**Some Remarks on the Fine Structure of Ideophones and the Meaning of Structure**

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## 1. The meaning of structure[1]

Hierarchical structure, a core property of human language, is closely connected to the expression of meaning. A well-known illustration of this close bond between structure and meaning comes from syntactic ambiguity: the linear string *John hit the dog with the stick* has two different interpretations, where each reading corresponds to a different constituent structure: *John [$_{VP}$ hit [$_{NP}$ the dog [$_{PP}$ with the stick]]]* —meaning: 'John hit the dog that was carrying the stick'— and *John [$_{VP}$ hit [$_{NP}$ the dog] [$_{PP}$ with the stick]]* —meaning: 'John hit the dog and he did so with the stick'. A second illustration of the meaning of structure comes from the semantic roles associated with noun phrases. For example, when the noun phrase *the dog* occupies the complement (i.e., direct object) position of a transitive verb, as in *John [$_{VP}$ hit the dog], the dog* is interpreted as the Theme-argument of the verb *hit*. However, when it occupies the subject position of the clause, as in *The dog bit John*, the semantic role of *the dog* is completely different; it then acts as an Agent-argument. A third illustration of the close relationship between structure and meaning comes from the interpretation of nouns like *dog*. When *dog* combines with the indefinite article *a*, or the numeral *one*, as in *The car hit a/one dog*, it typically gets a count-reading, which feels like the default interpretation. Interestingly, *dog* gets a mass-reading when it is part of a different nominal structure, specifically one lacking an indefinite article, or one in which it co-occurs with the quantifiers *much* or *some*, as in *Look, there is (some/much) dog on the bumper of your car!* A fourth and final illustration of the close relationship between structure and meaning comes from the following minimal pair: *This is [a good solution of the problem]*, and *This is [a hell of a problem]*. Even though the bracketed noun phrases look quite similar superficially, their meaning is very different. In the former bracketed noun phrase, *(of) the problem* acts as the complement of the noun *solution*; in the latter bracketed noun phrase, however, the noun *hell* has a (metaphorical)-evaluative meaning rather than a referential one. It is the speaker of the utterance that assigns negative valence (*hell*) to the referent of the noun *problem*. That these two nominal expressions have different underlying structures is clear from the fact that they display different sub-extraction behavior: It is impossible to say: *a problem which this is [a hell of (a) ~~which~~]*, but completely fine to say: *a problem which this is a good solution of ~~which~~]*; see Den Dikken (1998:186).

The search for the relationship between structure (including word order) and meaning also plays a role in Barnes & Ebert's article on the information status of iconic expressions in

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spoken language, specifically German ideophones such as *plitsch-platsch* in (1a) and co-speech gestures such as 'BIG' in the English sentence in (1b):

(1) a. Der Frosch geht *plitsch-platsch* die Treppe hoch. (German)
the frog goes splish-splash the stairs high
'The frog goes splish-splash up the stairs.'

b. Cornelia bought [a bottle]_BIG. (English)

They observe that the information status of such expressions can vary. Specifically, they can contribute more at-issue-content or less at-issue-content to the sentence in which they are embedded, where 'at-issue content' stands for information that is semantically, and also prosodically, (more) integrated into the clause, and accessible for denial by the interlocutor; 'non-at-issue content' stands for the opposite.

They argue that the extent to which ideophones and co-speech gestures have at-issue content is dependent on the distribution of these expressions within the clause (an external property), but also on the expression's inner structure (an internal property). For example, the German ideophone *plitsch-platsch* receives a more at-issue reading in clause-final position, as in (2), than in clause-internal position, as in (1a). Interlocutor B's denial, *Nein, das stimmt nicht, etc.*, yields a more felicitous reading for (2A) —'(?)' according to Barnes and Ebert— than it does for (1a) —'#?' according to Barnes and Ebert .

