

Swedish linking –s

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Many Swedish compounds occur with a linking –s in-between the first and the second part, whereas other compounds lack it. Its occurrence is partly regulated by some clearly defined phonological rules, but most of the variation is not sensitive to phonology. Compare the examples in (1) and (2).

- (1)a *järnväg-s-karta*
 railroad-S-map
 b *dag-s-ljus*
 day-S-light 'daylight'
- (2)a *väg-karta*
 road-map
 b *dag-mamma*
 day-mother 'child-minder'

The occurrence of the linking –s in the a)-examples is structurally determined. As is well known since Tamm (1900; see also Josefsson 1998) the linking element occurs when the first part is polymorphemic (see 1a), whereas it is normally lacking when the first part is monomorphemic (see 2a). There are however also compounds where the –s occurs with a single morpheme in the first part. These compounds are normally said to have lexically or idiosyncratically determined linking –s.

The linking –s is normally assumed to be derived from the genitival –s. In my talk I claim that it is identical to the genitival –s, all through the history of Swedish. I will show that both the linking –s and the genitival –s are morphological entities until the middle of the 15th century. This is visible in phonological processes (such as syllable shortening and devoicing of consonants), as well as in the morphemes relation to grammatical gender

After the middle of the 15th century, both the linking –s and the genitival –s become syntactic elements; the phonological processes disappear and they occur in all genders.

The syntactic status of the modern linking element is seen in the contrast between (1)a and (2)a. The syntactic status of the genitival –s is evidenced by group genitivals, as in (3).

- (3) *mannen på gatan-s åsikter*
 man-the in street-the-S views 'the ordinary man's views'

My claim will be an elaboration on Delsing (2002), namely that the genitival –s has the same properties whether it is found inside or outside words, and that its properties changes simultaneously in both environments.

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Linking-elements in nominal compounds in Luxembourgish

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The discussion about the origin and function of linking-elements is given a further dimension by the special structure of nearly complete syncretism and complex plural markers in Luxembourgish nouns. In this paper, the comparison of a political corpus to a literary one will not only allow a systematical inventory of linking-elements in nominal compounds as well as the determination of their productivity, but it will also show which strategies of word morphology are preferred in each context.

The fact that Luxembourgish does not have the morpheme *-s* as a plural marker and only rarely uses it as a genitive marker is most remarkable, as this same consonant shows the most productivity as a linking-element. It can be inserted into almost every construction and it is not so uncommon to encounter the linking-*s* several times in one and the same word, like for example in *Béierfestszeltsdëscher* (*benches in a marquee*). In contrast to German, there is even an increase in the number of suffixes that take obligatory *-s*. Moreover as a consequence of this syncretism Luxembourgish disposes of a large amount of mono-syllabic words so that concatenated words take the shape of a trochaic or iambic foot. Logically no marker such as a linking-element is needed. Even though, a trend towards inserting linking-elements as often as possible can be observed. In the bi-syllabic compound of the example *Dreckstut* (*binbag*), no linking-element is needed, but there is also no argument for why there should not be a linking-element. Even grammaticalized words can be restructured and linked by additional *-s*. Therefore, a fruitful way of investigating linking-elements in Luxembourgish should start with the following question: When is it absolutely impossible to concatenate with *-s*?

Link or inflection? On linking elements in genitive compounds in Icelandic

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In Icelandic there are many types of elements to be found between the first and the second part of genitive compounds with apparently inflected (or genitive) first part. How to analyse these elements is an unsettled issue in the Icelandic literature. Indridason (1999) argues that some cases are genitive endings while others are linking elements. What is interesting here is the strong similarity between these elements and ordinary inflectional endings, as shown in (1):

(1)

