11188	27.9
Imperative	2273	5468	29.4
PPP	11504	1418	89.0

2.3 Tense, mood and negation

Given that the morphosyntactic form of the main verb is relevant for the distribution of *ge-*, we might expect this to carry over to more fine-grained distinctions like tense and mood. Indeed, if *ge-* has something to do with perfectivity or resultativity, it is plausible to think that tense in particular will make a difference, given well-known interactions between tense and aspect. E.g. in PDE, the progressive appears happily in both present and past, but the unmarked aspectual form is heavily restricted in the present, so that with eventive predicates a non-episodic (typically habitual) reading is forced:

(12) a. I was eating the dosa.
b. I am eating the dosa.

(13) a. I ate the dosa.
b. # I eat the dosa.

Example (13b) is odd out of the blue, because a habitual reading with a definite object requires a special context, e.g. as the answer to a question like 'What do you usually eat at this restaurant?' On the other hand, the unmarked aspect is perfectly felicitous with an episodic reading in the past, as in (13a). Thus if OE *ge-* is involved somehow with aspect, we might also expect it to interact with tense marking.

Looking at the numbers on the frequency of *ge-* according to the tense of the clause, we find that past tense has a small but clear favoring effect (χ^2 = 573.782, p < .0001), as seen in Table 3.[14] This small effect can perhaps

[14] Note that what is at stake here is the tense of the clause, not necessarily of the verb form which we are considering with respect to whether it bears *ge-*. In the various periphrastic constructions, the tense of the clause will be marked on the (highest) auxiliary, whereas

Table 3: Tense of the finite verb

Tense	*ge-*	no	% *ge-*
Pres	15496	54329	22.2
Past	23105	60878	27.5

be understood if *ge-* has something to do with completion, or the reaching of some result state. Whether or not a particular eventuality goes to completion is perhaps easier to judge and also more relevant when it lies in the past than in the present or future. Note relatedly that in many languages a perfective-imperfective distinction is restricted to or at least predominantly expressed in past forms, not present ones.

Mood seems less relevant. OE finite verbs distinguish subjunctives from indicatives, though a large number of forms are actually ambiguous between the two. Clear subjunctive forms have a somewhat higher frequency of *ge-* than clear indicatives, but ambiguous forms show the highest frequency, as can be seen in Table 4. The differences here are statistically significant[15] but there

Table 4: Mood of the finite verb

	ge-	no	% *ge-*
Indicative	23051	75443	23.4
Subjunctive	5234	14713	26.2
Ambiguous	9857	22840	30.1

is reason not to take this too seriously. The difference between indicative and subjunctive is small in absolute terms, and the fact that ambiguous forms don't end up in between the two clear categories suggests that something else is going on here.[16]

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it is the main verb that we are examining for the presence of *ge-*. Of course, only finite clauses will have tense marked at all, the various infinitival and participial clauses lacking such marking. The numbers here thus do not add up to the same total as in some of the other tables, where all clauses are reflected.

[15] For example, for the difference between indicatives and subjunctives $\chi^2 = 73.396$, $p < .0001$.

[16] I.e. if there is a real difference between indicatives and subjunctives in their behavior with *ge-* then, assuming that the ambiguous category contains a mixture of forms intended as indicatives and forms intended as subjunctives, it should show a behavior somewhere in between the two categories. What may be going on here actually is that there is an interaction with tense marking. Perhaps the largest group of forms that are systematically ambigous be-

Another possibility I investigated is whether negation has an effect on the appearance of *ge-*. While the connection may not seem so obvious, Postma (2002) has shown that the cognate prefix *ghe-* in Middle Dutch actually had a preverbal use as a negative polarity item, so we might imagine that OE would exhibit something similar. Table 5 shows, however, that it does not. Here again,

Table 5: Polarity of the clause

	ge-	**no**	**% *ge-***
Negative	3123	9953	23.9
Non-negative	39756	116964	25.4

the difference we see between negative and non-negative clauses is statistically significant (χ^2 = 14.082, p = .0002), but this is only because the data set is so large. The absolute difference we see is tiny, and in any case goes in the opposite direction of what Postma observed for Middle Dutch.

2.4 Prepositional and adverbial elements

A standard diagnostic of aspectual distinctions, in particular those at the Aktionsart level, is the licitness of certain PPs and adverbials. For example, we can classify predicates according to whether they can felicitously combine with PPs like *in an hour* or *for an hour* (roughly, telic vs. atelic predicates). Given the size of the corpus being examined here and the complexities of the possible PPs, it was not feasible at this initial stage to divide things up according to specific PPs and adverbials.[17] It is, however, relatively easy to search for whether a particular clause contains a PP or adverbial of any kind. Consider then the frequencies for *ge-* under these conditions reported in Table 6. The prefix *ge-* is more frequent with both PPs and adverbials than without, and again in both cases the difference is statistically significant (for PPs χ^2 = 822.793, p < .0001, for adverbs χ^2 = 44.395, p < .0001). Again, this is at least in large part simply due to the extremely large sample sizes. When we look at the actual size of the difference, we find that with adverbs it is just 1.5%, whereas with PPs it is

tween indicative and subjunctive are the past 3sg forms of weak verbs. If ambiguous forms tend to be past, then perhaps they tend to take *ge-* at a higher rate for this reason rather than anything having to do with mood. This is one of many points that will be investigated in the proper multivariate analysis planned for future work.

[17] This will require taking a sample out of the full corpus to examine in more detail, and thus will be considered for the next stage of the project.

Table 6: PPs and adverbs in the clause

	ge-	no	% *ge-*
PP	20850	51655	28.8
No PP	22029	75262	22.6
Adverb	15687	44175	26.2
No adverb	27192	82742	24.7

6.2% increase, over four times the effect. The effect with adverbs is certainly small enough that, though statistically significant, it may not be particularly meaningful. That with PPs may reflect something more real, but this cannot be determined until a more detailed examination of a sample of the corpus is carried out.[18]

2.5 Date

Given the fact that *ge-* disappears in the course of the ME period, it is worth looking into whether it was already in retreat in OE. In other words, we want to see whether the frequency of *ge-* correlates with the date of a particular text. For the OE period it is exceedingly rare that we know exactly when a particular text was composed, or even when the surviving manuscripts (which are usually later, often considerably so) were written. The best we can do with a reasonable degree of certainty is typically a range of a few decades. Furthermore, as the collection of available texts is quite limited, if we tried to assign too narrow a date range to each, we would end up with unacceptably small amounts of data for any particular range. To deal with these issues, historical corpora usually set up a limited number of longer periods, and assign each text to one of these, so that they can be grouped together for analysis in roughly contemporaneous samples that are large enough to do basic statistics. The *YCOE* corpus, following the Helsinki Corpus on which it is largely based, divides OE into four periods, the first from the earliest attestations to 850, the second from 850 to 950, the third from 950 to 1050, and the third from 1050 to 1150, after which the ME

[18] One possibility is that the frequency of *ge-* is increased by the presence of complement PPs which affect the aktionsart of the main predicate, e.g. by introducing a telos, as in *Sandra swam* vs. *Sandra swam* ***to the shore***. The idea would be that such a complement role is more frequently played by PPs than by adverbials. Since complement vs. adjunct status of these elements is not consistently annotated in the corpus, this cannot be searched for automatically, but must be determined by examination of individual examples.

portion of the Helsinki corpus picks up. In what follows, I will collapse together periods one and two because the first contains too little text to be comparable.

With this background, consider now the frequency of preverbal *ge-* for the three periods of OE given in Table 7. The first thing to notice is that the frequen-

Table 7: Date of the text

Period	***ge-***	**no**	**% *ge-***
pre-950	15330	44721	25.5
950-1050	19865	58792	25.3
1050-1150	74	430	14.7

cies in the first two periods are remarkably close, indeed essentially identical. In fact, even with such large numbers, what little difference there is comes out as not being statistically significant (χ^2 = 1.341, p = .2468). This shows us quite clearly that *ge-* was completely stable, neither increasing nor decreasing for most of the OE period. The second thing is that there is a clear and sudden drop in frequency between the second and third periods. At first glance, this suggests that perhaps at this point the decline of *ge-* had begun that would continue through the ME period. However, and this is the third crucial point, we must be very careful about how seriously we take this data point. There are two reasons to be skeptical. For one thing, note that the absolute number of clauses we're looking at here is very small in comparison to the first two periods — two orders of magnitude smaller. This is because of the extremely limited amount of English text that survives from the relevant period, due to the collapse in the use of written English following the Norman conquest. The number of examples here is not so small that valid statistical reasoning is impossible (and the difference does come out as statistically significant, χ^2 = 29.707, p < .0001), but it is small enough that we do have to be concerned about the representivity of the sample.

The second reason to be skeptical is also related to the Norman conquest and the collapse of the Old English scribal tradition. By the late tenth century, a quite consistent, standardized form of West Saxon OE had established itself as the written form used in all centers of writing around the country. Like most standardized languages, it was quite conservative, and by the time of the conquest clearly no longer reflected the contemporary spoken language in many respects. When the scribal tradition was broken by the Norman conquest, the propagation of this standard ceased or was at least severely weakened. Thus, to the extent that people wrote anything in English at this time, they were far more

heavily influenced by their own speech than by the inherited standard. This means that there is a quite sharp break in nearly every property of the language we find in the texts of late OE and early ME compared to what came before. But this clearly does **not** imply that there was a series of catastrophic changes in the living language at the time. Rather, there was a catastrophic change in writing practices, such that the written language suddenly caught up with perhaps two centuries' worth of more gradual changes in the spoken language. In other words, to the extent that the difference between the second and third periods in the table above reflects a real change in the language, it was probably more gradual than it appears, spread out over the previous century. In any case, what we can conclude is that *ge-* was nowhere near disappearing, and indeed was stable for most of OE, but that its decline was beginning towards the end of the period.

2.6 The identity of the main verb

The area where the most interesting results are to be found is in the lexical identity of the main verb, i.e. the item on which the prefix *ge-* either does or doesn't appear. Before we get to the data, a quick word on the corpus work it took to get at it is in order. Unfortunately, identifying lexical verbs with searches of the *YCOE* corpus is not nearly as easy as searching for most of the other factors being discussed here. This is essentially because there are vastly more lexical verbs in OE (or of course any language) than there are verb forms, polarity categories, chronological periods etc. More to the point, the *YCOE* is not lemmatized, i.e. beyond functional items and a few other extremely common items, the lexical identity of a word form has not been determined and is not tagged. The POS-tag on a verb will indicate that it is a verb and provide information about its morphological form and grammatical properties, but not whether it is a form of e.g. *speak* or *eat* or *desire*. This means that identifying specific lexical items requires writing queries that can recognize them based on their form, which is time-consuming and prone to errors. There is an effect of diminishing returns as well due to Zipf's Law, which tells us that the vast majority of lexical verbs will only appear a handful of times in the corpus, many of them only once. Thus it is only really worth the effort of doing the work to recognize a small number of extremely common items.

That is precisely what I did, writing my queries to recognize 31 lexical verbs based on their forms, in addition to 'have', 'be', 'do' and the pre-modals, which are specifically tagged in the corpus. This successfully identified 54,380 verb forms with specific verbal lexemes as indicated in the tables below. There

were an additional 74,395 verb forms that were not recognized, and these are listed below as 'unclassified'. Table 8 is a complete list of all of the verbs, plus the unclassified category, sorted in ascending order of the percentage of *ge-* vs. no prefix, to give an overview of the situation.

Table 8: Identity of the main verb

Verb	**Gloss**	***ge-***	**no**	**% *ge-***
(pre-)modals		0	2575	0.0
bēon/wesan	**'be'**	1	30127	0.0
habban	**'have'**	13	5053	0.3
cuman	**'come'**	29	4687	0.6
sendan	**'send'**	15	947	1.6
drincan	**'drink'**	17	779	2.1
etan	**'eat'**	26	538	4.6
fēran	**'go'**	64	1282	4.8
beodan	**'command'**	58	1001	5.5
cwedan	**'say'**	553	9145	5.7
gān	**'go'**	128	1927	6.2
secgan	**'say'**	288	3783	7.1
sprecan	**'speak'**	90	1134	7.4
andwyrdan	**'answer'**	37	457	7.5
sellan	**'give'**	362	2182	14.2
wunian	**'dwell'**	202	1093	15.6
wrītan	**'write'**	30	158	16.0
sittan	**'sit'**	131	649	16.8
seoþan	**'boil'**	3	14	17.6
fōn	**'grasp'**	159	728	17.9
hatan	**'call/order'**	560	2309	19.5
dōn	**'do'**	933	3681	20.2
slēan	**'smite'**	87	325	21.1
faran	**'go'**	241	772	23.8
acsian	**'ask'**	156	486	24.3
nemnan	**'name'**	217	601	26.5
þencan	**'think'**	328	777	29.7

Table 8: Identity of the main verb (continued)

Verb	Gloss	*ge-*	no	% *ge-*
wyrcan	**'work, make'**	523	1227	29.9
unclassified		30885	43510	41.5
tēon	**'pull'**	89	119	42.8
weorþan	**'become'**	1001	979	50.6
niman	**'take'**	1434	1265	53.1
halgian	**'hallow'**	392	108	78.4
hǣlan	**'heal'**	626	110	85.1
sēon	**'see'**	2714	188	93.5

The first thing to note here, which is a very important message to take away, is that the variation is massive. It goes from verbs that are literally never prefixed with *ge-* to one that bears it a full 93.5% of the time, and fills out the space in between fairly evenly.

Now let's zoom in a bit to get a better idea of what's going on in detail, by splitting up that full range of variation into a few smaller chunks. In the each of the tables to follow I will include the 'general total' at the bottom for comparison, i.e. the overall frequency of *ge-* across all verbs. First, at the very bottom of the range, we'll take the 'auxiliary' verbs. Note that what we're looking at here are not the actual auxiliary uses of these verbs (where *ge-* also never appears), but rather their main verb uses, since in general here we are interested in whether the main verb of a clause bears *ge-*. The frequency of *ge-*

Table 9: Main verb uses of 'auxiliary' verbs

Verb	Gloss	*ge-*	no	% *ge-*
(pre-)modals		0	2575	0.0
bēon/wesan	**'be'**	1	30127	0.0
habban	**'have'**	13	5053	0.3
general total		42366	124178	25.4

with these verbs given in Table 9 is essentially zero, and given the very high frequency of their appearance in the corpus, we can be quite confident in the accuracy of this result. Now, given the background assumption from previous work that the *ge-* prefix has something to do with perfectivity or resultativity,

such extremely low frequencies are not really surprising. All of these verbs are statives, and so are not expected to appear in perfective or resultative uses. This is a case where the precise details of what is behind the distribution of *ge-* are perhaps not so crucial, since we expect it to be incompatible with statives under most reasonable proposals. As we move further into the other verbs on the list, different specific theories will make clearly different predictions, and the ways that specific verb classes behave will help us to choose among them. When considering each group I will continue to initially speak in terms of what is surprising or expected based on a vague notion of perfectivity or resultativity, and then make use of the surprises to help lead us to a specific proposal.

Turning now to the lexical verbs, we consider first in Table 10 the group with markedly low frequency of *ge-*.[19] The rarity of *ge-* with some of these is

Table 10: Lexical verbs with low frequency of *ge-*

Verb	**Gloss**	***ge-***	**no**	***% ge-***
cuman	**'come'**	29	4687	0.6
sendan	**'send'**	15	947	1.6
drincan	**'drink'**	17	779	2.1
etan	**'eat'**	26	538	4.6
fēran	**'go'**	64	1282	4.8
beodan	**'command'**	58	1001	5.5
cwedan	**'say'**	553	9145	5.7
gān	**'go'**	128	1927	6.2
secgan	**'say'**	288	3783	7.1
sprecan	**'speak'**	90	1134	7.4
andwyrdan	**'answer'**	37	457	7.5
general total		42366	124178	25.4

again relatively easy to understand. The group of speech verbs e.g. (*cwedan*, *segcan*, *sprecan* and *andwyrdan*) are all plausibly essentially activities in Ak-

[19] The cut-off between this group and the next is of course arbitrary. Unlike with the previous group of verbs, which could be distinguished as auxiliaries, independent of their behavior with *ge-*, there is no clear grammatically defined division here. I have chosen to draw the line between *andwyrdan* and *sellan* as there is a marked jump in frequency of *ge-* between then, from 7.5% to 14.2%. The next cut-off point, between *wyrcan* and *tēon*, also corresponds to a jump in frequency, from 29.9% to 42.8%, and also marks off the lexical verbs that combine with *ge-* at a higher frequency than the mass of unclassified ones.

tionsart terms, meaning that they aren't telic and thus don't normally have resultative uses. The two 'go' verbs are plausibly also activities, though it will depend here quite a bit on the details of individual contexts. Motion verbs are frequently activities in their basic uses, but relatively flexible in Aktionsart terms, being easily converted to accomplishments e.g. by the addition of appropriate PPs indicating a goal.

Initially unexpected is the behavior of *sendan*, *drincan* and *etan*. We would expect these, especially the latter two, to be telic in most cases, and thus if *ge-* marks perfectives or resultatives, it seems that it should be common here. I will come back to *drincan* and *etan* in Section 3.3, where we will see that their behavior can actually provide some support for a particular analysis of the function of *ge-*. With *sendan*, the story seems to be a bit simpler. While *ge-* is the most common verbal prefix of its type in OE, and the one whose distribution and meaning present the most challenges, it is really just one member of a larger system, as alluded to briefly above. It turns out that with *sendan*, other prefixes – specifically *a-* and *on-* – are overwhelmingly used in telic contexts, not *ge-*. Table 11 provides the numbers for *sendan* with various prefixes vs. with no prefix. We see then that while *sendan* may have a markedly low frequency with

Table 11: Frequency of various prefixes with *sendan*

Prefix	**Frequency**
none	979
a-	405
on-	96
ge-	15
to-	8
for-	6
of-/be-/in-/ut-	9
total pref.	539
% pref.	35.5

ge- in particular, it has a rather normal frequency of prefixation overall.[20]

[20] It should be noted here that while I have not systematically considered the other prefixes in my examination of the corpus results so far, my searches did identify them, precisely so that I could exclude them from the count of forms with no prefix at all. I was thus able to check the other lexical verbs identified here to make sure that none of them show similar effects to *sendan*, with prefixes other than *ge-* showing up at a high enough frequency to interfere.

The really big surprise among the verbs with a low frequency of *ge*-prefixation is with *cuman*. Verbs meaning 'come' are typically highly telic — unlike verbs meaning 'go', they include an inherent telos.[21] Indeed, 'come' is typically a telic verb par excellence, and so we expect OE *cuman* to be used primarily in perfective and resultative contexts. Under essentially all accounts that have been proposed for the distribution of *ge*-, we would thus predict a very high frequency with *cuman*. And yet, this particular verb bears the prefix less than one percent of the time, i.e. with a frequency otherwise found only with statives. In (14) we have a straightforward example, which is clearly telic, perfective, resultative and anything else you might expect to be associated with *ge*-, including being a periphrastic perfect built on the PPP. Nonetheless, the form of *cuman* we find is unprefixed:

(14) Martha þa gehyrde þæt se Hælend wæs **cumen**
Martha then heard that the savior was come
'Then Martha heard that the savior had arrived.'
(coaelhom,+AHom_6:49.889)

We will return to the status of *cuman*, and how it might be accounted for, in Section 3.3.

Now let's consider Table 12, which contains the verbs with markedly high frequency of *ge*-, i.e. those which take *ge*- more often than the average of the unclassified lexical verbs. Here again we have both the expected and the unex-

Table 12: Lexical verbs with high frequency of *ge*-

Verb	**Gloss**	***ge-***	**no**	***% ge-***
tēon	**'draw, pull'**	89	119	42.8
weorþan	**'become'**	1001	979	50.6
niman	**'take'**	1431	1265	53.1
halgian	**'hallow'**	392	108	78.4
hǣlan	**'heal'**	626	110	85.1
sēon	**'see'**	2714	188	93.5
general total		42366	124178	25.4

pected from the perspective of previous attempts to understand the prefix. These

[21] By default this telos is the location of the speaker at the reference time, but it can be shifted to other salient locations depending on the context.

arre primarily highly telic achievement verbs, like *weorþan*, *niman*, *halgian* and *hælan*, which would be expected under all approaches to appear frequently with *ge-*. The surprising case here is *sēon*, which might have been expected to be a stative or an activity at least a significant portion of the time, but in fact overwhelmingly takes *ge-*.

2.7 Interactions with auxiliaries

A final type of factor to consider is the presence of different auxiliary verbs in the clause in addition to the main verb. We can naïvely expect effects on the distribution of *ge-* here because at least some of the relevant periphrastic constructions are used to express aspectual distinctions. Additionally, the presence of particular auxiliaries is also extremely easy to search for in the corpora, unlike most other reflections of aspect. Let's begin then with a comparison of all of the auxiliaries, as well as the possibility of no auxiliary, shown in Table 13.[22] Clauses with a (pre-)modal auxiliary have a somewhat higher than average frequency of *ge-*, but the difference is not particularly large.[23] Auxiliaries BE and HAVE, on the other hand, show a very strong favoring effect on *ge-*. Clauses with no auxiliary have a somewhat lower than average frequency with *ge-*, but this is just because the examples with BE and HAVE push up the average so high.

Table 13: Presence of auxiliaries in the clause

Aux.	***ge-***	**no**	***% ge-***
none	27853	113588	19.7
(pre-)modal	3375	7441	31.2
BE	9764	2494	79.7
HAVE	969	43	95.8
general total	42366	124178	25.4

[22] The various categories here do not add up to the general total because a number of examples have been set aside where there is more than one auxiliary or the situation is otherwise complicated in a way that is not easy to compare to the main categories here.

[23] To be absolutely clear, what is being discussed here is whether, in a clause containing a particular auxiliary, the main verb is prefixed with *ge-*. We are not talking about instances where an auxiliary itself is prefixed with *ge-*. As noted in Section 2.6, this simply does not seem to occur.

Now, at first glance it looks like the preference for *ge-* is stronger with HAVE than with BE. However, there's a good bit more going on here that needs to be unpacked. First of all, while auxiliary *have* is essentially only found in the (ancestor of the) periphrastic perfect, *be* is also used in the passive and the OE ancestor of the progressive. Aspectually speaking, the passive and especially the progressive are entirely different from the perfect, and we do not expect them to behave at all the same with respect to *ge-*. If we restrict our attention to just perfect clauses, we get the numbers in Table 14.[24] Now we see that the

Table 14: Perfects, according to auxiliary

	ge-	**no**	**% *ge-***
BE	868	96	90
HAVE	125	4	97

frequency of *ge-* is much closer to being the same with BE and HAVE, and furthermore that it is approaching being categorical. Still, there appears to be a somewhat stronger preference for the prefix with HAVE than with BE.

It turns out, however, that this difference is spurious, and comes entirely from interaction with lexical effects. 86 of the 96 examples of perfects with BE, where the PPP lacks *ge-*, are with *cuman*. Recall that — for reasons that we haven't figured out yet — *cuman* staunchly resists prefixation with *ge-*. Crucially, OE *cuman* **only** appears with BE in the perfect (McFadden & Alexiadou 2010), so the examples with that one verb are artificially suppressing the overall frequency of *ge-* with auxiliary BE. If we remove the examples with *cuman* from consideration, we get the numbers in Table 15. The difference between HAVE and BE is now essentially gone, and we have the effect that once we correct for lexical oddities, *ge-* is essentially categorical with the periphrastic perfect in OE.

[24] The numbers of examples here are much smaller because I have restricted attention to intransitive examples for methodological reasons. The issue briefly is this. In the *YCOE* corpus, PPPs all have the same tag VBN, regardless of whether they appear in a passive, a perfect or some other construction. This means that perfects with auxiliary BE and passives are formally identical, hence not distinguishable by corpus searches. They must rather be identified on a case by case basis by considering the transitivity of the lexical verb and the semantics of the particular example. Fortunately, this time-consuming hand-coding has already been done, in the research leading up to McFadden & Alexiadou (2010), and I have used that as the basis for the numbers reported here. However, since that work was concerned with the alternation between HAVE and BE in the perfect, and that alternation is restricted to intransitives (transitives always using HAVE), the coding was only done for intransitive examples, yielding the restricted sample reported on here.

Table 15: Perfects, according to auxiliary, excluding *cuman*

	ge-	no	% *ge-*
BE	861	10	99
HAVE	125	4	97

Consider what this means for our search for an explanation for the function of *ge-* in the language. Since its distribution is so categorical once we carefully distinguish contexts, it is plausible to think that it realizes a single, specific grammatical category, rather than marking a vaguer conceptual category that is variably sensitive to multiple factors. Furthermore, this specific category cannot be something that distinguishes the HAVE and BE perfects in OE, since they behave identically. It must rather be a component that all OE perfects have in common, which however is not limited to or diagnostic of the perfect, as it is present at a relatively high frequency in non-perfect clauses as well.

3 An analysis of the OE patterns and some explanation

3.1 The semantics of early English 'perfects'

I submit that the facts just discussed from the perfect are the key to understanding the role of *ge-* in OE. In particular, they lead quite directly to the proposal that the prefix does indeed have something to do with resultativity, not perfectivity. In order to motivate this we need to first consider some background on the semantics of the perfect. Part of what makes the perfect difficult to get a handle on is that there seem to be multiple readings for it, which are distinguishable in terms of their entailments, yet can be expressed by the same morphosyntactic form, at least in many languages (see Iatridou et al. 2003 and the other contributions in Alexiadou et al. 2003 for useful discussion). For present purposes we need to be able to distinguish between the 'perfect of result' and the 'experiential perfect', both of which can be expressed by the periphrasis with auxiliary *have* in PDE.

The 'perfect of result' entails that the target state of the eventuality described by the main predicate holds at the reference time.[25] In (15), e.g. the continuation makes it clear that we're not just talking about what Beorhtric has done, but what state he is currently in as a result of what he has done. I.e. he is

[25] See Parsons (1990); Kratzer (2000) for the difference between 'target' states and 'resultant' states.

in York at the reference time (which happens to also be the speech time because this is a present perfect) as a result of going there.

(15) Beorhtric has gone to York, and he won't be back until tomorrow.

(16) Beorhtric has gone to York five times already this semester.

The experiential perfect on the other hand entails that the eventuality described by the main predicate is anterior to the reference time. There are not necessarily any implications about whether or not particular consequences of that eventuality continue to hold, aside from the somewhat trivial fact that what has happened cannot un-happen, i.e. the subject will always have the experience of having participated in the eventuality, even if the particular target state of that eventuality no longer holds. Example (16) must be interpreted as an experiential perfect because of the repetition involved. It is not possible for the target state of at least the first four instances of Beorhtric going to York to still hold, since he must have left in the meantime in order to be able to go back. That is, there is clearly no implication that Beorhtric is in York five times at the reference time, which would be incoherent, but rather that he is in the state of having experienced going to York five times in the last semester.

Now, it is well established that the 'perfect' constructions in OE, built with BE and HAVE in addition to the PPP, crucially differ from their PDE descendants in that they were essentially restricted to the perfect of result (see McFadden & Alexiadou 2010 and citations there). The experiential reading was not yet available. In other words, while you could use a periphrastic 'perfect' to express something like (15) in OE, you could not use it to express (16). A simple past form would have been used instead. This means that every time we see a pefect in an OE text, we can conclude that it is a resultative, i.e. there is a target state that is asserted to hold at the reference time. This target state is then something that the perfects with HAVE and BE in OE all have in common. Thus it is a candidate for what *ge-* contributes. Indeed, we can go further, since it is certainly not the case that target states are only found in perfects. Rather, target states can be found in clauses with all kinds of tense and aspects, which is at least broadly in line with the distribution we observe for *ge-*.

3.2 The proposal and its implementation

I would thus like to explore the hypothesis that OE *ge-* marks a particular type of resultativity, being associated with the presence of a target state. This of course has clear connections to some of the earlier proposals mentioned above. van Kemenade & Los (2003) argue that *ge-* is related to resultativity in various

stages of Dutch and English, and resultativity plays an important role in analyses of verbal particles in some of the modern languages (see e.g. Ramchand & Svenonius 2002; McIntyre 2003). It is clearly distinct, on the other hand, from proposals that connect *ge-* to (outer) aspect, in particular Streitberg (1891)'s claim that it marks perfectivity.[26]

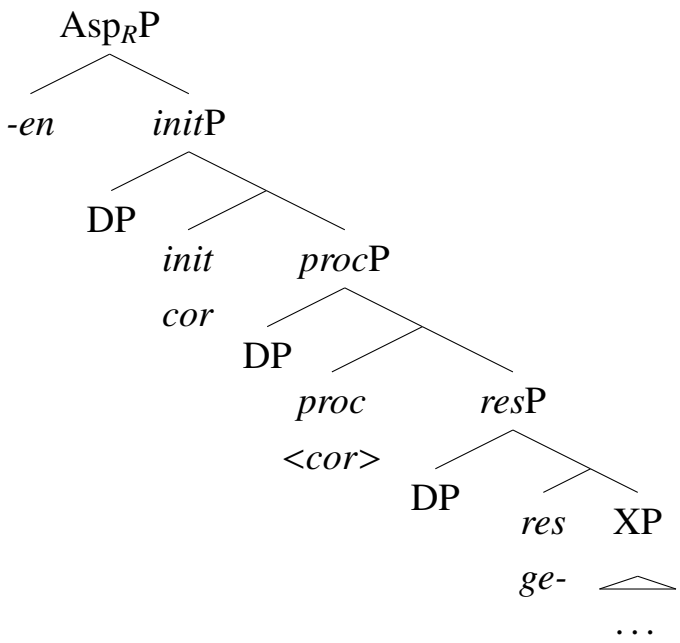
The idea being pursued here thus associates *ge-* with inner aspect or Aktionsart, rather than with outer or viewpoint aspect. Note, however, that I am **not** tying *ge-* to a specific (Vendlerian) Aktionsart, but rather to one of the building blocks that goes into at least two different ones. Modern work on Aktionsart, even if it adopts Vendler's four main categories, typically decomposes them in terms of more basic components (see Dowty 1979 among many others), and the target state is one of these basic components. It is a defining ingredient of the telic Aktionsarten, i.e. of Achievements and Accomplishments, but not of Activities or States (or Semelfactives).

What I would like to argue for now is that the OE data discussed so far actually allows us to be even more specific about what is meant by saying that *ge-* is associated with resultativity and target states. I will implement my proposal in terms of Ramchand (2008)'s verbal decomposition, which identifies the basic building blocks of the Aktionsart structure of predicates with dedicated heads in the syntax. She posits three main heads in what she dubs the 'first phase'. The middle head, called *proc(ess)* encodes a (durative) process. The higher head, called *init(iation)* encodes a state which causes the process, i.e. the state of affairs that sets the process in motion, like the intention of an agent. The lower head, called *res(ult)* encodes a state that is caused by the process, i.e. the target state of the complex eventuality. The Aktionsart of particular eventualities can differ based on which of these heads are present. For example, a typical activity will include *proc* but not *res*, and may or may not include *init*, depending on whether it is externally caused. An agentive accomplishment, on the other hand, will include all three heads, with *init* encoding the agentive causation, *proc* the process portion, leading up to the target state represented by *res*.

Given this background, I would like to propose that *ge-* is the unmarked realization in OE of Ramchand's *res* head. The *-en* or *-d* suffix in PPPs is higher up, in an Asp head outside of *init*P (Kratzer 2000; Embick 2004; McFadden & Alexiadou 2010). Concretely, for a form like the PPP *gecoren* 'chosen' in a perfect clause like example (11) above, we have the structure in (17):

[26] There are, however, connections to the more nuanced aspectual proposal of Lloyd (1979) for Gothic *ga-*, which takes into account issues of both inner and outer aspect. A more complete comparison with Lloyd's proposals is planned as part of work in progress.

(17)



In addition to the basic semantics (about which more below), this structural proposal accounts for certain simple morphological facts, e.g. that *ge-* is a prefix while *-en* is a suffix. Given the Mirror Principle (Baker 1985), if the three heads in the structure above combine in a single word, the expected unmarked order will be *res-proc-init*-Asp$_R$, which is exactly what we get. Note that it is cross-linguistically common for resultative elements to show up as verbal prefixes, and so this seems like a quite reasonable result.

3.3 Covering the data

Let us consider now how this proposal can accommodate some of the surprising data that we turned up for specific lexical verbs. First, how do we deal with the extreme dispreference for *ge-* with *cuman*? Note that the pattern here is out of line with expectations no matter what approach we take to the basic semantics of *ge-*. As noted above, 'come' is clearly a telic predicate, with a strong resultative component, and is certainly expected to appear frequently in perfective uses. The idea being pursued here, that *ge-* is associated with target states realized as Ramchand's *res* head, fares no better on its own, since the semantics of 'come' clearly does include a target state. What this means is that we need a theory that can treat *cuman* as some kind of lexical exception, and ideally also make sense of why this of all verbs should be exceptional in this way. While the proposal being made here cannot claim to be uniquely suited in this sense — any reasonable theory will have a mechanism for dealing with lexical exceptions of this kind — the solution it offers is at least more than adequate.

The relevant bit of background is that Ramchand's system allows for single verbal elements to simultaneously realize multiple head positions, subject to lexical restrictions. That is, some lexical verbs can be specified to realize *init* + *proc*, others *proc* + *res* or *init* + *proc* + *res*, and still others just *proc*. Indeed, in a language like PDE, the vast majority of lexical verbs can realize the entire spine of the first phase, including two or three of the relevant functional heads, without any help from prefixes (or suffixes). What I am proposing for OE in contrast is that, as a language-specific property, its lexical verbs are generally not specified to realize the *res* head, which thus must be spelled out separately from the verb root in structures in which it appears, and furthermore that this precisely this is what the prefix *ge-* does. Now, to deal with a verb like *cuman*, we can simply posit that it is exceptional in that it can realize the *res* head in addition to *init* and *proc*. I.e. its lexical entry contains the specification [*init, proc, res*]. Under the principles Ramchand adopts for how lexical items compete to realize particular bits of structure, an element like *cuman* will span across all three heads, winning out over and thus blocking *ge-*. This of course works technically and covers the empirical ground we need it to cover, but it can be reasonably argued that it goes beyond this minimum to be a fairly natural account of the situation and to actually help make sense of why this particular verb should behave this way.

