

# Left-dislocation constructions in contemporary Swedish: A Sign-based Construction Grammar Account<sup>i</sup>

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## Abstract

Left dislocation constructions (LD cxns) exist in many languages, including Swedish. In Swedish, LD cxns traditionally occur when a phrase precedes a clause with a pronominal or adverbial copy referring to that phrase. Inspecting previous studies of LD cxn, most sources describe it as rather uniform: a declarative clause where the dislocated phrase has the information structural status of topic, the copy is a subject or an object, and the copy is placed immediately after the dislocation. This paper shows that there is more variation to LD cxns by presenting a Sign-Based Construction Grammar account of the Swedish LD cxn. Based on an empirical study of 295 LD cxns, the paper proposes that most LD cxns belong to one out of three different construction patterns, whereas almost as many LD cxns belong to more peripheral patterns. This means that a construction may have a few more prototypical instantiations, but that we need to investigate many examples to understand the construction better. LD cxns without copies are also investigated in this paper, and the conclusion reached is that this construction can be incorporated as a part of the LD cxn family.

## 1. Introduction

When a clause is preceded by a phrase that is co-referent with an anaphoric pronoun or adverbial inside the clause, we have an instantiation of left dislocation in Swedish. In the example in (1), the proper noun *Eleonora* is the phrase that is left dislocated, and the object pronoun *henne* ‘her’ is the anaphoric pronoun inside the clause to which *Eleonora* belongs, but is not included in.

- (1) Eleonora<sub>i</sub>, henne<sub>i</sub> har jag inte sett på  
Eleonora<sub>i</sub> her<sub>i</sub> have I not seen on  
flera dagar.  
several days  
‘Eleonora, I haven’t seen her in several days.’

Adopting a Construction Grammar (CxG) view of language (Sag 2012), I will assume that left dislocation constitutes a construction, consisting of a main or subordinate clause, preceded by a phrase.

This phrase is hereafter referred to as left dislocation (LD) and can be of any kind, as long as it can be co-referent with an anaphoric pronoun or adverbial. Alternatively, the LD can also be repeated inside the clause, as in (2) below, in which the LD *ABBA* also appears inside the clause. The phrase inside the clause referring to the LD, I will call COPY, regardless of its form.<sup>2</sup> Comparing (1) and (2), we also see that COPY can be used in several different positions in the clause, but only in positions available for adjuncts and nominal complements, i.e. COPY cannot occupy verbal positions according to the Swedish Academy Grammar (henceforth SAG 1999).

- (2) [ABBA]<sub>LD</sub> när jag var liten lyssnade jag  
ABBA when I was little listened I  
mycket på [ABBA]<sub>COPY</sub>  
much on ABBA

‘When I was little, I listened to ABBA a lot.’

A similar construction is the so-called free initial annex construction (FIA cxn, SAG IV 1999: 454). In FIA cxn, an adverbial precedes a main clause or a Swedish *that*-clause, without a co-referent COPY in the clause. In example (3) from Strandberg (2019), the subordinate clause *när vi gick till affären* ‘when we went to the store’ is the preceding adverbial, which SAG (IV 1999: 452) calls free initial annex, here abbreviated FIA. In contrast to a typical LD, FIA is associated with the whole sentence, and not a COPY. In other words, the FIA in (3) is not associated with one single COPY phrase in the main clause; the proposition of FIA is related to the proposition of the whole sentence. Another type of FIA exemplified in SAG occurs when FIA comments on the speech act rather than on the proposition (Strandberg 2019), see (4). The FIA in (4), *om du undrar* ‘if you would like to know’, serves as an introduction to the proposition rather than describes it, as in (3). The FIA cxn illustrated in (4) is not investigated in this paper but is an

important part of the network of Swedish LD and FIA cxns that will be sketched in section 5.

- (3) [När vi gick till affären] DEF  
when we went to store.  
Frida köpte bara sånt det var  
Frida bought only such it was  
extrapris på  
extra price on  
'When we went to the store, Frida only bought things on sale.'
- (4) [Om du undrar] Joakim har bestämt  
if you wonder Joakim has decided  
sig för att byta lägenhet.  
REFL. to switch apartment.  
'If you would like to know, Joakim has decided to switch apartment.'

In sum, the constructions under investigation in this paper are two clausal constructions, LD and FIA cxns, preceded by an independent phrase. In the LD cxn, there is also a COPY inside the clause, co-referent with the preceding LD. This COPY can be either an adjunct or an argument. This construction I will refer to as LD cxn. When the pre-posed phrase is an adjunct and describes the whole clause rather than just a COPY inside of it, I will refer to the construction as the FIA cxn. Hence, LD cxns in which the COPY is an adjunct can, in theory, be rephrased as FIA cxns, as COPY-adjuncts are not mandatory. This indicates that the two categories LD and FIA could be merged.

LD cxns have been investigated in several previous studies (e.g. in Telemann et al 1999; Lagerholm 2008; Lindahl 2017; cf. Lambrecht 1994 for English and Melum Eide 2011 for Norwegian). However, the results mostly present a rather stereotypical picture of the construction: The LD is a topical NP followed by a subject COPY in a declarative clause, and it is only possible in one type of subordinate clause, namely Swedish *that*-clauses. The FIA cxn, on the other hand, has not been studied as extensively as the LD cxn, but the properties of FIA cxn in Telemann et al (1999) differs quite a lot from the collected examples in Strandberg (2017, 2019) that are not explicitly accounted for in Telemann et al (1999). Using the CxG-framework, this paper aims to show two

things: Firstly, although very common in the literature, the standard picture of the LD cxn is too narrow. Secondly, the type of FIA cxn investigated here has been neglected in the literature so far.

Abstract clausal constructions are understudied in CxG (though see Hoffmann 2013), especially outside of English, and existing studies have often focused on cxns containing at least one lexically specific element. For example, the *What's X doing Y?* cxn (Kay and Fillmore 1999) has two specific lexical units, *What's* and *doing*. The LD- and FIA cxns are different as they do not contain any mandatory lexical units: the obligatory elements in the constructions are neither lexically nor semantically specified. The Swedish ditransitive argument structure construction, like LD- and FIA cxn, does not contain any specific lexical unit, but the constructional slots in the ditransitive cxn can instead be defined with semantical roles – which is not true for the LD- and FIA cxns. Instead, the meaning of the LD and FIA cxns seems to lie in their information structure; several studies (cf. Andersson 1982: 36; SAG IV 1999: 448; and Lindahl 2017: 65 for Swedish; Gregory & Michaelis 2001 for English) have shown that the dislocated phrase in the LD cxn bears the information structural status of topic. However, the many adverbial LDs found in Strandberg (2017) indicate that not all LD cxns are topical, as those adverbials establish circumstances, places and time rather than topics of the utterances.

Swedish is a verb second language, i.e., in a Swedish main clause there is only one topological position available in front of the finite verb. Dislocations in languages like Swedish are thus even more interesting because they give us an opportunity to study how integrated the dislocation is in its main clause. Moreover, all clausal cxns, no matter how many lexical units they include, build on a more abstract clausal cxn. Looking at the Swedish Constructicon (Lyngfelt et al 2018), we find that a lot of the cxns are clausal, but the constructicon does not yet contain any abstract clausal cxn from which these cxns can derive. With this situation as a point of departure, the research questions addressed in this paper are the following:

- What are the syntactic and information structural properties of the LD- and FIA CXNs?
- How do these constructions relate to other, more abstract Swedish clausal constructions hierarchically?



- How can studies of constructions such as the LD CXN and FIA CXN be fruitful for studies of abstract sentence patterns in general?

The paper builds on Strandberg (2019) but also contains further studies of the questions under investigation. The outline of the paper is as follows: In the next section I present the Swedish word order and sentence types in which the LD and FIA cxns may occur, according to the Swedish Academy Grammar (SAG). I also comment on SAG's analysis of the morphosyntax of the constructions and introduce the information structural concepts I use later when analyzing the constructions. Thereafter, the methods and materials used in the empirical investigation are explained, followed by a presentation of the paper's framework: Sign-Based Construction Grammar (Sag 2012). This section is followed by the results, a discussion of the main findings, and a suggestion for merging LD and FIA cxns into one cxn. I also present a draft of a Swedish type hierarchy, a constructional network, that can serve as a point of departure for further studies of the LD and FIA cxns, but also for all studies investigating the Swedish constructional network. The paper is wrapped up with a concluding summary.

## 2. Background

### 2.1. Swedish word order

One of the cornerstones of Swedish word order is the verb-second rule (here abbreviated V2-rule), which states that the second constituent in a declarative Swedish main clause must be a finite verb. To my knowledge, there are no widely accepted analyses of the V2-rule in CxG, and this article will therefore follow SAG's topological analysis.

The first position in a Swedish main clause, also known as the 'fundament', can be filled by almost any phrase type, typically a subject or an adverbial. If an adverbial occupies the fundament, then the subject, due to the V2-rule, inverts with the verb and occurs immediately after it, followed by possible sentence adverbials<sup>3</sup>. This is illustrated with the examples (5) and (6).

- (5) Jag äter pasta i dag.  
I eat pasta today  
'I eat pasta today.'

- (6) I dag äter jag pasta

today eat I pasta  
'Today, I eat pasta.'

The second position, the inverted subject position and the position for sentence adverbials, I will refer to as the 'middle field', following SAG. After the middle field, non-finite verbs, complements, and adverbials are placed, and this position, following SAG, I refer to as the 'end field'. The fundament, the middle field and the end field represent the basic three fields of a Swedish main clause, but not all fields are always filled; for example, not all verbs require an object, and in imperatives and polarity questions, the verb is the first word in the clause, leaving the fundament empty.