<i>gen. endings</i>	<i>nouns with gen. endings</i>	<i>genitive compounds</i>
-ar	vél- ar (gen.,sg., f., 'machine')	vél- ar -hljóð (nom.sg.n., 'machine sound')
-a	bók- a (gen.,pl.,f., 'books')	bók- a -hilla (nom.,sg.,f. 'bookshelf')
-s	land- s (gen., sg., n., 'land')	land- s -lög (nom., pl., n., 'national laws')
-na	nýr- na (gen.,pl.,n., 'kidneys')	nýr- na -aðgerð (nom.,sg., f., 'kidney operation')
-u	tölv- u (gen.,sg.,f., 'computer')	tölv- u -útskrift (nom.,sg.,f., 'computer printout')
-ur	næt- ur (gen.,sg.,f., 'night')	næt- ur -gisting (nom.,sg., f., 'sleepover')

In addition to (1), Icelandic has traditional linking elements as in *ráð-u-nautur*, 'consultant', *tóm-a-hljóð*, 'hollow sound', *eld-i-viður*, 'firewood', *brjóta-n-legur*, 'breakable', and *keppni-s-höll*, 'arena'. In these compounds, unlike those in (1), the first part cannot occur as an independent genitive forms, hence **tóm-a*, **eld-i*, **brjóta-n* and **keppni-s*.

In Icelandic we then have: (a) inflectional endings, (b) elements in genitive compounds which are identical to inflectional endings, but unlike endings they do not have anything to say about the morphology of the word as a whole, and (c) traditional linking elements like [*a, i, u, s, n*] which have no apparent inflectional status whatsoever.

In my talk I'll discuss whether one can argue that the elements in the genitive compounds in (1) are in fact linking elements rather than genitive endings, and what kind of arguments can be found to support such an analysis.

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Linking elements as stem allomorphy: The case of Modern Standard German

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The set of linking elements in German derives from inflectional morphemes. In Modern Standard German, however, linking elements have no function at all. In particular, neither do they consistently express a plural reading of the first constituent of compounds nor do they facilitate the pronunciation of compounds nor do they consistently structure compounds. Furthermore, a number of compounds have linking elements that do not belong to the inflectional paradigm of its first constituent, questioning their status as markers of some inflectional category. Finally, linking elements do not literally link two constituents but are an integral part of the first constituent of a compound.

Therefore, it is theoretically more promising to regard linking elements as stem allomorphy (Fuhrhop 1998). Lexemes in German (as well as in other languages) have at least one general stem form, a default. Some have a larger stem form paradigm comprising deviating forms for specific structural positions as well as the default for all other contexts. One of these specific structural positions for nouns is the left-hand membership in compounds. Taking linking elements as stem allomorphy allows analyzing explicit linking elements as well as zero linking elements, umlaut, subtractive forms, and replacive forms as basically the same phenomenon.

Despite the general diversity of linking elements in German, most lexemes have only one form as first parts of compounds. According to Augst (1975), only ten percent of nominal lexemes have more than one linking form. In these latter cases, there is typically one productive form while the others appear in lexicalized compounds only. An example for this is the lexeme MANN 'man'. In the actual vocabulary of German at least four different linking types can be observed. Newly coined compounds, however, predominantly take one and the same stem form. This can be tested with psycholinguistic naming experiments that lead to the production of nonce-words.

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Number and rhythm in Dutch compounds with or without linking *en*

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Dutch compounds show much freedom in the use of linking elements. Both *bloembak* ‘flowerbox’ and *bloemenbak* occur, in dialects *appeleboom* may replace standard *appelboom* ‘apple tree’, and *celstructuur* ‘cell structure’ exists next to *cellenstructuur*. This variation may be explained by the fact that compounds in Dutch are formed by analogy. When the frequency of exemplars with the linking element is not markedly different from the frequency of exemplars without the linking element, speakers vary their choice.

Yet semantics may also matter. Linking *e(n)* equals plural *-en*, and many take *celstructuur* to mean ‘structure of a cell’ and *cellenstructuur* ‘structure built of cells’. So *e(n)* may affect number, either binarily (*cel(len)structuur*: plural or singular *cell*) or gradually (*bloem(en)bak*: fewer or more flowers).