First of all, in Ramchand's system, what determines what spells out the different heads in the first phase is the lexical information specified for particular verbal items, interacting with general principles for resolving competition. If *ge-* is competing with lexical material to spell out a particular head in that system, it is entirely expected that there will be some lexical exceptions where it gets beaten out, as we find with *cuman*. Second of all, the specification of what heads in the first phase a lexical item can realize is essentially a grammaticalization of its typical semantic behavior. Thus if there are going to be lexical items that are exceptionally specified to be able to realize the *res* head, we would expect them to be precisely those lexical items that most frequently appear with such semantics. In other words, we expect a verb like *cuman*, which is basically always used in resultative contexts, to be able to supercede *ge-*, i.e. to be inherently resultative, not a verb like, say, *faran* 'go', which is sometimes used in resultative contexts and sometimes in non-resultative ones.

What then about the markedly low frequency of *ge-* that we noted with *etan* and *drincan*? These are verbs that may not always involve a clear target state, but certainly will much of the time, when a clearly defined substance ends up being consumed. Consider an example where both of them happen to appear, and where there are clear target states defined for the definite objects they take:

(18) þā sacerdas þā … **æton** þone mete … and þæt wīn eal **druncon**
the priests then … ate the food … and the wine all drank
'The priests then ate the food and drank all the wine.'
(coaelhom,+AHom_22:406.3519-21)

Given everything we have said so far, we certainly expect the result states of the food and all the wine being consumed to be reflected by the presence of *ge-* on the two verbs. Furthermore, given the fact that these verbs are not expected to **always** be telic, with a clear target state, the approach we adopted for *cuman* does not seem appropriate.

As it turns out, however, Ramchand (2008)'s theory actually predicts this pattern. She makes a distinction between resultative meanings that come from the structural specification of an actual target state, and those that arise from the presence of a bounded path or theme argument. While the former involve an explicit *res* head in the structure, the latter do not, with the resultative meaning instead being an entailment of how the rhematic material restricts the interpretation of *proc*. That is, they do not actually involve a *res* head. Note then that clauses built around *etan* and *drincan*, as consumption verbs, will primarily be found in structures of this latter type. They realize *init* and *proc*, and combine with 'incremental themes' like *þone mete* and *þæt wīn* above, which bound the process, providing an implication of telicity. That is, it is possible at any time to gauge the priests' progress in completing the eventuality described by examining how much of the food and wine are left. However, no *res* head will be involved in these structures, and thus there is no place for *ge-* to be inserted. We can thus account for why *ge-* is generally not found with these verbs, even though they have a 'resultative' interpretation in a pre-theoretical sense. This is a clear advantage over competing proposals in terms of telicity or a less precisely defined resultativity.

4 ME developments

An additional point that makes the analysis of *ge-* in OE just presented particularly attractive is that it offers insights into its development in ME. In this section I report on results from searches on the complete PPCME2 (Kroch & Taylor 1999), which is analogous to the YCOE discussed above, also containing 1.5 million words, tagged for part of speech and grammatical features and parsed for syntactic structure, but covering ME rather than OE. Not surprisingly, the use of the prefix shows a steady decline over the course of late OE and ME, as we can see if we extend Table 7 from Section 2.5 above into ME, as shown in Table 16. Again, the frequency of *ge-* is impressively stable in the

Table 16: Frequency of *ge-* in ME

Period	Dates	*ge-*	no-pref	total	% *ge-*
OE1	**pre-950**	15079	43464	58543	25.8
OE2	**950-1050**	19695	57793	77488	25.4
OE3	**1050-1150**	74	422	496	14.9
ME1	**1150-1250**	2297	30190	32487	7.1
ME2	**1250-1350**	989	16850	17839	5.5
ME3	**1350-1420**	1106	58519	59625	1.9
ME4	**1420-1500**	162	31614	31776	0.5

first two periods of OE, but then begins to drop in period O3. While we noted above that we have to be careful about taking the numbers from this period too seriously given the relative paucity of examples, we can see now that they do fit in well with subsequent developments in ME. The overall frequency of *ge-* is significantly lower than in OE from the beginning of the ME period, and by the end of the ME period, the prefix has essentially been lost, aside from a small number of relics.

It is far from clear what might underlie this decline, regardless of what theory we might adopt for the function of *ge-* in OE. We certainly cannot expect speakers to have had less need of resultativity or of perfectivity or any of the other proposed categories, i.e. to have stopped using *ge-* because they stopped talking about target states. One possibility, given the proposal made for OE *cuman* above, is that lexical verbs increasingly came to be able to realize the *res* head themselves, obviating the need for a separate realization by *ge-*. At some level this must ultimately be the case, since in Ramchand's system, verb roots that can appear in Accomplishments and Achievements in PDE must be analyzed as covering the *res* head. But this just pushes the question one step further down the line: what led (certain) verb roots to expand their realization in this way, at the expense of the inherited prefix *ge-*?

Perhaps the most likely explanation is a relatively mundane morphophonological one, with developments akin to what happened in the prehistory of Old Norse. The prefix was unstressed and had relatively little phonological substance to begin with, starting as /jɛ/ in early OE. In late OE it would have been reduced to /jə/ by regular sound changes affecting unstressed vowels, and by ME, where the usual spelling has become *i-* or *y-*, it was simply /i/ or perhaps even /ə/. While it probably should not have completely disappeared due solely to sound change, it would have been reduced enough to plausibly be suscepti-

ble to morphologically conditioned loss. Note that two of the other prefixes that have survived into the modern language — *be-* and *for-* — had more phonological substance, beginning with an obstruent, although even they have seen their distribution heavily reduced.

Even if we can't be sure about why *ge-* disappeared, the way in which it did so does yield some insights into what it was doing. Its decline in frequency is not uniform across environments, but proceeds rather differently in the two places where *ge-* is most common — perfects and passives, as shown in Table 17.

Table 17: *ge-* in perfects and passives in ME

	Perfect				**Passive**			
Period	***ge-***	**no-pref**	**total**	**% *ge-***	***ge-***	**no-pref**	**total**	**% *ge-***
ME1	437	424	861	50.75	967	1222	2189	44.18
ME2	217	265	482	45.02	352	1096	1448	24.31
ME3	213	1891	2104	10.12	691	4730	5421	12.75
ME4	10	1247	1257	0.80	85	3136	3221	2.64

Note that in the M1 period at the beginning of ME, the frequency of *ge-* is comparable in the two environments. But while the drop in the passive is fairly smooth over the next three periods, in the perfect the frequency remains stable into ME2, before dropping suddenly in ME3.

We can actually make sense of this development if we consider the resultative analysis of *ge-* being proposed here in light of McFadden & Alexiadou (2010)'s findings on the development of the perfect in ME. We showed that in OE and early ME, the periphrastic perfect was only used with a perfect-of-result reading (as discussed above), and thus could only be built on resultative predicates. Starting in the ME3 period, however, the new experiential — crucially non-resultative — use of the perfect with *have* (but not with *be*) arose. Again, this accounts for why *ge-* was so common in the perfect in the early periods, if as proposed here it was the default realization of the underlying resultative structure. More importantly for current purposes, it also predicts the sudden drop in the frequency of *ge-* in perfects, precisely in ME3, due to the influx of the new experiential perfect. This placed no resultativity requirement on the predicates it was built on, thus did not favor *ge-* the way the old resultative perfect had. Indeed, as the table above shows, the marked decrease in the percentage of perfects with *ge-* in that period results not from a decrease in instances of *ge-*, but from a sudden increase in the total number of perfects, as expected. The

old perfect-of-result, which favored *ge-*, continued to be used at similar rates as before, but was swamped by the new experiential one, which did not favor *ge-*. This is a striking parallel to McFadden & Alexiadou (2010)'s finding that the purely resultative *be*-perfect was swamped by the resultative-or-experiential *have*-perfect in the same period.

5 Summary and outlook

In this paper I have presented data and conclusions from the first stage of a large-scale corpus study on the use of preverbal *ge-* in Old and Middle English. On the basis of the evidence obtained so far, I was able to propose an analysis of the prefix which is more explicit about the specific aspectual components involved than previous approaches, and which can cover certain otherwise puzzling factors of its distribution. The preliminary nature of this report is clear from a number of its limitations. Most importantly, the corpus study has so far only involved automated searches, which means that only those patterns have been investigated that can be unambiguously identified on the basis of the parsed structure or annotation in the corpora or on the basis of specific string forms. As a result, a wide array of syntactic and especially interpretive factors have not yet been taken into account. The temporary justification for this is that the volume of data involved is simply too large to examine all of the examples by hand. Additionally, only the most basic level of statistical analysis has been carried out, in particular a series of chi-square tests on the effects of individual factors. No attempt has been made thus far to carry out a proper multivariate analysis to disentangle the effects of the various factors that have been identified. For some factors with very clear effects this is probably not a serious problem, but for others, where non-trivial interactions are clearly involved, we are certainly missing an important part of what is going on.

The continuation of this project will address both of these issues. First, a representative sample of manageable size will be extracted from the collection of data made so far, and the examples there examined and coded by hand for factors that could not be searched for. Second, a more complete statistical analysis will be carried out. One portion of this will be to carry out the multivariate analysis that is so sorely missing at this stage. A second will involve applying more sophisticated tools to overcome the recurring issue described in this paper, where a simple chi-square test returned (a sometimes quite high level of) statistical significance even with a very small effect size, simply because of the huge numbers of examples involved.

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The information structural effects of German P- and D-pronouns in discourse

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1 The background, the problem, the questions

The so-called Demonstrative Pronoun I (*der*, *die*, *das*) which exists additionally to the cross-linguistically more typical type of Demonstrative Pronoun II (*dieser*, *diese*, *dieses*) in German is one of its "exotic" linguistic features. There are, probably, only a handful of languages exhibiting this kind of an intermediate pronoun type functionally located between personal and demonstrative pronouns. The term Demonstrative Pronoun I has been replaced in the theoretical literature by the term D-pronoun (D-PRO henceforth). It refers to the deictic component of the pronoun which gives rise to the use of D-PRO for assigning a contrast (1) and the selection of a single exemplar out of a group of exemplars of the same type (2).

(1) Siehst Du den Mann dort drüben?
'Do you see the man over there?'

a. Der hat aber einen Bart.
'D-PRO-M.SG.NOM has quite a beard.'

b. Ich kenn den irgendwoher.
'I know D-PRO-M.SG.ACC from somewhere.'

(2) Gib mir mal die Tüte mit den Birnen.
'Can you give me the bag with the pears.'

a. Die (hier) möchte ich gleich essen.
'This one I would like to eat yet.'

b. Tom will die (hier) zurückbringen.
'Tom wants to give back this one.'

In these and related types of uses the D-PRO exhibits similarity with the Demonstrative Pronoun II which is nearly parallel in use to English *this*/*that* or Dutch *deze*/*dat* (Piwek et al. 2008).

German, of course, also exhibits personal pronouns (*er*, *sie*, *es*; P-PRO henceforth) and since German is a non-pro-drop language, P-PROs are fre-

quently used and are seen as the default pronoun type. Research on anaphora resolution and reference tracking in discourse revealed a functional difference of P- and D-PROs concerning the disambiguation of anaphoric pronoun reference. German exhibits only a few contexts allowing null subject elements. Therefore, P-PRO is the formally least complex referential expression and – in line with the Givenness- or Salience-Hierarchy (Givón 1983; Gundel et al 1993; Ariel 2004) - refers back to the most salient antecedent which are prototypically subject antecedents. Accordingly, D-PRO as the next complex referential expression prototypically refers back to non-subject antecedents (Bosch & Umbach 2007; Bouma & Hopp 2007).

(3) Paul$_i$ schenkt Fritz$_j$ sein altes Fahrrad.
'Paul gave Fritz his old bike.'

a. Er$_i$ hat sich gerade ein neues gekauft.
'He bought a new one recently.'

b. Der$_j$ hat sich gerade ein neues gekauft.
'D-PRO-M.SG.NOM bought a new one recently.'

The application of the described pronoun resolution mechanism ensures the disambiguation of pronoun reference. However, contexts requiring the disambiguation of pronoun reference are comparatively rare. Most contexts present only one potential antecedent and, in those presenting more than one, pronoun reference is often disambiguated by linguistic features (e.g. number, gender) or by semantic interferences. Theoretically, one could expect that only P-PRO, i.e. the default pronoun, would occur in such unambiguous contexts. However, this is not the case. Though P-PRO occurs more frequently, both P- and D-PRO are used – in many contexts with hardly any difference in meaning as in (4).

(4) Als der Ball$_i$ angeflogen kam, bin ich losgerannt. Und ich hab ihn$_i$/den$_i$ wirklich noch gekriegt.
'When the ball came, I started running. And I really managed to get it/that.'

Decades ago, this has raised the question on the ratio of P- and D-PRO application in the unambiguous contexts. Klein (1979) might have been one of the earliest papers pointing at the topic (see the survey given by Ahrenholz 2007). In the 1990s, several researchers finally agreed on the hypothesis that use of a D-PRO referring to an already introduced antecedent has the effect of foregrounding the pronoun referent in the mental model of the discourse while use of a P-PRO in the same context continues the given status of the referent or

give rise to backgrounding the referent in favour of other parts of information (see Bethke 1990; Weinrich 1993; Wiemer 1996). The terms foreground and background are used in these approaches for distinguishing the actual information status of the referent of a pronoun (and other referential expressions). Foregrounded referents are highly activated and salient in the actual sequence of discourse, they introduce a new topic and/or are in focus. Backgrounded referents, on the contrary, are less activated and salient in the actual sequence of the discourse and neither topicalized nor in focus. In this sense, the two terms are more related to the thema-rhema-distinction of the Prague School (Prochazka et al eds. 2010) than to Hopper (1979) – often cited as the seminal work introducing the terms foregrounding and backgrounding in linguistic theory. In Hopper's sense the terms assign a difference in the contribution of a piece of information (actually a tense form) to the global discourse. Foregrounded information, in this framework, is salient information that moves a text or discourse forward while backgrounded information is less-salient and does not advance the main line of discourse. The shift in the application of foreground/background from characterizing global content features to assigning an opposition in the actual information status becomes even obvious by the fact that in the generative framework the topic of P- and D-PRO use has been discussed as a focusing effect (Schlobinski 1992; Zifonun et al. 1997) or a means of topic-comment organization (Selting 1993).

What is worth noting is that all approaches agreed on a functional opposition of P- vs. D-PRO which affects the information status of the pronoun referent in the actual sequence of discourse. Unfortunately, the insights of this period of research came out of view in the mid 1990s. One reason was the increasing interest in anaphoric pronoun resolution, specifically the disambiguation of pronoun reference. This research brought to light complex interactions of various factors in anaphora resolution (Givón 1983; Ariel 2004; Gundel et al. 1993; Beaver 2004), but, at the same time, it pushed out of view the frequent uses of P- and D-PRO which are not in need of a disambiguation of pronoun reference. Accompanied by a decreasing research interest in discourse analysis and spoken language, this gave rise to an overemphasis of the higher frequency of D-PRO in spoken/colloquial language than in written/standard language. The difference in the two pronoun types occurred to be a difference in register/language level (still partially present in Ahrenholz 2007). Finally, this research situation has raised the impression that the solution has been found for the riddle about what the benefit is in German due to the existence of P- and D-PRO. This is, however, not the case as it comes to light in the recent discussions on various types

of P- and D-PRO uses in various types of contexts (e.g. Weinert 2007, 2011; Ahrenholz 2007; Hinterwimmer, to appear).

The present investigation steps back to the claims of the 1990s by assuming that there is a functional opposition in the use of P- and D-PRO which affects the status of the pronoun's referent in the mental model of the discourse. We interpret the earlier findings as an indication of an information structural difference which is specifically relevant on the discourse level. The question we address here is twofold. Firstly, we ask whether the assumed opposition in the information status of P- and D-PRO referents has consequences on referent continuation in the ongoing discourse. So far, the effects of P- vs. D-PRO use were determined concerning the status of the pronoun referent in the actual sequence of discourse, i.e. they were determined by a judgement on the salience or the topic/focus status of the pronominal DP. As far as we can see, this determination has not been operationalized further. Since there are contexts in which both P- and D-PRO would fit in with only a feeling of a difference but without clear-cut exclusiveness, the opposition is empirically not well validated. If we could show that there are effects of type of pronoun on the ongoing discourse this would, in our view, provide the lacking empirical validation. Secondly, we ask whether there are effects of the narrator's point of view on P- and D-PRO use. The idea behind this question is that the way of information unfolding in discourse depends on the speaker. S/he decides which pieces of information come next, what is foreground and what is background information. If type of pronoun choice is related to the processes of discourse organization by the speaker – via fore- and backgrounding of information – and if internal or external location of the narrator's point of view influences the organization strategies of the speaker/narrator this might have an effect on the use of P- and D-PRO.

In the following, we first present our expectations and respective arguments concerning the two questions addressed in this paper (section 2). In section 3 we describe the empirical basis and method of our study and present the results. Section 4 provides the discussion of the results and section 5 gives a summary.

2 The expectations, the arguments, and the hypotheses

2.1 Effects on referent continuation in the ongoing discourse

Putting together the reported claims on P- and D-PRO use and the findings on the impact of factors like salience, givenness, centering etc. on the choice of referring expressions (e.g. Givón 1983; Ariel 2004, Gundel et al. 1993; Beaver 2004) we assume that the difference in the use of P- vs. D-PRO is a difference

in information structural features. A P-PRO indicates that the referent is already introduced, well known, and relatively activated in the discourse model. Further information concerning this referent can be added and highlighted in the current and the ongoing discourse without increasing the activation of this referent in the discourse model. On the contrary, a D-PRO indicates that the referent is currently not activated enough in the discourse model, either because it is relatively new or because it was not topic or in focus in the preceding part of the discourse. The D-PRO is a sign for the hearer that the respective referent is becoming more central in discourse. Increasing the activation of a referent can have at least two reasons. Either the referent is put in contrast to another referent (see (1)) or it should be established as the entity to which newly given information should be related.

If this is correct, choice of P- vs. D-PRO should have consequences for the continuation of the pronoun referent. We propose that there is an asymmetry in the continuation of P- vs. D-PRO referents in the immediately following context. D-PRO referents should remain prominent, i.e. occur in salient position in the ongoing discourse, while the continuation of P-PRO referents is neutral to that constraint. Therefore we expect to find the following:

A. *Asymmetry in discourse continuation of P- and D-PRO referents*
D-PRO referents typically occur in information structural prominent position in the ongoing discourse while P-PRO referents do or do not.

The asymmetry claim should hold specifically for P- and D-PROs which are not involved in anaphoric disambiguation, i.e. in the disambiguation of pronoun reference resulting from the existence of more than one potential antecedent. Though the choice of pronoun type in these cases is constrained by the same features as in general – i.e. P-PROs refer to the more salient and activated referents while D-PROs to the less salient and activated ones – the need for disambiguation of pronoun reference can require the use of D-PRO irrespective of the relevance of the pronoun referent in the ongoing discourse. Because of such potential effects of anaphoric disambiguation (AD henceforth), the expected asymmetry might be of the following nature:

B. *Asymmetry in discourse continuation of referents of P- and D-PRO not involved in AD*
Referents of D-PRO not involved in AD typically occur in information structural prominent position in the ongoing discourse while respective referents of P-PRO typically do not.

Table 1: Pronoun resolution involved in AD (= +AD) and not involved in AD (= −AD)

antecedent	**P-PRO**	**D-PRO**
subject / topic	+AD	-AD
non-subject / non-topic	-AD	+AD

Table 1 demonstrates which anaphoric relations of P- and D-PRO are involved vs. not involved in AD (for P-and D-PRO use involved in AD see e.g. Bosch & Umbach 2007).

The asymmetry effect should turn out by opposite preferences for referent continuation of P-PRO referring to non-subject antecedents vs. referent continuation of D-PRO referring to subject antecedents.

2.2 Effects of narrator perspective

As a source of the effects of P- and D-PRO use described in section 2.1, we predict that the speaker's choice of P- and D-PRO depends on the general point of view the narrator takes in relation to the narrated event, i.e. on the narrator (=speaker) perspective. This prediction is based on the following findings and considerations: It has been emphazised in the 1990s that the choice of an (AD "free") P- or D-PRO is not constrained by linguistic structure but by the speaker's decision on what he wants to establish as the focus in the actual sequence of discourse, cf. e.g. Bellmann (1990: 237): "Fokussierung ist ein psychischer Akt, der ausschließlich von den Einstellungen, der Situationsdefinition, dem Interesse, dem Grad der Betroffenheit, dem Temperament und der jeweiligen Befindlichkeit des sprechenden Individuums ausgeht." [Focussing is a psychological act which only depends on the attitudes, the definition of the situation, the interest, the degree of affectedness, the temperament, and the actual constitution of the speaking individual.]. As has been said in section 1, specifically in the generative framework, the choice of a D-PRO has been concerned as an act of focussing.

Further, there is empirical evidence that also the use of pronouns varies in dependence on the type of texts - not only between texts given in spoken or written language but also in texts within these two domains (e.g. Ahrenholz 2007; Weinert 2007, 2011). This variation in pronoun use might have similar sources like the variance found in the application of tense and aspect forms in discourse. Concerning these categories, Stutterheim et al. (2010), Stutterheim & Lambert (2005) and others argue that the established patterns correlate with

the type of content and the type of text, e.g. the tense-aspect pattern of reports, object descriptions, manipulation of things, and other (more static?) types of texts differs from that in texts presenting action and event descriptions. The decision on the type of text is (at least to some extent) the speaker's decision. It has already been stated that the point of view taken by the speaker is one factor in this decision and, by this, affects the application of tense-aspect forms (e.g. Klein & Stutterheim 2007). Given this, we assume that the narrator's point of view is a factor in the choice of focus and, therefore, also in the choice of P- or D-PRO. The two most opposed localizations for the narrator's point of view are "included into the event" (internal perspective) vs. "at a distance from the event" (external perspective); see Levinson's (1996) classification of 3 main types of narrator perspective in which the external-internal distinction is captured by the terms extrinsic and intrinsic. An internal point of view suggests that the fictitious location of the narrator is inside the narrated event, he is involved in it (without necessarily taking part). A point of view located external to the narrated event suggests a distance between narrator and event, the narrator is looking on it from outside. A narrator who takes an external point of view for telling a story has, very likely, more freedom to (re)organize the parts of the event as well as character presentation according to his communicative intentions and can stronger shape the narrative landscape in the sense of *Profilbildung* (Bethke 1990; Weinrich 1993) than a narrator taking an internal point of view. Concerning the use of P-and D-PRO in this respect, we expect the following:

C. *Effects of narrator perspective on discourse continuation of referents of P- and D-PRO*
   P- and D-PROs are more frequent in narrations narrated from an external than from an internal point of view.
   Additionally, referents of D-PRO not constraint by AD should be continued more frequently in prominent position in narrations given from an external point of view than in narrations given from an internal point of view.

3 The study: Use and referent continuation of P- and D-PRO in narratives

3.1 Participants and material

The corpus of narratives analyzed here consists of 66 oral narratives given by 33 adults in the age range of 21-67 (mean age 35). Each participant narrated two

picture-book stories consisting of 6 pictures each. In addition to *type of story* (cat vs. fox) we varied *type of pictures* (close vs. far) and *type of instruction* (external vs. internal position of the narrator). The cat story has been invented into research on children's narrative development by Hickmann (2003), the fox story has been developed for the same purposes at the Centre for General Linguistics Berlin (Gülzow & Gagarina 2007).

The variation in the factors *type of pictures* and *type of instruction* aimed at inducing an external or internal point of view for the narration of the picture book stories. *Type of pictures* concerns the two versions of drawing of the 6 scenes (i.e. pictures) of each story. One version presents the scenes and characters in a close-up manner (i.e. with the characters in the foreground of the pictures), the other version presents them in a far away manner (i.e. with the characters in the background of the pictures; see the material in the appendix). *Type of instruction* concerns two aspects in the written instruction: (i) the location from which the event was suggested to be observed by the narrator (from a tower = external to the event vs. in the narrator's garden = internal to the event) and (ii) the suggested style of narration (report vs. description of an exciting experience; see the two versions of the instruction in the appendix). The two factors were not crossed. The location "from a tower" was always combined with the ask for a report while the location "in the narrator's garden" was always combined with the ask for a description of an exciting experience. The factor *type of story* did not aim at the elicitation of differences in pronoun use. We only aimed at increasing the size of the corpus. However, as has been said in section 2.2 and has been found in studies on children (e.g. Aksu-Koç & Nicolopoulou 2015), different stories can raise differences in the use of linguistic means. Therefore we will treat *type of story* as a factor in the analyses of the data.

To sum up, the material systematically varied three factors which can be analyzed with respect to their effect on linguistic features of the narration:

(5) a. *type of story*: cat vs. fox
b. *type of pictures*: close vs. far
c. *type of instruction*: external(-report) vs. internal(-gig/event).

The combination of these factors resulted in 8 versions of the story. All 8 versions were presented to 50% as the first and to the other 50% as the second story each participant had to narrate. All of the produced narrations have been audio taped by using an MP3/MP4 player from Teac media service and transcribed according to the CLAN guidelines (MacWhinney 2000).

3.2 Elicitation method – procedure

Participant and experimenter were sitting in front of each other at a table. Each participant was told that s/he will have to tell two picture-book stories with pictures that were made for a study with children for which we also want to know how an adult would tell the stories. Then the participant was given the booklet with the two stories each introduced by a written instruction. The participant was asked to start by reading the instruction to the first story carefully and to follow this instruction. When the participant finished the first story s/he was asked to do the same with the second story. The written introduction asked the participant to first look at all pictures in a row without narrating in order to become familiar with the whole story. Having done this the story should be narrated according to the order of the pictures. Also, in both types of instruction, the participant was asked to tell the story to a friend (see B in the appendix).

Statistical analyses were made with the interactive chi-square calculator of Preacher (2001) which is online.

3.3 Data base for analyses – P- and D-PRO productions

The produced narrations consisted of 19 propositions in average. Utterances containing more than one clause were subdivided in the main and sub-parts which had an own subject (even a null subject) and a finite verb; i.e. into propositions. In addition, infinitive clauses of the type "um zu ... + infinite verb" 'in order to + infinite verb' were counted as separate proposition with a null subject. The total number of propositions produced in the 66 narrations is 1259. Since the present analyses focus on the use of 3rd person P-and D-PRO referring to characters given in the pictures we excluded propositions referring to the narrator and his/her location or to a fictitiously introduced addressee character. Further, we only analysed P- and D-PROs in nominative and accusative case. Pronouns in dative and genitive occurred only rarely in the data. However, the main reason for the restriction on nominative and accusative case is that these are the cases on the top of the case hierarchy encoding the central referents of an event or a scene.

Due to the described constraints our analyses are based on an amount of 230 propositions containing 161 P-PRO and 75 D-PRO.

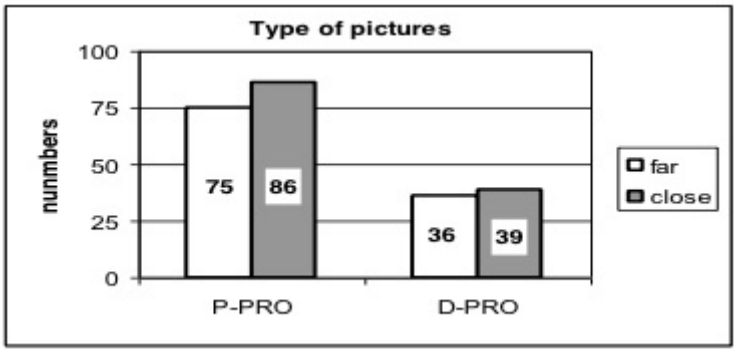

Figure 1: Distribution of P- and D-PRO in terms of the factor type of picture

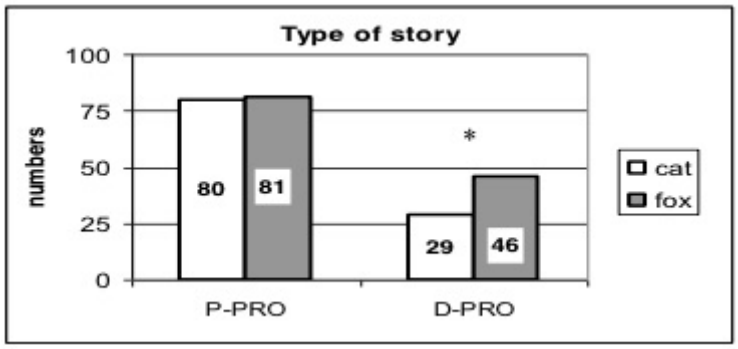

Figure 2: Distribution of P- and D-PRO in terms of the factor type of story

3.4 Results

3.4.1 Effects of the story setting: type of story, type of pictures, type of instruction

An overview on the overall distribution of P- and D-PRO production in the two narratives can best be given by the results for the three factors of story setting. Figures 1-3 show the distribution of the 161 P- and 75 D-PRO in dependence on each of these factors.

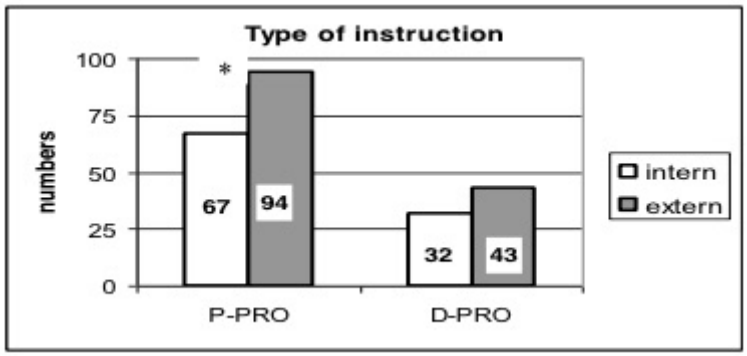

Figure 3: Distribution of P- and D-PRO in terms of the factor type of instruction

Statistical analyses reveal that the factor *type of pictures* (close/far; Figure 1) had no impact on the total amount of pronoun production and the proportion of the pronoun types in each condition. The factor *type of story* (cat/fox; Figure 2) also had no effect on the proportion of pronoun types, though the amount of D-PRO is significantly higher in the fox than in the cat story (p=0.0497). The factor *type of instruction* (external/internal; Figure 3) raised a higher amount of P- and D-PRO production in the external condition (p=0.013). While the difference in D-PRO production is not significant, the difference in P-PRO production is significant (p=0.033).

Given the relative marginal effects of these factors on pronoun production they have not been included in the following analyses. However, we will come back to the factor *type of instruction* in section 3.4.5.

3.4.2 Discourse continuation of pronoun referents depending on type of pronoun

In section 2.1 we proposed that the hypotheses on backgrounding and foregrounding effects of P- and D-PRO respectively of the 1990s can be tested by investigating the continuation of the pronoun referents in the ongoing discourse. In the asymmetry statement in A we proposed that referents of the pronoun type with a foregrounding effect, i.e. of D-PRO, are more likely to be continued in prominent position while referents of P-PRO, the pronoun type assigned to have a backgrounding effect, might occur in prominent position but don't have to.

In order to investigate the proposed correlations, we calculated the occurrence of P- and D-PRO referents as subject vs. non-subject in the immediately following proposition. Subjects are easily to detect and have a highly salient and prominent information structural status. They typically contain the aboutness topic in German. So, the continuation of the referent of *he* as the subject of the next proposition in (6a) is more prominent in information structural terms than continuation of he as the direct object in (6b).

(6) a. und er$_i$ (fuchs) sieht fast aus / als wenn **er**$_i$ (fuchs) darum bettelt
and he (fox) looks nearly like as if he (fox) for.this begs
'and he nearly looks as if he begs for this'

b. und dann fliegt er$_i$ (vogel) davon / und der fuchs verfolgt **den vogel**$_i$
and then flies he (bird) away and the fox chases the bird
'and then he is flying away and the fox is chasing the bird'

Figure 4 presents the proportion of subject and non-subject continuation of the referents of the two pronoun types. The difference in the overall continuation

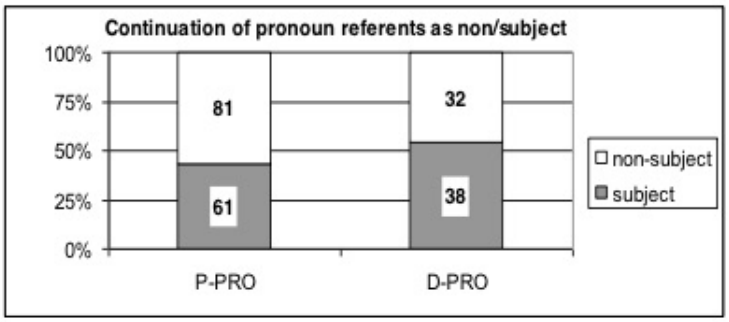

Figure 4: Continuation of P- and D-PRO referents as subject/non-subject of the following proposition

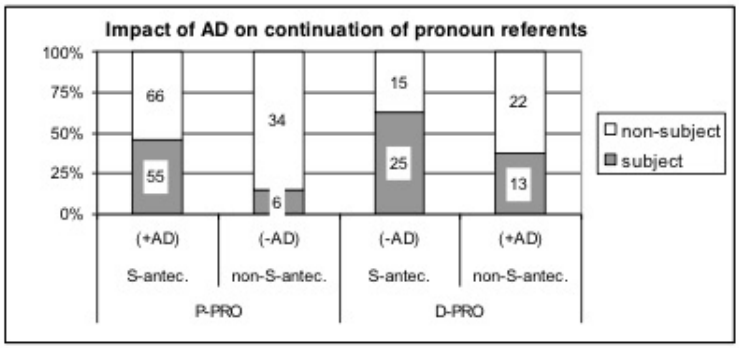

Figure 5: Continuation of P- and D-PRO referents as subject/non-subject of the following proposition depending on the potential involvement of the pronoun in anaphoric disambiguation (AD)

pattern of P- and D-PRO is not significant (p=0.12). There is only a weak tendency for referents of P-PRO to occur as non-subject in the following proposition (p=0.093).