(2) A: Ein Frosch geht die Treppe hoch – *plitsch-platsch*.
'A frog goes up the stairs - splish-splash.'
B: (?)Nein, das stimmt nicht. Der Frosch geht doch völlig geräuschlos die Treppe hoch.
no that is-right not the frog goes but completely silently the stairs high
'No, that's not true. The frog goes up the stairs in complete silence.'

When the demonstrative element *so* co-occurs with the ideophone, as in (3), the at-issue-reading also becomes more felicitous; that is, the information denoted by speaker A's utterance *so plitsch-platsch* can be denied by speaker B.

(3) A: Ein Frosch geht *so plitsch-platsch* die Treppe hoch.
a frog goes so splish-splash the stairs high
'A frog goes like splish-splash up the stairs.'
B: (?)Nein, das stimmt nicht. Der Frosch geht doch völlig geräuschlos die Treppe hoch.

In short, the empirical data discussed by Barnes & Ebert seem to confirm the generalization that structure matters for meaning. In this article, I aim to provide some further substance to this generalization by further exploring the internal syntax and external syntax of ideophones

on the basis of data from Dutch.[2] The article is organized as follows: In Section 2, I propose that ideophones are so-called roots. Section 3 examines the inner structure of ideophones, and the way in which they are integrated into larger syntactic structures. In Section 4, it is proposed that ideophones are deictic expressions. Section 5 discusses the syntactic distribution of ideophones, and the way in which structure (external syntax and internal syntax of ideophones) interacts with meaning. Section 6 concludes this article.

## 2. Ideophones as Roots

With Dingemanse (2019:16), I assume that ideophones form "[…] an open lexical class of marked words that depict sensory imagery". Following Borer's Exo-Skeletal Model (2005) and work on Distributed Morphology (Halle & Marantz 1993, Harley & Noyer 1999), I assume that (Dutch) ideophones such as *pats* 'bang', *boem* 'bang', and *tsjoek* 'choo/chuff' (sound of a train/engine) are roots, that is, lexical vocabulary items that are not specified for categorial information or any other formal-syntactic features; see also Corver (2014; 2015). According to these theories, the categorial status of a "word" is determined by the structure on top of the root. In DM, for example, it is a categorial marker (e.g., n, v) that merges with the root and determines the categorial nature of the projected structure. For example, the English root *kiss* becomes a noun by merging with the nominalizer *n*, as in *n*+√*kiss,* and it becomes a verb by merging with the verbalizer *v*, as in *v*+√*kiss*. An important consequence of this analysis is that lexical categories are syntactic objects with a composite structure.

Along similar lines, an ideophonic root atom like *tsjoek* can be 'assigned' categorial status on the basis of locally available functional material. For example, the numeral *twee* and the plural morphology *–s* in (4a) define the nominal nature (and count interpretation) of the phrasal expression *twee tsjoeks*. The past tense morphology *–te* (i.e., T) in (4b) defines the verbal character of *tsjoekte*.

(4) a. Na [twee tsjoeks] stond de trein stil.
after two chuff.PL stood the train still
'After two chuffs the train stopped.'

b. De trein [tsjoekte] het station uit.
the train chuff.PST.3.SG the station out
'The train chuffed out of the railway station.'

It is clear that, in these examples, *tsjoek* is highly integrated, not only syntactically —being a finite verb, it undergoes the so-called Verb Second operation in the Dutch main clause; Koster (1975)— but also semantically —it forms a verbal predicate that takes *de trein* as its external argument— and phonologically (the voiceless dental /t/ of the past tense morpheme *-te* results from the preceding voiceless consonant /k/ at the end of the root).[3]

[2] In the present article, I will abstract away from co-speech gestures.
[3] An ideophone ending with a voiced consonant gets the past tense ending *-de*, as in (ib), where the root *vroem* ends with the voiced dental /m/:

## 3. On the syntactic integration of ideophones

The question arises as to how ideophones are integrated into the syntactic structure, when they have a superficially bare form, as in the examples in (5):

(5) a. De locomotief reed toen *tsjoek-tsjoek* het station uit.
the locomotive drove then chuff-chuff the station out
'The locomotive then drove, chuff-chuff, out of the station.'
b. De auto is toen *boem* tegen de boom aangereden.
the car is then bang into the tree crashed
'The car then, bang, crashed into the tree.'