Normally, *e(n)* is pronounced exactly like the rhythmic element *e* (schwa). Indeed, prosody is relevant too. Thus, *blōemēnbāk* is preferred over *blōembāk* and *blōembāk*, the latter forms violating No-Clash and Recurrence. Further compounding with *-ontwerp* resolves these issues, hence *blōembākōntwērp* and *blōemēnbākōntwērp* ‘flowerbox design’ are equivalent. Clearly, the presence of *e(n)* partly depends on both semantics (numerosity) and form (rhythm). Here we explore their mutual influence. We show that when rhythm requires *e(n)*, the numerosity of modifiers in compounds is relatively low. Remarkably then, prosodic form and semantics interact in Dutch compounding.

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Do children treat French “linking elements” meaningfully in their acquisition of existing compounds?

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Linking elements often contribute little to nothing to the meaning of compounds. Historically linking elements most likely originated from once highly productive constructions. Some languages are in an intermediary stage (e.g. Dutch, see Schreuder, Neijt, van der Weide, & Baayen, 1998), with both productive meaningful linking elements and less

meaningful ones. French may be such an intermediary language. Most French nominal compounds contain a preposition (e.g., *sac à main* lit. ‘bag for hand’, meaning handbag). While prepositions are still highly productive, within compounds they do not necessarily contribute significantly to the meaning (e.g., the most common preposition in compounds, *de*, represents many semantic relations, including MADE OF, FROM, FOR, and HAS).

Data on children’s acquisition of compounds can add to the discussion of the status of prepositions within French compounds. Clark (1998) argued that children expect all morphemes within complex words to contribute to the meaning. If the preposition within French compounds retains its meaning as a preposition, then French-speaking children should use it to acquire compounds.

The existing data have thus far suggested that French-speaking children do not treat the preposition as contributing to the meaning of compounds. Three- and four-year old French-speaking children are equally likely to misorder the two content words in novel compounds like English-speaking children of the same age (e.g., calling a bag with suns on it, “un soleil de sac” ‘a sun of bag’; Nicoladis, 2002). They also overuse the more common preposition *de* where *à* would be more appropriate.

In this study, 28 French-speaking children (ages 3 to 5) explained the meaning of existing compounds, some with *à* and some with *de*. If children were using the prepositions to guide their understanding of compounds, we expected their explanations to differentiate between compounds with the two prepositions. For example, the explanation of *couteau à pain* (lit. knife for bread) might be ‘for cutting bread’ while *échelle de corde* (lit. ladder of rope) might be ‘made out of rope’.

This study showed that the youngest children often explained the meaning of the compounds as wholes (e.g., for *jus de canneberge* [cranberry juice], one younger 4-year old said “C’est pour boire” ‘It’s for drinking’). In contrast, the older 4-year olds and the 5-year olds showed clear differences in explaining the meaning of compounds with different prepositions. The children at all ages were better at explaining compounds with the relation FOR or HAS than other relations, regardless of the preposition or the frequency of the preposition in compound words.

If the French-speaking children processed the preposition meaningfully, the preposition should allow them to understand the meaning of the compound earlier than English-speaking children, who learn mostly compounds without linking elements (e.g., chocolate cake vs. baby book). We compared the children’s performance with age-matched English-speaking children from a previous study. The English-speaking children were better at explaining the relation between compound constituents.

These results support the claim that preschool children treat French prepositions in compounds like linking elements. While French-speaking children differentiate the meaning of existing compounds with different prepositions, they do so at about the same age or possibly later than English-speaking children do the same, with no preposition in the compounds. We discuss when and how in development, French speakers reanalyze these morphemes as prepositions.

Linking elements: a case of grammaticalization?