3.4.3 Continuation of pronoun antecedents depending on type of pronoun and involvement of pronoun use in AD

In section 2.1 we discussed the impact of AD on the choice of pronoun type. We argued that the constraints of AD on the choice of pronoun type can potentially override the role of information structural devices. In B, we proposed a specification for the impact of P- and D-PRO on referent continuation: The information structural effect of pronoun type on referent continuation proposed in A might be more prominent with pronouns not involved in AD. As shown by Table 1, choice of pronoun type is not related to AD in case of P-PROs referring to non-subject antecedents and of D-PROs referring to subject antecedents. Figure 5 presents the same analyses as given in section 3.4.2 but now specified for pronouns potentially involved vs. not involved in AD. For the pronoun uses not involved in AD (P-PRO referring to non-subject antecedent; D-PRO referring

to subject antecedents), there occurs a reversed continuation pattern. While the P-PRO referents are nearly exclusively continued as non-subjects the D-PRO referents are continued as non-subjects in only one-third of all instances. The difference is highly significant (p=0.000018). The preference for non-subject continuation of P-PRO is highly significant (p=0.000015) while the preference for subject continuation of D-PRO is not significant (which might partially be due to the low number of D-PROs).

Referent continuation of pronouns potentially involved in AD, i.e. of P-PROs referring to subject antecedents and of D-PROs referring to non-subject antecedents, shows a mild tendency towards the opposite pattern. However, the differences are not significant.

3.4.4 Discourse continuation of pronoun referents as topic of the next proposition

So far, we analyzed the backgrounding vs. foregrounding effect of pronoun choice on the ongoing discourse in terms of subject vs. non-subject continuation of the pronoun's referent. In this section we refine the notion of "continuation in prominent position" by including topic-focus status of the continued subject phrase. In German main clauses, the syntactic constituent in the *Vorfeld*, i.e. the pre-verbal position, has either topic or focus status. Therefore, a subject placed in the *Vorfeld* requires more prominence in the mental model of the discourse than a subject placed somewhere else in the sentence. Accordingly, the continuation of the referent the D-PRO der in (7a) is information structurally more prominent than the continuation of der in (7b).

(7) a. der$_i$ (vogel) hat die (kinder) noch nicht gefüttert / aber der$_i$ ist gerade weggeflogen
he.D-PRO (bird) has she.D-PRO (babies) yet not feeded / but he.D-PRO is right.now flown.away
'he has not yet feeded them but he is flown away right now.'

b. der$_i$ (fuchs) hat auf den vogel gestarrt / vielleicht wollte er$_i$ den vogel haben
he.D-PRO (fox) has at the bird stared / maybe wanted he the bird get
'he has stared at the bird, maybe he wanted to get the bird.'

The evidence for an information structural difference of P- vs. D-PRO would be strengthened if the continued subjects of the two pronoun types differ in their syntactic position. Having in mind the impact of AD on the information

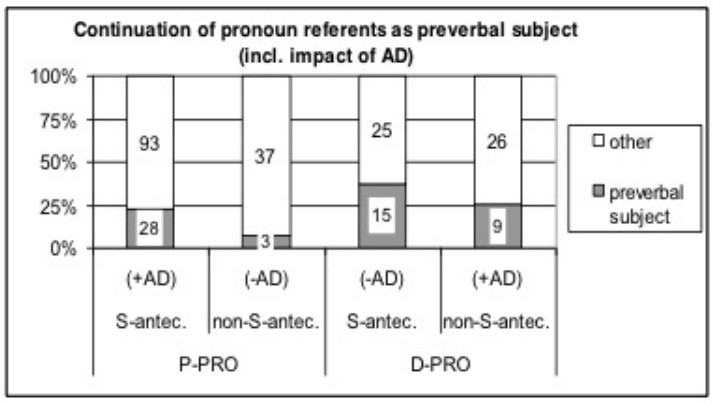

Figure 6: Continuation of P- and D-PRO referents as preverbal subject of the following proposition depending on the potential involvement of the pronoun in anaphoric disambiguation (AD)

structural use of pronouns found in the previous section, we specifically should find subject continuation of D-PROs not involved in AD more often in preverbal position than subject continuation of D-PROs involved in AD and as well more often than subject continuation of P-PROs in general.

Figure 6 presents the proportion of preverbal positioning of subject continuations for all the four categories of pronouns analyzed in the previous section. Preverbal subject continuation is most frequent with D-PRO referents not involved in AD. The continuation pattern of this type of D-PRO differs significantly from that of P-PRO not involved in AD ($p=0.0013$). At the same time, there is no significant difference in the continuation pattern of P- and D-PRO potentially involved in AD. 36 out of the 55 instances of immediately continued preverbal subjects in Figure 6 are null subjects in our data (cf. *und der$_i$ (vogel) moechte das (gräte) gerne haben und Ø$_i$ holt sich das mit ei(ne)m sturzflug.* 'and he (bird) would love to get it and Ø catches it by a nosedive'). However, null subjects are more frequent with pronouns involved in AD (27 of 37) than with pronouns not involved in AD (9 of 18).

3.4.5 Effect of type of instruction on discourse continuation of pronoun referents

Finally, we come back asking whether the factors included in the presentation of the stories to the participants, i.e. the factors of story setting, had an impact on the use of P- and D-PROs in the narrations. Specifically, the variation of the factors *type of pictures* (far/close) and *type of instruction* (external/internal) aimed at inducing a specific narrator perspective manifested by either an internal or an external point of view in relation to the narrated event. Concerning the use of P- and D-PRO, we expected that frequency and information structural

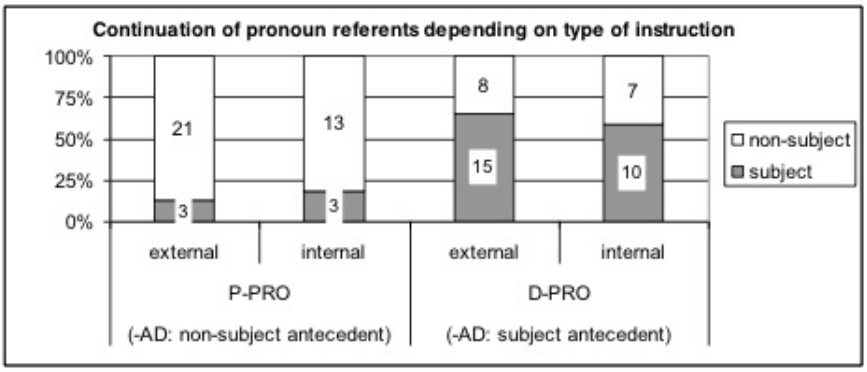

Figure 7: Continuation of pronoun referents not involved in AD in dependence on type of instruction (internal/external)

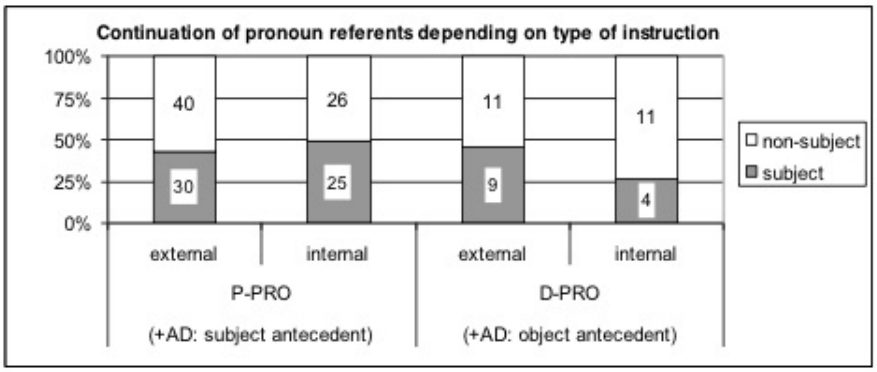

Figure 8: Continuation of pronoun referents involved in AD in dependence on type of instruction (internal/external)

opposition of P- and D-PRO would be more pronounced when the narrator takes an external point of view (see C in section 2.2).

The results reported in section 4.3.1 revealed that the factor *type of pictures* had no effect on pronoun use while the factor *type of instruction* raised a higher amount of P- and D-PRO when an external point of view was suggested, i.e. when the participant was asked to report the picture-book story as an observation he made from a tower. In order to examine whether *type of instruction* also raised a difference in the information structural opposition of P- and D-PRO we analysed the distribution of the four types of pronoun use established in the previous sections in terms of *type of instruction*.

Figure 7 and 8 present the results separately for the P- and D-PROs not involved in AD (Figure 7) and P- and D-PROs potentially involved in AD (Figure 8). Figure 7 concerns P- and D-PRO not involved in AD for which we found a significant effect on subject continuation of the pronoun referent (section 4.3.3). It turns out that this effect is primarily driven by a significant difference in subject continuation of P- and D-PROs in the external condition ($p=0.0002$). While P-PRO referents are nearly never continued as the subject of the follow-

ing proposition this is the case with about two-third of the D-PRO referents. On the contrary, there is no significant difference in the continuation pattern of P- and D-PRO in the internal condition. The neutralization of this difference in case of pronouns potentially involved in AD (Figure 8) underlines the impact of AD on pronoun use found in the previous sections.

4 Discussion

Two types of questions were underlying this study. The first question was whether the information structural effects of P- and D-PRO described in the literature of the 1990s affects the continuation of the pronoun referents in the ongoing discourse. The second question was whether the hypothesized information structural effects of the two pronoun types lead to different preferences for pronoun use depending on narrator perspective. In short, the answer on both questions is yes. The data provide evidence for an information structural opposition of P- and D-PRO in terms of the likeliness of a continuation of the pronoun referent as subject of the immediately following proposition. Further, the data provide evidence that the information structural opposition of P- and D-PRO makes the use of the two pronoun types a means for assigning an external point of view of the narrator (= author/speaker).

The state of the art of the 1990s on the difference of P- and D-PRO was that P-PROs allow backgrounding of the pronoun referent in favor of highlighting other parts of information in the ongoing discourse or in order to induce a topic change. D-PROs, on the contrary, give rise to foregrounding the pronoun referent in the discourse model, i.e. making it the topic or focus of the next sequence of discourse. Our data show that this is indeed the case. But the data also show that it does not hold for all types of pronoun use. The information structural opposition of P- and D-PRO comes to light specifically with pronoun uses that are not (potentially) involved in AD (Figure 5). The antecedent oriented requirements of AD induce the application of either P- or D-PRO irrespective of the intended information structural status of the referents, cf. (3). Obviously, the choice of P- or D-PRO is a matter of two relatively independent devices concerning either backward or forward orientation in discourse. Both devices ensure discourse coherence. Backward orientation has the function of ensuring coherence with the previous discourse. This is specifically demanding in cases of potentially ambiguous pronoun reference. For the moment it looks as if only when the backward reference of the pronoun is uncontroversial forward orientation, i.e. the intended information status of the pronoun referent in the next part of discourse, can determine the choice of P- or D-PRO. Differentiat-

ing these two devices and their outcomes seemingly has been the missing step in accounting for the information structural opposition of P- and D-PRO. It is worth noting that both devices, backward and forward orientation, work on the basis of the same well known opposition of P- and D-PRO: P-PROs are used for referents which are highly salient and activated in the mental model – D-PROs are used for referents which are introduced but not fully salient and activated in the given sequence of discourse. Specifically in the forward orientation of pronoun use, D-PROs are used in order to *make* the referents highly salient and activated.

Whether there are also information structural effects on pronoun use involved in AD cannot be answered on the basis of the limited amount of pronoun data in our corpus. At the moment we only see that the amount of null subjects is higher with pronouns involved in AD (P-PRO 29 of 55; D-PRO 9 of 13) than with pronouns not involved in AD (P-PRO 10 of 25; D-PRO 2 of 6).

The evidence for the impact of the intended information structural status of the referent on pronoun choice becomes further pronounced when including syntactic position of the continued subject into the analyses (-AD columns in Figure 6). Concerning only pronouns not involved in AD, we found that P-PRO referents are hardly continued as preverbal subjects while D-PRO referents are in about 40% of all instances. It has already been noted in the former research period that there is a positional difference of P- and D-PROs itself (e.g. Weinrich 1993). P-PROs are preferably placed postverbal while D-PROs occur preverbal. What our data show is that this also holds for the continuation of P- and D-PRO referents irrespective of the type of referential phrase used for continuation. The positional effect, again, disappears when concerning the continuation of referents of pronouns potentially involved in AD (+AD columns in Figure 6). This underlines the relevance of ensuring discourse coherence with the previous context.

Before coming to our results on the second question on whether the hypothesized information structural effects of the two pronoun types lead to different preferences for pronoun use depending on narrator perspective some words on our view of narrator perspective might be helpful. The discussions on point of view and/or narrator perspective suffer from the impacts of many different fields with partially orthogonal uses of the terminology, including also Foreground and Background and, additionally, Grounding. One source of confusion is the use of *narrator* for assigning either the person who is really telling the story, i.e. the author or speaker, as for assigning story characters who are fictitiously installed as the source of perspective-taking. Typically, both of these perspectives are present in a narrative. This is intriguingly demonstrated by Brunyé

et al. (2009) who found that first-person pronouns presented in single sentences raised an I-figure-internal perspective taken by the reader but when the same pronoun and situation was presented within a short text sequence "readers are more likely to adopt an external perspective", i.e. the I-figure became the person seen by X (= author/speaker/hearer). In the internal perspective the point of view taken by the author/speaker and the point of view of the character has been identified. In the external perspective there are two points of view, the external one of the author/speaker and the internal one of the character (the I-figure). The presence of the author/speaker perspective is often ignored when character perspective is taken in focus. In our study, we are interested in exactly this, the author/speaker perspective. As it is true for all linguistic expressions also a narrative can be constructed from different perspectives or point of views. Kuno (1987) speaks of *camera angles* which nicely illustrates that this type of perspective-taking depends on the localization of the author/speaker (or the camera) in a relation to the narrated situation (or scene). Typically, this relation is stable across a narrative while there can be variation in the character perspective.

To some extend the decision on the localization of the author's/speaker's point of view affects the decision on the type of the produced text, e.g. whether it is a report or a lively description of an experience (cf. Stutterheim 2003), and by this it affects the choice of appropriate linguistic and stylistic means. We hypothesized that an external point of view is associated with an overview over the whole situation while an internal point of view is not. While in the latter the chronology of the parts and sequences and the main actions determine the structure of the narration, in the former, i.e. from an external point of view, the relevance and contribution of the single parts and sequences to the whole situation can be weighted and presented according to the narrator's (= author's) communicative intends. Given that also the choice of a P- or a D-PRO depends on the speaker and his decision on the flow of information there should be a link between choosing an external point of view and using pronouns in order to give the narrative the speaker-intended *profile* in the sense of Weinrich's *Profilbildung*.

In order to elicit whether the information structural effects of the two pronoun types lead to different preferences for pronoun use depending on narrator perspective, we faced the participants with two alternative types of introduction into the task: a version aiming at inducing an internal point of view of the author/speaker ("please, tell the event you experienced in your garden to a friend who is coming right after it happened") vs. a version aiming at inducing an external point of view ("please, report the observation you made from a tower to

a friend"). There is no independent proof on how well the instructions did what we are aimed at. At least, we are not aware of such a proof. However, we found the expected higher amount of pronoun production of both P- and D-PRO when an external point of view was suggested by the introduction (Figure 3). Further, in the same condition, we found the expected information structural opposition of P- and D-PRO use for the pronouns not involved in AD (Figure 7).

As reported in section 3.4.1, we found more frequent use of D-PRO in the fox than in the cat story (Figure 2). The analysis of D-PRO use in terms of AD and type of instruction revealed that the higher frequency of D-PRO use in the fox story exclusively results from D-PROs potentially involved in AD (fox: 25 D-PROs vs. cat: 10 D-PROs). D-PRO use not involved in AD is of the same frequency in both types of stories (fox: 21 D-PROs vs. cat: 19 D-PROs). In the forward oriented use of D-PRO (-AD) the effect of type of instruction is in the expected direction in the cat-story (more subject (9) than non-subject (1) continuation in the extern condition but no preference in the intern condition) while it is not in the fox story (6 subject vs. 7 non-subject continuations). We hope that we can further clarify the impact of narrator's point of view on P- and D-PRO use by an extension of our corpus.

5 Summary

Our analyses have shown that the information structural opposition of P- and D-PRO already proposed in the 1990s can be made empirically visible by opposite preferences of the two pronoun types for continuation of the pronoun referent in the ongoing discourse. The respective analyses brought to light that P- and D-PROs function as means of discourse cohesion in two directions, backward in discourse and forward in discourse. The constraints on choice of pronoun type differ between these two applications. Ensuring backward coherence requires the disambiguation of pronoun reference (assigned as *pronoun use involved in AD (+AD)* in the paper). Choice of pronoun type in this case is not constrained by the intended informational status of the referent in the ongoing discourse. Assigning the latter is the function of forward oriented pronoun choice. This clearly works on pronouns not involved in AD. Both devices make use of the same well-known salience-based opposition between P- and D-PROs: P-PROs refer to referents already highly salient and activated in the discourse model while D-PROs refer to referents that should be made more salient and increased in activation in the discourse model.

The analyses further provide evidence that the information structural opposition of P- and D-PRO not involved in AD, i.e. their capacity of *Profilbil-*

dung (Weinrich 1993), is specifically applicated when the speaker/author takes an external point of view. In other words, the information structural function of P- and D-PRO makes them a means for assigning the point of view of the author/speaker.

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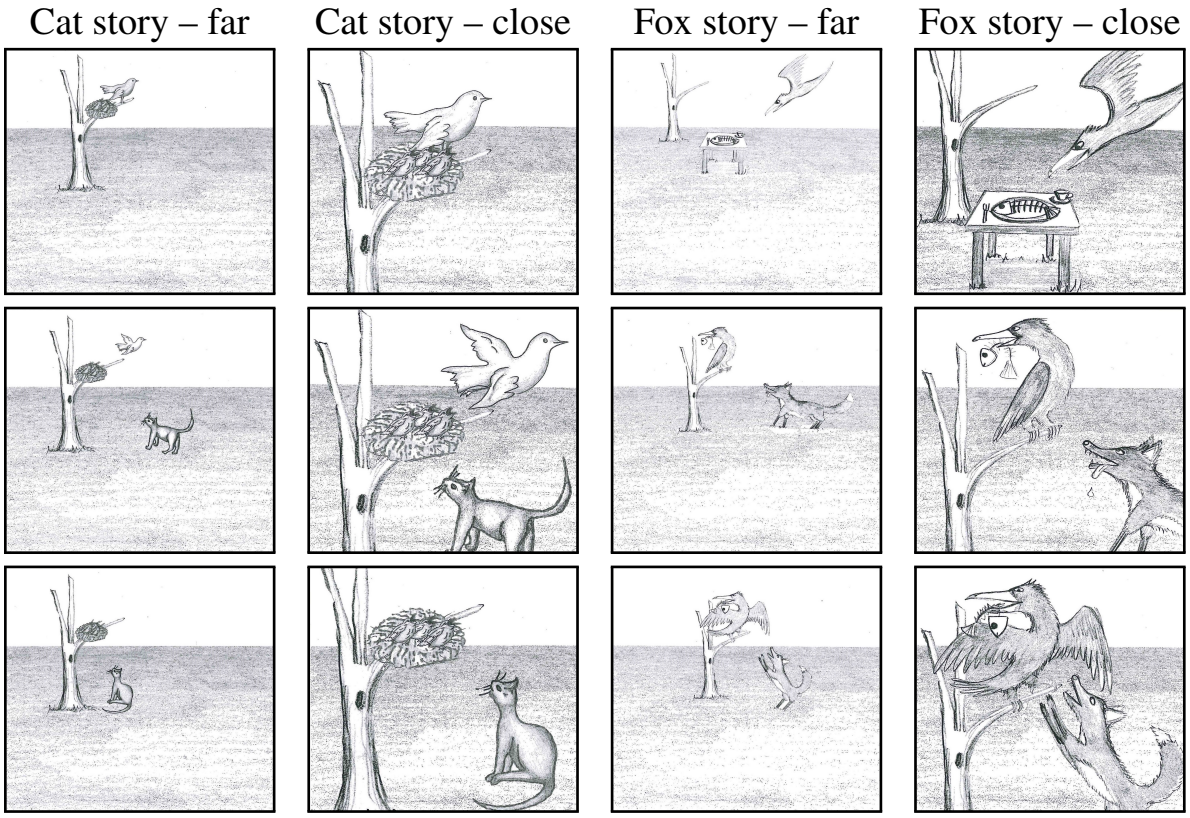
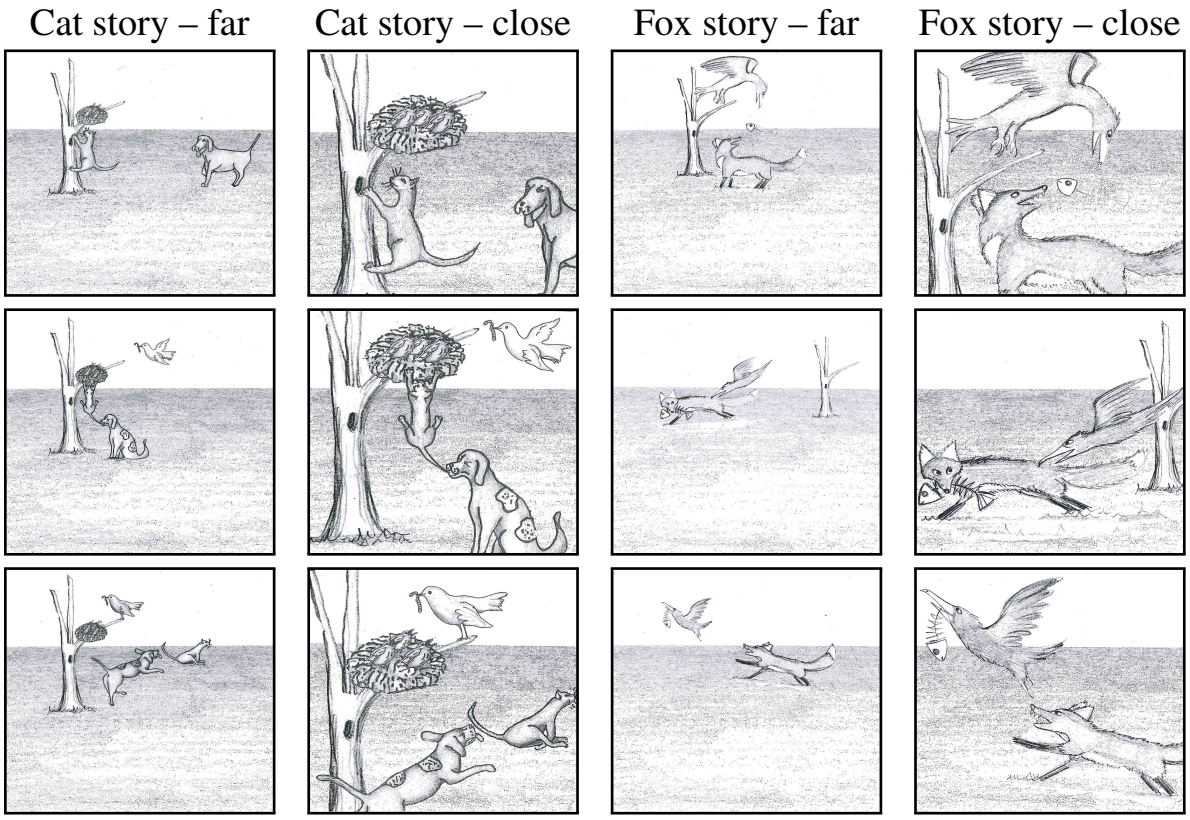
Appendix

A. The four picture stories





B. Introduction: internal (experience) – external (observation)

Experience

Imagine that you are in your garden while the event shown by the following pictures happens. Now, your friend is coming and you tell him what you just experienced.

Proceed as follows: First examine the whole story carefully picture by picture. If you have seen and understood the whole story, go back to the first picture. Then start narrating the event according to the pictures. Make the narration of what you experienced as detailed as possible. – Turn the page by yourself.

Observation

Imagine that you were observing the event shown on the following pictures when you were standing on a tower during a holiday trip. Now you are reporting the event to your friend who was not with you on the tower.

Proceed as follows: First examine the whole story carefully picture by picture. If you have seen and understood the whole story, go back to the first picture. Then start reporting the event according to the pictures. Make the report of what you have observed as detailed as possible. – Turn the page by yourself.

Verbal applicatives in Nuuchahnulth*

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In this article, I provide a description and analysis of the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' in the Southern Wakashan language Nuuchahnulth (*nuučaaʔnuɬ*). I argue that these morphemes are verbal applicatives that add a non-core argument to the thematic structure of a verb.
Verbal applicatives in Nuuchahnulth are interesting to investigate because they exhibit typologically unique behaviour that has never been studied before. Applicatives are traditionally considered functional elements whose only purpose is to add an indirect object to the argument structure of the verb (Pylkkanen 2002: 17). Nuuchahnulth is the only known language that productively uses independent verbs for this purpose.
Nuuchahnulth is an indigenous language of Canada spoken in the province of British Columbia. It consists of 14 major dialects, most of which have never been studied. All of these dialects are now highly endangered and urgently need to be documented.

We are the Nuu-chah-nulth-aht. We continue to follow our ancestors' true self-determination and real self-sufficiency when they lived and thrived on the lands and waters on the West Coast of Vancouver Island.

(The Nuuchahnulth Tribal Council)

* I would like to express my gratitude and appreciation to the language consultants of Nuuchahnulth Mary Jane Dick, Sarah Webster and Katherine Fraser. This article is dedicated to the people of Nuuchahnulth.
The article is based on my General's paper at the University of British Columbia, Canada, defended in partial fulfillment of the requirements for the degree of Doctor of Philosophy. This research has not been published before.

1 Introduction

The main objective of this work is twofold: First, to provide a detailed description of the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' in Nuuchahnulth (*nuučaaʔnuɬ*), an endangered indigenous language of British Columbia. Second, to propose a syntactic analysis of these morphemes.

Different languages employ different strategies for introducing a new discourse participant (Pylkkanen 2002). For example, English uses so-called double object constructions: (a) *John melted some ice.* (b) *John melted Mary some ice* (*Mary* is a new participant). The Bantu language Venda uses the special suffix *-el*: *Mukasa o-nok-is-el-a Katonga mahada* 'Mukasa melted Katonga the snow' (*Katonga* is a new participant). By contrast, Nuuchahnulth productively uses verbs to introduce discourse referents. In this respect, Nuuchahnulth is an unusual language, as it is the only language known to exploit such a strategy (Rose 1981). While it has been noted before that Nuuchahnulth has many typologically unique characteristics (Davidson 2002; Nakayama 2001; Stonham 1999), this way of introducing a new discourse participant has received very little attention in linguistic research (Klokeid 1978).

The data used in the article were collected by the author (unless specified otherwise) through fieldwork with three native speakers of the Ahousaht (ʕ*aaḥuus*ʔ*atḥ*) dialect of Nuuchahnulth. The speakers are literate females of 55-65 years of age. They are bilingual (with English as second language). The data were elicited using the research method of collecting native speakers' introspective judgments, which is a standard method in linguistic research. This method involves asking native speakers to judge constructed sentences for their well-formedness. The sessions were transcribed and tape-recorded. The collected data were first checked with the speakers, and then entered into a computer database. The field-notes and the database are accessible to other researchers, as well as to educational institutions interested in the data. The research was carried out in Vancouver and on Vancouver Island, British Columbia, Canada.

The article is organized as follows: Section 1 provides a short overview of the language. Section 2 describes the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' in Nuuchahnulth. Section 3 outlines previous analyses of the morpheme *čiɬ* 'do to'. Section 4 presents the proposal. Section 5 is devoted to the syntax of applicatives in Nuuchahnulth. Section 6 presents the conclusions. The article also contains an Appendix with a list of verbs used with the morphemes *čiɬ*, *ḥta* and *cḥin*.

2 Nuuchahnulth

Aboriginal British Columbia is renowned for its linguistic diversity. In Canada, there are between 50 and 73 Aboriginal languages representing 11 language families (Ignace 1998). In British Columbia alone, there are between 27 and 34 Aboriginal languages, representing eight distinct language families. All of these languages have experienced a tremendous decline during the past century, and most are currently in danger of extinction (Kinkade 1991).

Nuuchahnulth is among these highly endangered languages. There are 14 traditionally unwritten dialects of Nuuchahnulth, out of which, only four have been described (Ahousaht, Ditidaht, Kyuquot, and Tseshaht). It is very important to document the language, because the number of native speakers is rapidly declining. Most community members below the age of 60 do not speak or understand Nuuchahnulth at all, which makes the revival of the language very difficult (Nakayama 2001).

Nuuchahnulth (NCN) is spoken along the west coast of Vancouver Island from Cape Cook to Pachena Point. It belongs to the Southern Wakashan branch of the Wakashan language family, along with two other languages: Ditidaht and Makah. Ditidaht is spoken on the southern coast of Vancouver Island. Makah is spoken on the Olympic Peninsula in Washington State, USA.

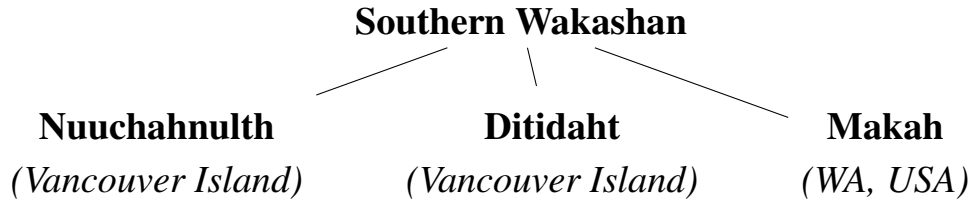


Figure 1: The Southern Wakashan branch of the Wakashan language family

The clausal structure of the language is characterized by predicate-initial word order with subject inflection (person/number/mood) on the predicate (Wojdak 2002: 1). There is no object inflection on the predicate with the exception of imperatives.

(1) a. makuk^{w}-mit-siš maḥt̓ii
buy-PAST-3SG.IND house
'I bought a house.'

b. * makuk^{w}-mit-ʔiš maḥt̓ii
buy-PAST-3SG.IND house
'I/He/She bought a house.'

There are two distinct verb classes in NCN: incorporating verbs (ʔ*u*-verbs) and non-incorporating verbs (independent verbs) (Woo & Wojdak 2001). Incorporating verbs appear either suffixed to the morpheme ʔ*u*, or to an incorporated object. ʔ*u* is an "empty" pleonastic morpheme glossed as *ø* ("empty").

(2) a. ʔu-ʔap-mit-ʔiš čakup maḥt̓ii
ø-buy-PAST-3SG.IND man house
'A man bought a house.'
b. maḥt̓ii-ʔap-mit-ʔiš čakup
house-buy-PAST-3SG.IND man
'A man bought a house.'
c. * ʔap-mit-ʔiš čakup maḥt̓ii
buy-PAST-3SG.IND man house
'A man bought a house.' (Woo & Wojdak 2001: 1)

Non-incorporating verbs never occur with ʔ*u* or an incorporated object.

(3) a. makuk^{w}-mit-ʔiš čakup maḥt̓ii
buy-PAST-3SG.IND man house
'A man bought a house.'
b. * ʔu-makuk^{w}-mit-ʔiš čakup maḥt̓ii
ø-buy-PAST-3SG.IND man house
'A man bought a house.'
c. * maḥt̓ii-makuk^{w}-mit-ʔiš čakup
house-buy-PAST-3SG.IND man
'A man bought a house.' (Woo & Wojdak 2001: 1)

Neither verbal type can appear suffixed to a subject.

(4) a. * čakup-ʔap-mit-ʔiš maḥt̓ii
man-buy-PAST-3SG.IND house
'A man bought a house.'
b. * čakup-makuk^{w}-mit-ʔiš maḥt̓ii
man-buy-PAST-3SG.IND house
'A man bought a house.' (Woo & Wojdak 2001: 1)

3 The morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for'

According to the speakers' judgments, all three morphemes denote an action done to an object. These three morphemes are the only ones in the language with this meaning. Following Rose (1981), Davis & Sawai (2001), Wojdak (2002) and Sawai (2002), I gloss the morpheme *čiɬ* as 'do to' and the morpheme

cḥin as ‘do for’. Rose also translates the morpheme *ḥta* as ‘do to’. However, according to the native speakers, this translation misses a difference in meaning between the morphemes *čiɬ* and *ḥta*. The morpheme *čiɬ* means ‘do (something) to an object’, while the morpheme *ḥta* means ‘do (something) with focus on an object’. To capture this difference in meaning, I suggest to translate *ḥta* as ‘do towards’ with the native speakers’ agreement.

The morphemes *čiɬ* ‘do to’, *ḥta* ‘do towards’ and *cḥin* ‘do for’ can occur either clause-finally, or clause-initially. These morphemes can optionally incorporate certain types of complements (*wh*-words, quantifiers, and personal and reflexive pronouns). The different positions of the morphemes and optional incorporation are described below.

I. No Incorporation:
   a. [pred[1] DO IO-*čiɬ*/*ḥta*/*cḥin*]
   b. [IO-*čiɬ*/*ḥta*/*cḥin* pred DO]

II. Incorporation:
   a. [DO-pred IO-*čiɬ*/*ḥta*/*cḥin*]
   b. [IO-*čiɬ*/*ḥta*/*cḥin* DO-pred]

The morpheme *čiɬ* ‘do to’

(5) a. ʔu-yii-mit-ʔiš John ƛ̓iiḥciip ʔaya-*čiɬ* (clause-final)
ø-give-PAST-3SG.IND John flowers many-do.to
‘John gave flowers to many.’

b. ʔaya-*čiɬ*-mit-ʔiš John ʔu-yii ƛ̓iiḥciip (clause-initial)
many-do.to-PAST-3.SG.IND John ø-give flowers
‘John gave flowers to many.’

c. ƛ̓iiḥciip-yii-mit-ʔiš John ʔaya-*čiɬ* (incorporation)
flowers-give-PAST-3SG.IND John many-do.to
‘John gave flowers to many.’

d. ʔaya-*čiɬ*-mit-ʔiš John ƛ̓iiḥciip-yii (incorporation)
many-do.to-PAST-3SG.IND John flowers-give
‘John gave flowers to many.’