In current generative grammar, it is assumed that there is one major computational device for building structure, namely Merge (Chomsky 1995). Merge constructs syntactic objects from lexical material and from the syntactic objects that it has already constructed. For example, merge of the lexical items *the* and *dog* yields the syntactic object (noun phrase) *the dog*, which, in turn, can be combined with the preposition *at*, yielding the prepositional phrase *at the dog*, as in *He looked at the dog*.

If Merge is the computational device for building syntactic structure, then arguably it is also involved in syntactically integrating ideophones such as *tsjoek-tsjoek* and *boem* in larger syntactic structures. Evidence in support of the syntactic integration of ideophones and, more generally, what are traditionally called 'interjections', comes from the structure-dependent nature of the relationship between the interjection/ideophone and other material within the clause. As shown in James (1973: chapter 4), interjections "refer" to a string of words that form a constituent. They do not "refer" to a linear sequence of words that forms a non-constituent. James gives the following examples to illustrate this structure dependence:

(6) a. Rick persuaded, *oh*, Wendy that she shouldn't come.
b. Rick persuaded, **oh, Wendy** that she shouldn't come.
c. #Rick persuaded, **oh, Wendy that she shouldn't come**.

(7) a. Princess Anne, *oh*, launched a ship and Prince Charles went to a reception.
b. Princess Anne, **oh, launched a ship** and Prince Charles went to a reception.
c. #Princess Anne, **oh, launched a ship and Prince Charles went to a**

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(i) a. Jan reed, vroem, de garage uit.
Jan drove, vroom, the garage out
'Jan drove, vroom, out of the garage.'
b. Jan vroemde de garage uit.
'Jan drove out of the garage with high speed.'

**reception**.

The natural interpretation of sentence (6a), which contains the hesitation marker *oh*, is that the speaker is selecting Wendy over other people, e.g. Mary and Joanna. In other words, *oh* and *Wendy* go together, as expressed by 'boldface' in (6b). A reading in which the speaker is choosing between 'Wendy that she shouldn't come' and 'Joanna that the party would start at 8 pm' is infelicitous; see (6c). We see the same contrast in (7): in saying *oh*, the speaker is selecting one of the things that Princess Anne did, as in (7b), where *oh* goes together with the VP *launched a ship*. As indicated by (7b), the speaker cannot be selecting whether to say "launched a ship and Prince Charles went to the reception" or "opened an agricultural show and the Queen Mother reviewed the Twelfth Hussars"; see James (1973:115).

Similar illustrations of structure dependence can be given for ideophones. Consider, for example, the Dutch example in (8a):

(8) a. Jan is *boem* tegen een boom aangereden en Marie is tegen een muur aangereden.
Jan bang into a tree crashed and Marie is into a wall crashed
'Jan, bang, crashed into a tree, and Mary crashed into a wall.

b. Jan is, **boem, tegen een boom aangereden** en Marie is tegen een muur aangereden.

c. #Jan is **boem tegen een boom aangereden en Marie is tegen een muur aangereden**.

The sound information depicted by *boem* only applies to the (eventive) VP *tegen een boom aangereden*, as represented in boldface in (8b), but not to the linear sequence and non-constituent *boem tegen een boom aangereden en Marie is tegen een muur aangereden*. For (8c) to become felicitous, *boem* must be repeated in the second conjunct: *…en Marie is boem tegen een muur aangereden*.

