

Motivating the Composition of Afrikaans Reduplications: a Cognitive Grammar Analysis

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Abstract¹

This contribution is aimed at an explanation of the motivation for the composition of Afrikaans grammatical and onomatopoeic reduplications within a cognitive grammar framework. It is illustrated that we can adequately describe the formation of reduplications in terms of four valence factors, viz. correspondence, profile determinacy, autonomy/dependency asymmetry, and constituency. By claiming that reduplications in Afrikaans are motivated largely by metonymies like MORE OF FORM FOR MORE OF CONTENT, WHOLE THING FOR A PART OF THE THING, TWO PROCESSES FOR AN INDEFINITE NUMBER OF PROCESSES, and PRODUCT FOR PRODUCER, an indication of the relation of metonymy to grammar is given, thereby offering a psychologically plausible and natural description and explanation of the motivation for Afrikaans reduplications.

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1. This contribution is based on work that I have done for my PhD thesis. My promoters, Arie Verhagen, Daan Wissing, and Adelia Carstens, have contributed immensely to shaping my thoughts. Parts of this contribution have also been presented at the 7th International Cognitive Linguistics Conference (Santa Barbara, USA, in July 2001), and I would like to thank colleagues for useful comments, especially David Tuggy, Ted Sanders, and Bertus van Rooy. Special thanks also to Günter Radden, who has commented extensively on earlier versions of this contribution, and provided me with new insights regarding the relationship between reduplication and metonymy. Needless to say that all errors and fallacies remain mine.

Keywords: Afrikaans, autonomy, cognitive grammar, composition, constituency, correspondence, dependence, metonymy, profile determinacy, reduplication

1. Introduction

In the debate on arbitrariness vs. motivation in language, examples of reduplication are often listed to illustrate iconicity in language (see for example Keller 1998; Kimenyi 1989 and Tai 1993, among others). It is argued that “form and meaning resemble each other in a quantitative respect, which is to say that the form of reduplications is in a sense non-arbitrary or motivated” (Botha 1988: 3). This claim has been further supported from a cognitive-semantic perspective by suggesting that there is a general metonymic relationship between form and meaning in the sense that WORDS FOR THE CONCEPTS THEY EXPRESS (Lakoff and Turner, 1989: 108). On the basis of this metonymy, the implication MORE OF FORM FOR MORE OF CONTENT is justified, with reduplications providing an excellent case in point (Lakoff and Johnson 1980: 127-128). However, Kövecses and Radden (1998: 74) point out that the relation of metonymy to grammar has not been worked out in enough detail and depth, and that it deserves further attention. With special reference to this relationship between metonymy and grammatical constructions, the motivation for the *composition* of Afrikaans reduplications is explored in this contribution.

Two types of Afrikaans reduplications will be considered here, viz. so-called *grammatical reduplications* (examples (1), (2), and (3)), and *onomatopoeic reduplications* (examples (4) and (5)).²

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2. A third type of reduplication can also be identified, viz. echo-word reduplications, as in *ietsie-bietsie* ('very little/a dash of/a touch of'), and *woerts-warts* ('very quickly; moving very swiftly'). Unlike grammatical reduplications and onomatopoeic reduplications, echo-word reduplications can be considered a more prototypical case of composition. In echo-word reduplications an autonomous constituent combines with a dependent constituent (where the dependent constituent exists on the grounds of its relation to the autonomous constituent), a profile determinant, as well as the order in which the constituents combine, can be identified (i.e. the first component structure dictates the mere existence of the second one, and determines the profile of the composite structure), and only partial correspondence is present on the phonological pole, and no correspondence on the semantic pole (i.e. in monosyllabic words corre-

- (1) *Dit het net **plek-plek** gereën.*
It has only place-place rained
'It has only rained in some places' (i.e. distributive)
- (2) *Hy **lek-lek** oor sy droë lippe.*
He lick-lick over his dry lips
'He repeatedly licks his dry lips' (i.e. iterative)
- (3) *Hulle het **een-een** deur die opening geklim.*
They have one-one through the opening climbed
'They climbed one-by-one through the opening' (i.e. serial ordering)
- (4) ***hoep-hoep** (onomatopoeic reduplication)*
hoop-hoop
'*Upupa africana*' (name of a common South African garden bird)
- (5) ***kwê-kwêvoël** (onomatopoeic reduplication)*
kwê-kwê bird
'*Camaroptera brachyura*' (name of a South African singing bird)

From a diachronic point of view there is no consensus on whether Afrikaans reduplication should be considered a legacy of seventeenth-century Dutch dialects spoken in the Cape (e.g. Kempen 1962), whether it should be seen as a product of creolisation and languages in contact (e.g. Raidt 1981), or whether it is of spontaneous origin (e.g. Scholtz 1963). Nevertheless, synchronically speaking reduplication in Afrikaans is a fully productive means of word formation (Bouman 1939: 346; Kempen 1969; Raidt 1981; Scholtz

spondences between the two component structures seem to exist in the coda, and either the onset or nucleus of the component structures (e.g. *woerts-warts*, *tjoef-tjaf*, *leer-schmeer* – variation indicated in bold), or in the case of multi-syllabic words, in the coda of the first syllable as well as all other subsequent syllables, with variation in either the onset or nucleus of the first syllable (e.g. *ietsie-bietsie*, *kêrel-schmêrel*). Considering that echo-word reduplications are motivated mainly on phonological grounds, in the sense that correspondences between the two component structures are specifically created to express a certain meaning, it falls outside the aims and scope of this contribution.

1963), found in both spoken and written language, irrespective of register or genre.

In contrast to previous descriptions of the Afrikaans reduplication construction that have been done from a more structuralist or generative perspective (e.g. the seminal book of Botha (1988), *Form and Meaning in Word Formation: A Study of Afrikaans Reduplication*, which is situated in the Galilean style of inquiry), this study is theoretically and methodologically conducted within a cognitive grammar framework (cf. Langacker 1987; 1991a; 1999). Being part of the cognitive-functional paradigm, it is assumed in this framework that language is an integral part of human cognition (Langacker 1987: 12-13). The general strategy is to study language structure not as an autonomous system, but rather as a reflection of our general cognitive capacities: autonomous language-specific structures are postulated as a last resort, only after the possibilities of finding functional or cognitive motivations for linguistic forms are exhausted (Geeraerts 1995: 111-112; Wilcox 2001).