[1] pred = predicate

The morpheme *ḥta* 'do towards'

(6) a. ʔu-yii-mit-ʔiš John ƛ̓iiḥciip ʔaya-*ḥta* (clause-final)
ø-give-PAST-3SG.IND John flowers many-do.towards
'John gave flowers to many.'

b. ʔaya-*ḥta*-mit-ʔiš John ʔu-yii ƛ̓iiḥciip (clause-initial)
many-do.towards-PAST-3SG.IND John ø-give flowers
'John gave flowers to many.'

c. ƛ̓iiḥciip-yii-mit-ʔiš John ʔaya-*ḥta* (incorporation)
flowers-give-PAST-3SG.IND John many-do.towards
'John gave flowers to many.'

d. ʔaya-*ḥta*-mit-ʔiš John ƛ̓iiḥciip-yii (incorporation)
many-do.towards-PAST-3SG.IND John flowers-give
'John gave flowers to many.'

The morpheme *cḥin* 'do for'

(7) a. ʔu-ḥc̓ii-siš haʔum sut-*cḥin* (clause-final)
ø-cook-1SG.IND food you-do.for
'I cook food for you.'

b. sut-*cḥin*-siš ʔu-ḥc̓ii haʔum (clause-initial)
you-do.for-1SG.IND ø-cook food
'I cook food for you.'

c. haʔum-ḥc̓ii-siš sut-*cḥin* (incorporation)
food-cook-1SG.IND you-do.for
'I cook food for you.'

d. sut-*cḥin*-siš haʔum-ḥc̓ii (incorporation)
you-do.for-1SG.IND food-cook
'I cook food for you.'

The morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' obligatory suffix to the following objects: the reflexive pronoun ʔ*uk*^{w}*a* 'self', the personal pronouns *sii* 'me', *sut* 'you-SG', *niiḥ* 'us' and *siiḥ* 'you-PL'; and *wh*-words if these objects occur in the sentence. They optionally suffix to object-quantifies and to the pleonastic morpheme ʔ*u*-. These morphemes never attach to a subject.

(8) a. ʔuk^{w}a-*čiɬ*-mit-ʔiš čakup ʔu-c̓us (with reflexive pron.)
self-do.to-PAST-3SG.IND man ø-make.fun
'A man made fun of himself.'

b. ʔu-ċus-mit-ʔiš čakup ʔuk^{w}a-*čiɬ*
ø-make.fun-PAST-3SG.IND man self-do.to
'A man made fun of himself.'

c. * ʔu-*čiɬ*-mit-ʔiš čakup ʔuk^{w}a ʔu-ċus
ø-do.to-PAST-3SG.IND man self ø-make.fun
'A man made fun of himself.'

d. * ʔu-*čiɬ*-mit-ʔiš čakup ʔuk^{w}a-ċus
ø-do.to-PAST-3SG.IND man self-make.fun
'A man made fun of himself.'

In (8a) and (8b), the morpheme *čiɬ* 'do to' is suffixed to the reflexive pronoun ʔ*uk^{w}a* 'self', and the sentences are correct. In (8c) and (8d), this morpheme is not suffixed to the reflexive, and the sentences are ungrammatical.

(9) a. sii-*čiɬ*-mit-ʔiš čakup ʔu-ċus (with personal pron.)
me-do.to-PAST-3SG.IND man ø-make.fun
'A man made fun of me.'

b. ʔu-ċus-mit-ʔiš čakup sii-*čiɬ*
ø-make.fun-PAST-3SG.IND man me-do.to
'A man made fun of me.'

c. * ʔu-*čiɬ*-mit-ʔiš čakup sii ʔu-ċus
ø-do.to-PAST-3SG.IND man me ø-make.fun
'A man made fun of me.'

d. * ʔu-*čiɬ*-mit-ʔiš čakup sii-ċus
ø-do.to-PAST-3SG.IND man me-make.fun
'A man made fun of me.'

In (9a) and (9b), the morpheme *čiɬ* 'do to' is suffixed to the personal pronoun *sii* 'me', and the sentences are grammatical. In (9c) and (9d), this morpheme is not suffixed to the same personal pronoun, and the sentences are incorrect.

(10) a. ʔača-*čiɬ*-mit-ʔiš čakup ʔu-ċus (with *wh*-object)
who-do.to-PAST-3SG.IND man ø-make.fun
'Who(m) did a man make fun of?'

b. * ʔu-*čiɬ*-mit-ʔiš čakup ʔača ʔu-ċus
ø-do.to-PAST-3SG.IND man who ø-make.fun
'Who(m) did a man make fun of?'

c. * ʔu-*čiɬ*-mit-ʔiš čakup ʔača-ċus
ø-do.to-PAST-3SG.IND man who-make.fun
'Who(m) did a man make fun of?'

In (10a), the morpheme *čiɬ* 'do to' is suffixed to the *wh*-word ʔ*ača* 'who', which yields a grammatical sentence. In (10b) and (10c), however, this morpheme is not suffixed to the *wh*-word, and the sentence is incorrect.

(11) a. hiš-*čiɬ*-mit-ʔiš čakup ʔu-c̓us (with quantifier)
everybody-do.to-PAST-3SG.IND man ø-make.fun
'A man made fun of everybody.'

b. ʔu-c̓us-mitʔiš čakup hiš-*čiɬ*
ø-make.fun-PAST-3SG.IND man everybody-do.to
'A man made fun of everybody.'

c. ʔu-*čiɬ*-mit-ʔiš čakup hiš-aata ʔu-c̓us
ø-do.to-PAST-3SG.IND man everybody-direction ø-make.fun
'A man made fun of everybody.'

In (11a) and (11b), the morpheme *čiɬ* 'do to' is suffixed to the quantifier *hiš-* 'everybody'. In (11c), this morpheme is not suffixed to the quantifier. All three sentences are grammatical, which illustrates that the morpheme *čiɬ* 'do to' can optionally suffix to quantifiers. The sentence (11c) also shows that *čiɬ* 'do to' can attach to the pleonastic morpheme ʔ*u-*.

In (12), the sentence can only be correct if the *wh*-word is an object. If the *wh*-word refers to the subject, the sentence becomes ungrammatical.

(12) ʔača-*čiɬ*-mit-ʔiš hiš-aata ʔu-c̓us (with subject)
who-do.to-PAST-3SG.IND everybody-direction ø-make.fun
* 'Who made fun of everybody?' (*wh*-word = subject)
'Who(m) did everybody make fun of?' (*wh*-word = object)

The discussed above is summarized in the Table 1 below.

Table 1: The use of *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' in Nuuchahnulth

Category		***čiɬ/ḥta/cḥin***
Objects	Reflexive pronoun ʔ*uk*^{w}*a* 'self'	✓ (obligatory)
	Personal pronouns *sii* 'me', *sut* 'you-SG', *niiḥ* 'us', *siiḥ* 'you-PL'	✓ (obligatory)
	Wh-words	✓ (obligatory)
	Quantifiers	✓ (optional)
	Pleonastic morpheme ʔ*u-*	✓ (optional)
Subjects		*

4 Previous analyses of the morpheme *čiɬ* 'do to'

There has been no research done explicitly on the morphemes *ḥta* 'do towards' and *cḥin* 'do for'. However, two syntactic analyses of the morpheme *čiɬ* 'do to' have been proposed. Both analyses focus on the interaction of *čiɬ* 'do to' with *wh*-words.

According to one analysis (Davis & Sawai 2001), *čiɬ* is an object auxiliary generated above the VP. According to the other analysis (Sawai 2002), *čiɬ* is a focus particle generated above the IP. It has also been suggested by Wojdak (2002) that *čiɬ* could be analyzed as an accusative case marker. I discuss all three proposals in turn below.

4.1 *čiɬ* 'do.to' is an object auxiliary (Davis & Sawai 2001)

According to Davis & Sawai, *čiɬ* is an incorporating object auxiliary projected above the VP. *Wh*-words attach to *čiɬ* 'do.to' when used with a non-incorporating verb. The *wh*-verb complex then undergoes head-movement to Mood, and after that to C (13b).

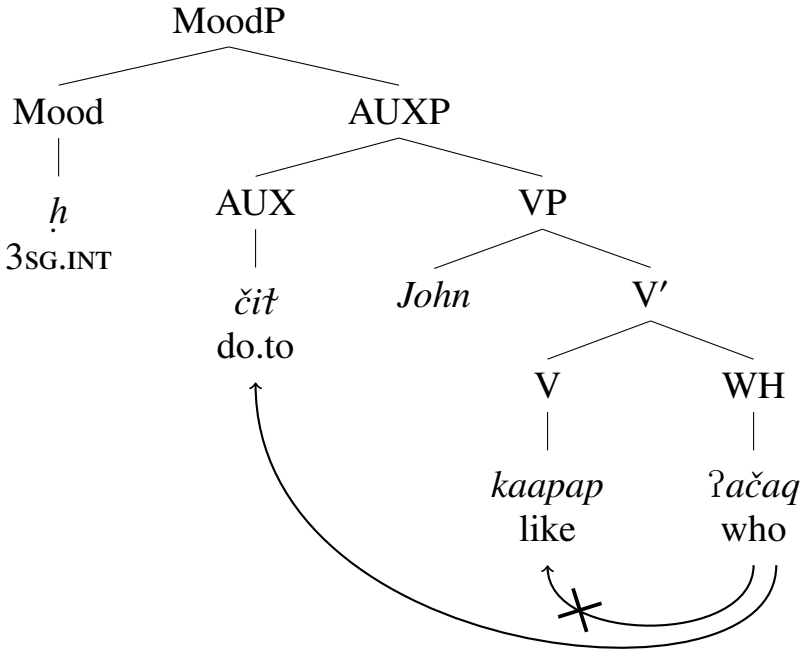
To account for the fact that a *wh*-word cannot incorporate into a non-incorporating verb, Davis & Sawai adopt a "relativized" version of Relativized Minimality[2] (Rizzi 1995). They propose that only potentially incorporating predicate can count as an intervening head for purposes of incorporation. Therefore, in (13b) above, the *wh*-word *ʔačaq* 'who' incorporates into the auxiliary *čiɬ* 'do.to' without a minimality violation.

A fatal problem with Davis & Sawai's analysis was pointed out by Wojdak (2002). According to Wojdak, if extended to account for the reflexive pronoun *ʔuk^{w}a* 'self', the analysis violates Relativized Minimality. Thus, in (14b), the movement *a* should be blocked, because the auxiliary *čiɬ* 'do.to' intervenes between I and V. The sentence (14b) is predicted to be ungrammatical. However, it is attested in NCN (see below).

(13) a. ʔaača-*čiɬ*-ḥ kaapap John
who-do.to-3SG.INT like John
'Who does John like?'

[2] *Relativized Minimality*: X x-governs Y if there is no Z such that (i) Z is a typical potential x-governor for Y; (ii) Z c-commands Y and Z does not c-command X.

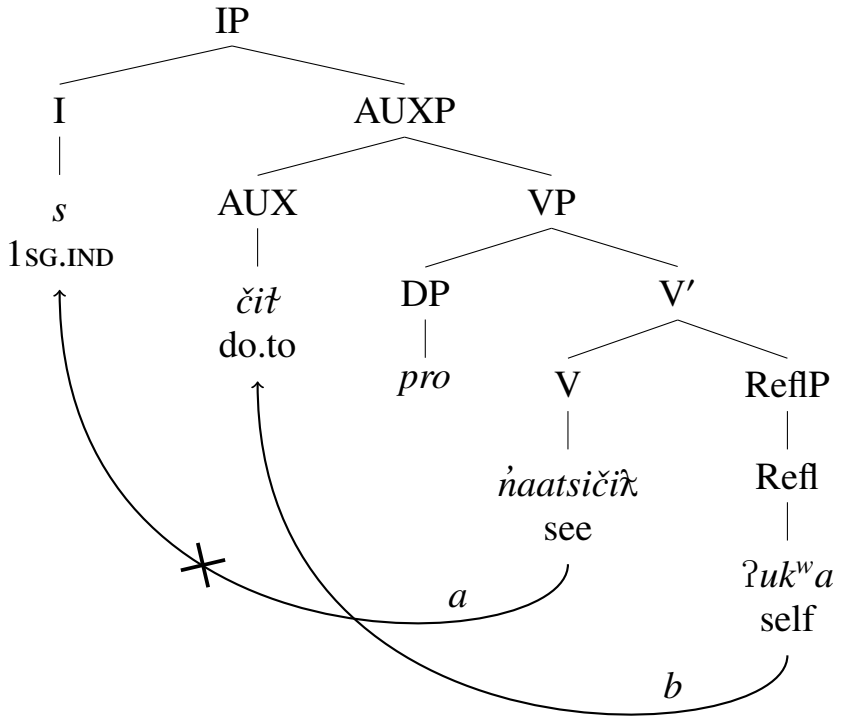
b.



(Davis & Sawai 2001: 128)

(14) a. ʼnaatsičiƛ-s ʔukʷa-*čiɬ*
see-1SG.IND self-do.to
'I saw myself.'

b.



(Wojdak 2002: 12)

4.2 *čiɬ* 'do.to' is a focus particle (Sawai 2002)

According to Sawai (2002), *čiɬ* 'do to' is a focus particle generated above the IP in the head of FocP. The *wh*-phrase moves into Spec,FocP to check the strong [focus] feature of the head.

This analysis predicts that *čiɬ* 'do to' should always appear before the main predicate, because it is generated above the main predicate in a syntactic tree. However, this does not account for the correct sentences where *čiɬ* 'do to' is used clause-finally after the main predicate (see 15 below).

(15) What did you do to yourself?

a. ʔu-c̓us-mit-siš ʔukʷa-*čiɬ*
ø-make.fun-PAST.1SG.IND self-do.to
'I MADE FUN of myself.'

b. m̓ačiƛ-mit-siš ʔukʷa-*čiɬ*
bite-PAST-1SG.IND self-do.to
'I BIT myself.'

This analysis also predicts that in (15), the reflexive pronoun ʔ*ukʷa* 'self' should be focused, because it attaches to the focus particle *čiɬ*. However, as the data above indicate, it is not the case in the language. In (15a), only the verbs *c̓us* 'make fun' is focused and in (15b), only the verb *m̓ačiƛ* 'bite' is focused.

4.3 *čiɬ* 'do.to' is a structural accusative case marker

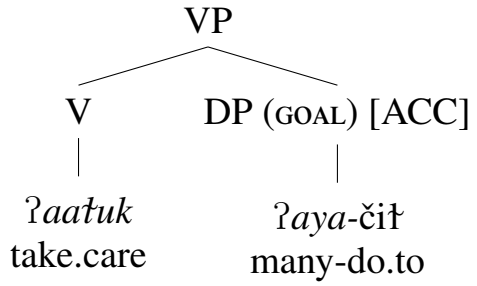
If the morpheme *čiɬ* 'do to' were a structural ACC case marker, it would predict that this morpheme cannot be sensitive to theta roles of the verb's arguments. Thus, in both (16) and (17) below, *čiɬ* 'do to' should attach to ʔ*aya* 'many' because ʔ*aya* is a complement of the verb.

(16) a. ʔu-ʔaaɬuk-mit-ʔiš čakup ʔaya-*čiɬ* (ʔ*aya* = GOAL)
ø-take.care-PAST-3SG.IND man many-do.to
'A man took care of many.'

b. * ʔu-ʔaaɬuk-mit-ʔiš čakup ʔaya (ʔ*aya* = GOAL)
ø-take.care-PAST-3SG.IND man many
'A man took care of many.'[3]

[3] This example as well as all correct examples below are grammatical data in Nuuchahnulth volunteered by native speakers. The examples do not miss information, compared with their English translations, where the word *something* is missing.

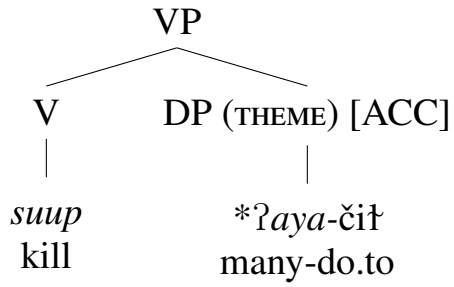
c.



(17) a. * ʔu-suup-mit-ʔiš čakup ʔaya (ʔ*aya* = THEME)
ø-kill-PAST-3SG.IND man many
'A man killed many.'

b. ʔu-suup-mit-ʔiš čakup ʔaya (ʔ*aya* = THEME)
ø-kill-PAST-3SG.IND man many
'A man killed many.'

c.



However, as the data above indicate, it is not the case in the language. The NCN sentences show that this morpheme is sensitive to theta roles of the verb's complements. In (16), ʔ*aya* 'many' is a GOAL argument of the verb. The morpheme *čiɬ* 'do to' attaches to this argument, and the sentence is correct. In (17), ʔaya 'many' is a THEME argument. The morpheme *čiɬ* 'do to' attaches to it, and the sentence is ungrammatical. This sensitivity with regard to theta-roles is not predicted by the analysis of *čiɬ* 'do to' as an ACC case marker.

To rule out a possibility that the verb *suup* 'kill' in (17) is "special", such that it does not assign ACC case to its complement, I illustrate below more examples where *čiɬ* 'do to' is ungrammatical on the THEME argument of the verb (18-20).

(18) a. * ʔu-ʔiic-mit-ʔiš čakup ʔaya-*čiɬ* (ʔ*aya* = THEME)
ø-eat-PAST-3SG.IND man many-do.to
'A man ate a lot.'

b. ʔu-ʔiic-mit-ʔiš čakup ʔaya (ʔ*aya* = THEME)
ø-eat-PAST-3SG.IND man many
'A man ate a lot.'

In (18) above, *čiɬ* 'do to' is ungrammatical on the THEME argument ʔ*aya* 'many' of the verb ʔ*iic* 'eat'.

(19) a. * ʔu-kwiiɬ-mit-ʔiš John ʔaya-*čiɬ* (*ʔaya* = THEME)
ø-make-PAST-3SG.IND John many-do.to
'John made a lot (of something).'

b. ʔu-kwiiɬ-mit-ʔiš John ʔaya (*ʔaya* = THEME)
ø-make-PAST-3SG.IND John many
'John made a lot (of something).'

In (19) above, *čiɬ* 'do to' is ungrammatical on the THEME argument *ʔaya* 'many' of the verb *kwiiɬ* 'make'.

(20) a. ʔu-yii-mit-ʔiš John ƛ̓aatn̓aʔis ʔaya-*čiɬ*
ø-give-PAST-3SG.IND John children many-do.to
* 'John gave children lots (of something).'
'John gave (something) to many children.'

b. ʔu-yii-mit-ʔiš John ƛ̓aatn̓aʔis ʔaya
ø-give-PAST-3SG.IND John children many
'John gave chrildren lots (of something).'
* 'John gave (something) to many children.'

In (20), *čiɬ* 'do to' is ungrammatical on the THEME argument *ʔaya* 'many' of the verb *yii* 'give'. However, it is grammatical with the GOAL argument of this verb. Thus, in (20a), *ʔaya* 'many' is a GOAL argument of the verb *yii* 'give'. The morpheme *čiɬ* 'do to' attaches to this argument, and the sentence is correct. In (20b), *ʔaya* 'many' is a THEME argument of the same verb *yii* 'give', and the grammatical sentence occurs without *čiɬ* 'do to'.

Another argument that shows that *čiɬ* 'do to' is not a structural ACC case marker concerns passive constructions in NCN. If this morpheme were a structural ACC case marker, we would expect it not to appear on the THEME which has been promoted to subject in passive constructions (see Kim 2001 on object promotion in passive constructions). However, as the example (21b) below indicates, *čiɬ* 'do to' is grammatical on the promoted object in a passive clause (compare with 21a).

(21) a. ʔu-c̓us-mit-ʔiš Mary sut-*čiɬ*
ø-make.fun-PAST-3SG.IND Mary you-do.to
'Mary made fun of you.'

b. sut-*čiɬ*-ʔat-mit-ʔick ʔu-c̓us-ʔat ʔuḥʔat Mary
you-do.to-PASSIVE-PAST-2SG.IND ø-make.fun-PASSIVE by Mary
'You were made fun of by Mary.'

As (21) shows, the morpheme *čiɬ* 'do to' is used in both active and passive clauses, which is not predicted by this analysis.

Another piece of evidence that *čiɬ* 'do to' is not a case marker comes from its position in a clause. If *čiɬ* 'do to' were a case marker, we would expect it to appear attached to the argument and act as a constituent with the argument. However, as the examples below indicate, *čiɬ* 'do to' can occur either on the argument, or separated from it (as in 22b, compare with 22a), which is unexpected if analyzing *čiɬ* 'do to' as a case marker.

(22) a. ʔaya-*čiɬ*-mit-ʔiš čakup ʔu-c̓us (on the argument)
many-do.to-past-3sg.ind man ø-make.fun
'A man made fun of many.'

b. ʔu-*čiɬ*-mit-ʔiš čakup ʔaya ʔu-c̓us (separated)
ø-do.to-past-3sg.ind man many ø-make.fun
'A man made fun of many.'

5 The proposal

I propose that the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are verbal applicatives that add a non-core (additional) argument to the thematic structure of a verb. In 5.1, I show that these morphemes are verbs. In 5.2, I argue that these morphemes serve to introduce a non-core argument.

5.1 The morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are verbs

One argument in favor of the verbal status of the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' is that they appear independently as verbs meaning 'do to', 'do towards' and 'do for'.

The morpheme čiɬ *'do to'*

(23) a. ʔu-*čiɬ*-mit-ʔiš John ʔumʔiiq (as a verb in a statement)
ø-do.to-PAST-3SG.IND John mother
'John did (something) to mother.'

b. ʔača-*čiɬ*-mit-ḥ John (as a verb in a question)
who-do.to-PAST-3SG.INT John
'Who(m) did John do (something) to?'

The morpheme ḥta *'do towards'*

(24) a. ʔu-*ḥta*-mit-ʔiš John ʔumʔiiq (as a verb in a statement)
ø-do.towards-PAST-3SG.IND John mother
'John did (something) to mother.'

b. ʔača-*ḥta*-mit-ḥ John (as a verb in a question)
who-do.towards-PAST-3SG.INT John
'Who(m) did John do (something) to?'

The morpheme cḥin *'do for'*

(25) a. ʔu-*cḥin*-mit-ʔiš John ʔumʔiiq (as a verb in a statement)
ø-do.for-PAST-3SG.IND John mother
'John did (something) for mother.'

b. ʔača-*cḥin*-mit-ḥ John (as a verb in a question)
who-do.for-PAST-3SG.INT John
'Who(m) did John do (something) to?'

These morphemes can have the same arguments as other verbs in NCN: they can be used with common nouns, proper names, inanimate nouns, reflexive pronouns, personal pronouns and quantifiers.

(26) a. ʔu-*čiɬ*-mit-ʔiš John ʔumʔiiq
ø-do.to-PAST-3SG.IND John mother
'John did (something) to mother.'

b. ʔu-*ċus*-mit-ʔiš John ʔumʔiiq
ø-make.fun-PAST-3SG.IND John mother
'John made fun of mother.'

In (26a) above, the morpheme *čiɬ* 'do to' is used with the common noun ʔ*um*ʔ*iiq* 'mother'. In (26b), the verb *ċus* 'make fun' is used with the same common noun.

(27) a. ʔu-*čiɬ*-mit-ʔiš Mary John
ø-do.to-PAST-3SG.IND Mary John
'Mary did (something) to John.'

b. ʔu-*ċus*-mit-ʔiš Mary John
ø-make.fun-PAST-3SG.IND Mary John
'Mary made fun of John.'

In (27a), the morpheme *čiɬ* 'do to' is used with the proper name *John*. In (27b), the verb *ċus* 'make fun' is used with the same proper name.

(28) a. ʔu-*čiɬ*-mit-ʔiš John huupuk̓^{w}as-uk Bill
ø-do.to-PAST-3SG.IND John car-POSSESSIVE Bill
'John did (something) to Bill's car.'

b. ʔu-*ċus*-mit-ʔiš John huupuk̓^{w}as-uk Bill
ø-make.fun-PAST-3SG.IND John car-POSSESSIVE Bill
'John made fun of Bill's car.'

In (28a), the morpheme *čiɬ* 'do to' is used with the inanimate noun *huupuk̓^{w}as* 'car'. In (28b), the verb *ċus* 'make fun' is used with the same inanimate noun.

(29) a. ʔuk^{w}a-*čiɬ*-mit-ʔiš John
self-do.to-PAST-3SG.IND John
'John did (something) to himself.'

b. ʔuk^{w}a-*ċus*-mit-ʔiš John
self-make.fun-PAST-3SG.IND John
'John made fun of himself.'

In (29a), the morpheme *čiɬ* 'do to' is used with the reflexive pronoun *ʔuk^{w}a* 'self'. In (29b), the verb *ċus* 'make fun' is used with the same reflexive pronoun.

(30) a. sut-*čiɬ*-mit-ʔiš John
you-do.to-PAST-3SG.IND John
'John did (something) to you.'

b. sut-*ċus*-mit-ʔiš John
you-make.fun-PAST-3SG.IND John
'John made fun of you.'

In (30a), the morpheme *čiɬ* 'do to' is used with the personal pronoun *sut* 'you'. In (30b), the verb *ċus* 'make fun' is used with the same personal pronoun.

(31) a. ʔu-*čiɬ*-mit-ʔiš John hiš-aata
ø-do.to-PAST-3SG.IND John everybody-direction
'John did (something) to everybody.'

b. ʔu-*ċus*-mit-ʔiš John hiš-aata
ø-make.fun-PAST-3SG.IND John everybody-direction
'John made fun of everybody.'

In (31a), the morpheme *čiɬ* 'do to' is used with the quantifier *hiš* 'everybody'. In (31b), the verb *ċus* 'make fun' is used with the same quantifier.

Another piece of evidence that *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are verbs comes from examples where these morphemes can occur with the passive suffix -ʔ*at*, just like other verbs in NCN.

(32) a. ʔu-*čiɬ*-ʔat-mit-ʔiš ʔumʔiiq
ø-do.to-PASSIVE-PAST-3SG.IND mother
'It was done to mother.'

b. ʔu-*ċus*-ʔat-mit-ʔiš ʔumʔiiq
ø-make.fun-PASSIVE-PAST-3SG.IND mother
'Mother was made fun of.'

In (32a), the morpheme *čiɬ* 'do to' appears with the passive suffix -ʔ*at*. In (32b), the verb *ċus* 'make fun' is used with the same passive suffix.

In NCN, only incorporating predicates can occur with the expletive morpheme ʔ*u*- (Woo & Wojdak 2001). As the data below show, the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' can also occur with the expletive ʔ*u*- (see also Section 2.2).

(33) a. ʔu-*čiɬ*-mit-ʔiš John ʔumʔiiq
ø-do.to-PAST-3SG.IND John mother
'John did (something) to mother.'

b. ʔu-*ċus*-mit-ʔiš John ʔumʔiiq
ø-make.fun-PAST-3SG.IND John mother
'John made fun of mother.'

In (33a), the morpheme *čiɬ* 'do to' appears with the expletive morpheme ʔ*u*-. In (33b), the verb *ċus* 'make fun' is used with the expletive ʔ*u*-.

Another similarity with incorporating verbs is that *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' can suffix to a *wh*-word.

(34) a. ʔača-*čiɬ*-mit-ʔiš John
who-do.to-PAST-3SG.IND John
'Who(m) did John do (something) to?'

b. ʔača-suup-ḥ-ʔač John
who-kill-3SG.INT-CONFIRM John
'Who did John kill?'

In (34a), the morpheme *čiɬ* 'do to' appears suffixed to the *wh*-word ʔ*ača* 'who'. In (34b), the verb *ċus* 'make fun' is also suffixed to the same *wh*-word.

I have shown above that the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' and incorporating verbs behave very similarly in NCN. The question arises: are there any differences? The only difference found is that unlike other incorporating verbs, *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' cannot suffix to a noun or another verb.

(35) a. * ʔa-ʔiič-*čiɬ*-mit-ʔiš John
PL-old.person-do.to-PAST-3SG.IND John
'John did (something) to old people.'
b. ʔa-ʔiič-ʔaaɬuk-mit-ʔiš John
PL-old.person-take.care-PAST-3SG.IND John
'John took care of old people.'

In (35a), the morpheme *čiɬ* 'do to' is ungrammatical when suffixed to the noun *ʔaʔiič* 'old people'. In (35b), the verb *ʔaaɬuk* 'take care' appears suffixed to the noun *ʔaʔiič* 'old people'.

(36) a. * ƛ̓iix-*čiɬ*-mit-ʔiš John ʔumʔiiq
laugh-do.to-PAST-3SG.IND John mother
'John did (something) laughing at mother.'
b. ƛ̓iix-*c̓us*-mit-ʔiš John ʔumʔiiq
laugh-make.fun-PAST-3SG.IND John mother
'John made fun laughing at mother.'

In (36a), the morpheme *čiɬ* 'do to' is ungrammatical when suffixed to the verb *ƛ̓iix* 'laugh'. In (36b), the verb *c̓us* 'make fun' is suffixed to the verb *ƛ̓iix* 'laugh'.

I attempt to explain this difference between *čiɬ*, *ḥta* and *cḥin* and other incorporating verbs in NCN in the Section 6.3.

The discussed above is summarized in the Table 2.

Table 2: The morphemes *čiɬ* 'do to', *ḥta* 'do towards', *cḥin* 'do for' are verbs

Properties	**Verbs**	***čiɬ/ḥta/cḥin***
Occur as verbs in sentence	✓	✓
Used with: common/proper, animate/inanimate nouns, pronouns, quantifiers	✓	✓
Appear with passive -ʔ*at*	✓	✓
Occur with expletive ʔ*u*-	✓	✓
Suffix to *wh*-words, pronouns, quantifiers	✓	✓
Suffix to nouns, verbs	✓	X

5.2 The morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are applicatives

Many languages have a means of adding an indirect object to the argument structure of a verb (Pylkkanen 2002). This is widely attested in the Bantu languages amongst many others (Bresnan & Moshi 1993). Such additional arguments are called applied arguments. The term applicatives is used to refer to elements that serve to add an applied argument to the argument structure of a verb. I argue that the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are applicatives, because they are used to introduce such additional (non-core) arguments.

In the following example (37a), the intransitive stative verb *hiix^{w}at* 'be angry' has the core argument AGENT 'I'. In (37b) and (37c), the non-core argument ʔ*aya* 'many' is added, in which case the morphemes *čiɬ* 'do to' or *ḥta* 'do towards' appear in the sentence.

(37) a. hiix^{w}at-ḥi-siš
be.angry-STATE-1SG.IND
'I am angry.'

b. hiix^{w}at-ḥi-siš ʔaya-*čiɬ*
be.angry-STATE-1SG.IND many-do.to
'I am angry at many.'

c. hiix^{w}at-ḥi-siš ʔaya-*ḥta*
be.angry-STATE-1SG.IND many-do.towards
'I am angry at many.'

čiɬ 'do to' and *ḥta* 'do towards' are also used in questions when an additional argument occurs in the sentence (38a and 38b below).

(38) a. ʔača-*čiɬ*-k hiix^{w}at-ḥi
who-do.to-2SG.INT be.angry-STATE
'Who are you angry at?'

b. ʔača-*ḥta*-k hiix^{w}at-ḥi
who-do.towards-2SG-INT be.angry-STATE
'Who(m) are you angry at?'

In (38a) and (38b), the non-core argument 'who' is added. As a result, the morphemes *čiɬ* 'do to' or *ḥta* 'do towards' appear in the sentence.

(39) a. kamatq-šiƛ-ʔaqƛ-siš ...
run-PERF-FUTURE-1SG.IND
'I will run (e. g. to the store).'

b. kamatq-šiƛ-ʔaqƛ-siš ʔaya *cḥin* ...
run-PERF-FUTURE-1SG.IND many-do.for
'I will run for many (on behalf of many).'

In (39a), the intransitive unergative verb *kamatq* 'run' has the core argument AGENT 'I'. In (39b), the non-core argument 'many' is added, which causes the morpheme *cḥin* 'do for' to appear in the sentence.

(40) ʔača-*cḥin*-ʔaqƛ-k kamatq-šiƛ
who-do.for-FUTURE-2SG.INT run-PERF
'For who(m) will you run?'

In (40), the non-core argument 'who' is added, and the morpheme *cḥin* 'do for' is used in the sentence.

(41) a. qaacii-tʔyap-mit-ʔiš John suuḥaa
give.food-bring-PAST-3SG.IND John salmon
'John brought a salmon.'
b. qaacii-tʔyap-mit-ʔiš John suuḥaa ʔaya-*čiɬ*
give.food-bring-PAST-3SG.IND John salmon many-do.to
'John brought a salmon to many.'
c. qaacii-tʔyap-mit-ʔiš John suuḥaa ʔaya-*ḥta*
give.food-bring-PAST-3SG.IND John salmon many-do.towards
'John brought a salmon to many.'

In (41a), the transitive verb *qaacii* 'bring' has two core arguments: the AGENT 'John' and the THEME 'salmon'. When the non-core argument 'many' is added, the morphemes *čiɬ* 'do to' or *ḥta* 'do towards' are used in the sentence (41b), (41c).

(42) a. ʔača-*čiɬ*-mit-ḥ John qaacii-tʔyap suuḥaa
who-do.to-PAST-2SG.INT John give.food-bring salmon
'Who(m) did John bring a salmon to?'
b. ʔača-*ḥta*-mit-ḥ John qaacii-tʔyap suuḥaa
who-do.towards-PAST-2SG.INT John give.food-bring salmon
'Who(m) did John bring a salmon to?'

In (42a) and (42b), the non-core arguemnt 'who' is added. As a result, the morphemes *čiɬ* 'do to' or *ḥta* 'do towards' appear in the sentence.

(43) a. haʔum-ḥc̓ii-siš
food-cook-1SG.IND
'I cook food.'

b. haʔum-ḥc̓ii-siš ʔaya-*cḥin*
food-cook-1SG.IND many-do.for
'I cook food for many.'

In (43a), the transitive verb *ḥc̓ii* 'cook' has two core arguments, the AGENT 'I' and the THEME 'food'. When the non-core argument 'many' is added, the morpheme *cḥin* 'do for' appears in the sentence (43b).

(44) ʔača-*cḥin*-k haʔum-ḥc̓ii
who-do.for-2SG.INT food-cook
'Who(m) do you cook food for?'

In (44), the non-core argument 'who' is added, and the morpheme *cḥin* 'do for' is used in the sentence.