SAG (IV: 439) also assumes a pre-field in front of the clause, where for example interjections and vocatives are placed, as they do not constitute a part of the sentence but are only connected to it semantically. This 'pre-field' is also where we find LD and FIA, and it explains why structures like these do not conflict with the V2-rule: they do not occupy the first position of the clause. In Table 1 below, the Swedish main clause structure is illustrated with three examples, all of which start with a pre-field: (7) and (8) are the LD- and FIA cxns in (2) and (3) above, (9) a declarative clause preceded by an interjection and (10) a polarity question following a vocative. Also, there is a counterpart to the pre-field after the 'end-field' – this field is not a main part of the investigation but will be referred to as the post-field in the draft of Swedish grammar in section 5<sup>4</sup>. The pre- and post-field analyses are also applied to related languages, e.g., Danish and German (see Hansen & Heltoft 2011 for Danish, and Duden 2005: 897 for German).

**Table 1. SAG typological analysis of Swedish**

	Pre-field	Fundament	Middle field	End field
(7)	ABBA <sub>LD</sub>	när jag var liten	lyssnade jag mycket	på ABBA <sub>COPY</sub> .
(8)	När vi gick till affären, <sub>FIA</sub>	Frida	köpte bara	sånt det var extrapris på.
(9)	Ja, Yes,	jag I	kan can	laga maten i kväll. cook food.DEF tonight.
	'Yes, I can cook tonight.'			
(10)	Eleonora,		kan du can you	laga maten i morgon? cook food.DEF tomorrow?
	'Eleonora, can you cook tomorrow?'			

As illustrated in Table 1, LDs cxns are possible in several sentence types. In addition to declaratives and polarity questions, LD cxns can also be used in imperatives, *wh*-questions, Swedish *that*-clauses and two types of independent subordinate clauses (SAG IV 1999: 446). The fact that LD cxns can occur in subordinate clauses makes it possible for LD to occur in two different positions, when the subordinate clause is part of a main clause. In both (11) and (12), a *that*-clause occurs in a polarity question. The LD in (11) is placed in front of the main clause, whereas the LD in (12) occurs after the Swedish complementizer *att* 'that'.

- (11) [Det här tåget]<sub>LD</sub> tror du att  
this here train.DEF think you that

[det]<sub>COPY</sub> går till Köpenhamn?  
it goes to Copenhagen

'This train, do you think that it goes to Copenhagen?'

- (12) Visste du att [det här tåget]<sub>LD</sub>  
knew you that this here train.DEF

[det]<sub>COPY</sub> går till Köpenhamn?  
it goes to Copenhagen

'Did you know that this train goes to Copenhagen?'

In contrast to LD cxns, the clause in a FIA cxn can only be either a main clause or a Swedish *that*-clause. In SAG, the main clauses are mostly exemplified with imperatives, see (13), and when declaratives serve as examples, the FIAs almost always have the same structure: They are all

subordinate clauses of the type *vad (som) XP än VP* 'whatever VP', and the declarative clause is inverted, see (14) from (SAG IV: 454). Hence, although the definition of FIA cxns allows for a lot of variation, the examples in SAG do not conform to this definition.

- (13) [För att tala med receptionen]<sub>FIA</sub>  
To speak with reception.DEF  
slå nollan.  
press zero.DEF

'To speak with the reception, press zero.'

- (14) [Vad som än händer]<sub>FIA</sub> stugan  
what that than happens cabin.DEF

säljer jag (i alla fall) inte.  
sell I (anyway) not

'Whatever happens,  
I will not sell the cabin.'

Not only in SAG but in written Swedish in general, the FIA cxn is very rare and might seem like a violation of the V2-rule (cf. Walkden 2017). However, I do not consider the FIA cxn to be ungrammatical. The fact that it is completely natural sounding when used in spoken Swedish (cf. Walkden 2017) is a strong argument for this. That the construction is rare in written Swedish is most likely due to differences in genre, and the possible ambiguity between the FIA cxn and V2 violations that may arise. The FIA cxn seems to serve a certain purpose in spoken Swedish, a purpose that it probably does not serve in written language. Moreover, the ambiguity that may arise when someone reads a FIA cxn also shows the difference in genre between the two constructions and indicates that a spoken FIA cxn has something that a written FIA cxn does not – in my opinion, this something is a specific prosody. When reading a



FIA cxn, the construction might look like an example of L2-Swedish (cf. Walkden 2017: 53). However, when hearing the same construction, it does not sound like an example of L2-Swedish, and as Walkden (2017: 53) remarks, the construction is used by L1 as well as L2 speakers. To conclude, a reasonable hypothesis is that the FIA cxn is a spoken language innovation not yet used in written language due to its similarities with L2-Swedish.

## 2.2. The morphosyntax of LD and COPY

In the introduction, we saw that any phrase is eligible as LD, if there is an anaphoric pronoun or adverb referring to it in the main clause. In this study, I have also included examples where LD and COPY are identical, as long as they are not following on each other in the linear structure, because if they do, it is very hard to tell whether the speaker uses an LD CXN, stutters, or repeats themselves. Moreover, SAG recognizes pronoun vocative phrases referred to with an identical pronoun as LD CXNs, for example (15), without extending the discussion to other phrase types.

- (15) [Du, Eleonora]<sub>LD</sub> vad lagade [du]<sub>COPY</sub>  
 you Eleonora what cooked you  
 för mat i går?  
 for food yesterday  
 ‘Eleonora, what did you cook yesterday?’

Furthermore, LD and COPY can have different case markings. A nominative LD may have a genitive COPY, as in (16). Note that the genitive COPY is not the head of its phrase.

- (16) [Eleonora]<sub>LD</sub> [hennes]<sub>COPY</sub> arbetstider  
 Eleonora hennes working hours  
 varierar ganska mycket.  
 vary quite much  
 ‘Eleonora, her working hours vary quite a lot.’

Another case where LD and COPY differ is when the neuter pronoun *det* ‘it’ is used regardless of the gender of an indefinite NP-LD. In this case, *det* focuses the meaning of LD rather than referring to a specific person or object. In the LD cxn in (17), the speaker is talking about some specific pancakes, and says that these pancakes are good. Therefore,

Swedish requires the COPY to agree with the LD, which is why the COPY is the plural *de* ‘they’. In (18), however, the speaker is not talking about some specific pancakes, but about pancakes in general, which is why the neuter *det* ‘it’ is used, even though it does not agree in number with the LD.

- (17) [Pannkakorna]<sub>LD</sub> [de]<sub>COPY</sub> är goda.  
 pancakes.DEF they are good.PL  
 ‘The pancakes, they are good.’  
 (18) [Pannkakor]<sub>LD</sub> [det]<sub>COPY</sub> är gott.  
 pancakes it is good  
 ‘Pancakes, that’s good.’

Following SAG (IV 1999: 444), I will call this type of *det* an intensional anaphor. This kind of anaphora is also used when the LD is an identifying predicative, i.e. when it denotes an NP identical with the subject (SAG I 1999: 180), see (19). When COPY refers to a subordinate clause, a verb phrase, a participle phrase or an adjective phrase, *det* is the only option. This *det*, I will also refer to as an intensional anaphor.

- (19) [Patric]<sub>LD</sub> [han]<sub>COPY</sub> är fantastisk.  
 Patric he is fantastic  
 ‘Patric, he is fantastic.’

Syntactically, SAG states that the syntactic function, i.e. the part of the sentence that COPY represents, is more likely to be a subject or any other complement than an adjunct. Moreover, a sentence can be constructed with two LDs, if one of them is nominal and the other one is adverbial, according to SAG (IV: 449-450). The example SAG uses to illustrate this is given in (20).

- (20) [Fredrik och Camilla]<sub>LD1</sub> [när vi hade  
 Fredrik and Camilla when we had  
 historieförhör i torsdags]<sub>LD2</sub>  
 history examination last Thursday  
 [då]<sub>COPY2</sub> var det inte mycket [de]<sub>COPY1</sub>  
 then was it not much they  
 kunde.  
 could.

'Fredrik and Camilla, when we had history examination last Thursday, they didn't know that much.'

Several studies have also showed that prosody is an important side to the LD cxn (SAG IV: 439, Eide 2011, Holmberg 2019), as well as information structure (e.g. Andersson 1982, SAG, Gregory & Michaelis 2001, Lindahl 2017). Intonational aspects of LD cxn and FIA cxn are not covered in Strandberg (2019), nor in this paper, but information structural aspects are. In the following, I give a brief presentation of the information structural notions I will be using, followed by the information structure in LD cxns according to previous studies.

### 2.3. Information structure

In this paper, I understand information structure as "how language users compose their utterances in accordance with how the parts of these utterances relate to each other and the context" (Strandberg 2019). Two basic parts of utterances in this paper are the ground, stating what the utterance is about, and the focus, what is said about the ground. If we apply this to (21), we get the following analysis: The paper, being familiar to the reader as he has chosen to read it, is the ground of the first sentence. As the rest of the sentence contains new information, it constitutes focus. However, as this focused information, investigates the LD cxn, the second it is read, is no longer new information, it becomes ground in the next sentence. Hence, the LD cxn in the next sentence is the new ground, with the rest of the sentence as the new focus.