One of the implications of this assumption is that “language structure should be characterized relying only on mental abilities and phenomena that are either well known or easily demonstrated” (Langacker 1998: 2). In his paper “A dynamic usage-based model”, Langacker (1999) recognises five basic and very general psychological phenomena that are essential to language, viz. entrenchment, composition, comparison (and as a special case of it categorisation), abstraction (with schematisation a special case of it), and association (with symbolisation being a special case of it) (see also Sinha 2001). In our description of a certain usage event (i.e. a contextualised language utterance, characterised in full phonetic and conceptual detail), we should therefore pay attention to at least these five psychological capabilities. As Langacker (1999: 106) puts it:

A usage event has many facets susceptible to categorization by conventional linguistic units, which in CG [cognitive grammar] are limited to semantic, phonological, and symbolic structures. The potential categorizing units are entrenched to varying degrees and form a vast, structured inventory through relationships of symbolization, composition, and categorization. (Langacker 1999: 106)

Against this background, I will discuss the motivation for the composition of Afrikaans reduplications by giving a detailed analysis of some representative examples of grammatical and onomatopoeic reduplications.³

2. Composition in cognitive grammar

The ability to conjoin simple structures (or units or component structures) to form structures that are more complex (or composite structures) is one of the most basic cognitive capabilities of the human mind. Research from various fields has indicated that composition is central to problem-solving (Holyoak 1995), text production (Bereiter and Scardamalia 1987), concept formation (Franks and Bransford 1971), memory (Solso and McCarthy 1981), as well as other cognitive activities (e.g. Anderson 1983; Murphy 1988). Pinker (1997: 564) even holds the opinion that “the mind owes its power to its syntactic, *compositional*, combinatorial abilities” [my emphasis – GBVH]. From a cognitive grammar perspective, a high premium is therefore also put on the importance of composition in language usage.

Langacker (1999: 94) defines composition in language as the integration of two or more component structures to form a composite structure. This integration of component structures in composite structures can be expressed as ([A] [B])C, where [A] and [B] are conventionalised units that have not combined before, and (C) is the novel composite structure that is produced when the two component structures integrate.⁴ For example: in a compound like *dompelkursus* ‘crash course’ (Basson and Van Niekerk 2002: 17), the two component structures [DOMPEL] ‘plunge’ and [KURSUS] ‘course’ are combined to form the novel composite structure (DOMPELKURSUS). It is important, though, to keep in mind that (DOMPELKURSUS) is not merely the combination of [DOMPEL] and [KURSUS]. When two or more structures combine in a complex structure, an integrated composite structure is formed, which is a unit in its own right and which can not be strictly reduced to the

3. For the purposes of this contribution, I will only focus on the composition of Afrikaans reduplications. For a characterisation of Afrikaans reduplications in terms of the other four identified psychological phenomena, see Van Huyssteen (2000).

4. Square brackets are used to indicate the unit status of a structure (i.e. conventionalised structures), while parentheses are used to depict novel utterances/structures.

sum of its component structures. A view of partial compositionality is therefore held within this framework (Langacker 1997: 247-248), implying that one should not only describe the component structures or composite structures of grammatical constructions, but also their mode of integration and the relations between the different structures (Goldberg 1995: 16; Langacker 1987: 277).

The potential combination of component structures as well as the probability of combination is largely determined by the internal structure of component structures (Taylor 1990: 525). The valence potential of a certain component structure (i.e. the potential of a structure to combine with another structure) is governed by its semantic structure, while the manner how the structure combines in valence relations is somewhat a function of linguistic convention (Langacker 1991b: 167). These valence relations are dictated by four primary valence factors, namely (1) correspondence, (2) profile determinacy, (3) conceptual and phonological autonomy and dependency, and (4) constituency.

With regard to *correspondence*, we have to identify the corresponding substructures of the different component structures. The commonalities of the substructures serve as instructions for the superimposing of the specifications of the corresponding substructures to combine in a composite structure. Such correspondences might be sought on both the phonological and the semantic poles (Langacker 1987: 277-278; 1988c). With regard to the different kinds of reduplication in Afrikaans, I will illustrate that correspondences on the semantic and/or phonological pole are a matter of degree: depending on the extent of correspondences between two component structures, different forms of reduplication emerge.

When two component structures combine, the resulting composite structure usually inherits the *profile* of one of the component structures (e.g. in a compound like *gemakstoel* 'comfort chair', the composite structure inherits the profile of *stoel* 'chair'). One should therefore ask: Given the profiles of the component structures in a valence relation, what will be the profile of the composite structure? (Langacker 1987: 288). With reference to profile determinacy, Langacker (1987: 291-292) remarks that there is no absolute way to predict which component structure will feature as profile determinant; in fact, he says, "it makes no real difference whether we say that all of the component structures are profile determinants or that none of them are." In the case of both lexical and onomatopoeic reduplications, I will demonstrate that neither of the component structures can be identified as the profile determinant, as both component structures are identical. Both component

structures contribute equally to the profile structure of the composite structure, and we can therefore say either that both component structures are profile determinants, or that there is no profile determinant present.

The third valence factor is *conceptual and phonological autonomy and dependency*, which pertains to the phenomenon where a substructure can make internal reference to another structure, either semantically or phonologically. A structure that is characterised in terms of another structure and consequently makes salient internal reference to that structure, is called a dependent structure. An independent structure, on the other hand, is a phonological or semantic structure that exists in its own right, without presuming another structure. Although this A/D asymmetry is common in grammatical structure (as in the case of onomatopoeic reduplications), nothing precludes a relation of *mutual* dependence or guarantees that there will be a dependency relation between the two structures (Langacker 1987: 300), with grammatical reduplications an excellent case in point.

The last valence factor in terms of which we should describe the composition of Afrikaans reduplications is *constituency*, i.e. the order or sequence in which component structures combine to form more elaborate composite structures (Langacker 1987: 310). In the case of reduplications, one would suppose that constituency is rather non-essential, as the sequence of combination is irrelevant when two identical component structures combine. However, I will show that the level of constituency may have an effect on the meaning of reduplications.

Let us consider these statements in more detail, firstly with regard to grammatical reduplications, and then pertaining to onomatopoeic reduplications.