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The diachronic source of linking elements consists of grammatical endings, i.e. case and number suffixes. These inflectional elements were already highly grammaticalized. By

developing into linking elements and thus by moving from inflectional to lexical morphology (compounds) the question arises whether this can be considered a case of grammaticalization. In my talk, I will argue against this position. Linking elements are prosodically conditioned and help the listener in recognizing the most important lexical units. This is supported by the behaviour of productive (mostly unparadigmatic) linking elements, first of all *-s*, by following and thus indicating ill-formed phonological words.

/r/ in German pronominal adverbs: from part of the stem to linking element and beyond

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Pronominal adverbs in German consist of the adverb *da*, *wo* and *hier* as first element and a stem which is today mainly used as a preposition as second element (e.g. *davor*, *damit*, *dazu*). Between the first and the second element, /r/ can occur (as in e.g. *darauf*, *darüber*, *daraus*), which can be analyzed as a linking element from a synchronic point of view.

The purpose of the talk is to show how the /r/ which can occur between these elements has developed from a part of the first element into a phonologically motivated linking element.

It is argued that pronominal adverbs originate from two separate adverbs forming an adverbial phrase. The process of univerbation is accompanied by several processes generally associated with grammaticalization:

- a) semantic bleaching of the local meaning (especially of the first part) and a concomitant strengthening of textual functions
- b) a loss of syntactic separability/freedom of the two elements
- c) phonological reduction

For the purposes of this talk, phonological reduction is the crucial development. The first part loses its own word accent and may be further reduced. The phonological reduction is subject to a stem principle to the effect that the integrity of the freely occurring stem is preserved:

The first elements OHG *hwâr*, *wâr* MHG *wâ*, and *dâr thâr* as freely occurring lexical items are reduced to NHG *wo* and *da*. *Hie(r)* as a freely occurring stem, on the other hand, is increasingly used only with the final /r/. As a consequence, /r/ tends to occur more and more in pronominal adverbs with *hie(r)* as first element, whereas it need not occur with *wo* and *da* as first element, subject to a phonological condition: If the second element begins with a vowel, /r/ must occur.

This development can essentially be seen as an optimization of syllable structure. A syllable contact V\$V violates several constraints for an optimal syllable contact, whereas V\$CV is a much better syllable contact. Thus, phonological reduction of the first part is subject to two constraints which can be ranked in the following way: stem principle > optimal syllable contact.

One further development will be hinted at: In the course of further reduction, which is only possible for pronominal adverbs with *dar* (again due to constraints of syllable structure), /r/ loses its status as linking element. It is argued that the combination /dr/, occurring in colloquial German and in pronominal adverbs within fixed idiomatic expressions and particle verbs, carries deictic meaning.

On the nature and function of *-cum-* in Present-Day English

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This paper takes issue with the traditional view of English compounds such as *poet-cum-philosopher* and *emotional-cum-intellectual*, according to which the medial morpheme – *cumis* insignificant. The linker, which is a borrowing from the Latin preposition *cum* (‘with, together with’), first appeared in British place-name compounds such as *Chorlton-cum-Hardy* and began to be used in regular nominal compounding in the second half of the nineteenth century. The grammaticalization of the preposition as a coordinator is not unexpected as comitative markers are cross-linguistically a major diachronic source for conjunctive coordinators.

The analysis is first centered on the elusive nature of the linker, which seems to be about midway between an interradical interfix and a conjunction. New insight into the function of the linker is then offered by scrutinizing a list of 259 compounds culled from a present-day newspaper corpus. It is found that *-cum-* appears exclusively in novel coordinate nominal and adjectival compounds, the overwhelming majority of which are semantically multifunctional nouns (“an *X-cum-Y* is an *X* who/which is also a *Y*”), and that it plays a distinctive morphosemantic role which sets *-cum-* compounds apart from asyndetic compounds: the linker is predominantly used in complex compounds to simultaneously mark the internal boundary (boundaries) within the structure and the coordinate relation linking the compounding elements; its present-day function is to facilitate the processing of complex coordinate compounds.