- (21) [This paper]<sub>GROUND</sub> [investigates the LD cxn.]<sub>FOCUS</sub> [The LD cxn]<sub>GROUND</sub> [occurs when a phrase precedes a clause in which there is an anaphor co-referent with that phrase.]<sub>FOCUS</sub>

Following Lindahl (2017), Strandberg (2019) divides the ground into three different subcategories: topic, scene, and other ground material. The topic is the entity that the utterance comments on; in (21) above, the ground only contains a topic. Scene on the other hand indicates the circumstances of the utterance. In the first sentence in (22), this morning is the scene, and the rest of the sentence is focus. In the second sentence in (22), the when-clause represents the scene. As other ground material, Lindahl (2017) counts

phrases that constitute ground, but are neither topics nor scenes, for example was and about in (23).

- (22) [This morning]<sub>SCENE</sub> [I found a journal in my mailbox and I opened it immediately.]<sub>FOCUS</sub> [When I had opened it]<sub>SCENE</sub> I read a paper on the LD cxn.

- (23) "I read a paper on an interesting construction the other day."

"[What]<sub>FOCUS</sub> [was [the paper]<sub>TOPIC</sub> about]<sub>GROUND</sub>?"

"[[The paper]<sub>TOPIC</sub> [was about]<sub>OTHER GROUND MATERIAL</sub>]<sub>GROUND</sub> [the LD cxn.]<sub>FOCUS</sub>

Previous studies (Andersson 1982: 36, SAG IV 1999: 448, Gregory & Michaelis 2001, Lindahl 2017: 65, also Leino 2013: 338) have shown that LD usually bears the information structural role of topic. To see if this holds for my material as well, I will investigate the information structure of LD by examining the context and by using a topic test. This test as well as the materials and methods for this study are introduced in the next section.

### 3. Materials and methods

This paper investigates 47 FIA cxns collected from spontaneous conversation, and 225 LD cxns extracted from approximately half of the 20 hours long spoken language corpus Gymnasisters språk- och musikvärldar (The language and music worlds of High school students, GSM), recorded in 1997.

Strandberg (2017: 28) identifies merely 11 examples of the FIA cxn in GSM. The FIA cxn thus seemed hard to collect from one single corpus, and Strandberg (2019) therefore decided to collect FIA cxn from spontaneous conversation. These conversations come from radio and tv shows, and from informal conversations I have participated in myself, although none of the examples were uttered by me. The criteria used for identifying the examples were the following: the example had to be a declarative main clause, with an adverbial phrase placed in front of it. The examples were written down immediately after they were uttered, and some of the examples from radio and tv have also been available as audio files. Pauses in the examples and the contexts of the examples have been noted, but no further intonational aspects.

GSM consists of informal, spontaneous conversations between groups of 3–6 fellow



students at Swedish high schools in the Gothenburg area. The conversations are moderated by an interlocutor, and the participants are asked to discuss nine different songs, representing different styles of music (Wirdenäs 2002). The constructions have been excerpted from the transcriptions, due to limited access to the audio files.<sup>5</sup> However, when checking the excerpted constructions with the few audio files available, the accuracy of the excerpts was very high. Therefore, the excerpted material is considered reliable (Strandberg 2017, 2019).

The 225 LD cxns were studied in two methodological steps: a syntactic analysis, followed by an information structural analysis. The results from these analyses were then formalized using SBCG.<sup>6</sup> In the first step, the cxns were analyzed syntactically. This syntactic analysis investigated the morphosyntactic form of LD and COPY, as well as the clause type they occurred with. The positions of LD and COPY in the clause were also noted. The position of LD might intuitively seem obvious, but as we saw in the previous section, LD may have two different positions in subordinate clauses. The syntactic analysis also identified the syntactic function of COPY. The FIA cxns were analyzed the same way, except for the fact that the position of FIA always is the same, and that this construction lacks a COPY.

In the second methodological step, the information structural status of LD and FIA was investigated. For this investigation, contextual factors were of great importance. The context was used to determine whether the LD or FIA had the information structural status of topic, focus, scene, or other ground material. For topics, Reinhart's (1981) topic test was used as a confirmation of the contextual analysis, following Lindahl (2017). The topic test identifies an NP as the topic of an utterance {NP} + {YP} if the utterance can be formulated as He said about {NP} that {YP}. For example, the topic test correctly identifies the NP the paper in the comment in (21) above, repeated as (24) below, as the topic of the utterance, see (25). The suitability of the test is also supported by the fact that the test itself is a possible structure for LD cxns in subordinate clauses, see (26) from SAG (IV 1999: 447).

(24) This paper investigates the LD cxn.

(25) He said about {this paper} that {it investigates the LD cxn.}

(26) Hon berättade om [innan hon åkt]<sub>LD</sub>  
she told about before she left

att hon [då]<sub>COPY</sub> längtat bort  
that she then longed away

hela tiden.  
whole time.DEF

'She said that before she left, she had been longing away the whole time.'

In SAG (IV 1999: 447) example (26) is given as an instantiation of a LD cxn in a subordinate clause. In this example, the subordinate clause *innan hon åkt* 'before she left' is the LD, and fits into the {NP}-slot of the topic test. Its COPY *då* 'then' and the rest of the LD cxn, *hon hade längtat bort hela tiden* 'she had been longing away the whole time', fits perfectly into the {YP}-part of the topic test. This supports the assumption that there is a connection between the LD cxn and the topicalization function.

It seems then that the test works very well with declarative clauses in which a NP is the topic. However, the test needs slight modifications in order to be used with other types of LD cxn, e.g. LD cxns in which the main clause is not declarative. For polarity questions like (11) and wh-questions like (15), I will use the test sentences in (27) and (28) instead.

(27) Han frågade, angående {NP}, om {YP}  
He asked, regarding {NP}, if {YP}

(28) Han frågade, angående {NP},  
FRÅGEORD {YP}

He asked, regarding {NP},  
QUESTION WORD {YP}.

Following previous research, I will first analyze the context of the example to determine the information structural status of LD and FIA. If the status is topic, I will use the topic test as a confirmation of the contextual analysis and check whether the LD can be the {NP} part of the topic test. If the LD is not a NP, nor can be formulated as one, only the context will be used to determine whether LD is a topic or not.

After that, the results from the empirical analysis were formalized within the framework of Sign-Based Construction Grammar (SBCG). The

foundations of SBCG, necessary for this paper, are therefore introduced in the following.

#### 4. Sign-based Construction Grammar

As several studies have shown that the LD structure is associated with a certain information structure, I have chosen a Construction Grammar approach in which LD and FIA are analysed as constructions: grammatical structures associated with a meaning. This meaning, I believe lies in the information structure of the constructions. The syntactic and information structural properties are one of the research questions addressed in this paper, the hierarchical relation between the constructions and superior constructions the other. The framework of choice in this paper is Sign-based Construction Grammar (SBCG), as this framework offers a view and an analysis model of language compatible with these research questions. The attribute-value matrices used in SBCG are of advantage to this analysis as they allow us to specify the value for the components relevant for the construction in question. Another advantage is the hierarchical type hierarchies used in SBCG to express relations in the construction, the constructional network. The foundations of SBCG necessary to this paper are introduced below.

SBCG is a blend of Head-Driven Phrase Structure Grammar (Pollard & Sag 1994) and Berkeley Construction Grammar (cf. Fillmore 2013), combining a constructionist approach with a more formalized, constraint-based framework (Sag 2012: 62).

SBCG assumes that languages are built up by signs, and that each sign contains at least five components (Sag 2012): a phonological structure (PHON), a morphological form (FORM), a syntactic category (SYN), a semantic structure (SEM) and contextual information (CNTXT), which includes information structure. Signs are described as feature structures, where a feature can be paired with an atomic value, or another feature structure. When two or more daughter signs are combined under a mother sign, the resulting complex form is called a 'construct'<sup>7</sup>. The feature structures constituting signs and constructs are represented as attribute-value matrices (AVMs). Figure 1 below shows the AVM for the construct *älgen sprang* 'the moose ran', derived from the two signs *älgen* 'the moose' and *sprang* 'ran'.