I have shown above that the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' occur with additional arguments in NCN. If these morphemes are applicatives, i. e. they serve to add a non-core argument to the thematic structure of a verb, we would expect that additional arguments cannot be added without these morphemes. This prediction is shown to be correct in the examples below.

(45) a. * qaacii-tx̌ap-mit-ʔiš John suuḥaa ʔaya
give.food-bring-PAST-3SG.IND John salmon many
'John brought a salmon to many.'

b. qaacii-tx̌ap-mit-ʔiš John suuḥaa ʔaya-*čiɬ*
give.food-bring-PAST-3SG.IND John salmon many-do.to
'John brought a salmon to many.'

c. qaacii-tx̌ap-mit-ʔiš John suuḥaa ʔaya-*ḥta*
give.food-bring-PAST-3SG.IND John salmon many-do.towards
'John brought a salmon to many.'

(46) a. * haʔum-ḥc̓ii-siš ʔaya
food-cook-1SG.IND many
'I cook food for many.'

b. haʔum-ḥc̓ii-siš ʔaya-*cḥin*
food-cook-1SG.IND many-do.for
'I cook food for many.'

The current theory predicts that the applicative morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' cannot be used with a core argument of the verb. Below I show that this prediction is borne out, as these morphemes are ungrammatical with a core THEME argument of the verb.

(47) a. haʔum-ḥc̓ii-siš ʔaya
food-cook-1SG.IND many
'I cook lots of food.'

b. ʔu-ḥc̓ii-siš [ʔaya haʔum]
ø-cook-1SG.IND many food
'I cook lots of food.'

c. * ʔu-ḥc̓ii-siš
ø-cook-1SG.IND
'I cook.'

d. * haʔum-ḥc̓ii-siš ʔaya-*čiɬ*
food-cook-1SG.IND many-do.to
'I cook lots of food.'

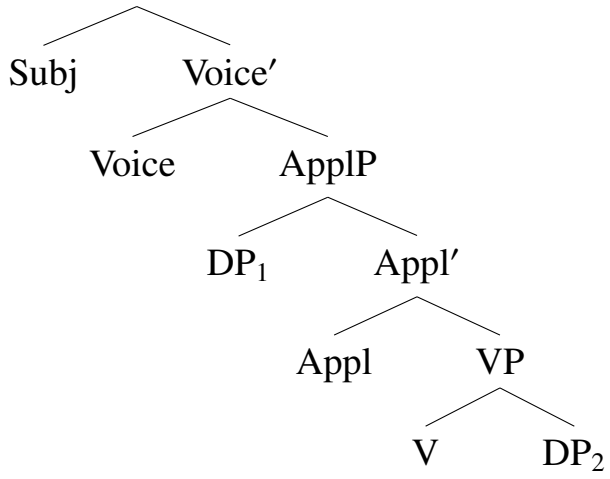
e. * ʔu-ḥc̓ii-siš [ʔaya-*čiɬ* haʔum]
ø-cook-1SG.IND many-do.to food
'I cook lots of food.'

In (47d) and (47e), the applicative is attached to the core THEME argument, and the sentences are ungrammatical.

6 A syntactic structure for the NCN applicatives

Pylkkanen (2002) argues that cross-linguistically there are two different types of applicatives: high applicatives and low applicatives. High applicatives denote a relation between an event and an individual and attach above the verb (48). Low applicatives denote a relation between two individuals and attach below the verb (50). The two constructions are similar in that in both, the applied (additional) argument asymmetrically c-commands the direct object.

(48) (Pylkkanen 2002: 19)

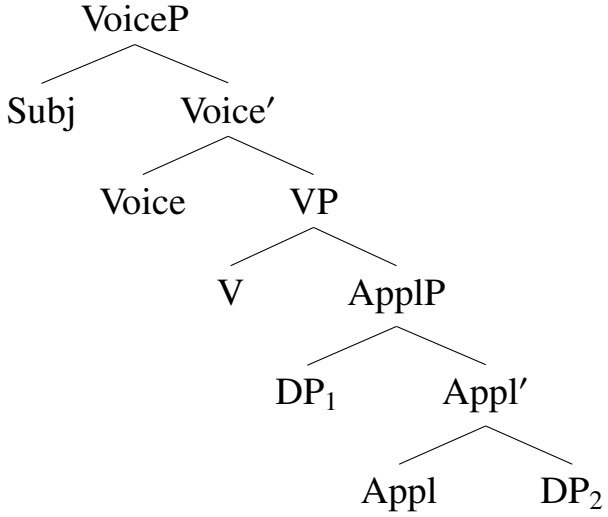


In (48), the applicative adds another participant to the event described by the verb. An example with a high applicative is shown in (49).

(49) High applicative: Luganda (Pylkkanen 2002: 25)

Mukasa ya-tambu-le-dde Katonga
Mukasa PAST-walk-APPL-PAST Katonga
'Mukasa walked for Katonga.'
(Katonga is an additional participant added to the event of walking.)

(50) (Pylkkanen 2002: 19)



In (50), the applied argument bears no semantic relation to the verb, it only bears a transfer of possession relation to the direct object. This is illustrated in English sentences below.

(51) Low applicative: English (Pylkkanen 2002: 19)

a. *I wrote John a letter.*
(I wrote a letter and the letter was to the possession of John.)
b. *I baked my friend a cake.*
(I baked a cake and the cake was to the possession of my friend.)
c. *I bought John a new VCR.*
(I bought a new VCR and the VCR was to the possession of John.)

6.1 Semantic diagnostics (Pylkkanen 2002)

I order to distinguish between high and low applicatives, Pylkkanen applies two semantic diagnostics:

(52) Semantic diagnostics for high and low applicatives

a. *Diagnostic 1:* transitivity restrictions
"Since a low applicative denotes a relation between the direct and

indirect object, it cannot appear in a structure that lacks a direct object. Therefore, only high applicatives should be able to combine with unergative verbs" (23).

b. *Diagnostic 2:* verb semantics
"Since low applicatives imply a transfer of possession, they make no sense with verbs that are completely static: for example, an event of holding a bag does not plausibly result in the bag ending up in somebody's possession. High applicatives, on the other hand, should have no problem combining with verbs such as hold: it is perfectly plausible that somebody would benefit from a bag-holding event" (23).

Pylkkanen also mentions that low applicatives are productive with unaccusative verbs (38).

Applying these diagnostics to the NCN applicatives, I show that they behave like *high* applicatives.

(53) a. sut-*cḥin*-ʔaqƛ-siš kamatq-šiƛ ...
you-do.for-FUTURE-1SG.IND run-PERF
'I will run for you (e. g. to the store).'

b. kamatq-šiƛ-ʔaqƛ-siš sut-*cḥin* ...
run-PERF-FUTURE-1SG.IND you-do.for
'I will run for you (e. g. to the store).'

In (53), the applicative *cḥin* 'do for' is used with the unergative verb *kamatq* 'run', which is only possible with high applicatives according to Pylkkanen's *Diagnostic 1*.

(54) a. sut-*cḥin*-mit-siš suu ƛiqy̓ak
you-do.for-PAST-1SG.IND hold key
'I held a key for you.'

b. suu-mit-siš ƛiqy̓ak sut-*cḥin*
hold-past-1sg.ind key you-do.for
'I held a key for you.'

In (54), the applicative *cḥin* 'do for' is used with the static verb *suu* 'hold', which is only possible with high applicatives according to Pylkkanen's *Diagnostic 2*.

(55) a. * sut-*cḥin*-ʔaqƛ-siš hinin
you-do.for-FUTURE-1SG.IND arrive
'I will arrive for you (e. g. to the airport).'

b. * hinin-ʔaqƛ-siš sut-*cḥin*
arrive-FUTURE-1SG.IND you-do.for
'I will arrive for you (e. g. to the airport).'

In (55), the applicative *cḥin* 'do for' is ungrammatical when used with the non-incorporating unaccusative verb *hinin* 'arrive', which is predicted for high applicatives.

(56) a. * sut-*cḥin*-ʔaqƛ-siš ʔu-*ʼnii*
you-do.for-FUTURE-1SG.IND arrive
'I will arrive for you (e. g. to the airport).'
b. * ʔu-*ʼnii*-ʔaqƛ-siš sut-*cḥin*
arrive-FUTURE-1SG.IND you-do.for
'I will arrive for you (e. g. to the airport).'

In (56), the applicative *cḥin* 'do for' is ungrammatical with the incorporating unaccusative verb *ʼnii* 'arrive'.

The results are summarized in Table 3.

Table 3: The morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are high applicatives

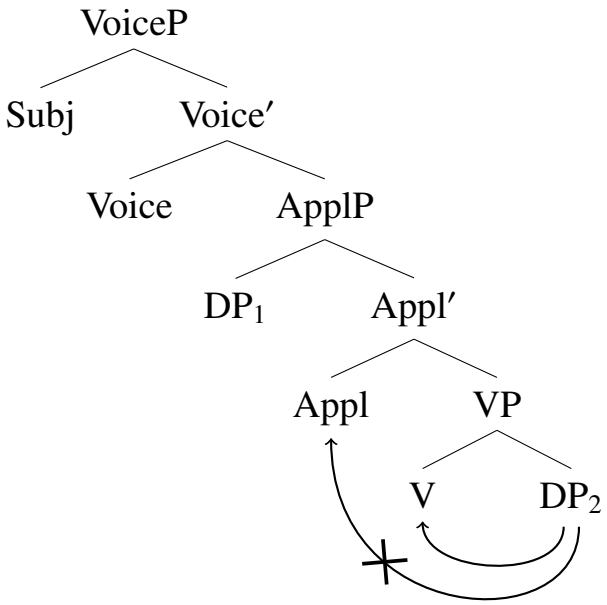
Combine with ...	**High applicatives**	**Low applicatives**	***čiɬ/ḥta/cḥin***
Unergative verbs	✓	X	✓
Static verbs	✓	X	✓
Unaccusative verbs	X	✓	X

6.2 Syntactic predictions

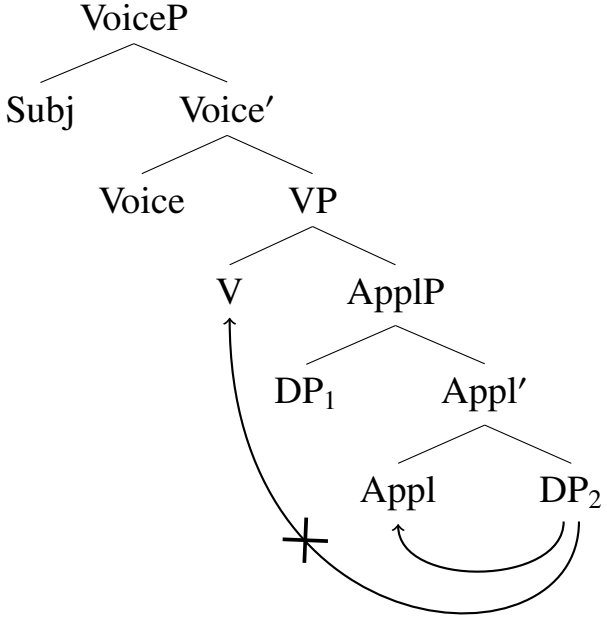
The two structures in (48) and (50) also make different syntactic predictions, namely predictions about incorporation. Thus, the structure for high applicatives predicts that the direct object should be able to incorporate into the verb, and it cannot incorporate into the applicative (see 57).

The structure for low applicatives in (58) predicts that the direct object should be able to incorporate into the applicative, and it cannot incorporate directly into the verb.

(57) (High applicative)



(58) (Low applicative)

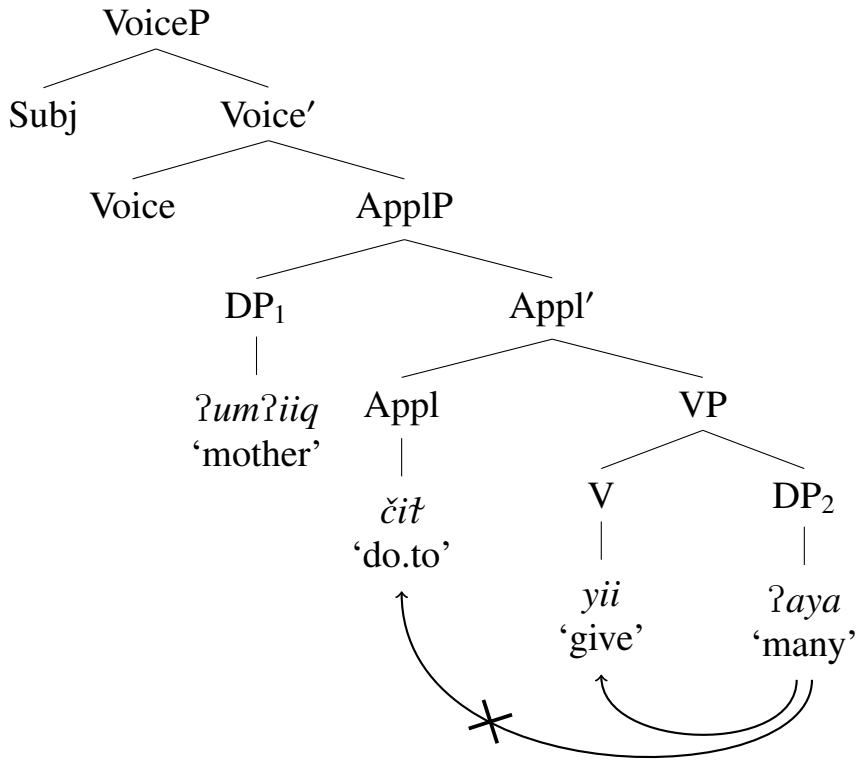


The NCN data show that the direct object can in fact incorporate into the verb, and it can never incorporate into the applicative, which is evidence in favor of the *high* applicative structure in NCN.

(59) a. ʔu-*čiɬ*-mit-ʔiš ʔumʔiiq ʔaya-yii
ø-do.to-PAST-3SG.IND mother many-give
'He/She gave lots to mother.'

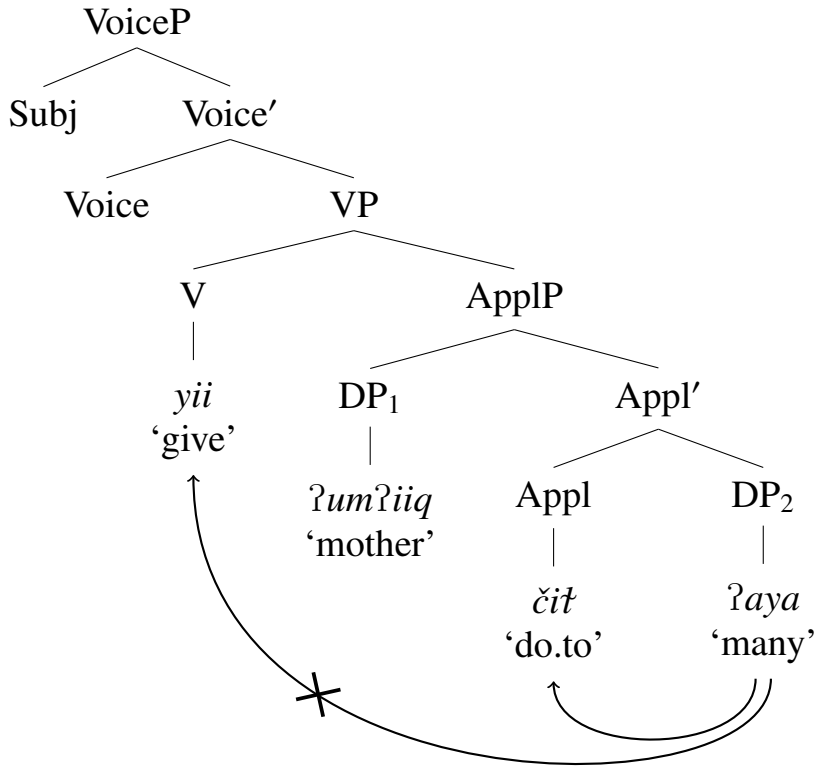
b. * ʔu-yii-mit-ʔiš ʔumʔiiq ʔaya-*čiɬ*
ø-give-PAST-3SG.IND mother many-do.to
'He/She gave lots to mother.'

(60)



The structure for high applicatives in (60) predicts that the direct object *ʔaya* ‘many’ should be able to incorporate into the verb *yii* ‘give’. It also predicts that the direct object should *not* be able to incorporate into the applicative *čiɬ* ‘do to’. These predictions are borne out in the sentence (59a) above.

(61)*



The structure for low applicatives in (61) predicts that the direct object ʔ*aya* 'many' should be able to incorporate into the applicative *čiɬ* 'do to'. It also predicts that the direct object should *not* be able to incorporate into the verb *yii* 'give'. However, these predictions are incorrect (see the sentence 59b above).

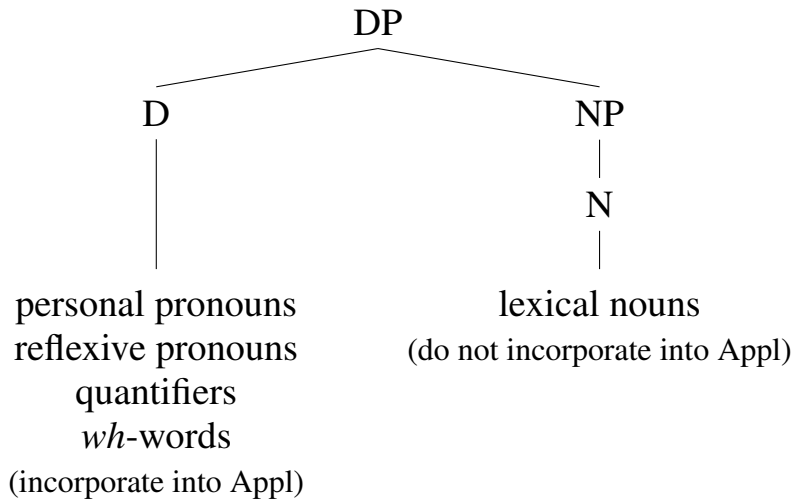
Thus, only the structure for high applicatives makes the correct predictions about incorporation in NCN.

To summarize, according to Pylkkanen's semantic diagnostics (2002), the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' are high applicatives. Syntactic predictions also show that these morphemes are high applicatives.

6.3 *čiɬ*, *ḥta* and *cḥin* as incorporators of functional elements

In the Section 5.1, I showed that the morphemes *čiɬ* 'do to', *ḥta* 'do towards' and *cḥin* 'do for' behave very similarly to incorporating verbs in NCN. They can incorporate personal and reflexive pronouns, quantifiers and *wh*-words. However, they cannot incorporate nouns and other verbs. Here, I propose that the reason for this is that *čiɬ*, *ḥta* and *cḥin* are functional heads that can only incorporate functional elements, like the ones listed above. Thus, in the structure (62) below, personal and reflexive pronouns, quantifiers and *wh*-words are generated in D and can get incorporated into the applicatives. Nouns and verbs are lexical elements, and therefore, they cannot be incorporated into the applicatives.

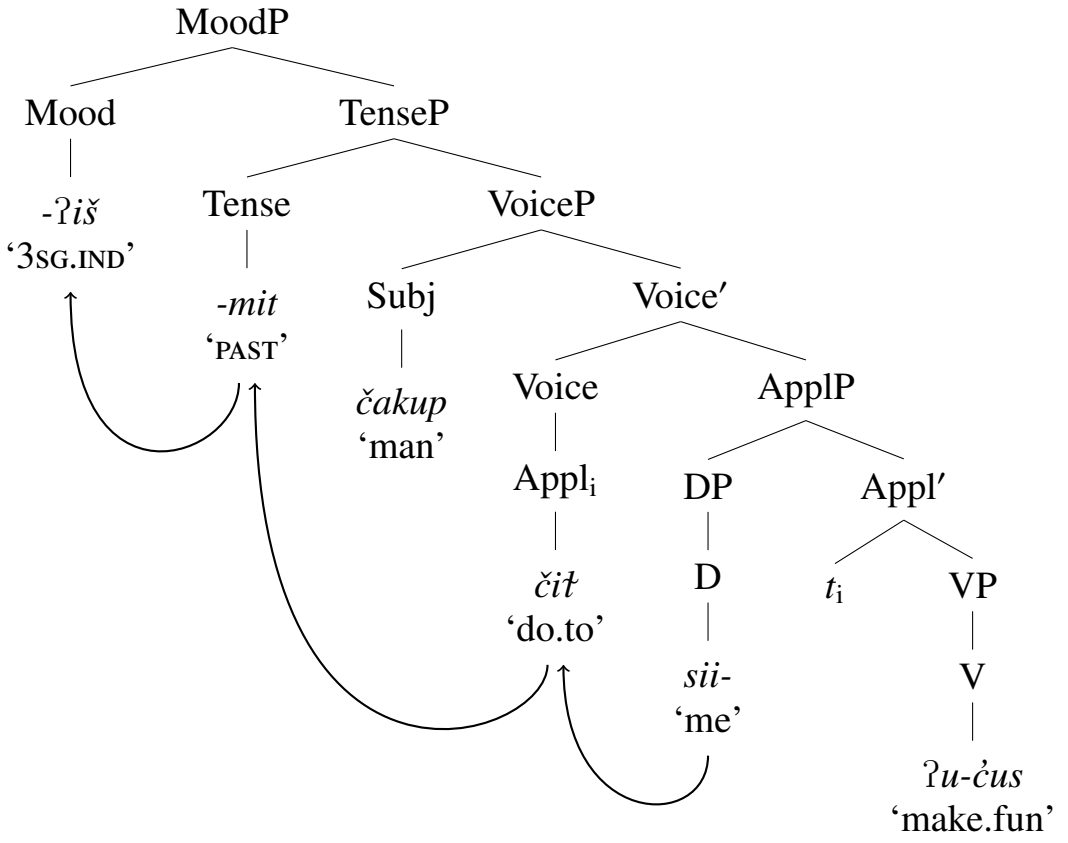
(62)



To generate a sentence like the one in (63) below, the applicative first moves to the Voice head, at which stage a functional element (in this case a pronoun) gets incorporated into it. Then the applicative with the incorporated into it element moves past the subject to the Tense head, and finally to the Mood head (see the structure in 64).

(63) sii-*čiɬ*-mit-ʔiš čakup ʔu-ċus (repeated from 9a)
me-do.to-PAST-3SG.IND man ø-make.fun
'A man made fun of me.'

(64)

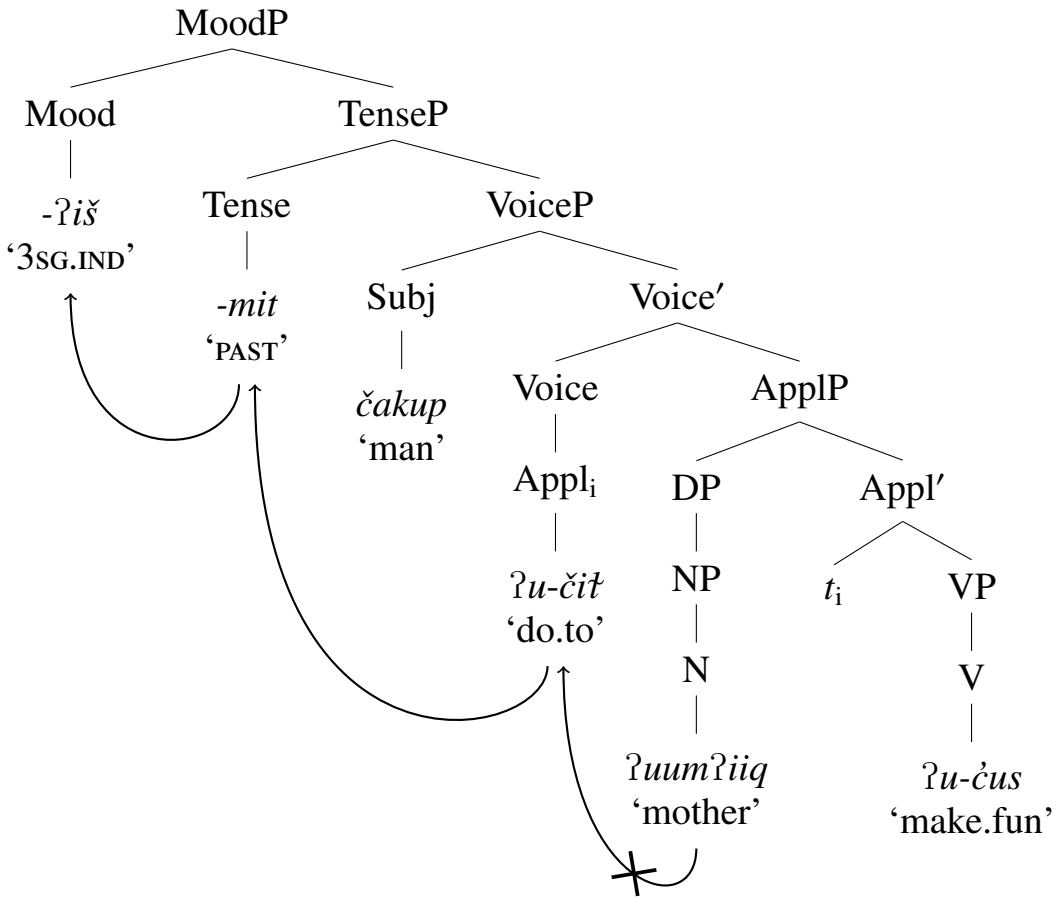


In the sentence (65) below, the noun ʔumʔiiq 'mother' is a lexical element and therefore, it cannot get incorporated into the applicative *čiɬ*-. The noun remains in the position it was generated in, namely, in Spec of ApplP position. The applicative moves to the Mood head via the intermediate Voice and Tense heads, thus generating the correct word order (see the structure in 66).[4]

(65) ʔu-*čiɬ*-mit-ʔiš čakup ʔumʔiiq ʔu-ċus (repeated from 9a)
ø-do.to-PAST-3SG.IND man mother ø-make.fun
'A man made fun of (the) mother.'

[4] I assume that the expletive morpheme ʔ*u*- is a morphological place holder, because it appears on the incorporating predicate only if no incorporation into this predicate takes place.

(66)



7 The conclusions

I have provided a detailed description and analysis of the morphemes *čiɬ* ‘do to’, *ḥta* ‘do towards’ and *cḥin* ‘do for’ in the Ahousaht dialect of Nuuchahnulth. I have argued that these morphemes are verbal applicatives that add a non-core argument to the thematic structure of a verb and showed that *čiɬ* ‘do to’, *ḥta* ‘do towards’ and *cḥin* ‘do for’ are high applicatives that attach above the main verb in a syntactic tree.

At the end, I would like to draw attention to the Nuuchahnulth community and the critical status of the language. The Nuuchahnulth community has a special position in the larger Canadian society. Their cultural traditions and language are in danger of being lost as a result of rapid English acculturation (Kinkade 1991). My language consultants recall being severely punished for speaking Nuuchahnulth in school, even as late as the 1950’s. As a result, many Nuuchahnulth parents did not teach their children to speak the language, hoping to spare them a similar humiliation. In spite of this emotional trauma, an increasing number of Nuuchahnulth people are now willing to relearn their language. For these reasons, the need for documentation and data analysis of the language becomes a pressing matter.

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Abbreviations and symbols

ø	Pleonastic morpheme
1	First person
2	Second person
3	Third person
ACC	Accusative case
APPL	Applicative
CONFIRM	Confirmative
IND	Indicative
INT	Interrogative
NCN	Nuuchahnulth
PERF	Perfective
PL	Plural
SG	Singular

Appendix

Table 4: Nuuchanulth verbs used with *čiɬ*/*ḥta*/*cḥin*

Verbs	**Translation**	***-čiɬ***	***-ḥta***	***-cḥin***
ʔuupẃin	to owe	✓	✓	X
ʔuuʔaɬsumḥi	to yearn for, to be infatuated with ...	X	X	X
ʔuup̓aa	to dislike, to disapprove of	✓	✓	X
ʔumaap	to pay attention to ..., to listen to ...	✓	✓	X
ʔuukš	to ask for ...	✓	✓	✓
ʔuuc̓us	to make fun of ..., to mock	✓	✓	X
ʔuksaap	to coax into ..., to encourage	✓	✓	X
ʔuqḥy̓uu	to be related to ...	✓	✓	X
ʔuyii	to give	✓	✓	X
ʔuuʔaɬuk	to take care of ...	✓	✓	✓
ʔuuḥc̓ii	to cook	X	X	✓

Table 4: Nuuchanulth verbs used with *čiɬ/ḥta/cḥin* (continued)

Verbs	**Translation**	***-čiɬ***	***-ḥta***	***-cḥin***
ʔuʔaap	to buy	x	x	✓
ʔuʔaata	to need	✓	x	x
ʔuʔatu	to fall off, to come off, to spend	x	x	x
ʔuʔiip	to give to ...	x	✓	x
ʔuʔinʔaš	to take place of ...	✓	✓	x
ʔuʔinḥkʷaẏap	to grind up	✓	✓	✓
ʔuʔinɬ	to serve ... (e. g. in a feast or a birthday party)	✓	✓	x
ʔuʔuʔiiḥ	to hunt, to collect	x	x	✓
ʔuuʔuċiqa	to miss an object (e. g. socks)	x	x	x
ʔuʔuǩuk	to look like, to resemble	x	x	x
ʔuʔukʷink	to talk with ...	x	x	x
ʔuʔumċu	to feed (someone specific)	x	x	x
ʔuʔumḥi	to be able to do	x	x	x
ʔuʔusum	to want	x	x	x
ʔumaḥsa	to want	✓	✓	x
ʔuʔuukt	to obtain by ...	x	x	✓
ʔuʔuukʷinkḥ	to tease	✓	✓	x
ʔuʔuusapi	to depend on ...	x	x	x
ʔuʔuwa	to complain	✓	✓	x
ʔuʕašt	to accomplish by ..., to be done by ...	✓	x	x
ʔuʕiƛ	to come upon ...	x	x	x
ʔucaʔap	to take (something from here to there)	✓	✓	x
ʔuċaas	to bet (in a gambling situation)	x	x	✓
ʔucp̓ii	to be on top, higher leverage	✓	✓	x

Table 4: Nuuchanulth verbs used with *čiɬ*/*ḥta*/*cḥin* (continued)

Verbs	**Translation**	***-čiɬ***	***-ḥta***	***-cḥin***
ʔucuqšiƛ	to put something into one's mouth	X	X	X
ʔuḥaaẏas	to go and buy	X	X	X
ʔuḥsaa	to have a craving for certain food or sweets	✓	X	X
ʔuḥtaa	to do to ...	X	X	X
ʔukc̓iq	to travel alongside another vessel	X	X	X
ʔukčaas	to sit with someone outside on the ground	X	X	X
ʔukčiiɬ	to sit with somebody in a house/room/floor	X	X	X
ʔukčiis	to sit with somebody on a bench/couch	X	X	X
ʔukčumyiɬ	to accompany another person (e. g. in dance)	X	X	X
ʔuktšiƛ	to shrink	✓	✓	X
ʔuk^{w}iiɬ	to make	✓	X	✓
ʔumaʔin	to be stingy, not wanting to share person or object	✓	✓	✓
ʔunaak	to have, to be in possession of ...	✓	X	X
ʔunaq	to be fond of eating (something specific)	✓	✓	X
ʔup̓uuƛ	to get paid	X	X	X
ʔuqɬaap	to think	✓	✓	✓
ʔusiik	to be made	X	X	✓
ʔustaasip	to set down (something) on a table	✓	✓	✓
ʔutwiiʔiɬ	to be the first in line	✓	X	X
ʔuuʔapuɬa	to be underneath, defeated	✓	✓	X
ʔuuʔinḥi	to be waiting for ...	✓	✓	X

Table 4: Nuuchanulth verbs used with *čiɬ/ḥta/cḥin* (continued)

Verbs	**Translation**	***-čiɬ***	***-ḥta***	***-cḥin***
ʔuuʔinqƛ	to handle something specific, to dislike	✓	✓	x
ʔuuʔiƛ	to go for, to take	✓	✓	x
ʔuuʔukči	to side with ...	✓	✓	x

Caseless direct objects in Turkish revisited*

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1 Background

It has been claimed and widely assumed that caseless direct objects in Turkish exhibit a sort of syntactic incorporation, and only their cased counterparts are true syntactic arguments (Kornfilt 1997; Knecht 1986; Nilsson 1986; Öztürk 2005 among others). Cased and caseless objects are thus widely taken as derivationally related, crystallized in Kelepir's (2001) proposal that objects pick up overt accusative as they move out of the VP. In this paper, I would like to revisit both the empirical evidence and the interpretation leading to these claims and propose revisions.

I first show that not all caseless objects are the same. Mostly drawing on Aydemir (2004), I argue that bare caseless objects and those with indefinite expressions have differences that would be very unusual if they were both incorporated. However, adopting Öztürk (2005) and against Aydemir (2004), neither of the cases can be analyzed as head incorporation.

I then turn to the cased vs. caseless distinction and argue that cased and caseless objects are not that different after all. Based on data with strictly controlled information structure, I arrive at a different generalization than most of the earlier reports and claim that caseless objects are morphosyntactically as moveable as their cased counterparts.

Hence, I propose to replace the notion of incorporation in the literature of Turkish syntax with the notion of weak case (de Hoop 1992) and conclude by a discussion of the domain of syntactic analysis in this primarily semantic phenomenon.

2 What we know

I will start by laying out the best understood aspects of the distribution of overt accusative case and finer distinctions between caseless objects.

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2.1 Cased vs. caseless objects

In Turkish, both bare and phrasal internal arguments can appear caseless. This property is only observed with arguments that surface with accusative and nominative otherwise.[1] I focus on the accusative objects in this paper. (1) illustrates examples with bare (1a) and phrasal (1b) caseless objects.

(1) a. Ali kitap arı-yor.
Ali book search-IMPERF
'Ali is book-searching.'
b. Ali {bir/iki/birkaç/kütüphane-ye götür-ül-ecek} kitap arı-yor.
Ali one/two/few/library-DAT take-PASS-REL book search-IMPERF
'Ali is searching for a/two/a few book(s) (to be taken to the library).'

When these arguments appear with an overt accusative, they induce a "specific" or "presuppositional" reading (Enç 1991; Diesing 1992 respectively). As a result, a bare noun as in (1a) turns into a definite description (2a). In contrast, NPs with a numeral or indefinite expression yield a kind of partitive reading which Enç (1991) calls a specific indefinite.