3. The composition of Afrikaans reduplications

3.1. Defining the Afrikaans reduplication construction

Based on the definitions of grammatical constructions in construction grammar (Goldberg 1995) and cognitive grammar, we can define the Afrikaans reduplication construction as:

a word-formation construction where a dependent/independent morpheme [X/x] combines with an identical morpheme [X/x] to form a word [X-X/x-x], of which the meaning [X-X] is not strictly predictable from the two component structures [X/x] and [X/x].

In simple terms this means that in a reduplication like *speel-speel* in (6), the meaning of ‘easily’ is not predictable from the meaning of *speel*.

- (6) *Ons het **speel-speel** die werk afgehandel.*
 We have play-play the work finished
 ‘We have finished the work easily’

Following from this working definition we can formulate the construction schema for the reduplication construction in Afrikaans as $[[[X/x][X/x]]X-X/x-x]$, instantiating example (6) as $[[[SPEEL/speel][SPEEL/speel]]SPEEL-SPEEL/speel-speel]$, where $[SPEEL-SPEEL]$ means ‘easily’.

3.2. Grammatical reduplications

With reference to grammatical reduplications in Afrikaans, the combination of two completely identical component structures can be considered to be a special (i.e. non-prototypical) case of composition. What I mean is this: there is one hundred percent *correspondence* between all the substructures of the two component structures, on both the phonological and semantic pole; the two component structures are in no way conceptually or phonologically *dependent* on each other; and the *order* in which the constituents combine can not be shown. However, the peculiar thing about grammatical reduplication is that, unlike in the case of prototypical compositions (like compounds), the profile of the composite structure (i.e. the reduplicated form) diverges slightly from the profiles of the two identical component structures (i.e. the non-reduplicated forms), despite the fact that neither of the component structures can be identified as the *profile determinant*. This holds, in my opinion, the key to the motivation for the existence of grammatical reduplications: a speaker employs the reduplication construction when s/he wants to express a meaning that differs from the conventional meaning of the non-reduplicated form.

Consider the following examples of *nou* ‘now’ and its reduplicated form *nou-nou* ‘a moment ago/in a moment’:

- (7) *Hy is **nou** hier.*
 He is now here
 ‘He is here now’

- (8) *Hy sal **nou-nou** hier wees.*
 He will now-now here be
 ‘He will be here in a moment’
- (9) *Hy was **nou-nou** hier.*
 He was now-now here
 ‘He was here a moment ago’

To understand the reduplicated form better, let us first reflect on the semantic structure of the component structure [NOU/nou], as in example (7). As an adverb of time *nou* ‘now’ is conceptualised as a stative relation: it specifies a relative position (the landmark), situated somewhere between PAST (trajector₁) and FUTURE (trajector₂). In Figure 1, the specification of the relative position is indicated with a thick line around the profiled stative relation. For similar cases, Langacker (1987: 222) indicates that all facets of the scene are co-activated and simultaneously available, and that its conception involves summary rather than sequential scanning.

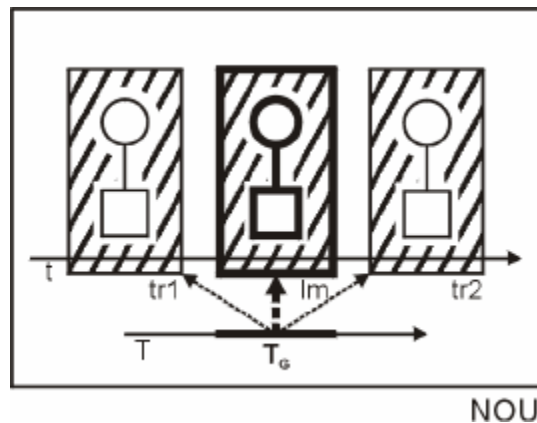


Figure 1. *nou* ‘at this moment; now’

Given *nou* as a deictic expression, it involves that [NOU] is grounded and that there must be some reference to a ground element within its scope of predication (Langacker 1987: 126). [NOU] refers to the time of speaking, and is grounded in the processing time (arrow *T* in Figure 1), rather than in the conceived time (arrow *t* in Figure 1). The subjective grounding in the processing time is indicated as *T_G* within the predicate scope, which, due to

summary scanning, can also refer to PAST and FUTURE, but rather identifies PRESENT as the primary figure, i.e. the prominent substructure in the scene around which the scene is organized (Langacker 1987: 120). Prototypically *nou* therefore has the sense ‘at this moment; now’.

Although not very frequently, it might happen within certain contexts that [NOU] also profiles either FUTURE or PAST. Compare the following examples (taken from a popular Afrikaans concise dictionary):

- (10) *Ek moet **nou** Woensdag die vergadering bywoon.*
 I must now Wednesday the meeting attend
 ‘I have to attend the meeting this coming Wednesday’
- (11) *Hy is **nou** net weg.*
 He is now just left
 ‘He has left just now’

In example (10) the semantic/pragmatic context determines that *nou*, as a time indicator, profiles a position somewhere in the near future through [WEDNESDAY]’s elaboration of the elaboration site of [NOU] (i.e. moments in the conceived time, indicated by the hatched parts in Figure 1). In example (11), on the other hand, [NOU] is elaborated by [NET], where PAST is part of the semantic structure of [NET], rendering the meaning ‘recently, in the past’.

Let us now look at the reduplicated form of *nou*, as in examples (8) and (9), where *nou-nou* profiles a stative relation either somewhere in FUTURE (see Figure 2) or somewhere in PAST (see Figure 3).