Now that we have shown that ideophones, and interjections more in general, display structure-dependent behavior, let us examine in more detail how they get integrated into the larger syntactic structure. As my starting point, I take the proposal that bare roots (e.g. √*car*) cannot participate in syntax "on their own"; see Chomsky (2013). They must have a minimal amount of functional structure (e.g., nP, as $[_{nP}\ n+\sqrt{car}]$) to be visible for syntactic computation. If so, also bare ideophones like *boem*, as in (8), and hesitation markers like *oh*, as in (6)-(7), must have functional structure on top of the root. The question then arises as to what exactly this functional structure is. I tentatively propose that these superficially bare elements are "small" noun phrases, that is nPs, and possibly sometimes DPs. Evidence in support of their nominal nature comes from a number of phenomena that deserve further investigation. First of all, it turns out that many interjections (including ideophones and exclamations) display the element *-s* at the end. Consider the following examples:

(9) a. *God(s)*! Wat een domme opmerking!
god-s what a stupid remark
'Gosh, what a stupid remark!'

b. Jan dook *hup(s)* het water in.
Jan dove "jump" the water into
'Jan dove, splash, into the water.'

c. De muis kwam *floep(s)* uit zijn holletje.
the mouse came whoosh out.of its hole-DIM.
'The mouse came, whoosh, out of its little hole.'

In line with Corver (2021), I take this element *-s* to be a minimal phonological realization of the categorial head $n^o$. It is the same *-s* that we find in nominal forms such as *iet-s mooi-s* 'something beautiful', and forms such as *langzaam-pje-s* (slow-DIMINUTIVE-s, 'slowly') and *op-een-s* (at-one-s, 'at once, suddenly'), which are, traditionally, taken to be adverbs but should be analyzed as hidden nominal expressions. Under this reinterpretation, *opeens*, for example, has the following structure: $[_{PP}$ *op* $[_{QP}$ *een* $[_{nP}$ $n^o$ *(= -s)* $[\sqrt{TIME}]]]]$, where *TIME* is a silent "noun" (see Kayne 2003). Following this line of analysis, *floeps* has the derivation in (10a). I assume that the superficially bare form *floep* has the same nominal structure, i.e. nP, but that the root remains *in situ* and that *n* does not surface; see (10b). Thus, the categorial head *n* only surfaces when there is a phonological host for the suffixal element *-s*.

(10) a. $[_{nP}$ $n^o$ $[\sqrt{floep}]]$ → $[_{nP}$ $\sqrt{floep}+n^o$ (= -s) $[\sqrt{\sout{floep}}]]$ (= floeps)
b. $[_{nP}$ $n^o$ $[\sqrt{floep}]]$ (= floep)

Notice by the way that this -s-pattern is also found at the end of other types of interjective expressions: [4]

(11) a. Drommels! (devil-s; 'By Jove! By gum!')
b. Deksels! (deuced-s; 'the Deuce!')
c. Duivels! (devil-s; 'the Deuce!')
d. Mieters! (damned-s; 'Super/Wizard!)'
e. Bliksems! (lightning-s; 'What the blaze!')
f. Donders! (thunder-s; 'The devil!')
g. Jakkes! (yuk-s; 'Yuk!')
h. Hebbes! (have-es; 'Gotcha!')

A second reason for saying ideophones such as those in (9) are nominal forms, comes from diminutive formation. Some of these interjections can be combined with *-ie*, which is a more informal variant of the diminutive morpheme *-je*:

(12) a. Nu ben ik hier, en….. *floepsie*, nu ben ik daar!

[4] Also in English, many interjections end with *-s*:

(i) Zounds! Zoinks! Aw shucks! Oops! Bollocks! Gadzooks! Drats! Yoicks! Hoicks!
Jeepers! Yikes! Yipes! Yikers! Diddums! Jings! (Scotland), Whoops! Rats! Whoops a daisies! Cheers!