(2) a. Ali kitab-ı arı-yor.
Ali book-ACC search-IMPERF
'Ali is searching for the book.'
b. Ali {bir/iki/birkaç/kütüphane-ye götür-ül-ecek} kitab-ı
Ali one/two/few/library-DAT take-PASS-REL book-ACC
arı-yor.
search-IMPERF
'Ali is searching for the one/two/few book[s] (to be taken to the library).'

Some noun phrases have to surface with overt accusative case (Enç 1991). These are noun phrases such as those with possessors, demonstratives, definite pronouns, and those with expressions like 'most'.[2]

(3) Ali {o kitab-*(ı)/ benim kitab-ım-*(ı)/ on-*(u)} arı-yor.
Ali that book-ACC my book-ACC it-ACC search-IMPERF
'Ali is searching for that book/my book/it.'

---

[1] Caselessness of subjects is observable in word order preferences and relativization patterns (Kennelly 1997; Öztürk 2009), but both cased and caseless external arguments appear with ∅ morphology. My claims are largely applicable to subjects as well.

[2] All of these are indicators of strong NPs in the sense of Milsark (1974), which leads Enç to the conclusion that specificity in her sense is behind Milsark effects.

A robust finding regarding the syntax of caseless objects is that they are lower in the structure than cased objects (Diesing 1992; Kelepir 2001). Evidence to this claim is the fact that caseless objects follow, while cased object precede, dative arguments and very low adjectival adverbs in broad focus.[3]

(4) a. Ali çocuğ-a kitap ver-iyor.
Ali child-DAT book give-IMPERF
'Ali is book-giving to the child.'
b. Ali kitab-ı çocuğ-a ver-iyor.
Ali book-ACC child-DAT give-IMPERF
'Ali is giving the book to the child.'

(5) a. Ali yavaş kitap arı-yor.
Ali slow book search-IMPERF
'Ali's book-searching is slow.'
b. Ali kitab-ı yavaş arı-yor.
Ali book-ACC slow search-IMPERF
'Ali's searching for the book is slow.'

Since cased and caseless direct objects never appear alongside each other in a given sentence, pairs like (4a)/(4b) and (5a)/(5b) are interpreted as derivationally related. Subsequently, cased direct objects are analyzed as having originated in the position of caseless objects and moved to a position higher than the dative object or the adjectival adverb (Kelepir 2001 among others).

2.2 Bare vs. indefinite caseless objects

Caseless objects come in at least two flavors. One is with a bare singular noun as in (1a). I will refer to this type as bare caseless object in the sense that it does not have a quantificational morpheme in its phrase. The interpretation of such bare caseless objects is like those of bare plurals or compound verbs in English. These nominals are number-neutral and cannot typically introduce new discourse referents (Aydemir 2004).

(6) a. Ali bütün gün kitap oku-du.
Ali all day book read-PAST
'Ali read books all day.'
'Ali did book-reading all day.'

[3] See Section 4 for some of the corresponding non-broad focus examples.

b. * Dün film$_i$ seyrettim. On-u$_i$/onlar-ı$_i$ sen de seyretmelisin.
yesterday film watched.I. it/them you too must.watch.you
'I watched movies/did movie watching yesterday. You must watch it/them, too.' (from Aydemir 2004)

The second type of caseless object is those objects with a numeral or indefinite expression in the same noun phrase (most cases of 1b). I will refer to these as indefinite caseless objects. These are non-number neutral and are the canonical means to introduce new discourse referents. The typical expression of an English indefinite noun phrase is in this form in Turkish, not a bare caseless object or a cased object with an indefinite expression.

(7) a. Ali bugün bir makale oku-du.
Ali today one article read-PAST
'Ali read an article today.'
b. Dün bir film$_i$ seyrettim. On-u$_i$ sen de seyretmelisin.
yesterday one film watched.I. it you too must.watch.you
'I watched a movie yesterday. You must watch it, too.'
(from Aydemir 2004)

Both bare and indefinite nominals of these broad sorts can vary with their cased counterparts exemplified in (2). What is maybe a third category is nominals that can never appear cased. This is observed with complements of light verb constructions and some measure verbs.

(8) a. Ali pes-(*i) et-ti.
Ali [PASS]-(ACC) light.do-PAST
'Ali admitted defeat.'
b. Kazak-lar on lira-(*yı) tut-tu/et-ti.
Sweater-PL ten lira-(ACC) hold-PAST/do-PAST
'The sweaters cost ten liras.'

An important insight of the recent literature is that none of the three types of caseless objects has to occur under strict adjacency with the verb (Öztürk 2005). Among other indicators, one that is well-known and uncontroversial is the possibility of intervening morphosyntactic elements. Here I exemplify each case with the intervening scalar additive *bile* 'even'.

(9) a. Ali kitap bile oku-du.
Ali book even read-PAST
'Ali even did book-reading.'
b. Ali bir makale bile oku-du.
Ali one article even read-past
'Ali even read an article.'

(10) a. Ali pes bile et-ti.
Ali [PASS] even light.do-PAST
'Ali even admitted defeat.'
b. Kazak-lar on lira bile tut-ma-dı.
sweater-PL ten lira even hold-NEG-PAST
'The sweaters didn't even cost ten liras.'

This and other evidence show that caseless nominals cannot be the products of lexical compounding but are rather built in syntax. The question is, what kind of syntax? Is it the same for all kinds of caseless nominals? Is it the same with some additional movement for cased nominals?

3 Bare and indefinite caseless objects: are they all the same?

The leading view in Turkish syntax is that the absence of case on both bare nominals and nominal phrases with an indefinite expression is an indicator of incorporation. Such analyses partly stem from considerations of the Case Filter, that these caseless nominals should not be possible unless under a strict government configuration (Kornfilt 1984). Coupled with certain other morphosyntactic tendencies displayed by these nominals, this has lead to proposals of incorporation in Turkish. These range from lexical compounding (Mithun 1984) to head incorporation (Knecht 1986 among others) and pseudo-incorporation (Öztürk 2005). Öztürk makes the additional strong claim that similar configurations such as light verb constructions also show pseudo-incorporation.

In this section, I review the related claims and conclude that bare caseless arguments are pseudo-incorporated and indefinites are not.

3.1 Further differences between bare and indefinite caseless objects

Semantically, bare and indefinite caseless objects display a set of differences in which bare objects show more incorporation-like characteristics as number neutrality and referential opacity (6) (see van Geenhoven 1998; Farkas & de Swart 2003 on characteristics of incorporation). In contrast, indefinite caseless objects correspond exactly to expressions with an indefinite in English: they are specified in terms of number and can introduce new discourse referents (7).

Bare caseless objects in fact seem to be restricted to the narrowest scope possible in all contexts. In contrast, indefinites can be shown to be ambiguous. In (11) we observe this ambiguity of the indefinite with respect to a universal quantifier (a) and an intensional predicate (b).[4]

[4] This property of caseless indefinites may suggest QR in this otherwise scope-rigid language, but as Özge (2011) illustrates, intermediate scope is missing, thus QR is unlikely.

(11) a. Herkes içeride bir film izli-yor.
everyone inside one movie watch-PROG
i. 'Everyone is watching a movie inside.' ∀ > ∃
ii. 'There exists a movie s.t. everyone is watching it inside.' ∃ > ∀

b. Bir kitap arı-yor-um. Bul-amı-yor-um. (Dede 1986)
one book look.for-PROG-1SG find-INABIL-PROG-1SG
i. 'I am looking for a book. I can't find one.' *lookfor* > ∃
ii. 'I am looking for a book. I can't find it.' ∃ > *lookfor*

The bare caseless object cannot yield wide scope readings of the existential in either case.

(12) a. Herkes içeride film izli-yor.
everyone inside movie watch-PROG
i. 'Everyone is movie-watching inside.' ∀ > ∃
ii. Not: 'There exists a movie s.t. everyone is watching it inside.' *∃ > ∀

b. Kitap arı-yor-um. Bul-amı-yor-um.
book look.for-PROG-1SG find-INABIL-PROG-1SG
i. 'I am looking for a book. I can't find one.' *lookfor* > ∃
ii. Not: 'I am looking for a book. I can't find it.' *∃ > *lookfor*

Aydemir (2004) lists two more syntacto-semantic differences between the two caseless objects.[5] First, bare noun objects support an atelic interpretation, whereas indefinites support a telic interpretation.

(13) a. Ali bir saat boyunca/ *bir saat-te çay iç-ti.
Ali one hour along one hour-LOC tea drank
'Ali drank tea for an hour/*in an hour.'

b. Ali *bir saat boyunca/ bir saat-te bir (bardak) çay iç-ti.
Ali one hour along one hour-LOC one glass tea drank
'Ali drank a (glass of) tea in an hour/*for an hour.'

Second, only bare noun objects are allowed to cooccur with an adjectival adverb. Indefinites, on the other hand, force an interpretation in which the modifier is an adjective modifying the nominal.

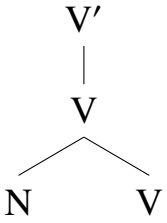
(14) a. Oya bugün iyi müze gez-di.
Oya today good museum tour-PAST
'Oya toured museums well today.'

[5] She provides in fact four more arguments, but the other two are in my opinion subcases of number-neutrality and reference: ∅ pronouns also cannot refer to bare caseless objects (which she calls ellipsis) and plurals are also number-non-neutral.

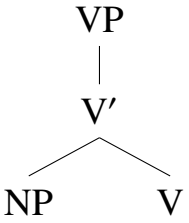
b. Oya bugün iyi bir müze gez-di.
Oya today good one museum tour-PAST
'Oya toured a good museum today.'

Aydemir proposes to capture these differences with an incorporation analysis. Bare noun objects are incorporated into the verb, forming a syntactic compound. Indefinite noun phrases, on the other hand, are true syntactic arguments and can therefore act as arguments as well as referrable semantic objects.

(15) a. Bare caseless object:



b. Indefinite caselesss object:



This explains, according to Aydemir, why the bare noun object is invisible to discourse as a referent (6) or cannot act as an internal argument to "measure out the event" (13a) (in the sense of Tenny 1992). It is also the reason why bare noun verb combinations can be modified by adjectival adverbs (14a), because the adverb in this case is directly preverbal. Indefinites, on the other hand, can be discourse anaphora because they denote individuals, and measure out events because they are true internal arguments. In structures with an indefinite and an ambiguous adjectival adverb, the adverb is not preverbal and can only be interpreted as part of the NP.

3.2 Against head incorporation

The differences between bare and indefinite objects notwithstanding, Öztürk (2005) argues that head incorporation in the sense of Baker (1988) does not exist at all in Turkish. This is the process Aydemir (2004) assumes for (15a).

The first observation is that the bare nominal is in fact potentially phrasal. That a bare caseless object may be modified by a participle was shown in (1b) and is repeated below. This cannot be head incorporation, because head incorporation is a combination of X^0 categories.

(16) Ali kütüphane-ye götür-ül-ecek kitap arı-yor.
Ali library-DAT take-PASS-REL book search-PROG
'Ali is searching for (a) book(s) to be taken to the library.'

Second, unlike what has been claimed before, caseless objects can appear away from their verb. This was illustrated by the focus particle in the paradigm in (9).

In addition, when the caseless complement is given in the discourse, it can occur in a left-peripheral topic position (17). Even though there is some disagreement about the acceptability of such sentences, I concur with Öztürk for reasons I make explicit in the next section. For now, let me note that sentences such as (17) have rarely been reported to be completely ungrammatical, and strangely reported to be more acceptable than caseless indefinites in this position, which must in principle be less incorporated.

(17) Çay$_i$ ben t$_i$ iç-me-di-m. (Öztürk 2009)
tea I drink-NEG-PAST-1SG
'Tea, I did not have any.'

Third, incorporation does not change the valency of the predicate. We infer this from the causative construction. Normally, the causee is marked differently depending on whether the caused event is transitive or not: it is marked accusative when the verb is intransitive (both unergative or unaccusative), and dative when the verb is transitive (19).

(18) a. Ali Hasan-ı/*a ağla-t-tı.
Ali Hasan-ACC/*DAT cry-CAUS-PAST
'Ali made Hasan cry.'
b. Ali su-yu/*ya kayna-t-tı.
Ali water-ACC/*DAT boil-CAUS-PAST
'Ali boiled the water.'

(19) Ali Hasan-a/*ı balığ-ı tut-tur-du. (Öztürk 2005)
Ali Hasan-DAT/*ACC fish-ACC catch-CAUS-PAST
'Ali made Hasan catch the fish.'

If we use a bare caseless object such as *balık* 'fish' instead of the cased object in (19), we still observe dative on the causee. This means that a new, intransitive verb corresponding to 'fish-catching' is not created via incorporation. The caseless object is visible to syntax in terms of valency.

(20) Ali Hasan-a/*ı balık tut-tur-du. (Öztürk 2005)
Ali Hasan-DAT/*ACC fish catch-CAUS-PAST
'Ali made Hasan catch fish.'

The fourth and last argument Öztürk uses to argue against head-incorporation of objects is that external arguments are also found in a similar configuration, where we do not find the head-complement relationship necessary for head incorporation. I skip this data for reasons of space but note that there is good evidence from relativization that indicates that indeed such low subjects are relativized like internal arguments despite being logical subjects (Kennelly 1997).

3.3 A reformulation

In the resulting state of the literature, facts such as referential opacity, number neutrality, aspectual interpretation and adjectival adverb distribution point toward a more "incorporated" syntax/semantics for bare caseless objects, but not for indefinite caseless objects. On the other hand, major morphosyntactic tests indicate that even the more incorporated kind of caseless object is potentially phrasal, can stand away from the verb, can be an external argument, and does not change valency. Therefore, the most intuitive syntactic distinction one can draw to account for these differences like Aydemir did, namely head incorporation in the case of bare objects, does not seem to be available.

Öztürk (2005) proposes instead to account for the patterns of incorporation observed in Turkish as pseudo-incorporation, after Massam (2001). However, she claims that indefinite caseless objects also pseudo-incorporate, so that caselessness is a result of pseudo-incorporation, thus dismissing Aydemir's (2004) observations. My solution of reconciliation building on both sets of brilliant observations is quite simple. Bare caseless objects pseudo-incorporate in Turkish and indefinites do not.

(21) *Pseudo-incorporation in Turkish:*
Caseless direct objects without a numeral/indefinite expression are pseudo-incorporated.

In making this argument, I am aware that pseudo-incorporation is a rather loose syntactic notion in that it is not so obvious what the difference is between simple merge and incorporation. In the next section, I will argue that pseudo-incorporated objects can move around, which further blurs the distinction. However, it still is a valid formal label to account for a distinction that clearly cannot be ignored. It can be asked later what exactly happens in syntax or at the interfaces for certain configurations to count as pseudo-incorporated rather than just merged.

I am also aware that that by saying that only bare objects pseudo-incorporate and indefinites do not, we lose the generalization of caselessness. Namely, we would either have to say that the absence of case in indefinites is due to another reason than incorporation, or that this absence is due to something else in both bare and indefinite noun phrases. In Section 5, I argue for the latter.

4 Cased and caseless objects: are they so different?

At least since Knecht (1986), the prevailing view in the literature regarding the distinction between cased and caseless objects is that they are derivationally related. The empirical footing for this view comes from the observation that

caseless objects are much harder to move away from their case-assigning verbs than cased objects, which are practically free in their distribution. The claim then is that arguments start the derivation caseless and get assigned case through a kind of A-movement after which further movement becomes possible. This has several incarnations in the literature, but the underlying logic is similar. For instance, following Diesing (1992), Kelepir (2001) claims that the movement freedom as well as definiteness effects noted in (2) are due to existential closure that cased objects in effect escape.

As attractive as it is, this idea is built on a shaky empirical ground. We have seen that focus particles routinely separate the caseless object from its verb as in (9). More notably, we see perfectly grammatical examples being reported such as (17) that cast doubt on the descriptive generalization that caseless arguments do not move.

In this section, I argue based on controlled information structural contexts that caseless objects can in fact move.

4.1 Moved caseless objects in context

There is a clear difference between bare and indefinite caseless objects with respect to the kind of fronting exemplified in (17). While fronted bare objects can be acceptable as in (17) and (23), caseless indefinites are almost entirely unacceptable in this fronted position (22). Note that in (22), B is similarly unacceptable with and without the provided context.[6]

(22) A: Bir aslanın boyu ne kadardır acaba?
'I wonder how tall a lion is.'
B: ?? Bir aslan$_i$ ben t$_i$ gör-dü-m. 2 metre var.
one lion I see-PAST-1SG 2 meter exist
'A lion, I've seen one. It's about 2 meters.'

If we contextualize a similar situation with a bare nominal in the discourse, we see that acceptable cases like Öztürk's easily arise.

(23) A: Aslanların boyu ne kadardır acaba?
'I wonder how tall lions are.'
B: Aslan$_i$ ben t$_i$ gör-dü-m. 2 metre var.
lion I see-PAST-1SG 2 meter exist
'Lions, I've seen some. They're about 2 meters.'

[6] In the case of such gradient grammatical judgements, as a principle I use question marks rather than an asterisk. The difference of grammaticality between (22) and (8), to my mind, is similar to the difference between center embedding and subject island violations in English.

This asymmetry suggests that the unacceptability in the movement of the caseless object in (23) is due to its indefinite character rather than being caseless. Further evidence that this restriction on fronting is more about indefiniteness than case comes from oblique objects. When indefinite, these objects show a similar restriction on fronting, such as an argument of the verb 'come across' requiring comitative case.

(24) A: 'I wonder how tall a lion is.'
B: ?? Bir aslan-la$_i$ ben t$_i$ karşılaş-tı-m. 2 metre var.
one lion-COM I come.across-PAST-1SG 2 meter exist
'A lion, I've come across one. It's about 2 meters.'

Secondly, notice that indefinites can be moved into a more acceptable word order via extraposition to the right.[7] This suggests that it is really the combination of indefiniteness and fronting that is behind the unacceptable configuration.

(25) A: 'I wonder how tall a lion is.'
B: ? Ben t$_i$ gör-dü-m bir aslan$_i$. 2 metre var.
I see-PAST-1SG one lion 2 meter exist
'I've SEEN a lion. It's about 2 meters.'

The bare caseless object which can occur more freely even in the leftward topic position unsurprisingly has no problems occurring in the extraposed position.

(26) A: 'I wonder how tall lions are.'
B: Ben t$_i$ gör-dü-m aslan$_i$. 2 metre var.
I see-PAST-1SG lion 2 meter exist
'I've SEEN lions. They're about 2 meters.'

What could be going wrong with a fronted indefinite? Indefinites are known to make worse topics than generics (see, for instance Büring 1997). Indeed, this movement in Turkish brings about a topical reading of the fronted object (Kılıçaslan 2004). Extraposition, in comparison, indicates discourse givenness without topicality. If what is wrong with (22) is the presence of a topicalized indefinite, the pattern of grammaticality is explained. Indefinites cannot be topicalized (22), but generics can (23). Both can be backgrounded (25, 26).

Thus, even though initially it may look like caseless objects do not move away from their verb, it is rather the case that only indefinites are restricted in this way. This restriction is best explained as an illicit semantic configuration where an indefinite is topicalized. Thus, caselessness interacts with movement only indirectly, through the semantic configurations created.

[7] I translate these examples into English with stress shift due to givenness.

4.2 Topicalization of cased objects

The claim that cased and caseless objects are syntactically related for the most part relies on the observation that cased objects are relatively freer to move. This seems to imply that overt case makes all movement better regardless of the content of the utterance. If this were the case, we would expect (22) and (23) to improve when accusative case is introduced in the same context. This is not at all the case. The resulting variant is morphosyntactically well-formed but entirely incoherent with the discourse.

(27) A: Bir aslanın boyu ne kadardır acaba?
'I wonder how tall a lion is.'
B: # Bir aslan-ı$_i$ ben t$_i$ gör-dü-m. 2 metre var.
one lion-ACC I see-PAST-1SG 2 meter exist
'Of the lions, I've seen one. About 2 meters.'

(28) A: Aslanların boyu ne kadardır acaba?
'I wonder how tall lions are.'
B: # Aslan-ı$_i$ ben t$_i$ gör-dü-m. 2 metre var.
lion I see-PAST-1SG 2 meter exist
'The lion, I've seen it. About 2 meters.'

(27) and (28) are acceptable in contexts where a known discourse referent can be accommodated. Notice that the indefinite, even with case marking, suffers in this topic position.

(29) A: Hayvanat bahçesine yeni gelen hayvanların boyu ne kadardır acaba?
'I wonder how tall the new zoo animals are.'
B: ? Bir aslan-ı$_i$ ben t$_i$ gör-dü-m. 2 metre var.
one lion-ACC I see-PAST-1SG 2 meter exist
'Of the lions, I've seen one. About 2 meters.'

(30) A: Hayvanat bahçesine yeni gelen aslanın boyu ne kadardır acaba?
'I wonder how tall the new lion at the zoo is.'
B: Aslan-ı$_i$ ben t$_i$ gör-dü-m. 2 metre var.
lion I see-PAST-1SG 2 meter exist
'The lion, I've seen it. About 2 meters.'

Clearly, accusative signals a semantic difference, but does not seem to correlate with movement. When the context allows for a known discourse referent, they topicalize straightforwardly, but case-marking is not a prerequisite to topicalization if the context does not allow such an interpretation.

In comparison to (23), examples like (29) and (30) are admittedly more typical. The reason might be that the semantic contribution of the case marker which is analyzed variably as definiteness, partitiveness or existential presupposition (see Özge 2011) is more readily compatible with the role of topic. Perhaps bare object topicalization is dispreferred because it constitutes an unnecessary departure from the base order to eventually yield a less optimal sentence. As Kılıçaslan (2004) shows, such departure is largely optional in Turkish.

4.3 Interim conclusion

In sum, syntactically, both cased and caseless objects are moveable phrases. Caseless objects do not necessarily become moveable after they pick up accusative case. This being said, the semantic import of indefiniteness and accusative may restrict possible word order configurations. In the case of indefiniteness, there is a strong dispreference for topicalized indefinites across the board, whereas cased objects are so free presumably because they are natural topics due to their presuppositional import.

Thus the syntactic configuration behind accusative case *per se* is not responsible for making an object freer in syntax, but the semantic import that it creates indirectly determines its freedom. In conclusion, combined with Öztürk's (2005) arguments for pseudo- rather than head-incorporation, we see that cased and caseless objects are not so different after all.

5 Discussion

We have seen that caselessness neither invariably leads to incorporation, nor is separated bluntly from cased arguments. My proposal is to analyze this ∅ case as weak case in Turkish, in the sense of de Hoop (1992). Accusative is the corresponding strong case. Unlike NPs that may truly lack case, arguments with weak case are syntactically free.

This revision does not only cover both bare and indefinite objects as needed, but also provides an explanation for obligatorily caseless objects such as measure verb complements as in (8). These are neither indefinites nor instances of pseudo-incorporation, therefore it is otherwise mysterious why they are caseless.

Between cased and caseless objects, there is clearly a morphosyntactic link. Accusative may look like a semantic/pragmatic marker but it is also case in the traditional sense. This we understand from the fact that it is the only case that varies with ∅ case, and from the word order shift in the presence of a second internal argument or an adjectival adverb (4 and 5). However I do not think

accusative objects are invariably in vP or higher positions. There are reasons to think they are lower (see Üntak-Tarhan 2006).

Between bare and indefinite objects, however, a morphosyntactic link is harder to argue for except for one phenomenon we have discussed, namely adjectival adverbs. The other phenomena seem to be more in the jurisdiction of semantics. After all, one has a numeral and one not, and it would not be surprising that the nominal with the numeral has more complex quantificational and referential properties than the one without. Of the properties of the bare caseless nominal, number neutrality, would be entirely expected, referential opacity can be related to the absence of the semantic contribution of the numeral, and lowest scope and atelic interpretations could potentially be derived from them. I will not attempt such a semantic analysis here, but indeed suggest that these be addressed with tools of semantics.[8]

If some of the related ungrammaticalities were semantic at heart, it would be possible to observe ameliorating effects of lexical semantics and pragmatics. This is exactly the case concerning the referential opacity of bare objects. Next to widely cited examples showing referential opacity, one can easily find cases where the bare object can introduce a discourse referent that can be referred to in the ensuing discourse. For instance, in the discourse in (31), the bare caseless object in (a) is referred to by the overt pronoun in (b), and the ∅ pronoun in (c) (see similar examples in Persian in Krifka & Modarresi 2015).

(31) Bir saattir oğlanları izliyorum.
'I've been watching the boys for the last hour.'

a. Emre portakal getir-iyor.
Emre orange bring-IMPERF
'Emre does orange-bringing.'

b. Ali de on-u soy-uyor.
Ali CONN it-ACC peel-IMPERF
'And Ali peels it.'

c. Ama sonra ∅ ye-m-iyor-lar. Biriktir-iyor-lar.
but then eat-NEG-IMPERF-3PL save-IMPERF-3PL
'But after that they don't eat. They save.'

Telicity, similarly, is much less tightly connected to the type of object than previously thought. Counterexamples to the binary correspondence Aydemir presents exist in both directions. Neither does an indefinite caseless object make an event with a verb of perception telic (32a), nor does a bare object make an event with a verb of accomplishment atelic (32b).

[8] I refer the reader to a promising novel account of a number of these restrictions in incorporated nominals by Krifka & Modarresi (2015).

(32) a. * Ali iki saat-te bir kız gör-dü.
Ali two hours-LOC one girl see-PAST
'*Ali saw a girl in two hours.'

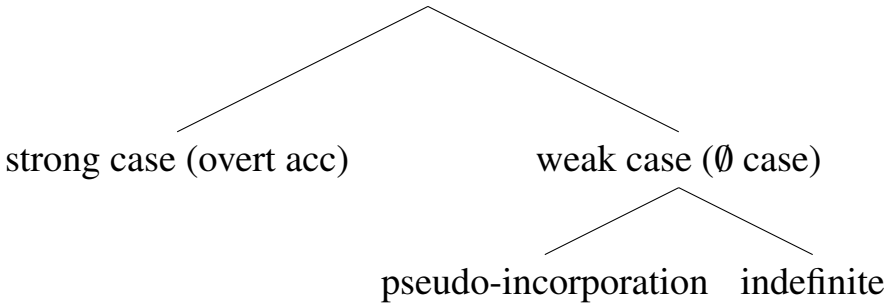
b. Elif iki ay-da tez yaz-dı.
Elif two month-LOC dissertation write-PAST
'Elif dissertated in two months.'

In stark contrast with these aspects that could potentially be addressed more intuitively in semantics, we have in our paradigm one case of the distribution of adjectival adverbs as in (14). This phenomenon does not seem as intuitively semantic as the others. Also, it is the only difference by which bare and indefinite caseless objects differ that has a visible word order dimension. Since cased objects also interact with these adverbials in terms of word order, this should be the first place to look for the syntactic configuration behind case in Turkish.

6 Conclusion

In this paper I have re-examined claims regarding caselessness and incorporation on the one hand and case and syntactic freedom on the other. I have argued that caselessness is not all incorporation. Only bare caseless objects can be said to incorporate, and specifically, pseudo-incorporate. What ties the two together is that ∅ case is the realization of weak case in Turkish. As NPs with weak case, they enjoy a degree of syntactic freedom than head-incorporated nominals. The resulting taxonomy looks like the following:

(33)



As usual, upon closer examination facts turn out to be more complicated than they initially appear. However, I believe with this more rigorous empirical background we can ask more interesting, more well-structured questions probing the typology of incorporation and the role of syntax, semantics and their interface in shaping what counts as incorporated and what is not.

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Kleine Geschichte der „schiefen Attribute“*

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Der folgende Artikel soll einen Überblick über ein Phänomen geben, das unter verschiedenen Namen einen Einzug in deutsche Grammatiken und linguistische Fachtexte gehalten hat. Man begegnet ihm als „Attribuierungskomplikation“, „schiefes Attribut“, „grammatische Illusion“ und Ähnlichem. Gemeint sind Daten wie der *grüne Bohneneintopf*, der *vierstöckige Hausbesitzer* oder das *direkte Objektpronomen*, sowie die *Absturzursache des TWA-Jumbos* und die *Kritikpunkte an Lakoff*. Im Folgenden soll aufgezeigt werden, wie die Diskussion um (scheinbar) fehlerhafte Attribuierungen von N+N-Komposita wieder zu einem virulenten Forschungsthema wurde (§1) und wie dessen Behandlung in Grammatiken (§2), (populären) Sprachkritiken (§3) und Fachtexten (§4) aussieht. In §5 wird eine abschließende Diskussion gegeben.

1 Zum Auslöser einer Forschungsdebatte

Der 1999 erschienene Artikel von Armin Burkhardt *Zu einigen typischen Attributfehlern in der deutschen Gegenwartssprache* kann wohl als Ausgangspunkt der neu begonnenen Diskussion über scheinbar ungrammatische Attribuierungen gesehen werden. Er sorgte direkt nach seinem Erscheinen für einige Diskussionen, die Gisela Zifonun, Michael Vogt und Peter Eisenberg (1999) dazu veranlassten, drei „Kritikversuch[e] an einem Sprachkritiker“ zu formulieren. Burkhardt verurteilt verschiedene Attribuierungen der deutschen Substantivgruppe als falsch oder fehlerhaft. So etwa die folgenden:

(1) a. der vierstöckige Hausbesitzer
b. die reitende Artilleriekaserne
c. die deutsche Sprachwissenschaft

* Der vorliegende Beitrag geht auf gemeinsame Überlegungen und konstruktive Zusammenarbeit mit André Meinunger vom ZAS (Berlin) zurück.

In (1) beziehen sich die adjektivischen Attribute nicht wie üblich auf das Zweitglied der jeweiligen Substantivgruppe (*Besitzer*, *Kaserne*, *Wissenschaft*), das den Kopf der sog. Kompositumkonstruktion (Fabricius-Hansen 1993) bildet, wie man an der Wahl des Artikels sieht. Auch kann man (zumindest für (1a) und (1b)) keinen Doppelbezug (Fabricius-Hansen) feststellen, indem sich das Attribut auf das gesamte Kompositum bezieht. Vielmehr sieht es so aus, dass nur das Erstglied der Substantivgruppe attribuiert wird. *Vierstöckig* ist weder der *Besitzer*, noch der *Hausbesitzer*, sondern lediglich das *Haus*. Ebenso die *Kaserne*, die nicht reiten kann, sondern eine Kaserne der *reitenden Artillerie* ist.

Für weitere Kritik Burkhardts sorgen Genitivattribute wie in (2):

(2) a. die Absturzursache des TWA-Jumbos
b. die Einschüchterungsversuche der Anwälte Hofers
c. der Erpressungsfall des Warenhauskonzerns Kaufhof

In (2a) muss sich das Genitivattribut auf das Erstglied *Absturz* beziehen, da es, untechnisch ausgedrückt, nicht um die *Ursache des Jumbojets* geht. Im Fall der Attribuierungen in (2b) und (2c) sind Lesarten möglich, die nicht intendiert sind. Gemeint ist, dass die Anwälte eingeschüchtert werden und der Konzern erpresst wird. Die Sätze lassen jedoch auch die Interpretationen zu, dass den genannten Referenten die Agens-Rolle als derjenige, der einschüchtert bzw. die des Erpressers zugeschrieben wird.

Als noch problematischer sieht Burkhardt (vgl. die Einschätzung von Fabricius-Hansen 1993: Kap. 9) die Präpositionalattribute an.

(3) a. die Kritikpunkte an Lakoff
b. die Zuckerfabrik aus Rüben
c. der Prozeßbeginn gegen Immobilienunternehmer Schneider

Wie schon bei den o.g. Attribuierungen ist kein Zweitgliedbezug denkbar: **Punkte an Lakoff*, **Fabrik aus Rüben*, **Beginn gegen Schneider*. Während in (3a) und (3b) immerhin die Möglichkeit eines Präpositionalattributes besteht (*Punkte für den Sieg*, *Fabrik für Zucker*), lässt *Beginn* meistens ein Genitivattribut erwarten (*zu Beginn des Jahres*, *?zu Beginn in diesem Jahr*). Burkhardt geht es allerdings primär darum, auf das Phänomen als solches aufmerksam zu machen. Ob es sich z.B. bei „Attributen“ in (3) auch um extern realisierte Argumente von *Kritik* oder *Prozeß* handeln könnte und somit die Frage nach der thematischen Rolle einschlägig würde, spielt in Burkhardts Ausführungen daher keine Rolle.

Auf einige der Kritikpunkte und Aussagen Burkhardts gehen bereits Zifonun, Vogt und Eisenberg (1999) ein. Besonders hervorzuheben sind zwei

Tabelle 1: Mögliche Beurteilungsdimensionen sprachlicher Strukturen (Haider 2011: 244)

	Grammatisch	**Ungrammatisch**
Unakzeptabel	*Garden Path*	„grundschlecht“
Akzeptabel	„einwandfrei“	grammatische Illusion

Aspekte, auf die sich die Kritiken beziehen. Der erste ist die Unterstellung Burkhardts, dass „herzlich wenig Informationen“ zum Attribut vorliegen, es „in den Grammatiken einfach übergangen“ wird und „Attribuierungsprobleme beim Kompositum [...] nirgends auch nur mit einer Silbe erwähnt“ werden (vgl. die Kritik von Eisenberg). Dies ist definitiv nicht der Fall. Allerdings zeigt sich (s.u.), dass eine Erklärung für das Vorkommen der geschilderten Attribuierungen in der Tat nur fragmentarisch vorhanden ist. Der zweite Aspekt ist die Klassifizierung der Attribuierungen als „falsch“ oder „Fehler“ (vgl. besonders die Kritik von Vogt). Das Problem, vor das wir durch diese Attribuierungen gestellt werden, zeigt Zifonun auf: „Mögliche Interpretationsprobleme und stilistische Schwerfälligkeiten bedeuten aber nicht grammatische Fehlerhaftigkeit“ (Zifonun 1999: 12).

Die o.g. Attribuierungen müssen an zwei verschiedenen Skalen gemessen werden: die der *Grammatikalität*, und die der *Akzeptabilität*. Dass die Urteile der beiden Skalen nicht immer korrelieren, ist seit den sog. Holzwegsätzen (*garden path sentences*) bekannt. Sätze wie (4) sind grammatisch korrekt gebildet, werden aber von den Sprechern als inakzeptabel oder sehr schwierig beurteilt.