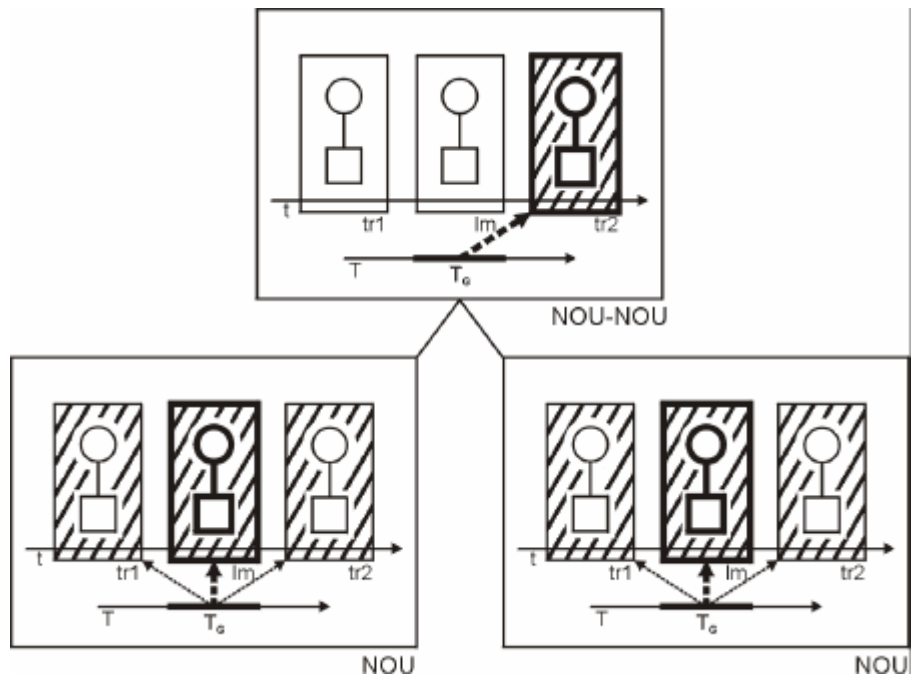


Figure 2. *nou-nou* 'in a moment' – see example (8)

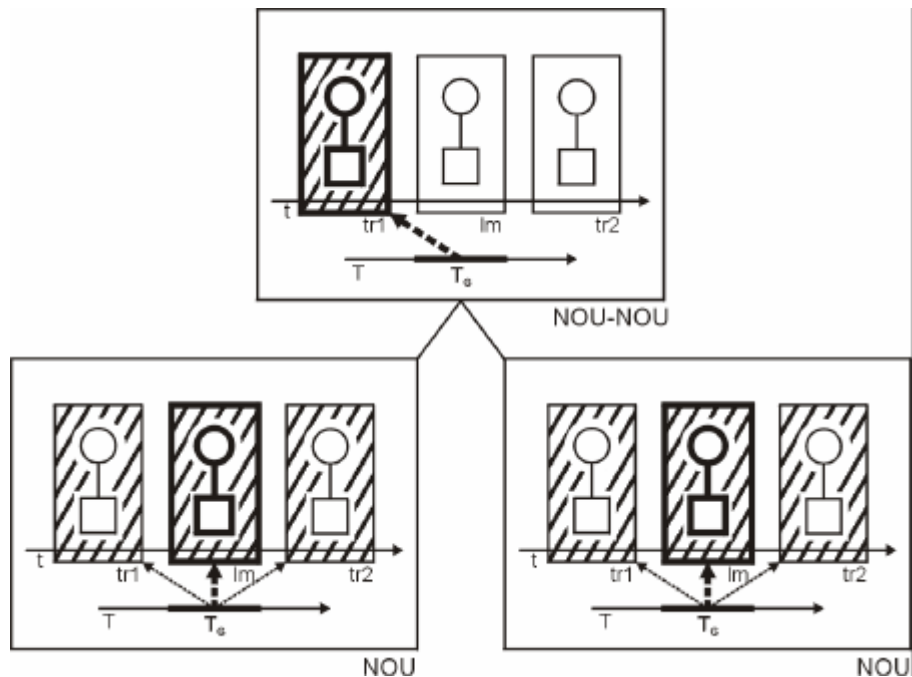


Figure 3. *nou-nou* ‘a moment ago’ – see example (9)

What is important is that part of the internal conceptual structure of [NOU-NOU] can by no means profile PRESENT, contrary to the case of [NOU]. Compare the following sets of examples, where the second example in every set is impossible in Afrikaans:

- (12) a. *Is jy **nou** al moeg?*
Are you now already tired?
‘Are you already tired now?’
b. **Is jy **nou-nou** al moeg?*
Are you now-now already tired?
- (13) a. *Het hy **nou** reeds probleme met sy motor?*
Have he now already problems with his car?
‘Does he now already have problems with his car?’
b. **Het hy **nou-nou** reeds probleme met sy motor?*
Have he now-now already problems with his car?

It should be clear at this stage that the profile of the composite structure of grammatical reduplications diverges slightly from those of the component structures: when two component structures with exactly the same profile combine in a complex composite structure, a different part in the same scene is profiled as a result (in other words FUTURE or PAST in Figures 2 and 3). By means of the reduplication construction, the speaker can therefore express a meaning that differs from the original meaning. This difference in meaning is motivated, in my opinion, by the metonymy MORE OF FORM FOR MORE OF CONTENT, where the MORE OF CONTENT that the reduplication achieves in this case is that of distancing away from PRESENT to either FUTURE or PAST (i.e. a profile shift in the conceived time).

Let us now look at another form of profile shift, which involves the “re-categorisation” of a perfective verb as an imperfective verb. Here, the effect of the metonymy MORE OF FORM FOR MORE OF CONTENT is that of extending a perfective process in time and thereby construing it as imperfective. Compare the following example:

- (14) *Hy lek-lek oor sy droë lippe.*
 He lick-lick over his dry lips
 ‘He is licking his dry lips repeatedly’

[LEK/lek] ‘lick’ usually profiles the perfective process of ‘passing one’s tongue over to taste/moisten/clean’ by means of sequential scanning. The reduplicated form *lek-lek*, however, only profiles an imperfective process, thus changing the punctual verb into a progressive verb. In my opinion, this sense of ‘iterativity’ or ‘continuation’ is motivated iconically by reduplication plus *metonymy*, which may be stated as TWO PERFECTIVE PROCESSES FOR AN INDEFINITE NUMBER OF PROCESSES. In languages like English or Dutch, this imperfective process is indicated by means of grammatical aspect (e.g. *be licking* in English, or *aan het likken zijn* in Dutch). Afrikaans, on the other hand, uses the reduplication construction to achieve this goal (i.e. to express grammatical aspect).

Likewise, the verb [BRUL/brul] ‘roar’ normally profiles a perfective process but, due to the impact of reduplication plus the above-mentioned metonymy, the perfective process is imperfectivised by (BRUL-BRUL/brul-brul), as can be seen in example (15):

- (15) *Die leeu brul-brul weg.*

The lion roar-roar away
 ‘While roaring, the lion left’

The perfective process of roaring described by *brul* may involve one or several completed acts of roaring; the imperfective process described by *brul-brul* involves an indefinite number of roars. Therefore, in Figure 4, the temporal profiles in the component structures are represented as discrete line segments, indicating the boundedness of the process. In contrast, the temporal profile in the composite structure is shown with a series of dots at each end to indicate the expansibility of the imperfective process (see also Langacker 2000: 224 for a detailed description of the differences between perfective and imperfective processes, as well as an alternative way to depict these processes in quasi-pictorial diagrams).