**Figure 1. The construct *älgen sprang* 'the moose ran'**

<table style="border: none;"> <tr> <td style="padding-right: 10px;">MTR</td> <td style="border-left: 1px solid black; padding-left: 5px;"> <table style="border: none;"> <tr><td>PHON</td><td>[æljɛn sprɑŋ]</td></tr> <tr><td>FORM</td><td>&lt; älgɛn, sprɑŋ &gt;</td></tr> <tr><td>SYN</td><td>I! [VAL &lt; &gt;]</td></tr> <tr><td>SEM</td><td>J+K</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table> </td> </tr> <tr> <td>DTR</td> <td style="border-left: 1px solid black; padding-left: 5px;">&lt; G, H &gt;</td> </tr> </table>	MTR	<table style="border: none;"> <tr><td>PHON</td><td>[æljɛn sprɑŋ]</td></tr> <tr><td>FORM</td><td>&lt; älgɛn, sprɑŋ &gt;</td></tr> <tr><td>SYN</td><td>I! [VAL &lt; &gt;]</td></tr> <tr><td>SEM</td><td>J+K</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table>	PHON	[æljɛn sprɑŋ]	FORM	< älgɛn, sprɑŋ >	SYN	I! [VAL < >]	SEM	J+K	CNTXT	X	DTR	< G, H >	<table style="border: none;"> <tr> <td style="padding-right: 10px; vertical-align: middle;">G</td> <td style="border-left: 1px solid black; padding-left: 5px;"> <table style="border: none;"> <tr><td>PHON</td><td>[æljɛn]</td></tr> <tr><td>FORM</td><td>&lt; älgɛn &gt;</td></tr> <tr><td>SYN</td><td>NP<sub>1</sub> <table style="border: none; margin-left: 10px;"> <tr><td>CAT</td><td>noun</td></tr> <tr><td>VAL</td><td>&lt; &gt;</td></tr> <tr><td>MRKG</td><td>def</td></tr> </table> </td></tr> <tr><td>SEM J:</td><td>älgɛn</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table> </td> </tr> <tr> <td style="padding-right: 10px; vertical-align: middle;">H</td> <td style="border-left: 1px solid black; padding-left: 5px;"> <table style="border: none;"> <tr><td>PHON</td><td>[sprɑŋ]</td></tr> <tr><td>FORM</td><td>&lt; sprɑŋ &gt;</td></tr> <tr><td>SYN</td><td>I [CAT [VFORM fin]] <table style="border: none; margin-left: 10px;"> <tr><td>VAL</td><td>&lt; NP<sub>1</sub> &gt;</td></tr> </table> </td></tr> <tr><td>SEM K:</td><td>PAST (sprɑŋ)</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table> </td> </tr> </table>	G	<table style="border: none;"> <tr><td>PHON</td><td>[æljɛn]</td></tr> <tr><td>FORM</td><td>&lt; älgɛn &gt;</td></tr> <tr><td>SYN</td><td>NP<sub>1</sub> <table style="border: none; margin-left: 10px;"> <tr><td>CAT</td><td>noun</td></tr> <tr><td>VAL</td><td>&lt; &gt;</td></tr> <tr><td>MRKG</td><td>def</td></tr> </table> </td></tr> <tr><td>SEM J:</td><td>älgɛn</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table>	PHON	[æljɛn]	FORM	< älgɛn >	SYN	NP <sub>1</sub> <table style="border: none; margin-left: 10px;"> <tr><td>CAT</td><td>noun</td></tr> <tr><td>VAL</td><td>&lt; &gt;</td></tr> <tr><td>MRKG</td><td>def</td></tr> </table>	CAT	noun	VAL	< >	MRKG	def	SEM J:	älgɛn	CNTXT	X	H	<table style="border: none;"> <tr><td>PHON</td><td>[sprɑŋ]</td></tr> <tr><td>FORM</td><td>&lt; sprɑŋ &gt;</td></tr> <tr><td>SYN</td><td>I [CAT [VFORM fin]] <table style="border: none; margin-left: 10px;"> <tr><td>VAL</td><td>&lt; NP<sub>1</sub> &gt;</td></tr> </table> </td></tr> <tr><td>SEM K:</td><td>PAST (sprɑŋ)</td></tr> <tr><td>CNTXT</td><td>X</td></tr> </table>	PHON	[sprɑŋ]	FORM	< sprɑŋ >	SYN	I [CAT [VFORM fin]] <table style="border: none; margin-left: 10px;"> <tr><td>VAL</td><td>&lt; NP<sub>1</sub> &gt;</td></tr> </table>	VAL	< NP <sub>1</sub> >	SEM K:	PAST (sprɑŋ)	CNTXT	X
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As mentioned in the previous section, the main foci of the analysis are the syntax and information structure of LD cxn and FIA cxn. Below, I will therefore explain in more detail how these are modelled in SBCG. In the analysis, I will also provide a basic analysis of the SEM value (which does not require any further explanations at this point).

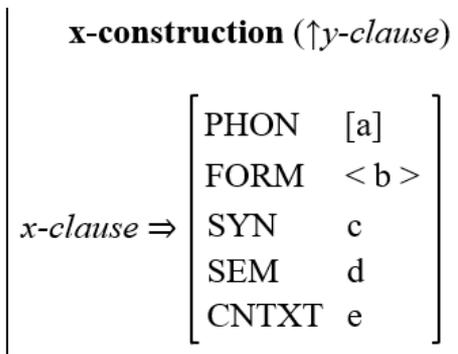
The value of the attribute SYN includes the phrase type of the sign, but other attributes can also be used to specify further syntactic information about the sign. In this paper, I will use the attributes syntactic function (FUNC) and category (CAT). The attribute CAT specifies part of speech, and its subordinate attributes specify finiteness (VFORM), and clausal status. Finiteness and clausal status are only relevant if the sign is a VP, a main clause or a subordinate clause. Clausal status will only be relevant if VFORM is finite, and if so the attribute independent clause (IC) will be marked as either positive or negative. The attribute CNTXT can also have different attributes as its value, but here I will only use one of them: information structure (INFO-STR). The value of INFO-STR are the information structural labels introduced in section 3: topic, scene, other ground material and focus. For SEM, I will use the subordinate value frame (FRAME) (see for example Fillmore, Lee-Goldman & Rhodes 2012).

Signs and constructs are model objects in SBCG's model of language. This is distinct from the description of the model objects: listemes and constructions. Whereas listemes describe lexical signs and fixed expressions, constructions describe constructs. By using model objects, we can ignore properties of a phenomenon that are not relevant in the investigation, which is why I leave out PHON and FORM in this study. Furthermore, differentiating between model objects and descriptions of model objects, the description



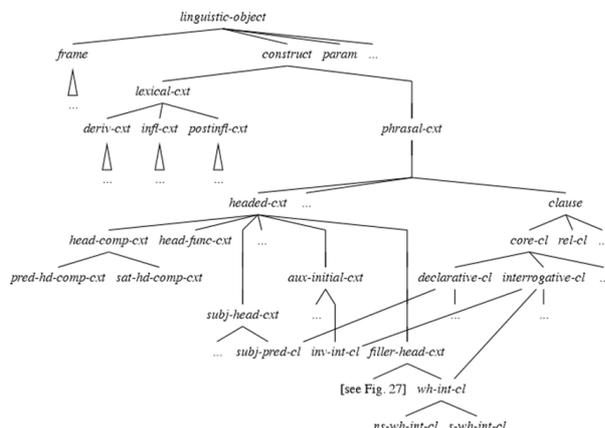
becomes our theory of language. Constructions will be illustrated as in Figure 2. Constructs, on the other hand, will be illustrated inside boxes, see Figure 1. As lexical signs and fixed expressions are not relevant for LD and FIA cxn, I will not explain listemes further in the following.

**Figure 2. Illustration of a construction**



How we interpret the grammatical descriptions is showed in the grammar signature. The grammar signature includes a type hierarchy that provides the linguistic objects present in the language and how these objects relate to each other hierarchically. In Figure 3, from Sag (2012), we can see that Sag considers construct to be one of the linguistic objects in the English grammar signature, with the two subordinate types lexical-cxt and phrasal-cxt. Phrasal-cxt is further divided into headed-cxt, i.e., constructs in which one of the daughter signs decides the syntax of the mother sign, and clause. This type hierarchy also captures the notion of inheritance; a node in the type hierarchy inherits all the specifications of its mother, i.e. headed-cxt has the same specifications as its mother phrasal-cxt, plus extra specification that differentiates it from its sister clause.

**Figure 3. Sag’s (2012) type hierarchy of English**



#### 4.1. Research questions revisited

In this paper, I will assume that FIA cxn consists of two daughters (DTRs), one FIA-DTR representing the leftmost phrase, and one clause-DTR, the clausal sign being the head daughter (HD-DTR). I also assume that LD CXN consists of two daughters: one LD-DTR and one clause-DTR. The HD-DTR in LD cxn also includes a COPY-DTR, representing the COPY that is co-referent with the LD-DTR from inside the clause. The aim of the paper is to present the syntactical and information structural properties of LD- and FIA cxn using AVMs developed within SBCG. The paper also aims to show the relation between the two constructions and their superior constructions in the Swedish grammar using SBCG’s type hierarchy. This will be done by investigating the information structure and the syntactic form and position of LD-DTR, the syntactic form, function and position of COPY-DTR and the syntactic form of HD-DTR. For FIA cxn, only the syntax and the information structure of FIA-DTR will be investigated. The research questions are repeated below:

- What are the syntactical and information structural properties of LD- and FIA CXN?
- How do these constructions relate to other, more abstract Swedish clausal constructions hierarchically, i.e., how can the Swedish version of Sag’s (2012) type hierarchy be constructed?
- How can studies of constructions such as LD CXN and FIA CXN be fruitful for studies of abstract sentence patterns in general?

### 5. Results and formalizations

My study of LD- and FIA cxn reveals that although the constructions do have the properties accounted for in the literature (see for example Andersson 1982, SAG 1999, Lindahl 2017), there is more variation to be accounted for. This section first presents the result of the syntactic analysis of LD-DTR, COPY-DTR and their HD-DTR, followed by FIA-DTR and its HD-DTR. Thereafter, the result of the information-structural analysis of LD-DTR and FIA-DTR is presented. Finally, a formalization of the Swedish LD cxn and FIA cxn as well as a draft of the Swedish type hierarchy are presented.

## 5.1. Syntactic category

### 5.1.1. LD cxn

As illustrated in Table 1, the most common type of LD-DTR has the form of an NP, and its corresponding COPY-DTR is usually either a personal pronoun or an intensional anaphor, but a few identical or synonymous NPs as well as adverbs also occur as COPY-DTRs. The second most common form of LD-DTR is a subordinate clause corresponding to a COPY-DTR that is either an adverb, or an intensional anaphor. These are by far the most common forms of LD cxn in the material, but as we can see in Table 1, the LD-DTR can also be an AdjP, InfP, AdvP, PP or VP. In other words, it seems that although several different phrase types can serve as LD-DTRs, the speakers in the material prefer NPs and subordinate clauses over other phrase types. This might indicate that these phrase types are preferred over others to serve certain information structural purposes, see 5.2. below.