I propose that this *-s* is a manifestation of the categorial head *n*, which turns a root into a noun.

now am I here and whoosh-DIM now am I there
'Now I am here, and … whoosh, now I am there!'

b. Jan moest de bal vangen maar, *oepsie*, hij was te laat!
Jan had.to the ball catch but oops-DIM he was too late
'Jan had to catch the ball, but, oops, he was too late!'

c. *Godsie*, wat een mooie auto![5]
Gosh-DIM what a beautiful car
'Gosh, what a beautiful car!'

Following De Belder (2011), I assume that there is a functional layer within the noun phrase, encoding 'diminutive meaning' (De Belder's 'SizeP'); see also Corver (2021). This functional layer is located on top of nP, as in (13):

(13) $[_{\text{SizeP}}$ -ie $[_{\text{nP}}$ $n^o$ (= -s) [√floep]]]

The form *floep-s-ie* is derived by moving the root to $n^o$, yielding *floeps*, and subsequently raising *floeps* to *-ie*, yielding *floepsie*. In short, the ideophone *floepsie* has a composite inner structure.

A third potential argument in support of the nominal status of (apparently) bare ideophones, comes from reduplicative patterns of the following type:

(14) a. Jan viel [holder *de* bolder] naar beneden.
Jan fell tumble *de* tumble to downstairs
'Jan fell tumble tumble from the stairs.'

b. Jan sloeg [roemer *de* boem] op de trommel.
Jan hit da-dum-da-dum on the drum
'Jan hit da-dum-da-dum on the drum.'

The ideophones in (14) feature the "linking element" *de*, which is homophonous with the non-neuter definite article *de*, as in *de zolder* 'the attic' and *de bloem* 'the flower'. Interestingly, similar reduplicative patterns can be found as proper names in children's verses and songs (15a), and also as a kind of replacement name if you have forgotten someone's real name (15b).

(15) a. En [Hoeper de poep] zat op de stoep. Kom laten we vrolijk wezen.
And hoop *de* poop sat on the sideway come let us happy be
'And Hoeper de poep sat on the sidewalk. Come let's be happy!'

b. Heb jij uh —hoe heet ie ook alweer— [Huppel de pup] nog gezien?
have you uh how is.called he PRT again huppel de pup yet seen
'Did you see uh —what's his name again?— Huppel de pup?

[5] The form *Gossie* is also found, also in reduplicative patterns: *Gossie possie* or *Gossie mijnie*.

The reduplicative proper names in (15) are reminiscent of complex proper names consisting of a first name and a second common noun that designates the individual's profession, as in *Jan de tuinman* (Jan the gardener), and *Jan de professor* (Jan the professor). I tentatively propose that all these *X de Y*-patterns instantiate a Determiner Phrase (i.e. DP), with *de* being a definite article (i.e. D), and the pre-article phrase and the post-article phrase occupying D's specifier-position and complement-position, respectively. Thus:[6]

(16) a. [$_{DP}$ [$_{nP}$ holder] [$_{D'}$ de [$_{nP}$ bolder]]]
b. [$_{DP}$ [$_{nP}$ Hoeper] [$_{D'}$ de [$_{nP}$ poep]]]
c. [$_{DP}$ [$_{nP}$ Jan] [$_{D'}$ de [$_{nP}$ tuinman]]]

Having given some empirical support for a nominal analysis of ideophones such as *floep, floeps* and *floepsie,* let us return to the question of how ideophones, and other interjective material, become part of the (clausal) syntactic structure. I propose that it is the structure building operation Merge which combines the ideophone, a phrasal expression, with its "host", that is, the phrasal constituent whose content is "specified" by the ideophone. Thus, the sequence *boem tegen een boom aangereden* in (17) has the following representation:[7]

(17) [$_{VP}$ [$_{nP}$ *boem*] [$_{VP}$ tegen een boom aangereden]]

Being part of the VP, *boem* can move along with *tegen een boom aangereden* in so-called VP-topicalization construction:

(18) [$_{VP}$ [$_{nP}$ *Boem*] [$_{VP}$ tegen een boom aangereden]] was Jan!
bang into a tree crashed was Jan
'And, bang, crash into a tree, John did!'