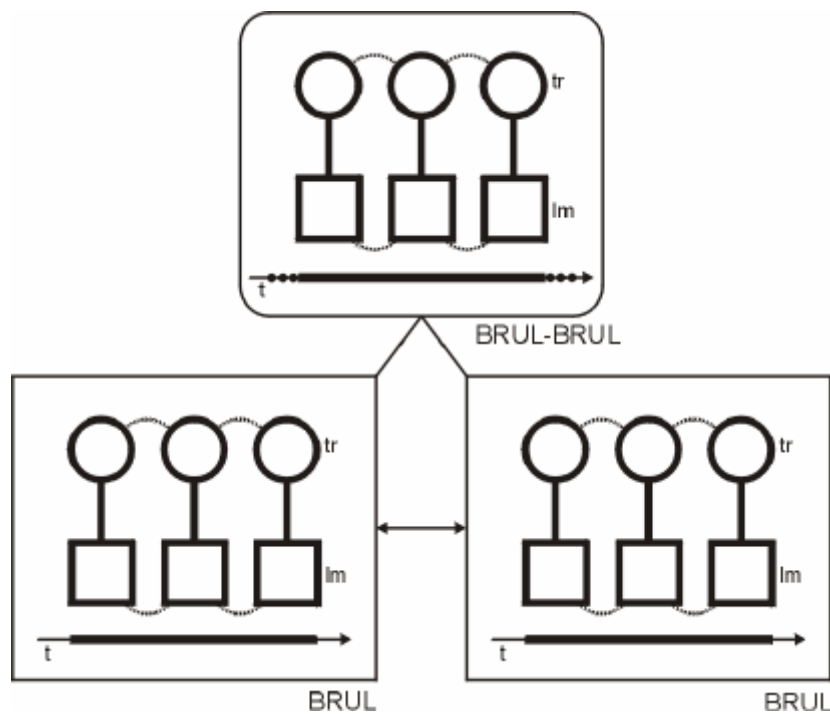


Figure 4. *brul-brul* ‘roaring’ (imperfective process)

We can also apply this analysis on *vat-vat* in example (16) (based on an example by Botha 1988):

- (16) *Die dokter vat-vat aan die swelsel.*
 The doctor touches-touches on the swelling
 'The doctor touches the swelling repeatedly/again and again'

The verb [VAT/vat] 'touch' usually profiles a transitive process that is inherently unmarked for aspectual specification (i.e. it can profile either a perfective or an imperfective process). In the case of the reduplication [VAT-VAT/vat-vat], we once again see an imperfectivising shift based on the metonymy TWO PROCESSES FOR AN INDEFINITE NUMBER OF PROCESSES, as [VAT-VAT] can only profile an imperfective process (without the possibility to profile a perfective process). The sense of 'repetition' can be ascribed to the fact that the use of the progressive aspect turns a punctual verb into an activity, thereby giving [VAT-VAT/vat-vat] a 'repetitive' sense (which is also the communicative function of this reduplication).

Additional to this 'repetitive' sense, Botha (1988: 94) correctly suggests that a sense of 'attenuation' could also be ascribed to example (16), rendering the meaning 'The doctor touches the swelling hesitantly/tentatively/non-intensely' (for an elaborate discussion of this meaning extension, see Van Huyssteen 2000). Whichever sense is activated, will obviously be dictated by the semantic/pragmatic context. However, the level of constituency can have a narrowing effect on which meaning is activated. Consider the following examples:

- (17) *Die dokter het aan die swelsel gevat-vat.*
 The doctor has on the swelling touched-touch
 'The doctor touched the swelling hesitantly/repeatedly'
- (18) *Die dokter het aan die swelsel gevat-gevat.*
 The doctor has on the swelling touched-touched
 'The doctor touched the swelling repeatedly'

In example (17), in which *gevat-vat* is the past tense form of [VAT-VAT/vat-vat], either the sense 'repetition' or the sense 'attenuation' could be ascribed to the reduplication, depending on the usage context. This is not unexpected, as the past tense form of the reduplication is sanctioned by the highly entrenched and productive schema for past tense formation in Afri-

kaans, viz. [PST+X/ge+x], thus motivating [PST+VAT-VAT/ge+vat-vat], with both the senses of the infinitive form available for activation. [VAT/vat] and [VAT/vat] are combined on the lowest level of constituency (see Figure 5), so that “word-status” is assigned to the composite structure, which is therefore then accessible for further morphological elaboration (i.e. by inflectional, derivational or syntactic structures).

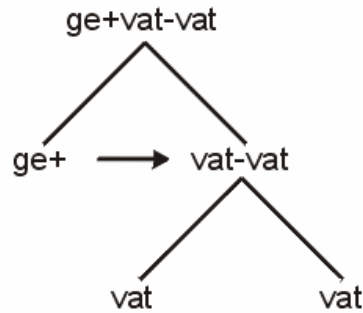


Figure 5. Constituency of *gevat-vat* ‘touched hesitantly/repeatedly’

In example (18), on the other hand, *gevat-gevat* only has the meaning ‘repeatedly’, and not ‘hesitantly’. This semantic narrowing can be ascribed to the level of constituency: [VAT/vat] and [PST/ge+] combine firstly, to form the past tense verb [PST+VAT/ge+vat], which profiles a perfective process that has taken place somewhere in the past (i.e. a completed perfective process). When [PST+VAT/ge+vat] and [PST+VAT/ge+vat] combine on the next level of constituency (see Figure 6), the metonymy TWO PROCESSES FOR AN INDEFINITE NUMBER OF PROCESSES motivates the interpretation of only ‘repeatedly’, since each of the processes have already been completed (i.e. TWO **COMPLETED** PROCESSES FOR AN INDEFINITE NUMBER OF **COMPLETED** PROCESSES). We can therefore establish that when a speaker unambiguously wants to express repetition, the constituency is motivated by the TWO PROCESSES FOR AN INDEFINITE NUMBER OF PROCESSES metonymy, and sanctioned by the schema ([PST+X][PST+X]PST+X-PST+X), rather than by the ([PST][X-X]PST+X-X) schema, which can lead to ambiguous interpretations.