**Table 2. The syntactic form of LD-DTR and COPY-DTR**

Syntactic form of LD-DTR	Syntactic form of COPY-DTR	N	%
NP	Personal pronoun	88	
	Intensional anaphor	65	
	Identical or synonymous NP	15	
	Adverb	8	
	<b>In sum</b>	<b>176</b>	<b>78</b>
Subordinate clause	Adverb	32	
	Intensional anaphor	7	
	<b>In sum</b>	<b>39</b>	<b>17</b>
AdjP	Intensional anaphor	2	
	Identical AdjP	1	
	<b>In sum</b>	<b>3</b>	<b>1</b>
InfP	Intensional anaphor	3	1
	AdvP	1	
AdvP	Intensional anaphor	1	
	AdvP	1	
	<b>In sum</b>	<b>2</b>	<b>1</b>
PP	Adverb	1	1
VP	Intensional anaphor	1	1
<b>In sum</b>		<b>225</b>	<b>100</b>

Table 3<sup>8</sup> below presents the syntactic function of COPY-DTR. As COPY-DTR, in contrast to LD-DTR, is an element of the clause, and not a pre-field element, only COPY-DTR carries a syntactic function. The LD-DTR is, of course, co-referent with COPY-DTR, but only in terms of semantics. This means that the syntactic function is represented by COPY-DTR, and that the semantics of LD- and COPY-DTR are reliant on each other. This can be illustrated with the following example:

(29) ja men [CD]<sub>LD</sub> [då]<sub>COPY</sub> pratar dom  
 yes but CD then talk they

inget emellan.  
 nothing between.

‘yes but on CD they don’t talk between the songs.’

(30) \*ja men [CD]<sub>LD</sub> pratar dom inget  
 yes but CD talk they nothing

emellan.  
 between.

Comparing the English translation with the Swedish example in (29), we notice that there is no preposition before *CD* in the Swedish version, which is also the case in the example of the locative adjunct adverbial in Table 3. This is only possible because of COPY-DTR, whose interpretation tells us that *CD* must be interpreted as an adverbial. Hence, an example like (30) is ungrammatical, as *CD* on its own cannot express this semantic content. In sum, LD-DTR cannot always take the place of COPY-DTR, and both daughters need each other in order to express the semantics properly. In the results, we also find sentences with multiple LD cxns, for example (31).

(31) nä men s- om man säger som  
 no but if you say like

[hip-hop]<sub>LD-DTR1</sub> [Kalle som lyssnar på  
 hip hop Kalle who listens on

hip-hop]<sub>COPY-DTR1</sub>]<sub>LD-DTR2</sub> han l- han  
 hip hop he he

lyssnar [han]<sub>COPY-DTR2</sub> skulle aldrig  
 listens he would never

lyssna på Fugees (.) heller.  
 listen on Fugees either.

‘No but if you say like hip hop, Kalle, who listens to hip hop, he l- he listens he would never listen to Fugees (.) either.’

In this example, the first LD-DTR is the NP *hip-hop*, and the second LD-DTR is the proper noun NP including a relative subordinated clause: *Kalle som lyssnar på hip-hop* ‘Kalle who listens to hip hop’. In



the second LD-DTR, we also find the first COPY-DTR *hip-hop*, which is indeed the same phrase as its LD-DTR. The second COPY-DTR *han* 'he' occurs on first position in the main clause. Examples like these rebut SAG's assumption that if multiple LD cxns occur in one sentence, then one must be nominal whereas the other one must be adverbial.

Looking at the results in Table 3 below, we see that the subject and adverbial functions are the most frequent realizations. That subjects are very common was expected from previous accounts as we saw in the introduction, but the high rate of adverbial LD-DTRs was not – this is not mentioned in any of the sources that I have investigated. Some of the subject COPY-DTRs are also co-referent with vocative LD-DTRs. These constructions I will analyze as a vocative-LD CXN, as the LD in these examples has a pragmatic function that the other types of LD CXNs lack, see section 5.2. The second most common syntactic function in the material is that of adverbial adjunct, and the adverbial adjunct can be either conditional, temporal or locative. Objects and predicative complements also occur in the material, but only in low frequencies.

Table 3 – The syntactic function of COPY-DTR

Syntactic function	N	%	Example
Subject	142	63	[de som ä den stora skillnaden mellan detta å Kent] <sub>LD-DTR</sub> [de] <sub>COPY-DTR</sub> ä ju att de här ä en mycke bättre låt.  <i>'the big difference between this and Kent, is that this is a much better song.'</i>
Vocatives	7		men [ni som lyssnar på radion] <sub>LD-DTR</sub> (.) [lyssnar [ni] <sub>COPY-DTR</sub> mycke påå-?] <sub>HD-DTR</sub>  <i>'but those of you who listen to the radio, do you listen a lot to-?'</i>
Adverbial adjunct	42	19	[om man vill va snabb] <sub>LD-DTR</sub> [då] <sub>COPY-DTR</sub> e de bäst å ta klassisk <i>'If you want to be fast, then you better chose classical music.'</i>
Conditional	27		[om man äter så här fin midda tillsammans me (föräldrarna)] <sub>LD-DTR</sub> [[då] <sub>COPY-DTR</sub> hör de till tycker jag att lyssna på klassisk musik] <sub>HD-DTR</sub>  <i>'if you're having a nice dinner together with your parents, then I think listening to classical music is a part of it'</i>
Temporal	12		[ibland när man har lyssnat på radio såhär jättemycke] <sub>LD-DTR</sub> [[då] <sub>COPY-DTR</sub> e de här rätt gött å sätta på-] <sub>HD-DTR</sub>  <i>'sometimes when you have listened to the radio a lot, then this is quite nice to turn on-'</i>
Locative	3		[Pop-TV på ZTV] <sub>LD-DTR</sub> [[där] <sub>COPY-DTR</sub> spelar dom inte många dåliga låtar] <sub>HD-DTR</sub>  <i>'On Pop-TV on ZTV, there they don't play that many bad songs'</i>
Object	21	9	[de hon säger] <sub>LD-DTR</sub> [[de] <sub>COPY-DTR</sub> tycker hon ju me då] <sub>HD-DTR</sub>  <i>'what she says, that also has to be her opinion, then'</i>
Object of a preposition	17	8	[klassisk music] <sub>LD-DTR</sub> [[de] <sub>COPY-DTR</sub> lyssnar man gärna inte på] <sub>HD-DTR</sub>  <i>'classical music, that you don't really want to listen to'</i>
Predicative complements	3	1	[pampig] <sub>LD-DTR</sub> neej [[de] <sub>COPY-DTR</sub> ä den inte alls] <sub>HD-DTR</sub>  <i>'magnificent, no, that is not what it is'</i>
In sum	225	100	



The form of HD-DTR is either a main clause or a subordinate clause. Table 4 shows that there are three types of main clauses in the material: declarative clauses, polarity questions and wh-questions. With 78 %, the declaratives are clearly the most common ones. In Table 4 we can also see the position of COPY-DTR in HD-DTR; interestingly, there are no COPY-DTRs occupying the middle field of the declarative HD-DTRs. In these HD-DTRs, COPY-DTR is almost always in the fundament position but occurs in the end field as well.

**Table 4. The main clause types in the material and the position of COPY-DTR in the main clauses<sup>9</sup>**

HD-DTR's Main clause type	Position of COPY-DTR	No.	%	Example
Declarative clause	Fundament	162		som [den här Gravitation som Kent gör också] <sub>LD-DTR</sub> [ [den] <sub>COPY-DTR</sub> e ju helt(.) fruktansvärd när man ska lista ut vad den handlar om] <sub>HD-DTR</sub> <i>'like this Gravitation that Kent also plays, that one is terrible when you're trying to figure out what it's about'</i>
	End field	13		[dom som spelar de] <sub>LD-DTR</sub> (.) [de e ju [dom] <sub>COPY-DTR</sub> som lyssnar på de också ju] <sub>HD-DTR</sub> <i>'the ones who play it, they are the ones who listen to it as well'</i>
<i>In sum</i>		175	78	
Polarity question	Middle field	14		men [diin pojkvän] <sub>LD-DTR</sub> då som ä skateare då [lyssnar [han] <sub>COPY-DTR</sub> bara på samma sorts musik eller?] <sub>HD-DTR</sub> <i>'but your boyfriend then who is a skater then, does he only listen to the same type of music?'</i>
	End field	6		[när No limit kom ut] <sub>LD-DTR</sub> [lyssna du inte på den [då] <sub>COPY-DTR</sub> ?] <sub>HD-DTR</sub> <i>'when No limit came, didn't you listen to it then?'</i>
<i>In sum</i>		20	9	
Question with question word	End field	2		[om ni skulle gå hem ä sätta på en låt nu] <sub>LD-DTR</sub> [va skulle ni lyssna på [då] <sub>COPY-DTR</sub> ?] <sub>HD-DTR</sub> <i>'if you were to go home now and turn on a song, what song would you turn on then?'</i>
	Middle field	2		men [skatemusik] <sub>LD-DTR</sub> [va e [de] <sub>COPY-DTR</sub> då?] <sub>HD-DTR</sub> <i>'but skate music, what is that then?'</i>
<i>In sum</i>		4	2	
<i>In sum</i>		199	89	

In the material, there are 26 HD-DTRs that are subordinate clauses. Half of these clauses start with the complementizer *att* 'that', corresponding to English *that*-clauses, whereas the other half are either relative, temporal, causal, concessive, or interrogative. I will not go into detail about HD-DTRs that are subordinate clauses here, see instead Strandberg (2019).