That *boem* can move along with the fronted VP shows again that it forms a structural unit (a constituent) with its structural "host" (i.e., the VP).

## 4. The deictic nature of ideophones

[6] The element *-er* often appears in Dutch (and also English; *Jeepers!*) interjections. It is tempting to analyze this element as a nominalizing element as well, possibly n(P). Interestingly, *er* occurs as a nominal(izing) element in a number of contexts:

(i) a. Ik heb *er* toen drie gekocht. (quantitative *er*)
I have there then three bought
'I bought three of them.'
b. een babyboom*er* (nominalizing suffix)
a babyboomer
'a (baby)boomer'

[7] As an alternative analysis, one might propose that the ideophone occupies the specifier position of a designated functional head, as in (i):

(i) [$_{FP}$ [$_{nP}$ *boem*] [$_{F'}$ F [$_{VP}$ tegen een boom aangereden]]]

In Wilkins (1992: 131ff), it is argued that interjections are indexical in the sense of being context-bound (see also C.S. Peirce (1955:119)). Just like the indexical pronouns *I, you, this, that,* and the indexical adverbs *here* and *now*, they must be tied to the actual speech moment, that is, the situation of utterance. For example, the ideophone *zjoef* 'whoosh' in (19) references some relation between the falcon's wing movements and the flying event at the moment of utterance.

(19) Kijk, de valk vliegt *zjoef* over het hoofd van de valkenier heen!
look the falcon flies whoosh over the head of the falconer PRT
'Look, the falcon flies, whoosh, over the falconer's head!'

The question arises as to whether this indexical meaning has consequences for the syntactic structure of ideophones, and also other types of interjections. As noted in Barnes & Ebert's article, German ideophones such as *plitsch-platsch* can co-occur with the demonstrative element *so,* as exemplified in (3), repeated here as (20):

(20) Ein Frosch geht *so plitsch-platsch* die Treppe hoch.
A frog goes so splish-splash the stairs high
'A frog goes like splish-splash up the stairs.'

Similar examples can be found in Dutch; see Corver (2015):

(21) a. De valk vloog *zo zjoef* over mijn hoofd heen.
the falcon flew so whoosh over my head PRT
'The falcon flew, whoosh, over my head.'
b. Jan reed *zo van knal* tegen de boom aan.
Jan drove so of bang against the tree PRT
'Jan drove like bang against the tree.
c. De kikker kwam [zo van floeps] tevoorschijn.
the frog came so of whoops out
'The frog, whoops, appeared all of a sudden.

I take the demonstrative element *zo* to be the referencing element which establishes a relation with the contextual situation. The element *zjoef* designates the sound contents of the deictic element *zo*. More specifically, I assume that *zo zjoef* represents a small-clause-like structure, with *zo,* which I take to be a (pro)nominal expression (Corver 2023), as the small clause subject, and the nP *zjoef* as the small clause predicate. Following Den Dikken (2006), I call this small clause representation 'Relator Phrase':

(22) $[_{RP}$ zo $[_{R'}$ R $[_{nP}$ zjoef]]]

I take the (optional) element *van* in (21b, c) to be a functional preposition that functions as an exponent of the Relator-head:

(23) $[_{RP}$ zo $[_{R'}$ R (= van) $[_{nP}$ zjoef/floeps]]]

Interestingly, patterns of the type *van + ideophone* are also possible, as exemplified in (24):

(24) a. Hij sloeg *van boem tjak boem tjak boem* op de trommel.
he hit of boom chag boom chag boom on the drum
b. Mijn hart bonkt weer *van boemboem boemboem*.
my heart bounced again of boom-boom boom-boom