(4) a. Der Hund hat die Katze, die die Maus, die den Käse gefressen hat, gejagt hat, gebissen.
b. Er bezichtigte den Vater des Schreibens unkundiger Kinder.
c. Fest steht, dass Max die Kollegen nicht vorgestellt bekamen.

Die bisher vorgestellten Attribuierungen bilden „das Gegenstück zu Garden-Path-Konstruktionen“ (Haider 2011; Meinunger 2014). Tabelle 1 zeigt die beiden Beurteilungsdimensionen Akzeptabilität und Grammatikalität und die aus deren möglichen Kombination resultierenden Bewertungen der Sprecher. Nach dieser Einteilung werden die abweichenden Attribuierungen den grammatischen Illusionen zugeordnet, da sie, so der Untertitel des Aufsatzes von Haider (2011), „lokal wohlgeformt [aber] global deviant“ sind.

2 Zur Attribuierung in Grammatiken

Burkhardts Unterstellung, das Phänomen der abweichenden Attribuierung sei in der Literatur bisher vernachlässigt worden, kann nur zum Teil widerspro-

chen werden. So weist Zifonun (1999: 10) darauf hin, dass „diese in der Mehrzahl dort auftreten, wo das attribuierte Nomen ein Kompositum ist [...]“ (vgl. aber Fanselow (1991) für Attribuierungen von Nicht-Komposita wie *Kämpfer des Dorfes*). Zifonun verortet das Phänomen deshalb in einem Zwischenbereich zwischen Syntax und Lexikon. Ich beschränke mich an dieser Stelle auf den Verweis auf Fanselow (1991) und Härtl (2013). Auf eine Positionierung des Phänomens im Hinblick auf die Gesamtgrammatik möchte ich im Rahmen dieser Ausführungen verzichten. Auch Eisenbergs (1999) Einwand, es gäbe durchaus Literatur zur Attribuierung und zur Substantivgruppe, möchte ich unterstützen. Wenn es sich bei der einschlägigen Literatur um Darstellungen der Substantivgruppe oder der Attribute im Allgemeinen handelt (z.B. Grundriß, IDS-Grammatik, Duden-Grammatik), werden die geschilderten Attribuierungen jedoch lediglich der Vollständigkeit halber erwähnt. Zwar wird auf weiterführende Literatur verwiesen, eine Erklärung des Phänomens findet sich aber nicht.

Im *Grundriß* (Eisenberg 2006) etwa findet sich in nur einem Satz der Verweis auf die Arbeit von Fabricius-Hansen (1993) und das folgende Zitat zu den Ausdrücken *der Mann nach Frankfurt*, *das Haus am Morgen*, *Vaters Schreibtisch des Direktors*, *der Mann wegen des Staubsaugers*, *Quarz am Nachmittag* oder *das Laster von der Trunksucht*:

> Unserer Auffassung nach sind diese Ausdrücke grammatisch und ohne Schwierigkeiten interpretierbar. Das Spezifische an der Attributrelation ist, dass sie semantisch weniger festgelegt ist. Was immer wir an nominal benennbaren Entitäten auf wie verwickelte und abseitige Weise zueinander in Beziehung setzen: Wir werden eine Attributkonstruktion finden, die auf die Beziehung „passt“, und sei es, dass wir sagen, „der Baum bezüglich meiner Großmutter“. (Eisenberg 2006: 268)

Die IDS-Grammatik (Zifonun et al. 1997: 1996 f.) demonstriert am Beispiel des *künstlichen Intelligenzprogramms*, dass solche als „abweichend“ erscheinenden Beispiele z.T. als elliptisch zu sehen sind und entweder gegen die Skopusregeln für restriktive Adjektive oder gegen die Wortbildungsregeln des Deutschen verstoßen. Das Adjektiv müsste, gemäß der gültigen Regeln, Skopus über sein gesamtes Bezugsnomen haben. Es läge also ein Fehler auf der syntaktischen Ebene der Attribuierung vor. Geht man von einer Ableitungsgeschichte aus, in der ein durch ein Adjektiv erweitertes Nomen als Bestandteil eines Kompositums eingesetzt wird, so liegt ein Verstoß auf morphologischer Ebene vor, weil in diesem Fall ein Verstoß gegen Wortbildungsregeln begangen wird. Die IDS-Grammatik schlägt als Alternativen zur Vermeidung der Struktur Bindestrichschreibung vor: *Künstliches-Intelligenz-Programm*. Es wird jedoch eingeräumt, dass in einem solchen Fall das Adjektiv seinen Modifikatorstatus verliert.

Außerdem wirken solche Fügungen ebenfalls „abweichend“ oder „schwerfällig“. Man beachte, dass eine kompositumsinterne Flexion vorgenommen werden muss (*das Künstliche-Intelligenz-Programm*, *dem Künstlichen-Intelligenz-Programm*). Eine Schreibung wie *ein „Künstliche Intelligenz“-Programm* o.Ä., die keine kompositumsinterne Flexion erfordern würde, wird erstaunlicherweise nicht in Betracht gezogen.

Die Duden-Grammatik verweist in §446 (in der siebten Auflage vgl. § 472) auf den Aufsatz von Bergmann (1980), der unten diskutiert wird. Laut Duden wird den Attribuierungen eine gewisse „Komik“ zugeschrieben, obwohl die Beziehung als „falsch“ eingestuft wird. Ebenso findet sich die Unterscheidung in die beschriebenen problematischen Attribuierungen und den „sprachüblich geworden[en]“. Es werden auch andere Schreibungen diskutiert, die die Bezüge als „korrekt“ darstellen, wobei auf flektierte und unflektierte Varianten wie die folgenden hingewiesen wird:

(5) a. Kleinkinderspielzeug, Rotkreuzschwester
b. Loseblattausgabe, Rote-Kreuz-Schwester

Die Duden-Grammatik bietet als „Lösung“ bis zur momentan neusten Auflage jedoch nur eine „man sollte nicht“-Empfehlung an.

Der „Zweifelsfälle-Duden“ (Band 9) listet in der zweiten Auflage (1972) unter dem Stichwort „Attribut“ (Punkt 3) drei Fälle von Attribuierung auf, die „irrtümlich“ zustande kommen. Zwei davon betreffen die Attribuierung von Komposita, nämlich die als „nicht korrekt“ eingestuften Verbindungen in (6):

(6) a. vierköpfiger Familienvater
b. Abfahrtszeit nach Kassel

Es wird auf den Eintrag „Kompositum“ verwiesen. Dort findet sich zu (6a) (Punkt 6) der Hinweis, dass der formale Bezug des Attributs das Grundwort (also das Zweitglied, der Kopf) des Kompositums ist, der inhaltliche Bezug allerdings der gesamte Ausdruck. Damit steht die Möglichkeit offen, dass „sprachübliche“ Ausdrücke als „geschlossene Einheit“ interpretiert werden können und somit als „korrekt“ eingestuft werden. Der Duden gibt als Erklärung für das Auftauchen der geschilderten Attribuierungsstrukturen „Unkenntnis“ oder „Flüchtigkeit“ an. Außerdem wird gemutmaßt, dass die „Komik“, die von einigen Verbindungen ausgeht, zu „absichtlichen Erfindungen“ geführt hat, die als „leicht durchschaubar“ klassifiziert werden. Unter Punkt 7 des Eintrags werden Überlegungen zur Bindestrichschreibung angestellt, die hier nicht weiter von Belang sind. Interessant ist, dass bei (6b) (Punkt 8) als inhaltlicher Bezug nur der zweite Bestandteil des Kompositums als möglich gilt, sonst ist die Verbindung „falsch“. Die „richtige“ Version für (6b) lautet demnach *die Zeit*

der Abfahrt nach Kassel. Eine Ausnahme bilden auch bei dieser Verbindung die „sprachüblichen“ Attribuierungen, bei denen ein Bezug auf das gesamte Kompositum möglich ist. Die Bewertung als „falsch“ wird in späteren Auflagen nicht mehr vorgenommen. Allerdings findet nun die Flexion des Attributs als ein mögliches Kriterium zur Einordnung der Beispiele Erwähnung. Auffällig ist, dass der Duden einigen Beispielen wie *Sauregurkenzeit* oder *Abfahrt[s]zeit nach* eigene Einträge widmet. In jedem Fall bleibt festzuhalten, dass die Attribuierungen von Komposita schon immer als Zweifelsfälle eingeordnet worden sind.

3 Zur Attribuierung in der Sprachkritik

Bereits Wustmann (1966: 161, erste Auflage 1891) verfasst in seinen *Sprachdummheiten* einen „groben Unfugparagraphen“. Beispiele wie (1) (hier wiederholt als (7)) wirkten „unbedingt komisch“ und es wäre „[v]iel [...] gespottet worden“.

(7) a. der vierstöckige Hausbesitzer
b. die reitende Artilleriekaserne
c. die deutsche Sprachwissenschaft

Bei einigen Verbindungen (z.B. nach dem Muster (7a)) mutmaßt Wustmann, dass sie nur gebildet worden sind, um sie lächerlich zu machen. Auch hier ist die Rede von einem „sprachliche[n] Fehler“, der darin besteht,

> [d]aß das Eigenschaftswort einzig und allein dem Bestimmungswort [Erstglied des Kompositums, JW] der Zusammensetzung angehört, während es nun, nachdem sich dies mit dem Grundwort [Zweitglied/Kopf, JW] vermählt hat, sinnlos die ganze Zusammensetzung zu betreffen scheint. (Wustmann 1966: 161)

Wustmann bestimmt die seiner Ansicht nach fehlerhaften Attribuierungen, indem er annimmt, dass Verbindungen nur „[u]ntadelig“ werden, wenn sie sich zu dreigliederigen Wörtern zusammensetzen lassen wie etwa *Altweibersommer* oder *Sauregurkenzeit*. Er versucht so bereits ein Kriterium zu erarbeiten, mit dem sich die „fehlerhaften“ Fälle von den unproblematischen unterscheiden lassen. So ist z.B. **Nassregenschirm* nicht möglich, weil ein nasser Regenschirm „eben ein nasser Schirm und nicht ein Schirm gegen nassen Regen [ist]“ (ebd.: 161). Somit kritisiert Wustmann nicht blind eine ihm fehlerhaft erscheinende Struktur, sondern schlägt ein Abgrenzungskriterium zu anderen Strukturen vor. Dies erscheint mir insofern bemerkenswert, als es meines Wissens keine Arbeit

gibt, die das Verhältnis von Bildungen wie (7) zu unproblematischen Attribuierungen oder zu anderen denkbaren Lösungen wie z.B. der Schreibung *„reitende Artillerie"-Kaserne* untersucht. Ansätze finden sich bei Sandberg (1984), für den jedoch alle Attribuierungen Gesamtbezüge sind und er somit kein Problem mit ihnen hat.

Weniger problematisch erscheinen Wustmann das *Übersetzungsrecht in fremde Sprachen* und die *Abfahrtszeit nach Kassel*. Diese Attribuierungen klassifiziert er ebenfalls als „Sprachfehler", attestiert ihnen aber eine gewisse Geläufigkeit, die uns den Fehler übersehen lässt (ebd.: 162). Somit unternimmt er implizit eine Gliederung nach Auffälligkeit der Struktur in der Alltagssprache, die erst bei Fabricius-Hansen (1993) vollständig expliziert wird. Wustmann spricht einen wichtigen Punkt an, wenn er schreibt:

> Eigentlich sollte dieser Fehler noch auffallender sein, als der zuvor besprochene, insofern bei den geräucherten Fischläden und deren Geschwistern wenigstens das Zusammengehörige beisammensteht, während es in der Abfahrtszeit nach Kassel durch das Grundwort zerrissen ist. (ebd.: 162)

Aufgrund der Beschaffenheit der Struktur (in diesem Fall aufgrund der Linearisierung der Elemente) schließt Wustmann auf deren Auffälligkeit und muss feststellen, dass seine Beobachtung offenbar falsch ist. Bei der Lektüre des Aufsatzes von Burkhardt (s.o.) sind mir ebenfalls einige Beispiele aufgefallen, denen ich eine hohe Auffälligkeit zuschreibe. In einigen Fällen vermuten wir, dass diese Strukturen nicht oder kaum belegt sind. Beispiele sind etwa die *freie Hauslieferung*, das *schlechte Wettergeld*, der *dritte Weltladen* oder das *fettige Haarshampoo* (Burkhardt 1999: 6f.). Ob sich diese Vermutungen erhärten lassen, ist zu untersuchen.

Ein weiterer Hinweis auf die betreffenden Attribuierungen findet sich bei Reimann (1964), einer Quelle, die der allgemeinen Aufmerksamkeit bisher entgangen zu sein scheint, da sich meines Wissens in keinem der einschlägigen Texte ein Verweis darauf findet. Reimann widmet sich in seinem Kapitel *Die sauere Gurkenzeit* (296 ff., sic!) zunächst einem (nicht näher bestimmten) 1877 von August Lehmann verfassten Buch, in dem noch Wendungen wie *der gelernte Tischler*, *der gediente Soldat* und *der erfahrene Feldherr* kritisiert werden, die zur Zeit von Reimanns Ausführungen jedoch bereits völlig normal geworden sind. In den genannten Beispielen liegen keine Komposita vor. Trotzdem findet Reimann auch Beispiele wie die *kalte Mamsell* oder die *weitsichtige Brille*, die „kaum noch als Witz" bzw. „selbstverständlich" eingestuft werden – Für letzteres möchte ich ergänzen: im wahrsten Sinne des Wortes, denn, so Reimann: „Nur ein Esel wird so tun, als sei sie [die weitsichtige Brille, JW] mißverständlich." (ebd.: 297). Auch liefert Reimann ein älteres Beispiel der

problematischen Attribuierung, den *seidenen Strumpffabrikanten* aus einer alten Vossischen Zeitung von 1775, bei dem Reimann sicher ist, dass die Struktur nicht als Witz gemeint war. Er nennt weitere Beispiele für Adjektivattribute. Offenbar sieht er bei Präpositionalattributen keine Probleme. Lösungen bietet Reimann nicht an. Eine Ausnahme ist der Vorschlag der Schreibung *die Sauere-Gurken-Zeit* oder *die Saueregurkenzeit*. Allerdings versteht sich das *Vergnügliche Handbuch* Reimanns auch nicht als sprachlicher Ratgeber, sondern eher als Unterhaltungswerk.

4 Zur Attribuierungskomplikation

Burkhardts Kritik, dass die Thematik vernachlässigt worden ist, ist insofern zu unterstützen, als die Bibliographie, die Eisenberg (1999) als Erwiderung vorlegt, recht kurz ist. Neben den bereits diskutierten Grammatiken erwähnt er an speziell einschlägiger Literatur die Arbeiten Bergmanns (1980), Koldes (1985), Fabricius-Hansens (1993) und Schmidts (1993). Ich möchte im Folgenden die Liste um den Aufsatz Sandbergs (1984) sowie einige Arbeiten neueren Datum erweitern, mit einem Verweis auf Bär (2007) oder aber Haider (2011), Härtl (2013) und Meinunger (2014).

Bergmann legt ein Korpus an, das er nach dem Bezugselement des Attributs ordnet. Er entwickelt, ähnlich wie schon Wustmann, einen Bezugstest: Kann man die attribuierte Substantivgruppe durch ein dreigliedriges Dekompositum ersetzen? Seiner Ansicht nach weist *Heißwasserspeicher* die gleiche Struktur auf, wie *tropische Waldtiere*, nämlich [(AB) C]. Für ihn sind Attribuierungen mit reinem Erstgliedbezug völlig im Einklang mit den Wortstellungsregeln (vgl. allerdings Zifonun 1999) und erfüllen die gleiche Funktion wie Komposita im Allgemeinen und dreigliedrige Dekomposita im speziellen (Bergmann 1980: 249). Er versucht in Ansätzen eine Klassifizierung der Attribute, indem er nach semantischen Verträglichkeiten zwischen Attribut und Bezugselement sucht. Besonders wichtig erscheint ihm das Merkmal [±allgemein] bzw. [±spezifisch]. D.h. je größer die semantische Eigenständigkeit des Kompositums ist, desto unspezifischer sollte das Attribut sein (ebd.: 257). Problematisch ist allerdings der Kommentar Bergmanns, dass „Warnungen vor *der verregneten Feriengefahr* [...] insofern überflüssig [sind], als solche Fälle zumindest in dem hier untersuchten Corpus nicht vorkommen“ (ebd.: 258). Er stellt am Anfang explizit die Frage, inwieweit es sich um einen „fingierten Gegenstand“ handelt. Diese Frage taucht später bei Burkhardt als Frage nach „linguistischer Pedanterie“ wieder auf. Die meisten der problematischen Attribuierungen gäbe es „überhaupt nur als Beispiele in den genannten Werken“ (ebd.: 236), deshalb kämen auch immer wieder die gleichen (nicht-authentischen) Beispiele vor.

Sandberg (1984) kritisiert Bergmanns Ausführungen und Methoden. Er bezweifelt den Wert der Kompatibilitäts-, Auflösung- und Paraphraseproben, auf die Bergmann seine Ergebnisse und Klassifizierungen stützt. Für ihn hat das Attribut bei Komposita immer Gesamtbezug, da auch die Bedeutung des Kompositums nicht kompositionell aus den Bestandteilen zu ermitteln ist. Er glaubt auch, dass „die Bildungsweise des Adjektivattributes, die Zugehörigkeit zu einer bestimmten Bedeutungsgruppe oder zu einem bestimmten Funktionstypus völlig ohne Bedeutung [ist]“ (Sandberg 1984: 176). Dies gilt es zu prüfen, denn ich bin der Ansicht, dass zumindest die Bildungsweise und Komplexität des Adjektivattributs eine Rolle spielt. Sandberg ist der Ansicht, dass bei einem Genitiv- oder Präpositionalattribut niemand die Frage nach dem Bezug auf ein bestimmtes Kompositionsglied stellen würde (ebd.: 178). Dies ist in den späteren Arbeiten aber durchaus geschehen (s.u.). Mit seiner einheitlichen Betrachtung des Gesamtkompositums bilden die problematischen Attribuierungen keine Ausnahmeerscheinung mehr. Einziges Kriterium bleibt die semantische Verträglichkeit, die jedoch nur intuitiv bestimmt wird.

Kolde (1985) geht es um die Darstellung der strukturellen Beziehungen zwischen Nominalphrasen und Sätzen. Er diskutiert den Wert des Nutzens eines Nominalrahmens und nimmt mehrere Attributpositionen zwischen Artikel und Substantiv an. Darauf möchte ich nicht näher eingehen, da mir das Problem der Strukturzuweisung als weniger virulent erscheint. Mir geht es vielmehr darum zu zeigen, dass die Attribuierungen zwar der Vollständigkeit halber erwähnt werden, eine Erklärung ihrer (In-)Akzeptabilität jedoch noch aussteht.

Fanselow (1991) argumentiert, dass es bezüglich der Argumentvererbung und Argumentunterdrückung einen Unterschied gibt zwischen den Ausdrücken in (8):

(8) a. Straßenplanierarbeiter
b. *Planierarbeiter der Straße/von Straßen

Bei (Determinativ-)Komposita wird eine Argumentstelle, die eines der Kompositionsglieder eröffnet, durch das andere (oder ein anderes) Kompositionsglied gesättigt.

(9) a. Sättigung der Subjektstelle: λx (f(N)(x) & f (v)(x))
Singsittich, *Fliegebiester*, *Kopierknecht*
b. Sättigung der Objektstelle: λx (f(N)(x) & V$z f$(V)(x)(z))
Ziehbrücke, *Essapfel*

Bei (8b) ist nun das Problem, dass die Argumentstelle von *planier-* bereits von *Arbeiter* gesättigt ist. Es ist keine Argumentstelle für ein Genitiv-Attribut mehr verfügbar (vgl. jedoch Härtl 2013). Allerdings ist gerade bei den Genitiv-

Attributen ersichtlich, dass auch Probleme bestehen, wenn es sich nicht um ein Kompositum handelt (vgl. Fanselow 1991: 24).

(10) a. *Bäcker von Semmeln[1]
b. Schreiner des Tisches
c. Kämpfer für sein Dorf
d. *?Kämpfer um sein Leben

Die Frage, die sich mir stellt, ist, ob (10d), wenn es die gleiche Struktur aufweist wie (10c), schlechter ist. Die Frage nach der Argumentvererbung wirft m.E. kein Licht auf das Problem der Usualisierung, das zur Klärung der Akzeptabilität gerade auch der Adjektivattribute eine Schlüsselrolle spielt.

Fabricius-Hansen (1993) untersucht die verschiedenen Attributarten (Genitiv-, Präpositional- und *für*-Attribute) bezüglich ihrer thematischen Rollen. Hierbei unternimmt sie die wichtige Unterteilung der Beispiele anhand der Bezugsglieder der Attribute. Somit ergeben sich vier Gruppen:

(11) a. Strukturen mit eindeutigem Zweitgliedbezug des Attributs:
Personenüberwachungen durch den Verfassungsschutz
b. Strukturen mit eindeutigem Erstgliedbezug des Attributs:
Angriffswahrscheinlichkeit durch die Sowjetunion
c. Strukturen mit Doppelbezug des Attributs:
Barschels Rücktrittsankündigung
d. Strukturen mir Gesamtbezug des Attributs: es ist kein Bezug auf einzelne Teile möglich (z.B. bei idiomatischen Komposita) (Farbricius-Hansen 1993: 204)

Eine solche Einteilung erscheint mir sehr sinnvoll, da sie Aussagen zum Verhältnis zwischen Akzeptabilität und Strukturtyp ermöglicht. So schließt Fabricius-Hansen z.B., dass „Kompositumkonstruktionen, bei deren Interpretation das Erstglied und das Attribut je eine spezifische Attributfunktion bezüglich des Zweitgliedes zugeordnet bekommen, [...] akzeptabler [sind] als solche, bei denen das nicht der Fall ist.“ (Fabricius-Hansen 1993: 227) Dies ist m.E. ein Schritt in die richtige Richtung. Allerdings erfasst sie die Adjektivattribute mit ihrem Ansatz nicht, da diese offenbar von den thematischen Rollen nicht betroffen sind. Desweiteren vermuten wir, dass die Akzeptabilität von Attribuierungen nicht ausschließlich von deren Struktur bestimmt wird. Innerhalb der Gruppen werden sich sicherlich interne Akzeptabilitätsabstufungen zeigen. Es wäre interessant zu sehen, inwieweit bestimmte Lexeme oder Wortfelder die Akzeptanz beeinflussen.

[1] Die Bewertungen in (10a)–(10c) sind von Fanselow (1991) übernommen.

Eine sehr differenzierte Analyse der „Attribuierungskomplikation“ legt Schmidt (1993) vor. Auch er beschränkt sich auf die Attribute rechts des Nomens (vgl. jedoch Kap. 4.4.1.6.1. zu Wustmann, Bergmann und Sandberg). Bei den von ihm untersuchten Items finden sich allerdings auch Beispiele für die o.g. Attribuierungen:

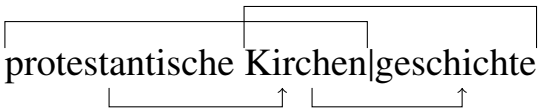
(12) a. keltisches Fürstengrab
b. verregnetes Sommerloch

Schmidts empirische Befragungen ergaben bereits, dass die Beispiele in (12) nicht gleichermaßen unauffällig sind. Auch zeigte sich, dass die Komplikationen, die mit dieser Struktur assoziiert werden, von verschiedenen Sprechergruppen unterschiedlich beurteilt werden. Die Thematik der Textsorten wird hier meist indirekt zur Sprache gebracht. Ich möchte erwähnen, dass stillschweigend davon ausgegangen wird, dass die Problematik der beschriebenen Attribuierungen von den Sprechern als solche überhaupt wahrgenommen wird. Ich habe die Erfahrung gemacht, dass etwa zur *Fahrgemeinschaft nach Kassel* eine lange Erläuterung notwendig ist, damit von den Sprechern überhaupt ein Problem erkannt wird. Die Frage danach, welche Eigenschaften Fügungen haben müssen, um „sprachüblich“ zu werden bzw. welche Eigenschaften gewisse Fügungen offenbar als auffälliger erscheinen lassen, bleibt weiterhin ungeklärt.

Welke (2002) erwähnt die „schiefen Attribute“ kurz und merkt an, dass der Stamm in das Kompositum inkorporiert ist und nicht mehr regiert. Ein Kompositum wie *private Anlagekunden* wäre demnach nur hinsichtlich des Kopfes rektionstransparent. Die Frage, die sich stellt, ist, wann der „intendierte semantische Bezug auch auf das Grundwort vage anwendbar“ ist (vgl. Welke 2002: 16) und wann nicht. Nach seiner Auffassung sind die folgenden Attribuierungen nicht möglich:

(13) a. *lieblicher Aussichtsturm
b. *tiefer Liebesbrief
c. *räudiger Hundebesitzer

Bär (2007), bei dem die Attribuierung „gegenläufige Determinationsverschränkung“ heißt, argumentiert in seiner Analyse mit semantischen Verträglichkeiten und pragmatischen Faktoren wie *Usualität* und *Ökonomie* (vgl. dazu auch Härtl 2013). Durch eine Pfeilnotation gibt er andeutungsweise eine strukturelle Beschreibung an. Diese sieht in etwa so aus (nach Bär 2007: 320 ff.):

(14) a. 

b. rotes Haus|dach

c. Lebens|beschreibung großer Persönlichkeiten

d. Risikoberichts|wesen an den Vorstand

Wie man sieht, klaffen hier die Ausdruckseinheit und die Sinneinheit auseinander. Die Sprecher verlassen sich darauf, dass die Beziehungen und damit auch die Bezeichnungen eindeutig hergestellt werden können. Dazu müssen zwei Bedingungen erfüllt sein:

1. Die Fügung muss einen gewissen Grad an Usualität aufweisen. Hierbei stellt sich m.E. die Frage, wie man Usualität misst.
2. Zwischen der Basis des Kompositums und dem Attribut darf es keine Beziehungen geben, die diejenigen zwischen dem Erstglied und dem Attribut stören könnten. Klassifizierende Ausdrücke stören diese Beziehungen nicht, Selektionsbeziehungen u.U. schon. (vgl. ebd.: 322)

   „Das bedeutet selbstverständlich keineswegs, den Unterschied zwischen prototypisch syntaktischen Strukturen und prototypischen Wortbildungsstrukturen zu leugnen.“ (ebd.: 334, Hervorhebung im Original)

Bei Dürscheid (2010: 71) findet sich lediglich ein Verweis auf Wustmann. Eine syntaktische Struktur der fehlerhaft attribuierten NPs wird nicht gegeben. Allerdings werden sie auch als ungrammatisch eingestuft.

Haider (2011) und Meinunger (2014) geben einen Überblick über verschiedene Arten von „grammatischen Illusionen“, die hier geschilderte Erstglied-Attribuierung wird von Meinunger als Illusionskandidat vorgeschlagen. Wichtig ist für uns die Beobachtung, dass sich nicht alle Fälle von potentiellen oder tatsächlichen Illusionen als gleich problematisch erweisen. Die abweichenden Attribuierungen scheinen für Sprecher wesentlich unauffälliger als z.B. die sog. *Stirnhorn*-Illusion in (15) zu sein:

(15) a. Eine Pariserin namens Dimanche soll sich ein gewaltiges Stirnhorn operativ entfernt haben lassen.
b. Hoffe, geholfen haben zu können.

Wie Haider (2011: 228) am Beispiel eines Threads über die Abfolge in (15b) zeigt, sind sich die Sprecher einig, dass hier ein Problem besteht. Dies ist bei den

Attribuierungen nicht (immer) der Fall. Deshalb ist es umso verwunderlicher, dass das Thema bei Haider gar nicht erwähnt wird. Er untersucht Attribuierungen nur am Fall von *genug*, wobei das Problem in diesem Fall darin besteht, dass *genug* nicht flektiert werden kann. Bei Meinunger (2014) findet sich ein Vermerk auf Burkhardt. Im Vergleich zu den anderen als Illusionen klassifizierten Strukturen bleiben die Ausführungen zu den Adjektivattributen bisher leider nur fragmentarisch. Spezielle Untersuchungen der Präpositionalattribute finden sich bei Härtl (2012), der sich wiederum auf Fabricius-Hansen beruft.

Härtl (2013) untersucht Fälle wie die folgenden, bei denen Attribute vorliegen, die *Argumente von Nicht-Köpfen* sind:

(16) a. Fahrgemeinschaft nach Italien
b. Ausreiseverbot in die BRD

(17) a. Designanalyse des Geschirrs
b. Belastbarkeitstest des Fahrzeugs

Härtl verfolgt für die beiden obigen Beispielgruppen verschiedene Erklärungsansätze, die ich im Folgenden kurz betrachten will. Allerdings spricht er explizit mehrere wichtige Aspekte an, die in der bisherigen Forschung zum Großteil implizit geblieben sind. Ein wichtiger Punkt ist die hohe *Produktivität* der Attribuierungsstrukturen in (16) und (17). Dadurch wird ausgeschlossen, dass es sich lediglich um Performanzfehler handelt. Er unterscheidet grundsätzlich akzeptable und nicht-akzeptable Attribuierungen, wobei für die Akzeptabilität sowohl die „konzeptuelle Salienz“ der Beziehungen von Prädikat und Argument(en), als auch „extra-grammatische Faktoren“ eine Rolle spielen.

Härtl macht zwei wichtige Beobachtungen, die zeigen, dass es sich bei den obigen Beispielen um zwei verschiedene Gruppen handelt.

(18) 1. Nur die Beispiele in (17) sind mit Simplizia vereinbar:
✓Analyse des Geschirrs vs. **Gemeinschaft nach Italien*
2. In (16) sind nur Argumente und keine Adjunkte möglich:
??Fahrgemeinschaft mit dem Volkswagen

Die Beispiele in (16) weisen demnach die folgende Struktur auf:

(19) [[Non-Head$_{I}$ Head] DP-Gen$_{Arg\text{-}I}$]

Hierbei handelt es sich um „occasional formations which are licensed through pragmatic intervention“ (Härtl 2013: 168). Härtl verweist auf die Grice'schen Konversationsmaximen, die zwischen *Ökonomie des Ausdrucks* und *Verständlichkeit trotz Kürze* vermitteln.

Dagegen sind die Beispiel in (17) so strukturiert:

(20) [[NON-HEAD$_I$ HEAD$_J$] DP-GEN$_{ARG\text{-}I/J}$]

Diese Beispiele sind weniger markiert als die der anderen Gruppe. Entscheidend ist die Kompatibilität der Argumentvariable des deverbalen Kopfes mit dem semantisch-ontologischen Typ der Genitiv-Phrase (vgl. ebd.: 169). Ungesättigte Argumente werden an das Kompositum vererbt: $\alpha/\beta\ \beta/\gamma \rightarrow \alpha/\gamma$. Wenn sich z.B. das Nomen *Oberfläche*, selbst ein relationaler Ausdruck, mit dem deverbalen Ausdruck *Zerteilung* verbindet, wird zwar die Argumentstelle von *Zerteilung* gesättigt, die von *Oberfläche* jedoch nicht. Diese Argumentstelle wird an das Kompositum *Oberflächenzerteilung* vererbt und kann durch ein Genitivattribut gesättigt werden und z.B. als *Oberflächenzerteilung des Knochens* realisiert werden.

Härtl unterscheidet verschiedene Fälle von Genitivattributen, für die er zwei verschiedene Erklärungen findet. Somit wird auch aus seinen Analysen ersichtlich, dass es sich (selbst bei der Einschränkung auf Genitivattribute) keinesfalls um ein einheitliches Phänomen handelt. Damit sieht es zunehmend so aus, als ob sich eine Erklärung der schiefen Attribuierung nicht auf die Frage Morphologie oder Syntax? beschränken kann, sondern vielmehr „modulübergreifend“ sein muss und nicht zuletzt auch offen bleiben sollte für pragmatische Faktoren, denn nur über diese sind m.E. Aussagen über die Akzeptanz der Formulierungen durch die Sprachgemeinschaft möglich.

In einem Nebensatz erwähnt Härtl (2013: 174), dass der Wettbewerb zwischen morphologischen und syntaktischen Regeln durchaus auch im Rahmen der Optimalitätstheorie verstanden werden kann, ein Ansatz, den zu verfolgen sich m.E. lohnen würde.

5 Zusammenfassung

Das Thema der problematischen Attribuierungen ist nicht neu. An verschiedenen Stellen werden in Grammatiken des Deutschen interessante Fälle von Attributen erwähnt. Umso verwunderlicher ist es, dass sich verhältnismäßig wenig spezielle Literatur zu dem Thema findet. Zwar behandeln die Arbeiten von Fabricius-Hansen (1993) und Schmidt (1993) das Thema relativ umfassend, jedoch beschäftigen diese sich (fast) ausschließlich mit postnominalen Attribuierungen. Die Frage ist, ob sich pränominale Attribute mit ähnlichen Ansätzen erklären lassen, oder ob die Gruppe der fehlerhaften Attribute einen eher heterogenen Charakter hat. Auffällig ist auch, dass grundsätzlich zwei Klassen von Attribuierungen gebildet werden: die problematischen, falschen, unfreiwillig oder bewusst komischen und andererseits die sprachüblichen, unauffälligen, korrekten, tolerierten Strukturen. Die Frage ist die, warum einige Strukturen unauffälliger sind als andere. Wonach richtet sich, ob Sprecher eine Attribuierung

wiederholen? Denn nur durch mehrmalige Benutzung kann ein Ausdruck usualisiert werden. Welchen Beitrag leistet dabei die Textsorte bzw. der Kontext? Welche Rolle spielen Ökonomieüberlegungen für die geschilderten Strukturen? Der Ansatz für diese Fragestellungen ist den Texten immanent, eine Antwort auf die Fragen steht allerdings noch aus.