The material also includes a small amount of rarer structures of LD cxn, e.g. adverbial LD-DTRs with a nominal COPY-DTR, LD cxn combined with extraction from relative clauses, and two LD CXN in combination with each other. Due to limited space, these are not accounted for here. See instead Strandberg (2019: 54–56).

### 5.1.2. FIA cxn

The syntactic form of FIA-DTR is illustrated in Table 5, which shows that temporal subordinate clauses are the most common realization, followed by conditional subordinate clauses. The material also contains a few adverb phrases, prepositional phrases, and noun phrases, with different modifiers.

**Table 5. The syntactic form of FIA-DTR**

Syntactic form of FIA-DTR	No.	%
Temporal subordinate clause	20	43
Conditional subordinate clause	14	30
Adverb phrase with a temporal subordinate clause as adverbial	5	11
Prepositional phrase	3	6
Adverb phrase	2	4
Adverb phrase with a preposition phrase and a temporal subordinate clause as adverbial	1	2
Noun phrase	1	2
Preposition phrase with a temporal subordinate clause as adverbial	1	2
	<b>47</b>	<b>100</b>

The FIA-DTRs are all adverbials, either temporal (68 %), conditional (30 %) or manner adverbials (2 %). Examples of a temporal, a conditional and a manner adverbial FIA are given in (32)–(34) below. As emphasized in section 2, these FIA cxns are not V2-violations, although that is a plausible intuitive analysis in a written context. However, these examples were extracted from spoken Swedish and did sound perfectly natural in their contexts (cf. Walkden 2017). As pointed out in section 2, this suggests that a certain prosody is necessary for these FIA cxns to be grammatical. It also shows that FIA cxns are more frequent in spoken language than in written language, where they presumably cannot serve the same purpose.

(32) [[När jag köpte den där  
when I bought that there

pastaburken]<sub>FIA-DTR</sub> [jag tyckte  
pasta tin I thought

den var jättefin]<sub>HD-DTR</sub>]<sub>FIA-CXT</sub>  
it was really pretty



'When I bought that tin of pasta,  
I thought it was really pretty.'

- (33) [[Dricker han själv]<sub>FIA-DTR</sub> [hon  
drinks he self she  
  
listar väl ut var han har  
finds probably out where he has  
  
det]<sub>HD-DTR</sub>]<sub>FIA-CXT</sub>  
it

'If he is drinking by himself, she will probably  
find out where he keeps it.'

- (34) [[Utan mina vänner]<sub>FIA-DTR</sub> [jag  
without my friends I  
  
hade liksom inte klarat det.]<sub>HD-DTR</sub>]<sub>FIA-CXT</sub>  
had kind of not made it

'Without my friends,  
I had not been able to make it.'

The results also include examples where it seems  
that LD- and FIA cxn are used in combination in  
the same sentence, as in (35).

- (35) [Säger hon [att jag måste  
says she that I must  
  
opereras]<sub>LD-DTR</sub>]<sub>FIA-DTR</sub> [jag kommer  
undergo surgery I will  
  
inte klara [det]<sub>COPY-DTR</sub>]<sub>HD-DTR</sub>  
not take it

'If she says that I must undergo surgery,  
I will not be able to take that.'

However, I do not consider examples like (35) to  
contain both a FIA- and a LD cxn; the relation  
between the LD-similar phrase *att jag måste  
opereras* 'that I have to undergo surgery' and the  
pronoun *det* 'that' is no different than the relation  
between a phrase in one sentence and its anaphora  
in another sentence. Hence, what looks like an  
instance of LD cxn in (35) is merely a consequence  
of an anaphoric relation between a phrase in the  
FIA-DTR and another phrase in the HD-DTR.

There are, however, examples in my material  
where both a FIA cxn and a LD cxn occur in the  
pre-field, following each other, as in example (36).  
Here, the FIA-DTR *när jag var liten* 'when I was a

kid' and the LD-DTR *min bästa kompis* 'my best  
friend' are separated, and it is therefore clear that  
example (36) contains a combination of FIA- and  
LD cxn, with the FIA-DTR as the first DTR in the  
pre-field. In the material, we also find examples  
where the LD-DTR is the first DTR, see (37).

- (36) [När jag var liten]<sub>FIA-DTR</sub> [min  
when I was little my

bästa kompis]<sub>LD-DTR</sub> [[han]<sub>COPY-DTR</sub>  
best friend he

hade en råtta hemma.  
had a rat home

'When I was a kid, my best friend,  
he had a rat at home.'

- (37) [Min svenskalärare]<sub>LD-DTR</sub> [när det var  
my Swedish teacher when it was

så varmt när det nu var]<sub>FIA-DTR</sub>  
so warm when it now was

[hon]<sub>COPY-DTR</sub> hade på sig kjol.  
she had on self.REFL skirt

'My Swedish teacher, when it was so hot  
outside whenever that was, she was wearing a  
skirt.'

In sum, the syntax of the constructions partly meets  
the expectations, partly not. As expected, most LD-  
DTRs are NPs coreferential with a subject copy  
placed in the fundament. However, not all  
complement functions are more common than  
adjunct functions; adverbial adjuncts are a lot more  
common than objects and predicative  
complements. Furthermore, although very  
common, the most common LD cxn does not  
account for all instances of the construction. The  
investigated FIA cxns, on the other hand, are  
indeed very similar structurally, as they were  
collected with more specific criteria: They had to  
be main clauses preceded by an adverbial FIA-DTR,  
with no COPY-DTR in the main clause. The most  
common phrase type of the FIA in the material are  
subordinate clauses.



## 5.2. Contextual information: Information structure

As presented in section 2, the LD-DTR is often seen as a phrase that states the topic of the utterance in the literature. Considering that most topics are NPs in the literature (Andersson 1982: 36, SAG IV 1999: 448, Gregory & Michaelis 2001, Lindahl 2017: 65, also Leino 2013: 338), this may intuitively conflict with the fact that part of the COPY-DTRs are adverbial adjuncts, as illustrated in section 5.1. The information-structural status of the LD-DTRs in my material is presented in Table 6 below. The table also contains English translations of the examples. For detailed word-by-word glosses, please see example (38)–(42) below.

**Table 6. The information-structural status of LD-DTR**

Information-structural status	No.	%	Example
Topic	166	74	(38) men [den låten som va nu] <sub>LD-DTR</sub> [den] <sub>COPY-DTR</sub> e ganska gammal 'but that song that just played, it is pretty old'
Vocative topic	9	4	(39) men [ni som lyssnar på radio] <sub>LD-DTR</sub> vad är de för kanaler [ni] <sub>COPY-DTR</sub> lyssnar på? 'but those of you who listen to the radio, what channels do you listen to?'
Scene	42	19	(40) men [hade de vart konsert] <sub>LD-DTR</sub> [då] <sub>COPY-DTR</sub> hade jag nog kunnat tänka mej å gå 'but if it had been a concert then I had probably considered going'
Focus	7	3	(41) [dåligt] <sub>LD-DTR</sub> [de] <sub>COPY-DTR</sub> e de ju faktiskt tycker jag 'bad, that it actually is, I think'
Other ground material	1	-	(42) [urusel] <sub>LD-DTR</sub> (.) va å de som gör att den å [urusel] <sub>COPY-DTR</sub> ? 'lousy, what is it that makes it lousy?'
	225	100	

Below I will describe the contextual factors that the information structural analysis of the examples in the table builds on. In (38)–(42) below, the context for the examples in table 6 is also given.

(38) Context: The speakers have listened to a techno song and are now talking about the techno genre. The speaker in the example starts to talk about the techno song again.

men [den låten som va  
but that song.DEF that was  
  
nu]<sub>LD-DTR</sub> [den]<sub>COPY-DTR</sub> e ganska  
now it is pretty  
  
gammal.  
old.

'But that song that just played, it is pretty old.'

In (38), the speakers have been talking about the genre of techno for a while after having listened to

a techno song together. This techno song is old information, and it is the topic of the utterance as it is the entity of which they are speaking.

(39) Context: The interlocutor have asked the speakers if they listen to the radio. Some of the speakers answered this question, whereas other started talking about other ways of listening to music.

men [ni som lyssnar på radio]<sub>LD-DTR</sub>  
but you who listen on radio

vad är det för kanaler  
what is it for channels

[ni]<sub>COPY-DTR</sub> lyssnar på?  
you listen on

'But those of you who listen to the radio,  
what channels do you listen to?'

The context in (39) has already made clear that some of the speakers listen to music on the radio. The interlocutor returns to these speakers and asks them about the channels they prefer. As the channels are the new information here, they are the focus of this utterance. The old information is that some speakers listen to the radio, and these speakers are the topic of the sentence. They are also addressed using a vocative construction, which is why example (39) has been labelled vocative topic.

(40) Context: The speakers are talking about music produced by the group Iron Maiden. The interlocutor has asked the speakers if they think the music is something people listen to at home, or if it is music you mostly listen to when you go to a concert. One speaker has answered that he/she considers it to be concert music, and the speaker below tells the group that he would consider going to such a concert because of its atmosphere.

men [hade de vart konsert]<sub>LD-DTR</sub>  
but had it been concert

[då]<sub>COPY-DTR</sub> hade jag nog  
then had I probably

kunnat tänka mig å gå  
could think me.REFL to go



‘But if it had been a concert, then I had probably considered going.’