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Linking elements: a new strategy to improve the phonological word

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Having developed from case and number suffixes, German linking elements are gradually losing their original morphological function. Instead of becoming marginal residue and eventually disappearing, they have adopted a new function that has helped them remain productive. The most productive linking element in German, the linking *s*, has even broken through the morphological blockade, attaching itself to first parts of compounds irrespective

of their gender. In my corpus-based discussion, I will argue that the productivity of the linking *s* is prosodically conditioned. It has developed the ability to improve suboptimal phonological words. This behaviour is consistent with that of other word-improving strategies known from the diachrony of German.

Linking elements without categorial features and the immobility of the linked elements

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In Mandarin Chinese, the associative *de* is an enclitic (C.R. Huang 1989), occurring between a modifier and the modified element (1a), or between a relational element and its semantic licenser (1b). Both the modified and the relational element are called Kernel elements.

- (1) a. honghong de pingguo b. Baoyu de linju
 red DE apple Baoyu DE neighbor
 ‘red apple(s)’ ‘Baoyu’s neighbor’

This talk shows shared properties of two kinds of linking elements, *de* and coordinators in English, trying to explain the puzzle why conjuncts may not move (Ross 1967).

I Kernel elements can be various categories (Tang 1990:421): nominal in (1), verbal in (2a), adjectival in (2b), and a pronoun or proper name in (2c).

- (2) a. Baoyu zai [hen kuai] de langdu.
 Baoyu PRG very fast DE read.aloud
 ‘Baoyu is reading (something) aloud fast.’
 b. Na tian wanshang ta [tebie] de xingfen.
 that day evening he especially DE excited
 ‘That evening, he was especially excited.’
 c. [Diu-le qianbao] de {ta/Baoyu} hen zhaoji.
 lose-PRF wallet DE he/Baoyu very worried
 ‘{He/Baoyu}, who has lost his wallet, was very worried.’

De is thus similar to *and*: they both occur in complexes of different categories.

II New evidence shows that *de* does not form a syntactic constituent with the non-*Kernel* element (Zhang 1999, Simpson 2002, den Dikken 2006, contra Cheng 1986, Tang 1990, Rubin 2002). Instead, it takes the *Kernel* element as its complement. Like head elements, *de* licenses the silence of the *Kernel* element to its right (3a), and disallows the focus marker *shi* to intervene its adjacency to the *Kernel* element (3b).

- (3) a. [Dai yanjing de na-ge-ren] lai-le.
 wear glasses DE that CL person come-PRF
 ‘The person who wears glasses came.’
 b. [Na jian hongse de (*shi) qunzi] zai chuang dixia.
 that CL red DE FM skirt at bed under
 ‘That red skirt is under the bed.’

If *de* is the head of the whole complex, it gets its categorial features from the *Kernel* element, so that the category of the whole complex is identical to that of the *Kernel* element. Similarly, the categorial features of conjuncts are transferred to *and*, so that the category of the whole complex is identical to that of conjuncts.

III *Kernel* elements, like conjuncts, may not move.

- (4) *{Ta/Baoyu}, diu-le qianbao de — hen zhaoji. (cf. (2c))
 he/Baoyu lose-PRF wallet DE very worried

IV Elements undergoing overt movement must have categorial features (Chomsky 1995:265, Ochi 1999:90). When the categorial features of Kernel elements are transferred to *de*, Kernel elements may not move. Similarly, conjuncts provide categorial features for *and* and thus for the whole coordinate complex, therefore, they may not move.

V This new account of the immobility of conjuncts suggests that the constraint is not a construction-specific constraint. Instead, it is related to the feature-makeup of coordinators. I will further show that in Chinese, conjuncts do not provide categorial features for the coordinators, which have their intrinsic categorial features, and they may move.