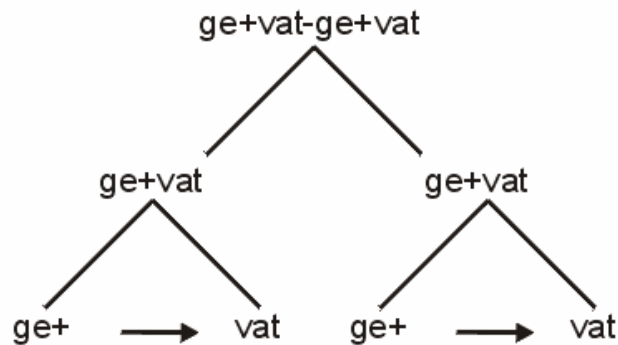


Figure 6. Constituency of *gevat-gevat* ‘touched repeatedly’

Let us look at one last example where reduplication plus metonymy leads to some form of “recategorisation”. Cases of nominalisation via metonymy are found when two identical numerals combine in the reduplication construction. Compare the following examples, taken from Botha (1988: 36):

- (19) **Drie-drie** storm deur die hek.
 Three-three storm through the gate
 ‘Groups of three storm through the gate’
- (20) **Tien-tien** verlaat die kamer.
 Ten-ten leave the room
 ‘Groups of ten leave the room’

Our conceptualisation of numerals like [DRIE] and [TIEN] entails that they represent a highly specified atemporal relation where the landmark is a specific point on the counting scale, and the trajector is either a continuous or a discrete entity. This entity also represents the elaboration site of the concept, which must be elaborated by some other structure. However, in the case of mutual elaboration where two identical component structures combine, the entity (i.e. the trajector in this case) is extended by means of metonymy to an indefinite number of groups of three.

In conclusion: it should be clear from the above analyses that the profile shift that occurs in grammatical reduplications can be ascribed to the effects of metonymisation, i.e. MORE OF FORM FOR MORE OF CONTENT. This view

of profile shift is fully compatible with Moravcsik's view that there are subtle, though definite, differences between the meanings of reduplicated and non-reduplicated forms:

[...] I have found no clear example of an unreduplicated constructions' meaning properly including the meaning of the corresponding reduplicated one, or of the two overlapping [...] (Moravcsik 1978: 316)

Langacker accounts for this kind of phenomenon by stating that "there is no claim to the effect that the composite structure is fully compositional or derives in any mechanical way from the semantic specifications of its components" (Langacker 1987: 292). Instead, "it is more appropriate to say that the component structures *motivate* aspects of the composite structure, and that the degree of motivation is variable" (Langacker 1987: 292).

3.3. Onomatopoeic reduplications

Onomatopoeic reduplications, just like grammatical reduplications, can also be considered a special case of composition, in the sense that there are also one-to-one *correspondences* between the component structures on the phonological pole (and therefore by implication also on the semantic pole), and that the *order* in which the constituents combine can also not be shown. As is the case with grammatical reduplications, the profile of the composite structure differs from the profiles of the two identical component structures, despite the fact that neither of the component structures can be identified as the *profile determinant*. However, unlike grammatical reduplications, the component structures in onomatopoeic reduplications show a high degree of conceptual and phonological dependence, in the sense that onomatopoeic interjections can be considered highly dependent morphemes. The claim here is that the motivation for the existence of onomatopoeic reduplications lies in the fact that speakers use the reduplication construction to refer *metonymically* to birds (e.g. *hoep-hoep* 'Upupa africana'), mammals (e.g. *dik-dik* 'Rhynchotragus damarensis'), fish (e.g. *gor-gor* 'Pomadasys bennetti'), or plants (e.g. *kêr-kêr* 'Erica peltata') in terms of some onomatopoeic resemblance with the sound-producing referent.

To elucidate this claim, let us firstly look into conceptual and phonological autonomy and dependence in more detail. Two factors mainly determine the measure of dependency between two structures when they combine in a valence relation, namely *salience* and *elaboration*. Consider the following definition of dependency by Langacker (1987: 300):

One structure, D, is dependent on the other, A, to the extent that A constitutes an elaboration of a salient substructure within D.

It is therefore important for us to determine which substructure of [D] is salient, and whether this salient substructure is elaborated by [A]. The salience (i.e. the degree of prominence) of a substructure can be based on two factors, namely the *degree of centrality* and the *probability of activation*.

The centrality of a substructure is described in terms of the extent to which a specification is conventional, generic, intrinsic, and characteristic (Langacker 1987: 150). A substructure that is more probably activated with a given structure, also enjoys greater prominence, and must therefore be identified. Other factors that could determine the salience of a substructure (e.g. part vs. whole, inanimate vs. animate, etc.) should of course also be taken into account.

When the salient structure/substructure has been identified, we should also determine whether this structure is elaborated by another structure. *Elaboration* can be seen as the instantiation of a schema, where a special case of the schema is rendered more precisely and in more detail (Langacker 1987: 68). Prototypically, when two components [D] and [A] enter into a valence relation, a substructure of [D] necessarily corresponds with the profile of [A]. This substructure is called the *elaboration site* (or e-site), because of its relation of schematicity with [A] and the fact that it is elaborated by [A]. In short, we must determine which schematic, dependent substructure (the e-site) is elaborated by a more specified, autonomous structure.

Let us consider some onomatopoeic reduplications in terms of these factors. In examples like *hoep-hoep* 'Upupa africana', *tinktinkie* 'Cisticola rufilata', and *kwê-kwêvoël* 'Camaroptera brachyura', the elements HOEP, TINK and KWÊ can be seen as onomatopoeic interjections (i.e. the sounds of birds). A/D asymmetry should therefore be an important valence factor in the combination of these elements in more complex structures, due to the high degree of dependence on the phonological pole. Such dependency becomes clear from a unipolar analysis of these elements as component structures of the conventionalised expressions *hoep-hoep*, *tinktinkie*, and *kwê-kwêvoël*. Following the fact that these component structures only occur in peripheral instances in other expressions than the conventionalised expressions, we can conclude that these component structures are prototypically mutually dependent.