In (40) above, the speakers are talking about concert music. Concert music is therefore part of the ground in example (40). However, it does not constitute the topic of the example. The LD-DTR is a conditional clause that instead gives the circumstances for the event in the main clause and is, in other words, the scene of this utterance.

(41) Context: The speakers have agreed to talk about the genre of dance band music. One of the speakers establishes that the song they listened to in the beginning of their conversation really was dance band music, and in the following example another speaker expresses his opinion about dance band music.

[dåligt] <sub>LD-DTR</sub>	[de] <sub>COPY-DTR</sub>	e	de
bad	that	is	it
ju	faktiskt	tycker jag.	
PARTICLE	actually	think I	

‘It IS actually bad, I think.’

In (41), the speakers have just started to talk about the genre dance band music, and the speaker states that this type of music is bad, in his opinion. No one has previously called the music bad or talked about being bad in any way, and the LD *dåligt* ‘bad’ is therefore the new information, the focus of this sentence.

(42) Context: The speakers are talking about a song, and one of them states that he/she finds the song lousy. In the example below, the interlocutor wants to follow up in this statement.

[urusel] <sub>LD-DTR</sub> (.)	va	ä	de	som
lousy	what	is	it	that
gör	att	den	är	
makes	that	it	is	
[urusel] <sub>COPY-DTR?</sub>				
lousy				

‘Lousy, what is it that makes it lousy?’

Example (42) is uttered in a context where one speaker has labelled a song lousy. The song and the label lousy are therefore the ground of the example,

whereas the question word *va* ‘what’ is the focus, the new information that the interlocutor wants to reach. I consider the song, in the example referred to as *den* ‘it’, to be the topic of the sentence, as the speakers have been talking about this song, and not about being lousy. I therefore consider the LD *urusel* to be other ground material in this context.

As we can see in Table 6 above, topic, at 74%, is by far the most common status, which was expected from the literature. However, 19% of the LD-DTRs are scenes, and just as the high rate of adverbials in section 5.1, this high number of scenes is not expected from the literature. Hypothetically, this may be due to different definitions of topic; other studies may have a topic definition which includes scene. The fact that all the scenes are free adverbials, on the other hand, makes it more probable that this type of LD cxn has been neglected, rather than there be a difference between definitions of topic.

As illustrated in Table 6, I consider the vocative LD-DTRs from section 5.1 to have a slightly different information structural status as well. I have analyzed all the vocatives as topics, as they do indeed name the referent that the utterance is about, but apart from that vocatives also address at least one listener. Expressed in terms of inheritance, this is a quality that the vocative-LD cxn inherits from a more general vocative cxn.

Table 6 further illustrates that LD-DTRs with the information structural status ‘other ground material’ are very rare, and so are LD-DTRs with the status focus. Although the LD-DTRs with the information structural ‘status focus’ are very rare, their presence shows that the LD cxn is not solely a topicalizing construction. It is very likely that the LD is a topic, but the constructional slot of the LD is not reserved for topics only, but also for scenes and in some cases even for focuses and other ground material.

All the FIA-DTRs in the material have the information-structural status scene. This was not surprising given the fact that the FIAs are adverbials. One example is the scene-setting FIA-DTR *om jag kom hem med ett ankare på överarmen* ‘if I came home with an anchor on my upper arm’ in the monologue about tattoos in (43), where the speaker is talking about his mother’s opinion of tattoos in shape of anchors.

(43) Context: The speaker is talking about his mother’s opinion of tattoos in shape of anchors.

[[Om jag kom hem med ett



if I came home with a  
 ankare på överarmen]<sub>FIA-DTR</sub>  
 anchor on upper arm.DEF  
 [hon skulle flippa.]<sub>HD-DTR</sub>]<sub>FIA-CXT</sub>  
 she would freak out

‘If I came home with an anchor tattoo on my upper arm, she would freak out.’

Although all FIA-DTRs in this material are scenes, it does not seem impossible for FIA-DTRs in the form of NPs to be topics. For example, Huang (1984: 550) argues that there are differences between topic-oriented languages like Chinese and Korean, and subject-oriented languages like English, and gives (44) below as an example of a Chinese topic-oriented sentence. Example (45)–(47) are from Strandberg (2019).

(44) neichang huo, wingkui xiaofangdui

‘That fire,  
 fortunately the fire brigade came early.’

(45) ?Den där eldsvådan, vilken tur  
 that there fire.DEF which luck

att brandkåren kom i tid.  
 that fire brigade.DEF came in time

(46) Men den där eldsvådan, vilken tur  
 but that there fire.DEF which luck

att brandkåren kom i tid.  
 that fire brigade.DEF came in time

(47) Apropå den där eldsvådan,  
 apropos that there fire.DEF

vilken tur att brandkåren  
 which luck that fire brigade.DEF

kom i tid.  
 came in time

Looking at Huang’s Chinese example in (44), we see that its English translation starts with the NP that fire. The corresponding example in Swedish, a FIA cxn with a topical NP, is given in (45), and this example is not entirely natural sounding. If we add the conjunction *men* ‘but’ before the example, as in (46), the example is natural sounding. Adding the

preposition *apropå* ‘apropos’ before the example also makes it natural sounding, although this makes the FIA-DTR a PP instead of an NP, see (47). In other words, it is possible for a FIA-DTR in the form of a PP to be the topic of the utterance, and it seems not impossible for a topical NP to be a FIA-DTR.

In this section we have seen that LD-DTR often has the information structural status topic, as predicted by the literature. However, the LD-DTR can also have other statuses as well and is not restricted to topics; it can also be the scene, the vocative topic, the focus or other ground material. The FIA-DTR, on the other hand, can only be scene-setting.

### 5.3. An SBCG-account of the constructions

In this section, the result of the investigation is summarized and formalized in to SBCG-constructions. I also present a draft of a Swedish type hierarchy in which the LD and FIA cxns are included.

#### 5.3.1. LD cxn

Taking all the above information into account, the LD cxns in the material form 70 different patterns, in which the LD- and the HD-DTRs have the same values for both SYN and CNTXT. This means that some of the 225 LD cxns have the same word order, the LD is of the same phrase type, the COPY has the same syntactic function and the LD has the same information structural status. Some of these 70 groups are quite large; 51% of all the LD cxns in the material belong to three of the 70 patterns, but there are also groups consisting of only one or a few constructions.

The three most common patterns are shown in Table 7 below, together with an example of the pattern in question. The first two patterns come in two different variations: The first pattern can be divided into two sub-categories, one where the COPY is a personal pronoun, and one where it is an intensional anaphor. The second pattern also exist in two variations, one where the COPY has the syntactic function of conditional adverbial, and one where the syntactic function is temporal adverbial. The examples in Table 7 have all been mentioned previously in this article.

**Table 7. The three most common patterns for the LD CXNs**

Pattern	Structure	No.	%
1a	[[ [NP, topic] <sub>LD</sub> [Declarative clause [Personal pronoun, subject, initial field] <sub>COPY</sub> ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  (38) [men [den låten som va nu] <sub>LD-DTR</sub> [[den] <sub>COPY-DTR</sub> e ganska gammal] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  <i>'but that song that just played, it is pretty old'</i>	48	21
1b	[[ [NP, topic] <sub>LD</sub> [Declarative clause [Intensional anaphor, subject, initial field] <sub>COPY</sub> ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  Table 2) [[de som ä den stora skillnaden mellan detta å Kent] <sub>LD-DTR</sub> [[de] <sub>COPY-DTR</sub> å ju att de här ä en mycke bättre låt. ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  <i>'the big difference between this and Kent, is that this is a much better song.'</i>	36	17
2a	[[ [Subordinate clause, scene] <sub>LD</sub> [Declarative clause [då 'then', conditional adverbial, initial field] <sub>COPY</sub> ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  Table 2) [[om man äter så här fin midda tillsammans me (föräldrarna)] <sub>LD-DTR</sub> [[då] <sub>COPY-DTR</sub> hör de till tycker jag att lyssna på klassisk musik] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  <i>'if you're having a nice dinner together with your parents, then I think listening to classical music is a part of it'</i>	19	8
2b	[[ [Subordinate clause, scene] <sub>LD</sub> [Declarative clause [då 'then', temporal adverbial, initial field] <sub>COPY</sub> ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  (40) [men [hade de vart konsert] <sub>LD-DTR</sub> [[då] <sub>COPY-DTR</sub> hade jag nog kunnat tänka mej å gå] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  <i>'but if it had been a concert then I had probably considered going'</i>	6	3
3	[[ [NP, topic] <sub>LD</sub> [Polarity question [Personal pronoun, subject, middle field] <sub>COPY</sub> ] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  Table 3) [men [diin pojkvän då som ä skateare] <sub>LD-DTR</sub> [lyssnar [han] <sub>COPY-DTR</sub> bara på samma sorts musik eller?] <sub>HD-DTR</sub> ] <sub>LD-CXT</sub>  <i>'but your boyfriend then who is a skater then, does he only listen to the same type of music?'</i>	5	2
		114	51

In sum, the five most common patterns can be understood as three patterns, and the formalizations of these are showed in Figure 4, 5 and 6 below. In the following, I will first comment on the formalization of each pattern, and then elaborate on the commonalities that the formalizations share with each other.

Pattern 1 is illustrated in Figure 4. As the LD-DTR in this construct is a topical NP, I have labelled the construct the topical NP-LD-cxt. In this construct, the topical status of LD-DTR is specified under the attribute CNTXT|INFO-STR. The attribute SYN shows us that LD-DTR is an NP, and the subordinate attribute CAT specifies that this NP belongs to the category noun. The SYN-value of HD-DTR is clause, for which I here use an S. We can also see that the attribute syntactic function, FUNC, has the value subject for COPY-DTR.