I assume that the representations of the ideophones in (24) contain a silent demonstrative ZO, as in (25):[8]

(25) $[_{RP}$ ZO $[_{R'}$ $[_{R}$ van] $[_{nP}$ boem boem]]]

The silence of demonstrative *ZO* in (25) is not unexpected. In colloquial spoken language, other deictic elements can also be absent at the sound surface, if their contents (meaning) is contextually recoverable. Some illustrations are given in (26):

(26) a. Ga weg, *(jij)* idioot! ($2^{nd}$ person pronoun)
go away you idiot
'Go away, you idiot!'
b. Kijk! *(Daar)* staat een ooievaar in de wei! (locative *daar*)
look there stands a stork in the meadow
'Look! A stork is standing in the meadow.'

In summary: ideophones that appear as "satellite elements" (e.g., *zjoef* in (19)) in a clause have inner structure. Specifically, the root (e.g., √*zjoef*) is embedded within a (nominal) functional layer, which minimally equals nP but possibly includes DP (see the linking element *de*). Furthermore, the "functionally dressed" ideophone acts as a predicative element within a small-clause representation (RelP), that encodes a predicative relationship between an overt (*zo*) or silent (*ZO*) demonstrative element which establishes a (deictic) connection with the utterance context.

## 5. The distribution of ideophones

Having a more refined picture of the inner structure of "satellite" ideophones, let us now have a look at their distributional behavior (i.e., external syntax). As noted in Barnes and Ebert, German ideophones can occupy different positions within the clause; see, for example, (1a) and (2A). As exemplified in (27), also Dutch ideophones can occur in different positions:

[8] Capital letters, as in ZO, are used to represent silent (i.e. unpronounced) lexical items.

(27) a. De valk vloog *zjoef* over mijn hoofd heen.
the falcon flew whoosh over my head PRT
'The falcon flew whoosh over my head.'
b. (?)*Zjoef* vloog de valk over mijn hoofd heen.
c. De valk vloog over mijn hoofd heen, *zjoef*.

In (27a), *zjoef* occupies a clause-internal position. In (27b) and (27c), on the contrary, *zjoef* occupies a left-peripheral position and a right-peripheral position, respectively. The question arises as to whether *zjoef* in (27b) occupies the left-peripheral position as a result of a displacement operation (so-called I(nternal)-Merge). Specifically, could the ideophone *zjoef* have been moved from a clause-internal position, as in (27a), to a left-peripheral position, as in (27b)? Schematically:

(28) [$_{CP}$ *Zjoef* [$_{C'}$ vloog [$_{TP}$ de valk ~~*zjoef*~~ over mijn hoofd heen ~~vloog~~]]].

As represented in (28), *zjoef* occupies the [Spec,CP]-position after displacement, and the finite verb is located in the C(omplementizer)-position as a result of the so-called Verb Second operation (Koster 1975).

The existence of the minimally different pattern in (29), however, raises the question as to whether the pattern in (27b) really involves displacement of the ideophone *zjoef* to [Spec,CP]. In (29), the locative d(emonstrative)-word *daar* 'there' immediately precedes the finite verb, and thus seems to occupy [Spec,CP], the position immediately preceding the finite verb. If *daar* occupies [Spec,CP], the left peripheral ideophone arguably does not occupy the left-peripheral position as a result of movement (i.e., I-Merge). As an alternative analysis, one might propose then that *zjoef* is base-generated,[9] that is E(xternal)-merged, with the clausal structure as depicted in (29):[10]

(29) [$_{CP}$ *Zjoef* [$_{CP}$ daar [$_{C'}$ vloog [$_{TP}$ de valk ~~daar~~ over mijn hoofd heen ~~vloog~~]]]].
whoosh there flew the falcon ~~there~~ over my head PRT
'Whoosh, the falcon flew over my head.'