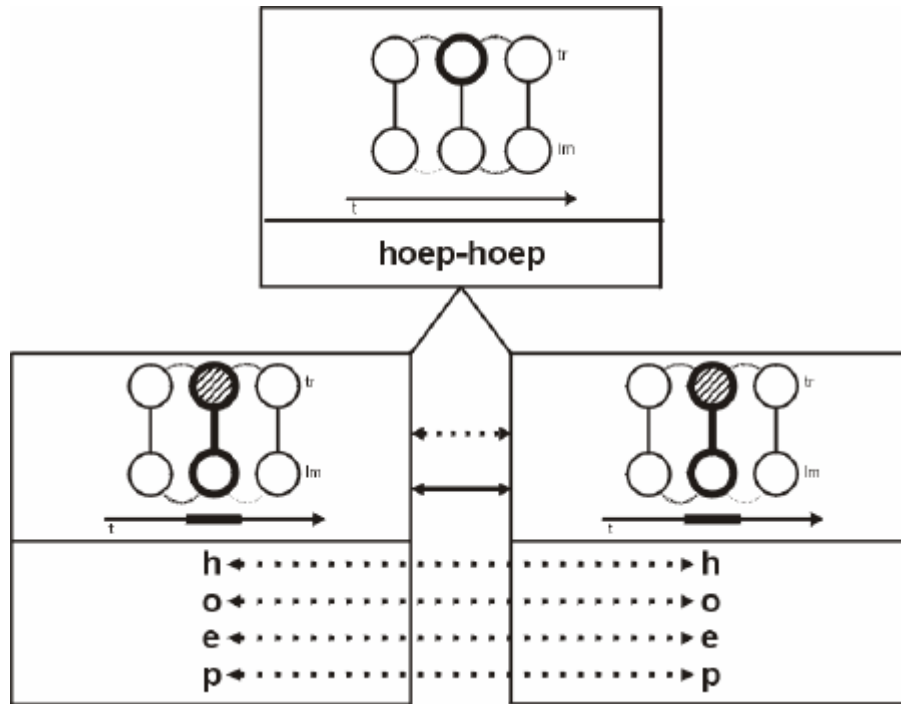


Figure 7. *hoep-hoep* ('hoop-hoop; *Upupa africana*')

If we then say that [HOEP/hoep] and [HOEP/hoep] are mutually dependent, it implies that both contain a salient substructure that is reciprocally elaborated by the other component structure. As an onomatopoeic interjection (e.g. when used to imitate the sound of the bird), [HOEP/hoep] is represented as a profiled moment of a perfective process, where the trajector is the producer of the sound (see Figure 7). If we measure the salience of this substructure (i.e. the trajector/the producer/the bird) in terms of centrality and probability of activation, we can conclude with certainty that it has a high degree of salience:

- *Degree of centrality*: In terms of the DEFINING PROPERTY FOR CATEGORY metonymy (Kövecses and Radden 1998: 56-57), the relation between the sound and the bird that produces the sound is strongly *conventionalised*; it is *generic* to the extent that speakers know that it refers to a kind of bird, without necessarily having any specialised knowledge about

the species; it is *intrinsic* to the relation, in the sense that it is unlikely that another entity but this specific species will produce this sound; and it is *characteristic* of the produced sound, in the sense that there is a strong mutual association between the bird and the sound it produces.

- *Probability of activation*: In the metonymic relation between the bird and the sound it produces, the PRODUCT is more salient than the PRODUCER is, i.e. we use the sound that the bird produces (the PRODUCT) to refer to the bird (the PRODUCER), and not vice versa; thus rendering the metonymy PRODUCT FOR PRODUCER (SOUND FOR PRODUCER OF SOUND). Although Kövecses and Radden (1998: 56-57) claim that the PRODUCT FOR PRODUCER metonymy does not seem to exist (based on the HUMAN OVER NON-HUMAN and ANIMATE OVER INANIMATE cognitive principles), onomatopoeic reduplications are in my opinion clear examples to justify the existence of this metonymy.

Due to the strong metonymic association between the PRODUCER (the bird) and the PRODUCT (the sound), the trajector of [HOEP] (i.e. the thing in the process) will function as the e-site of the structure. In terms of our definition of a dependent structure, one therefore expects that [HOEP/hoep] should be elaborated by an autonomous structure. However, in the case of onomatopoeic reduplications, where two identical, dependent component structures combine, the e-site of the one component serves as elaboration of the e-site of the other component, and vice versa. We can therefore speak of mutual elaboration when two identical dependent structures combine in a valence relation. The mutual identity is indicated in Figure 7 by means of the double-headed line arrow, while the double-headed elaboration arrow indicates that the two substructures elaborate each other mutually.

To summarise: the distinction between autonomous and dependent elements is important for our description of the reduplication construction. It was illustrated that, in the case of dependent structures, the dependent substructures in the dependent components elaborate each other mutually, resulting in an autonomous composite structure. I have also shown that onomatopoeic reduplications are motivated by various metonymic relations, like DEFINING PROPERTY FOR CATEGORY, and PRODUCT FOR PRODUCER. With reference to Kövecses and Radden, we can then conclude that these metonymies “provide speakers with natural ‘cognitive links’ that enable them to move from one entity ... to another ... without any effort or even unconsciously. They are a part of the mutual knowledge that speakers share and

rely on in creating and understanding (reduplications) with ease” (Kövecses and Radden 1998: 61).

4. Summary and conclusion

At the outset of this contribution, I aimed at an explanation of the motivation for the formation of Afrikaans reduplications by giving a detailed characterisation of composition in the reduplication construction, with special reference to the relationship between metonymy and grammatical constructions.

It was illustrated that grammatical reduplications are motivated by the fact that the reduplicated form is used to express a meaning that differs from the conventional meaning of the non-reduplicated form, as well as in the absence of another means to convey this meaning (e.g. in Afrikaans, grammatical aspect is often expressed by grammatical reduplications). The existence of onomatopoeic reduplications is motivated by the fact that speakers use the reduplication construction to refer metonymically to referents, in terms of some onomatopoeic resemblance with the referent.

I have indicated that we can adequately describe the formation of reduplications in terms of four valence factors, viz. correspondence, profile determinacy, autonomy/dependency-asymmetry, and constituency. On the grounds of these valence factors, we can conclude that grammatical reduplications can be seen as quite an uncharacteristic case of composition, while onomatopoeic reduplications are more prototypical, and echo-word reduplications even more so (see footnote 1).

I have also illustrated that reduplications in Afrikaans are motivated largely by metonymies like more of form for more of content, whole thing for a part of the thing, two processes for an indefinite number of processes, defining property for category, and product for producer. I hope to have given an indication of the relation of metonymy to grammar, in that I have shown how the grammatical properties of words and constructions are changed when they are used metonymically. I believe that such an analysis gives us a psychologically plausible (Langacker 1998: 2) and natural (Langacker 1987: 13-14) description and explanation of the motivation for Afrikaans reduplications.