Ich möchte das Phänomen, wie bereits erwähnt, an dieser Stelle nicht in der Grammatiktheorie verorten. Ob das beschriebene Phänomen nun in einem syntaktischen oder morphologischen Modul besser aufgehoben ist, soll offen bleiben. Ich attestiere ihm allerdings eine Verwandtschaft mit Klammerparadoxen oder ähnlichen „Mismatches“. Auch Bär zitiert bei den fraglichen Beispielen den Klassiker Fleischer & Barz (1995: 22): In der Tat scheint in der neueren Forschung dahingehend Einigkeit zu bestehen, dass sich „die Grenze zwischen [...] Komposita [...] und Wortgruppen nicht immer klar bestimmen lässt“. Auch über die Realität eines Konzepts der „grammatischen Illusion“, zu dem ich die beschriebenen Attribuierungen zunächst gerechnet habe, besteht unter Grammatikern und Psycholinguisten kein Konsens.

Das Anliegen des Artikels war es, die Geschichte eines linguistischen Phänomens nachzuvollziehen, das uns täglich begegnet und uns vor ein großes Beschreibungsproblem stellt, obwohl es im Sprachgebrauch (meist) keinerlei Auffälligkeit zeigt. Da in vielen Ausführungen auf konstruierte und oftmals auf Komik angelegte Beispiele zurückgegriffen wird, mag das Thema auf den ersten Blick ein Fall für die populäre Sprachkritik sein (an deren Rand sich Burkhardt m.E. mit seinem Aufsatz bewegt); auf den zweiten Blick zeigt sich jedoch, dass wir als Linguisten, die wir oft ohne weitere Gedanken von *direkten Objektpronomen*, *freier Dativanalyse* oder *deutscher Sprachwissenschaft* sprechen und schreiben, nicht an der Beschäftigung mit einem Thema vorbeikommen, das u.A. die Konkurrenz (oder die Arbeitsteilung?) unserer kerngrammatischen Module Morphologie und Syntax hinterfragt.

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Ist emphatischer Akzentwechsel bei expressiven (adjektivischen) Ausdrücken ein Hauptsatzphänomen des Deutschen?

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1 Einleitung: Zum Phänomen des Akzentwechsels – Bekanntes und Neues

Das im vorliegenden Artikel untersuchte Phänomen im Deutschen ist in der Literatur bisher quasi unentdeckt geblieben. Die einzige Ausnahme bildet der Beitrag von Berg (2008). Die Beobachtung ist folgende: Unter bestimmten Bedingungen, die mit Emphase zu tun haben, kann die lexikalisch festgelegte Betonung, also der Wortakzent, verschoben werden. Im Normalfall betrifft dieser Prozess nicht-native lexikalische Einheiten, denn die Akzentverschiebung passiert in der Regel von hinten nach vorn. Da deutsche Erbwörter initial-, also erstbetont, sind, ist das schwer möglich (jedoch s.u.). Fremdwörter, die auf den hinteren Silben betont sind, sind deshalb prädestiniert. Die meisten Beispiele kommen aus dem Bereich der Wortklasse Adjektiv: *spektakulär*, *skandalös*, *sensationell*, *optimal*, *ideal*, *brutal*, *fulminant*, *perfekt*, *gigantisch*. Im angedeuteten expressiven Gebrauch kann der Wortakzent von der letzten auf die erste Silbe wandern (angedeutet durch Großbuchstaben): *SPEKtakulär*, *SKANdalös*, *SENsationell*, *OPtimal*, *Ideal*, *BRUtal*, *FULminant*, *PERfekt*, *GIgantisch*. Es sind, wenn auch seltener, Substantive betroffen: *Katastróphe → KAtastrophe*, *Phänomén → PHÄnomen*, *Mystérium → MYSterium*. Berg nennt diesen Prozess „stress retraction“ (nach vor allem Gussenhoven 1983a,b), da die Betonung von rechts bzw. von hinten nach links bzw. nach vorn verschoben wird. Schematisch stellt er den häufigsten, Dreisilber betreffenden Fall folgendermaßen dar:

(1) --′- → ′--- (*fulminant*, *optimal*, *skandalös*, *resolut*, *aktuell*, *fasziniert* ...)

Für Berg ist diese Shiftrichtung die eigentliche. Betonungswechsel auf eine hintere Silbe (*stress advancement*) sei eine Art Ausnahme und gehorche besonderen, vorzugsweise morphologischen Regularitäten[1]. Dennoch lassen sich im Deutschen auch systematische Fälle von Links-rechts-Shift ausmachen. Eine

[1] „We thus conclude that the infrequent group of stress advancements relies much more strongly on morphological structure than does the frequent group of stress retractions“ (Berg 2008: 171).

bisher gänzlich undiskutierte Entdeckung ist die Schwankung der Betonung bei nicht fremdwortartigen Adjektiven (und marginal auch bei den ihnen entsprechenden Substantiven). Interessant und einschlägig sind hier Adjektive, die mit der Silbe bzw. dem Morphem *un-* beginnen. Für die Klassiker Grimm (1878) und Paul (1920, 68: 22f.) ist *un-* (neben *ur-* und *erz-*) quasi ein selbständiges Wort, denn Bildungen *un-* plus eine andere Wurzel bilden bei ihnen ein Kompositum. Dieses erklärt dann auch die Akzentverteilung, denn das Bestimmungswort trägt im Kompositum den prominenten Akzent: *unfrei*, *unfertig*, *uneigennützig*, *ungezuckert*. In den neueren Referenzwerken von einerseits Fleischer & Barz (1992) und andererseits Erben (1993) gilt *un-* (wiederum neben *ur-*, *erz-* und anderen) als Präfix — als eines, das den Akzent zu sich nimmt (wie die präpositionsähnlichen Elemente *an-*, *bei- ... zu-*, auch *ein-*; oder die fremdsprachigen *anti-*, *hyper-*, *ko-*, *pseudo-* etc.). Nun kann scheinbar für eine Reihe von *un*-präfigierten Adjektiven keine eindeutige Betonung angegeben werden: *unerhört*, *unglaublich*, *ungeheuerlich*, *ungemein*, *unsagbar*, *unsäglich*, *ungeheuer*. Bei diesen und ähnlichen Adjektiven gibt die online-Dudenausgabe (`www.duden.de`) als erstes immer die Betonung wie zu erwarten auf *un-* an, also: *UNerhört*, *UNglaublich*, *UNgeheuerlich*, *UNheimlich* usw. Oftmals existiert keine entsprechende *un*-lose Form: **erhört*, **?glaublich*, **?säglich* (oder aber die *un*-lose Form hängt mit der *un*-haltigen Form nicht systematisch-kompositional zusammen wie bei *heimlich* und *unheimlich*). Bei ebendiesen Adjektiven liefert der Online-Duden nun allerdings auch eine weitere Version, bei der die Hauptbetonung nicht auf die Erstsilbe fällt: *unerHÖRT*, *unGLAUBlich*, *ungeHEUerlich*, *unHEIMlich* etc. Beim Adjektiv *unverschämt* gibt die Grammatik nur die Erstbetonung an: *UNverschämt*. Mir scheint bei Emphase ebenso ein *unverSCHÄMT* möglich. Beim Adjektiv *unendlich* gibt die Grammatik interessanterweise nur die Version an, in der *un-* nicht prominent ist: *unENDlich*. Hier scheint die Initialbetonung allerdings auch möglich: *UNendlich*.

Ein oberflächlicher Blick auf die Adjektive mit wechselhafter Betonung, genauer gesagt auf die Adjektive, die über die spezielle Akzent-Alternative verfügen, (i) Wortakzent auf *un-* und bzw. oder (ii) Wortakzent auf einer hinteren Silbe, lässt schließen, dass Betonungswechsel an Emphase gebunden ist. Wichtig ist es, anzumerken, dass hier tatsächlich die neutrale Form diejenige mit Initialbetonung auf un- ist, was bedeutet, dass man es tatsächlich mit einer Form des Links-rechts-Shifts zu tun hat – und nicht umgekehrt. Nur solche Adjektive, die emphatisch gebraucht werden können, lassen die nicht-kanonische „Spät-“Betonung zu. Jene, die kaum bis unmöglich expressiv-emphatisch verwendet werden können, wie zum Beispiel die oben *angeführten unfrei*, *unfertig*,

uneigennützig, *ungezuckert*, lassen die „hintere“ Betonung nicht zu: **unFREI*, **unFERtig*, **unEIgennützig*, **ungeZUCkert*[2].

Quasi parallel dazu verhalten sich partizipienverdächtige Adjektive wie *ausgewechselt* oder *umgewandelt*. Bei *ausgewechselt* gibt der Duden nur die initialbetonte Form *AUSgewechselt*; *umgewandelt* hat keinen eigenen Eintrag. Beim emphatischen Gebrauch kann die Betonung nach hinten verschoben werden.

(2) Nach der Pause spielte Hannover 96 wie umgeWANdelt. (68)[3]

(3) Diese armen Menschen sind wie ausgeWECHselt.[4]

Dieser Shift – ebenfalls in Links-rechts-Manier – ist wiederum nur bei Emphase möglich. Es scheint also ein generelleres Phänomen zu sein als lediglich die umgekehrt-direktionale *stress retraction*. (Dennoch bleiben essentielle Fragen offen, denn diese Richtung scheint deutlich restringierter zu sein.)

Wie eingangs erwähnt, ist das Phänomen des Betonungswechsels an sich fast unbemerkt geblieben. Als erster scheint sich Gussenhoven den entsprechenden Daten im Niederländischen gewidmet zu haben. Von den zwei Arbeiten ist die eine eher phonologisch (1983a), die andere für die damalige Zeit äußerst modern experimentell-psycholinguistisch orientiert (1983b). In ebendieser wird der emphatisch-expressive Aspekt festgestellt. Gussenhoven spricht von „rhetorical retraction“, also von einer rhetorischen Operation, oder im englischen Original von „rhetorical device“. Derselbe, also „rhetorical retraction ... seems particularly frequent in propagandist speech, as used for instance in commercials and political speeches [and is] frequent in the more informal news shows” (Gussenhoven 1983b: 604). Eine weitere Arbeit zum Thema und speziell zu deutschsprachigen Daten liefert der deutsche Anglist Berg. Als Phonologe ist dieser ebenfalls hauptsächlich an den lautgesetzlichen Aspekten interessiert. Ein Verdienst Bergs ist die Erstellung einer Belegsammlung authentischer Äußerungen (s.u. 2.1 und Fußnote 3). Die vorliegende Arbeit sieht sich als weiteren Beitrag zum Phänomen unter pragmatisch-semantisch-syntaktischer Perspektive.

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[2] Damit ist die Betonungsverschiebung zugunsten von Emphase gemeint: *ungeZUCkert* ist kontrastiv möglich – als Gegenüberstellung zu *ungeSALzen* etwa.

[3] Die eingeklammerte Zahl nach einem Beispielsatz referiert auf die chronologische Nummer des authentischen Beleges aus Bergs handgeschriebener Liste. Weiter hinten treten diese Zahlen auch im Fließtext auf, z.B. als Beleg (91) oder Beleg (36), die konkreten Beispiele sind dabei kursiv gesetzt.

[4] T. Vermes „Er ist wieder da“, Hörbuch in 6 CDs gelesen von C.M. Herbst: CD 4, Track 8.

2 Zum Verhältnis von Expressivität und Hauptsatzphänomenen

Die Beschäftigung mit Emphase-Phänomenen hat in den letzten zehn Jahren vor allem seit und mit den Arbeiten von Potts (2005, 2007), die eine ganze Forschungsindustrie etabliert haben, einen enormen Aufschwung erlebt. Inzwischen erscheinen Überblickswerke und Handbücher zum Thema. Ein solches ist der 2013 erschienene, von Gärtner und Gutzmann herausgegebene Band *Beyond expressives: Explorations in use-conditional meanings*. Zu ebendiesem verfasste einer der beiden Herausgeber – Gutzmann – einen Überblicksartikel als Einführung in das Buch und gleichzeitig als Abriss der aktuellen Forschung. In diesem Beitrag stellt Gutzmann eine Liste aller Phänomene zusammen, die etwas mit Emphase und/oder Expressivität zu tun haben[5]. Diese sprachlichen Erscheinungen verfügen über eine wesentliche Komponente, die der rein wahrheitskonditionalen, klassisch-semantischen Ebene über- oder beigeordnet ist. Sie liefern einen Beitrag jenseits der Wahrheitsbedingungen; Gutzmann in seiner Sympathie mit dem Ansatz von Recanati (2004) nennt sie dementsprechend wie dieser nicht wahrheits- sondern gebrauchskonditional (*use-conditional*). (Hauptsächlich für das Deutsche einschlägige) Phänomene, die genannt und vorgestellt werden, sind:

– Pejorative Beifügung (*dieser Idiot Hans*)
– Expressive attributive Adjektive (*dein verdammter Hund*)
– Interjektionen (*huch*, *verdammt*)
– Expressiv gefärbte Ausdrücke (*Köter*, *Arschloch*)
– Modalpartikeln (*eh*, *halt*)
– Formale vs. vertrauliche Pronomen (*du* vs. *Sie* im Deutschen)
– Ethischer Dativ (*Komm mir ja nicht zu spät nachhause!*)
– Fokusakzent
– Exklamative
– Verum-Fokus
– Appositive und Parenthesen
– Topikalisierung im Englischen (als Beispiel für Topikauszeichnung)
– Diminutive
– Nicht-flektierte Verben (*dich in den Arm nehm*)

Die Forschungssituation zu den einzelnen Phänomenen ist äußerst unterschiedlich, was vor allem auch dadurch zu erklären ist, dass die jeweilige Struktur

[5] Gutzmann behauptet an keiner Stelle, seine Liste sei exhaustiv in Bezug auf die Literatursituation. Dennoch wird beim Leser das Gefühl geweckt, die in der bisherigen Forschung behandelten Phänomene, die Gutzmann auflistet, müssen quasi vollständig erfasst sein – zumindest, was die Typen gebrauchskonditionaler Ausdrücke betrifft.

unterschiedlich prominent im Sprachsystem ist. Außerdem ist nicht jedes Phänomen gleichsam interessant und wissenschaftlich herausfordernd. Ein Phänomen, das allerdings sowohl sehr häufig und charakteristisch als auch linguistisch interessant ist, sind Modalpartikeln im Deutschen. Diese tauchen auch immer wieder als Vertreter einer weiteren Kategorie auf: nämlich als sogenannte Hauptsatzphänomene (*root clause phenomena*; ab hier häufig abgekürzt als HP).

HP sind sprachliche Strukturen oder Eigenschaften, die nur in selbständigen (oder eben quasi selbständigen) Sätzen vorkommen. Die Pioniere der HP-Forschung sind Emonds (1970) und Hooper und Thompson (1973). Inzwischen gilt der Überblick von Heycock (2006) als Referenz. Davon lässt sich auch Jacobs (2014) inspirieren, wenn er (s)eine Liste für das Deutsche aufstellt.[6]

– Modalpartikeln
– Sprecherorientierte Adverbiale, Sprechaktadverbiale (*ehrlich gesagt*)
– Bestimmte Konjunktionaladverbiale (*Obwohl Fritz immerhin schon das Zweite Staatsexamen hat, hat er sich noch nicht auf eine Lehrerstelle beworben.*)
– I-Topikalisierung (*Fritz ist mit Pauken und Trompeten durchs Examen gefallen, obwohl er /SO dumm*
  AUCH wieder nicht ist.)
– Sprechaktbezogene Anhängsel (*Fritz hat schon das Zweite Staatsexamen, nicht wahr?*)
– V2-Stellung (bzw. V1)
– Objektweglassung in Infinitiv-Aufforderungssätzen (*Bitte (das Bild) nicht berühren!*)

Modalpartikeln werden hier ganz prominent angegeben. Man könnte – nicht nur deshalb – meinen, dass es einen engen Zusammenhang zwischen gebrauchsfunktionalen Ausdrücken und Hauptsatzphänomenen gibt. Expressivität scheint einherzugehen mit Operationen, die auf Hauptsätze beschränkt sind. Das ist auch nachvollziehbar bei Sprechaktadverbialen, Exklamativität oder (emphatischer) Topikalisierung. Dennoch kann man leicht zeigen, dass viele der Gutzmannschen Beispiele für gebrauchsfunktionale Ausdrücke nicht wurzelsensitiv sind. Man findet sie also auch in typischen Nebensätzen. Zu denen gehören zentrale Adverbialsätze (z.B. Temporalsätze, „echte“ Kausalsätze), restriktive Relativsätze oder beispielsweise Komplementsätze zu faktiven Prädikaten. (4) zeigt das mit einem expressiven Ausdruck im Temporalsatz und das authentische (5) im Vergleich zum nach dem Muster gebildeten (6) durch die Gleichwertigkeit im Hinblick auf den *du-Sie*-Unterschied innerhalb eines faktiven Nebensatzes.

[6] Jacobs merkt ausdrücklich an, dass seine Liste keinen Anspruch auf Vollständigkeit erhebt.

(4) Gerade als der Köter nochmals zum Schnappen ansetzt, stecke ich gewandt meine kleine Hand seitlich in sein Maul und drücke zu. (V. Guran: Von der Sünde zur Gnade, S. 95)

(5) So sehr es mich freute, dass Du bei den meisten Menschen so gut ankamst wie bei Evelines Mutter, so sehr ärgerte ich mich manchmal, weil ich mich des ... (I. Elsner: Briefe an einen ganz besonderen Hund, S. 68)

Genauso wie:

(6) So sehr es mich freute, dass Sie bei den meisten Menschen so gut ankamen wie bei Evelines Mutter, so sehr ärgerte ich mich manchmal, weil ich mich des ...

Die Frage, der hier nachgegangen werden soll, lautet: Ist der oben skizzierte Prozess des emphatischen Betonungswechsels ein HP oder ist er von der Kategorie „nicht-wurzelsensitive Operation“? Drei Betrachtungen sollen zur Beantwortung der Frage weitehelfen: 1) die Auswertung des Korpus von Thomas Berg; 2) die Auswertung der experimentellen Ergebnisse von Gussenhoven und 3) die Erstellung und Auswertung einer Befragung- bzw. Bewertungsstudie.

3 Empirische Befunde

3.1 Bergs Ergebnisse – „Korpusbelege“

In Berg (2008) wird auf eine vom Verfasser angelegte Datensammlung verwiesen. Diese hat mir der Autor auf Anfrage freundlicherweise überlassen. Sie besteht aus 158 niedergeschriebenen Beispielen – meist, aber nicht immer in Satzgröße. Diese ist allerdings zur Beantwortung unserer Frage entscheidend. Insofern fallen wahrscheinlich die meisten, jedenfalls ziemlich viele Äußerungen weg, denn aus einer Ellipse bzw. Einwort- oder Fragmentäußerung kann man nichts über den Status als HP ableiten (z.B. Beleg 110: *Ein GRANdioser Sieg!* Beleg 91: *Die Mannschaft nun AGgressiver*; Beleg 141: *Scott Nicholls in einem FUriosen Schlussspurt*; Beleg 36: *ein REsoluter Einsatz von Günter Drews*). Weiterhin kann und sollte man einige der von Berg gesammelten Beispiele ignorieren, die ziemlich eindeutig auf Performanzfehler zurückzuführen sind:

(7) Wenn Schweden ausgleicht, sind alle Bemühungen UMsonst gewesen; (120)

(8) Die beschäftigen ihn wochenWEIse, aber nicht länger. (23)

Die akzeptabelsten, also die nachvollziehbarsten Fälle von Betonungswechsel findet man tatsächlich in Hauptsätzen.

(9) Jens Voigt hat offenbar SENsationell aufgetrumpft. (143)

(10) Wir werden das Center KOMplett umgestalten. (127)

(11) Die Fortbewegung der Schlange beruht auf einem einzigen, aber GEnialen Konstruktionsprinzip. (97)

(12) Die Geschichte ist nach wie vor sehr, sehr MYSteriös. (61)

(13) Da gibt es eine MASsive Intervention der Bundesregierung. (49)

Das spricht erst einmal für den Status als HP. Dennoch findet man in Bergs Sammlung auch Beispiele mit Betonungswechsel im Nebensatz. Es scheint allererdings, als könnte man diese potentiellen Gegenbeispiele „wegdiskutieren". Beleg (19) in (14) kann als echter Fehler abgetan werden; hätte also denselben Status wie (23) oder (120). Diesen Schluss legt auch die Tatsache nahe, dass das Adjektiv *industriell* schwerlich als emphatisch gebraucht werden kann.

(14) Trotz der Tatsache, dass in der INdustriellen Welt ein Aufschwung stattfindet. (19)

(15) und (16) bzw. (37) und (33) enthalten betonungsgeshiftete Substantive; auch hier liegt ein zufälliger Fehler nahe. Die Sätze klingen nicht natürlich. Auch hier ist ein emphatischer Gebrauch quasi auszuschließen.

(15) Allgemein gilt, daß INteressenten sich an das Presseamt des deutschen Bundestages wenden können. (37)

(16) Der Eindruck, der hier entstanden ist, ist, dass es unterschiedliche sowjetische INterpretationen gibt. (33)

Außerdem gilt, dass HP nicht auf Wurzelsätze beschränkt sind, sondern, dass sie eben auch in hauptsatzähnlichen Nebensätzen auftreten können. Dazu zählen argumentrealisierende Sätze von Brückenverben (Verben des Sagens und Denkens (Reis 1997, Meinunger 2004 u.v.m.)) und sogenannte periphere Adverbialsätze (u.a. Frey 2011). Diese Prädikate erlauben zum Beispiel auch Verbzweit als wichtigste Eigenschaft (HP) unabhängiger deutscher Sätze. Interessanterweise lassen sich die Bergschen Belegsätze in Satzgefüge umformulieren, die den abhängigen Satz in Verbzweitgestalt beeinhalten. Das könnte ein Indiz sein, dass, falls die Sätze mit den Betonungswechseln doch akzeptabel sind, hauptsatzähnliche Strukturen vorliegen, bei denen man HP erwarten kann.

(17) Allgemein gilt, Interessenten können sich an das Presseamt des deutschen Bundestages wenden. (37′)

(18) Hier ist der Eindruck entstanden, es gibt / gebe unterschiedliche sowjetische Interessen. (33′)

Eine ähnliche Erklärung kann für (19) bzw. (88) angeboten werden. Hier liegt mit dem *als*-Nebensatz ein Teilsatz vor, der ebenfalls hauptsatzhafte Verbstellung aufweist: Das finite Verb befindet sich in der linken Satzklammer. Dass dieses HP mit einem potentiell weiteren – dem emphatischen – Betonungswechsel kombiniert auftritt, sollte nicht verwundern. Dennoch gilt auch hier, dass die emphatische Interpretation des Adjektivs wieder sehr fragwürdig ist und das Beispiel als Performanzfehler gewertet werden kann.

(19) Es sieht so aus, als würden die Atomaren Kurzstreckenwaffen auf den Schrotthaufen wandern. (88)

Interessanter sind folgende Fälle:

(20) obwohl er das gestern noch KAtegorisch ausgeschlossen hatte (109)

(20) bzw. (109) mit der emphatischen Initialbetonung ist ebenfalls unproblematisch. Dieser Teilsatz – ein konzessiver Nebensatz – gilt als ein sogenannter peripherer Adverbialsatz. Diese können problemlos HP – zum Beispiel Modalpartikeln – aufweisen (Coniglio 2011, Frey 2011), wie der (109) nachgebildete Satz in (21) zeigt.

(21) obwohl er das gestern ja noch kategorisch ausgeschlossen hatte. (109′)

In (22) bzw. (54) liegt Betonungsshift innerhalb eines infiniten Nebensatzes vor.

(22) Die Städteverwaltung hatte versprochen, die Protestaktionen als LEgal anzuerkennen. (54)

Es scheint plausibel, dass der Betonungswechsel hier nicht emphatisch, sondern kontrastiv gemeint ist. Das kann allein aufgrund des einzelnen Gesamtsatzes nicht entschieden werden, aber die Vermutung liegt nahe, dass hier eine Reaktion auf eine Aussage, in der das Wort *illegal* vorkommt, getroffen wird. Im Kontrast zu *illegal* wird *legal* dann auf seiner ersten Silbe betont. Somit wäre (20) bzw. (109) als Beispiel bei der Beantwortung der Frage „HP oder nicht?“ nicht einschlägig.

Zusammenfassend kann man aus Bergs Arbeiten nicht eindeutig extrapolieren, ob der einschlägige Betonungswechsel wurzelsensitiv ist oder nicht. Allerdings geht die Auswertung doch stark in die Richtung, dass es sich um ein HP handelt.

3.2 Gussenhovens Ergebnisse – Resultate des Elizitierens

Gussenhoven weist den expressiven oder, wie er es nennt, rhetorischen Effekt von Betonungswechseln (*stress retraction*) im psycholingustischen Experiment nach. Dazu werden Texte mit einer auffordernden Botschaft erzeugt, die dann von Testpersonen vorgelesen werden müssen. Die Texte enthalten eine Reihe von Adjektiven, die expressiv verwendet werden können und die von ihrer phonologischen Struktur her für einen Betonungswechsel geeignet sind. Der eine ausgewertete Text ist ein politischer Appell, in dem die Adressaten aufgerufen werden, an einer Protestaktion teilzunehmen. Der andere ist ein Werbetext, der zum Kauf eines Zahnpflegemittels animieren soll. Verschiedene Gruppen werden instruiert, aus welcher Perspektive sie den Text vorlesen sollen. So sollen einige Probanden den Text als Testsprecher lesen, damit ein angeblich neues Spracherkennungssystem trainiert und getestet werden kann, das gesprochene Sprache in verschriftete umwandelt. Eine andere Gruppe soll den Text so lesen, dass er möglichst effektiv bei den Adressaten ankommt, wieder eine andere Gruppe soll sich in die Lage eines PR-Teamchefs versetzen, der für den Text verantwortlich ist, ihn aber in der jetzigen Form für ungeeignet und stark verbesserungswürdig hält. (Es gibt noch eine weitere Gruppe.) Es ist gut nachzuvollziehen, dass die Leser jeweils unterschiedlich zum Textinhalt eingestellt sind. So sind die der ersten Gruppe wohl neutral, die der zweiten positiv, engagiert – die der dritten Gruppe reserviert oder negativ eingestellt. Gussenhoven kann zeigen, dass diejenigen, die hinter der Botschaft des Textes stehen (sollen), signifikant häufiger Betonungswechsel praktizieren. Leider sind die Texte wenig aussagekräftig, was die Typisierung von Stress-Shift als HP betrifft. Bis auf eine Ausnahme finden sich sämtliche potentiell akzentverschiebenden Adjektive in Hauptsätzen. Das könnte wieder eine Indiz für den HP-Status sein; allerdings kein starkes. Die einzige Ausnahme mit einem Adjektiv (bzw. zwei Adjektiven) in einem abhängigen Satz platziert diese(s) innerhalb eines restriktiven Relativsatzes. Der dem niederländischen Originalbeispiel entsprechende deutsche Satz würde lauten:

(23) Sesal ist nicht weniger als eine geniale Erfindung, die auf einfache, aber radikale Weise Schluss macht mit dem, was die Zahnmedizin als eine immanente Volkskrankheit betrachten musste: Karies.

Signifikant häufig wurde *radikaal* ‚radikal' geshiftet. Das ist aber wenig verwunderlich, liegt hier doch Kontrast zu *eenvoudig* ‚einfach' vor. Damit wird hier das Muster *LEgal – ILlegal* reproduziert. Allerdings wurde weitaus häufiger *strukturel(e)* (hier übersetzt mit *immanent*) geshiftet. Das Adjektiv war das wechselfreudigste im ganzen Werbesample überhaupt. Dieser Befund sollte dann zu denken geben, denn dieses Wort ist das am tiefsten eingebettete:

Es findet sich innerhalb eines restriktiven Relativsatzes, der seinerseits in einen restriktiven Relativsatz eingebettet ist[7]. Relativsätze weisen aber ziemlich problemlos HP auf. Als Fazit zeichnet sich Betonungswechsel wiederum als HP ab.

3.3 Neuere Ergebnisse – Interpretation der Resultate aus einer Informanten-Befragung

In einer kleineren Fragestudie habe ich einen Beurteilungsbogen erstellt, der vierzehn Sätze enthält. Alle Sätze waren (bzw. sind) minimal komplex; das heißt, sie bestehen aus einem Hauptsatz, in den jeweils ein Nebensatz eingebaut ist. Dieser Nebensatz enthält ein expressives Adjektiv, dessen emphatische Betonung durch Großschreibung angedeutet ist. Die Probanden wurde angehalten, auf einer Skala von 1 (vollkommen akzeptabel) bis 5 (unmöglich) zu beurteilen, wie gut die Sätze klingen (könnten). Die Versuchspersonen waren 17 Kollegen vom ZAS (Berlin) und 8 Studierende der Universität Leipzig, also insgesamt 25 linguistisch (vor-)gebildete Muttersprachler(innen). Erwartungsgemäß wurden zwei Sätze als die besten bewertet, die Nebensätze enthalten, die HP lizenzieren (in dem Fall realisiert durch die Verbzweitsellung). Das waren (24) mit der Durchschnittbewertung 1,18 und (25) mit der von 1,39.

(24) Claudia meint, Kerstin sei die Ideale Kandidatin. (1,18)

(25) Peter meint, der Auftritt im LK-Club gestern war SENsationell. (1,39)

Als schlechtester, d.h. quasi als unakzeptabel (3,9) wurde (26) bewertet.

(26) Wir bestreiten, dass die Tests und Versuche OPtimal gelaufen sind. (3,94)

Ähnlich schlecht war (27) mit der Bewertung 3,4.

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[7] Auf das Deutsche lässt sich das Datum schwerlich übertragen. Der Versuch, den niederländischen Originaltext zu übersetzen, gelingt durch das Adjektiv *immanent* nur mäßig. Gussenhoven, der seinen eigenen Probe-Text für den Aufsatz ins Englische übersetzt, lässt einen adjektivischen Modifikator gänzlich weg, was die Frage aufwirft, welchen Beitrag – semantisch und expressiv – das Adjektiv *strukturel* letztendlich hat.

Niederländisches Original: Sesal is zonder meer een geniale vinding, die op eenvoudige, maar radikale wijze een einde maakt aan wat de medische professie tot op heden als een strukturele volksziekte heeft moeten beschouwen: tandbederf!

Englische Übersetzung durch den Autor: Sesal is nothing less than a brilliant discovery, which in a simple but radical manner puts a stop to what the medical profession has so far had to consider an endemic disease: tooth decay!

(27) Peter hat sich gefreut, dass der Auftritt im LK-Club gestern SENsationell war. (3,4)

Dieses Bewertungsverhalten ist zu erwarten, wenn man den Betonungswechsel als HP begreift: *bestreiten* und *sich freuen* als faktive Verben lassen keine HP zu. Dennoch zeigen die Befragungsergebnisse, dass für den emphatischen Betonungswechsel keine Wurzelsensitivität besteht. Als nahezu genauso perfekt wie (24) und (25) wurden die Sätze (28) und (29) beurteilt:

(28) Hans kotzt es an, dass sein Nachbar PERmanent Krach macht. (1,21)

(29) Sie fand es gut, dass er OPtimal vorbereitet kam und KONstant bei der Sache war. (1,40)

Hier findet sich die emphatische Akzentuierung in einer Umgebung, die extrem HP-phob ist: innerhalb von Argumentsätzen zu faktiven Ausdrücken, in einem Fall sogar innerhalb eines Subjektsatzes.

Auch in zentralen Adverbialsätzen wurden Betonungswechsel von vielen Probanden als einigermaßen akzeptabel (2,4 bzw. 2,31) beurteilt.

(30) Klaus war im Klub, als Peter den PERfekten Auftritt hingelegt hat. (2,40)

(31) Weil Heike Raucher KAtegorisch ablehnt, wird Udo kaum ne Chance haben. (2,31)[8]

4 Ergebnis

Insofern kann man ganz eindeutig schließen, dass die emphatische Operation Betonungswechsel (*stress shift*) nicht wurzelsensitiv ist. Sie ist also kein Hauptsatzphänomen. Damit hat sie einen Expressivitäts-Status vergleichbar mit Diminutivbildung, Siezen vs. Duzen oder dem Beitrag expressiver Ausdrücke wie *Köter*, *Töle*, *Karre*, *verdammt*, *verflucht*, *beschissen*, *sahne-*, *hammer-* u.Ä.

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[8] Warum diese adverbialsatzhaltigen Sätze doch markierter sind als diejenigen mit Argumentsätzen – also als schlechter beurteilt werden, ist nicht klar. Möglichwerweise ist das Sample an Sätzen nicht groß genug, um zu generalisieren. Entscheidend ist jedoch, dass sie als relativ gut empfunden werden.

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ZASPiL 53 Laura Downing, Annie Rialland, Jean-Marc Beltzung, Sophie Manus, Cédric Patin & Kristina Riedel (eds.):

Papers from the Workshop on Bantu Relative Clauses. Contributions by Laura J. Downing, Annie Rialland, Cédric Patin, Kristina Riedel, Jean-Marc Beltzung, Martial Embanga Aborobongui, Lisa L.-S. Cheng, Al Mtenje, Larry M. Hyman, Francis X. Katamba, Shigeki Kaji, Charles W. Kisseberth, Emmanuel-Mossely Makasso, Sophie Manus and Sabine Zerbian.

ZASPiL 54 Natalia Gagarina, Annegret Klassert & Nathalie Topaj (eds.):

Sprachstandstest Russisch für mehrsprachige Kinder. Sonderheft.

ZASPiL 55 Laura J. Downing (ed.):

Questions in Bantu Languages: Prosodies and Positions. Contributions by Martial Embanga Aborobongui, Jean-Marc Beltzung, Laura J. Downing, Fatima Hamlaoui, Larry M. Hyman, Francis X. Katamba, Charles W. Kisseberth, Emmanuel-Mossely Makasso, Al Mtenje, Cédric Patin, Annie Rialland and Kristina Riedel.

ZASPiL 56 Natalia Gagarina, Daleen Klop, Sari Kunnari, Koula Tantele, Taina Välimaa, Ingrida Balčiūnienė, Ute Bohnacker & Joel Walters:

MAIN: Multilingual Assessment Instrument for Narratives (Part 1)

ZASPiL 57 Fatima Hamlaoui (ed.):

Proceedings of the Workshop BantuSynPhonIS: Preverbal Domain(s). Contributions by Lisa L.-S. Cheng & Laura J. Downing, Martial Embanga Aborobongui, Fatima Hamlaoui & Annie Rialland, Rozenn Guérois, Maarten Mous, Jasper De Kind, Joseph Koni Muluwa & Koen Bostoen, Lutz Marten and Fatima Hamlaoui.