That the ideophone *zjoef* is not input to I-merge, is also suggested by the fact that long distance dependencies are ill-formed:

[9] This structural representation is reminiscent of (hanging topic) left dislocation patterns such as *John, he's real smart* (Kayne 1994: 78). Kayne assigns the following abstract structure to this type of construction, where *John* is base-generated in the left periphery of the clause; see also Cinque (1990) for Italian clitic-left dislocation.

(i) [$_{XP}$ John [$_{X'}$ X$^{o}$ [he's real smart]]]

[10] Again, as an alternative analysis, one might propose that the ideophone occupies the specifier position of a designated functional head in the left-periphery of the clause, as in (i):

(i) [$_{FP}$ *Zjoef* [$_{F'}$ F [$_{CP}$ daar [$_{C'}$ vloog [$_{TP}$ de valk ~~daar~~ over mijn hoofd heen ~~vloog~~]]]]].

(30) **Zjoef* dacht Peter dat de valk over mijn hoofd heen vloog.
whoosh thought Peter that the falcon over my head PRT flew
'Peter thought that the falcon flew whoosh over my head.'

In this example, one cannot interpret the ideophone *zjoef* as providing information about the sound associated with the falcon's flying over my head. Under a movement analysis, in which *zjoef* orginates in the embedded clause and moves upward in a successive-cyclic fashion, such long-distance readings are (incorrectly) predicted to be possible. Under an E-merge analysis, the impossibility of the long-distance reading may be accounted for in terms of some sort of locality constraint: an ideophone (i.e., the RelP representing the ideophone) can only stand in a meaningful relationship with the phrase (e.g. CP or vP) with which it has merged directly.

So far, I have argued that clause-internal *zjoef* (27a) and left-peripheral *zjoef* are base-generated in their surface position. What about (27c), in which *zjoef* occurs clause-finally? For the analysis of this pattern, I base myself on Kayne's (1994:78) analysis of the English Right-Dislocation pattern in (31a):

(31) a. He's real smart, John (is).
b. [[He's real smart] [$X^o$ [John (is) ..]]]

Since, right-adjunction is not possible in his Antisymmetry theory, Kayne proposes that *John* is not a right-adjoined constituent. Rather, he proposes that *John (is)* in (31a) is a reduced clause that has *he's real smart* left-adjoined to it, as in (31b). As indicated, Kayne assumes that there is an empty functional head $X^o$ mediating that adjunction.

In the spirit of Kayne's analysis, I propose that the pattern in (27c), in which *zjoef* occurs in final position, has the base structure in (32a), where I abstract away from the mediating functional head. A slightly more refined representation is the one in (32b), where *zjoef* is represented as a Relator Phrase:

(32) a. [[De valk vloog over mijn hoofd heen] *zjoef*]
b. [[De valk vloog over mijn hoofd heen] [$_{RP}$ ZO [$_{R'}$ R [$_{nP}$ zjoef]]]]

Importantly, *zjoef* (i.e. the Relator Phrase) is the "matrix expression" and the preceding clause (*De valk vloog over mijn hoofd heen*) the subordinate or embedded expression.

Having more refined structural representations of the sentences in (27) may help us in further exploring the subtle information-structural meaning differences between the various patterns discussed in Barnes & Ebert's article. I will leave this quest for the exact relationhip between the structural placement of ideophones and their informational (i.e., meaning-related) contribution at the clausal level for future research.

## 6. Conclusion

Hierarchical structure is a core property of human language. It is a property that is closely connected to the expression of meaning. The main aim of this article was to show that Dutch

ideophones, even though often "simple" at the (sound) surface, have a complex inner structural organization. For discovering the subtle meaning contributions of ideophones, I think it is important to lay bare the hidden inner structure of ideophones. The same holds for the clausal structure in which the ideophone functions (or appears to function) as a "satellite constituent". The various distributional patterns of ideophones correspond to specific positions in the hierarchical structure of the clause. These syntactic positions arguably matter for the informational contribution made by ideophones.

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