References

- Anderson, John R.
1983 *The Architecture of Cognition*. Cambridge: Harvard University Press.
- Basson, Joey and Frans Van Niekerk (eds.)
2002 *Wilde Woordeboek 2*. [Wild Dictionary 2]. Pretoria: LAPA Uitgewers.
- Bereiter, Carl and Marlene Scardamalia
1987 *The Psychology of Written Composition*. Hillsdale: Erlbaum.
- Botha, Rudi P.
1988 *Form and Meaning in Word Formation: A Study of Afrikaans Reduplication*. Cambridge: Cambridge University Press.
- Bouman, A.C.
1939 Over reduplicatie en de woordsoorten. [About reduplication and part-of-speech]. *De Nieuwe Taalgids*. 33: 337-353.
- Franks, J.J. and Bransford, J.D.
1971 Abstraction of visual patterns. *Journal of Experimental Psychology*. 90: 65-74.
- Geeraerts, Dirk.
1995 Cognitive Linguistics. In: Jef Verschueren, Jan-Ola Östman, and Jan Blommaert (eds.), *Handbook of Pragmatics: Manual*, 111–116. Amsterdam: John Benjamins.
- Goldberg, Adele E.
1995 *Constructions*. Chicago: University of Chicago Press.
- Holyoak, Keith J.
1995 Problem solving. In: Daniel N. Osherson (gen. ed.), *An Invitation to Cognitive Science: Volume 3 – Thinking*, 267-296. Cambridge: MIT Press.
- Keller, Rudi.
1998 *A Theory of Linguistic Signs*. Oxford: Oxford University Press.
- Kempen, Willem.
1962 *Woordvorming en funksiewisseling in Afrikaans*. [Word Formation and Class-Changing in Afrikaans]. Kaapstad: Nasionale Boekhandel.
1969 *Samestelling, afleiding en woordsoortelike meerkunksionaliteit in Afrikaans*. [Compounding, Derivation and Part-of-Speech Multi-Functionality in Afrikaans]. Cape Town: Nasou.
- Kimenyi, Alexandre.
1989 Reduplication and binomial expressions in English: A case of syntagmatic iconicity. In: Irmengard Rauch & Gerald F. Carr.

- (eds.), *The Semiotic Bridge: Trends from California*, 347-365, Berlin: Mouton de Gruyter.
- Kövecses, Zoltan and Radden, Günter.
 1998 Metonymy: Developing a cognitive linguistic view. *Cognitive Linguistics*. 9: 37-77.
- Lakoff, George and Johnson, Mark.
 1980 *Metaphors We Live by*. Chicago: University of Chicago Press.
- Lakoff, George and Turner, Mark.
 1989 *More than Cool Reason*. Chicago: University of Chicago Press.
- Langacker, Ronald W.
 1987 *Foundations of Cognitive Grammar Volume I: Theoretical Prerequisites*. Stanford: Stanford University Press.
 1988 The nature of grammatical valence. In: Brygida Rudzka-Ostyn (ed.), *Topics in Cognitive Linguistics*, 91-125, Amsterdam: John Benjamins.
 1991 a *Foundations of Cognitive Grammar Volume II: Descriptive Application*. Stanford: Stanford University Press.
 1991 b *Concept, Image, and Symbol: The Cognitive Basis of Grammar*. Berlin: Mouton de Gruyter.
 1997 The contextual basis of cognitive semantics. In: Jan Nuyts and Eric Pederson (eds.), *Language and Conceptualisation*, 229-252. Cambridge: Cambridge University Press.
 1998 Conceptualization, symbolization and grammar. In: Michael Tomasello (ed.), *The New Psychology of Language: Cognitive and Functional Approaches to Language Structure*, 1-39. Mahwah: Lawrence Erlbaum.
 1999 *Grammar and Conceptualization*. Berlin: Mouton de Gruyter.
- Moravcsik, Edith.
 1978 Reduplicative constructions. In: Joseph H. Greenberg (ed.), *Universals of Human Language: Vol 3 – Word structure*, 297-334. Stanford: Stanford University Press.
- Murphy, Gregory L.
 1988 Comprehending Complex Concepts. *Cognitive Science*. 12: 529-562.
- Pinker, Steven.
 1997 *How the Mind Works*. London: Penguin.
- Raidt, Edith H.
 1981 Oor die herkoms van die Afrikaanse reduplikasie. [On the Origin of the Afrikaans Reduplication]. In: Ampie J. Coetzee. (ed.), *Hulsels van kristal. [Envelopes of crystal]*, 178-189 Cape Town: Tafelberg.

- Scholtz, Johannes du P.
1963 *Taalhistoriese opstelle: Voorstudies tot 'n geskiedenis van Afrikaans*. [Essays on the History of Language: Preliminary Studies towards a History of Afrikaans]. Pretoria: Van Schaik.
- Sinha, Chris.
2001 Re: Chomsky. Contribution on Cogling (cogling@ucsd.edu). 5 November at 22:13. E-mail: chris.sinha@language.sdu.dk.
- Solso, R.L. and McCarthy, J.E.
1981 Prototype Formation of Faces: A Case of Pseudomemory. *British Journal of Psychology*. 72: 499-503.
- Tai, James H.Y.
1993 Iconicity: Motivations in Chinese grammar. In: Mushira Eid & Gregory Iverson. (eds.), *Principles and Prediction: The Analysis of Natural Language: Papers in Honor of Gerald Sanders*, 155-166. Amsterdam: Benjamins.
- Taylor, John R.
1990 Schemas, prototypes and models: in search of the unity of the sign. In: Savas L. Tsohatzidis. (ed.), *Meanings and Prototypes*, 521-534, London: Routledge.
- Van Huyssteen, Gerhard B.
2000 *Die reduplikasiekonstruksie in Afrikaans: enkele aspekte van 'n kognitiewe gebruiksgebaseerde beskrywingsmodel vir Afrikaans*. [The Reduplication Construction in Afrikaans: Some Aspects of a Cognitive Usage-Based Model for Afrikaans]. Unpublished Ph.D. thesis. Potchefstroom: PUCHE.
- Wilcox, Sherman.
2001 Re: Chomsky. Contribution on Cogling (cogling@ucsd.edu). 2 November at 03:41. E-mail: wilcox@unm.edu.