The type of clause is further elaborated under the attribute CAT, where the value fin indicates that the verb form is finite. The positive value for independent clause ensures that the clause is independent as well. In this study, the type of clause has also been investigated, and therefore the formalizations should show this as well. In Sag (2012: 140), a simple declarative clause is an instance of the Subject-Predicate Construction. Here, I will label the same construction declarative-

cxn, and assume that the HD-DTR in each LD- and FIA cxn is either a declarative-cxn, a polarity-question-cxn, a wh-question-cxn or any other clause type that the LD- or FIA cxn occurs with. As we will see in section 5.4, the assumption I make is that the HD-DTR, a type of clausal construction, and a construction for pre-field constructs in Swedish, combine to form a LD- or FIA-cxt. In the formalizations, this will be shown in the "headline" of the formalization (the type label); in Figure 4, the headline is "Topical NP-LD cxn (↑declarative-cxt, argument-LD-cxt)". In the brackets, we can see that the HD-DTR is a declarative clause, and that it combines with an argument-LD-cxt. Argument-LD-cxts will be introduced thoroughly in section 5.4.

**Figure 4. Example of the most common LD-cxt in the material: the topical NP-LD-cxt**

Topical NP-LD-cxn (↑declarative-cxt, argument-LD-cxt)

MTR	$\begin{bmatrix} \text{SYN} & \text{S} \\ \text{SEM} & \begin{bmatrix} 2 \\ 2+3 \end{bmatrix} \\ \text{CNTXT} & \begin{bmatrix} 1 \end{bmatrix} \end{bmatrix}$
DTRS	< LD-DTR, HD-DTR >
LD-DTR	$\begin{bmatrix} \text{SYN} & \text{NP} & \text{[CAT noun]} \\ \text{SEM} & \begin{bmatrix} 2 \\ 2 \end{bmatrix} \\ \text{CNTXT} & \begin{bmatrix} 1 \end{bmatrix} & \text{[INFO-STR topic]} \end{bmatrix}$
HD-DTR	$\begin{bmatrix} \text{SYN} & \text{S} & \text{[CAT [VF fin]} \\ \text{SEM} & \begin{bmatrix} 3 \\ 3 \end{bmatrix} & \text{[IC +]} \\ \text{CNTXT} & \begin{bmatrix} 1 \end{bmatrix} & \text{[FRAME <...2...>]} \end{bmatrix}$
DTRS	< ... *COPY-DTR ... >
COPY-DTR	$\begin{bmatrix} \text{SYN} & \text{NP} & \text{[CAT pronoun/intensional anaphora]} \\ \text{SEM} & \begin{bmatrix} 2 \\ 2 \end{bmatrix} & \text{[FUNC subject]} \\ \text{CNTXT} & \begin{bmatrix} 1 \end{bmatrix} \end{bmatrix}$

In the previous sections, I have acknowledged vocative topic as a subcategory of topic, and the results have shown that a few of the topical NP-LD-cxt have vocative topics. When this is the case, the attribute CNTXT can be used to show how the vocative relates to other contextual factors. Sag (2012: 96) uses the attribute addressee (ADDR) to show to whom the utterance is directed. This means that the value of the attribute ADDR can be the same as the SEM value of LD- and COPY-DTR.

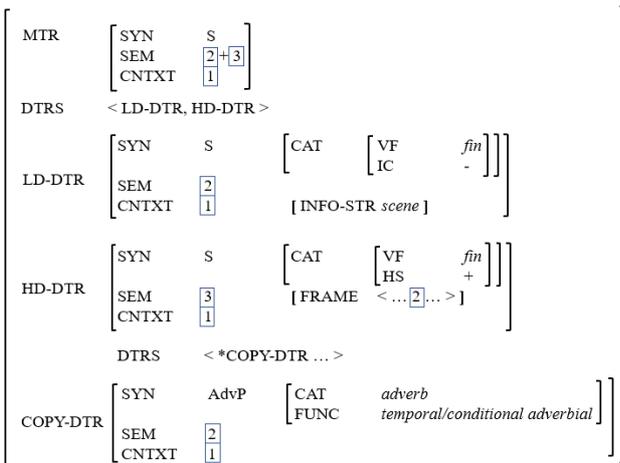
Pattern 2 is given in Figure 5. As the LD-DTR is scene-setting in both patterns, I have labelled the construction the scene-LD cxn. The scene-setting status is specified under the CNTXT attribute of LD-DTR. Furthermore, the LD-DTR is clausal and finite, but not independent. Being a declarative clause, the HD-DTR in this construction has the same properties as in the topical NP-LD cxn. The COPY-DTR, on the other hand, differs from its



counterpart in the topical NP-LD cxn; here, it is an adverb with the syntactic function temporal or conditional adverbial. As the scene-LD cxn is a declarative clause, it inherits from the declarative-cxt, but it also inherits properties from the adjunct-LD-cxt. The argument-LD-cxt as well as the adjunct-LD-cxt will be introduced in section 5.4.

**Figure 5. Example of the second most common LD-cxt in the material: the scene-LD-cxt**

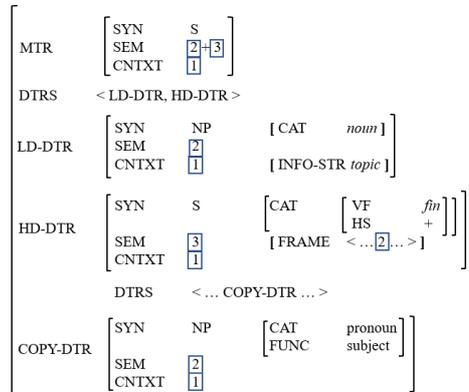
**Scene-LD-cxn** ( $\uparrow$ declarative-cxt, adjunct-LD-cxt)



Finally, pattern number 3 is illustrated in Figure 6, and has been labelled the topical NP-polarity question-LD cxn. Hence, its HD-DTR is, in contrast to the topical NP-LD cxn and the scene-LD-cxt, a polarity question. Its LD-DTR and COPY-DTR, on the other hand, have the exact same specifications as in the topical NP-LD cxn. Note that there is no Kleene star before COPY-DTR in the DTRs list; this is because in a polarity question, there is only one position available for a subject COPY-DTR. As the clausal structure has not yet been involved in the formalizations, the position of the subject COPY-DTRs will not be further specialized here.

**Figure 6. Example of the third most common LD-cxt in the material: the NP-topic-polarity question-LD-cxt.**

**NP-topic-polarity question-LD-cxn** ( $\uparrow$ polarity question-cxt, argument-LD-cxt)



In Figures 4-6 I use the attribute SEM in a very simplified way, as semantics was not the focus of the present study. The LD-DTR and COPY-DTR must be co-referent; this is indicated by the shared index 2. The reference of HD-DTR is not the same as for its DTRs, and it therefore receives the index 3. However, the SEM value of COPY-DTR and LD-DTR must be included in the SEM value of HD-DTR. This is solved here by including the attribute FRAME for semantic frame. I assume this frame includes all the frame elements of the main predicate, and one of them is co-indexed with LD-DTR and COPY-DTR. As all the signs are used in one specific context, they all share the same CNTXT value, indicated by 1.

5.3.2. FIA cxn

In Figure 7 below, the formalization of FIA-cxt is presented. As we can see, FIA-DTR is an adverbial with an unspecified form – FIA-DTR may have any syntactic form, as long as it can be an adverbial and is not an independent clause. The information structural status is scene. The HD-DTR is a finite, declarative clause, and both of the daughters are uttered in the same context, in the figure illustrated with the index 1 for all CNTXT attributes. The connection between the two daughters is made by making the semantic value of FIA-DTR part of the FRAME value of HD-DTR.

**Figure 7. Example of a formalization of FIA cxn**

**FIA-cxn** (*↑declarative-cxt, adjunct-LD-cxt*)

MDR	$\begin{bmatrix} \text{SYN} & \text{S} \\ \text{SEM} & [2+3] \\ \text{CNTXT} & 1 \end{bmatrix}$
DTRS	< FIA-DTR, HD-DTR >
FIA-DTR	$\begin{bmatrix} \text{SYN} & \text{XP} & [\text{CAT} & \text{X} & [\text{IC} & -1]] \\ \text{SEM} & 2 & [\text{FUNC} & \text{adverbial}] \\ \text{CNTXT} & 1 & [\text{INFO-STR} & \text{scene}] \end{bmatrix}$
HD-DTR	$\begin{bmatrix} \text{SYN} & \text{S} & [\text{CAT} & [\text{VF} & \text{fin}]] \\ \text{SEM} & 3 & [\text{IC} & +] \\ \text{CNTXT} & 1 & [\text{FRAME} & \langle \dots 2 \dots \rangle] \end{bmatrix}$

The SBCG-formalizations of the LD and FIA cxns have several advantages. First, the formalism of SBCG is capable of accounting for all the properties of the two constructions. Both LD and FIA cxn carry syntactic, semantic, information structural and intonational aspects, and all of these are very easily described with SBCGs model of language. Second, the formalism of SBCG allows us to moderate only the attributes necessary for the sign or construct in question. This means that attributes like FORM, where morphology is accounted for, can be left unspecified. Third, the formalizations are tightly connected to the type hierarchy which they are a part of. This gives us not only an accurate description of the constructions under investigation, but also shows us how constructions are linked to each other. A draft of this type hierarchy is presented in section 5.4.

#### 5.4. The type hierarchy

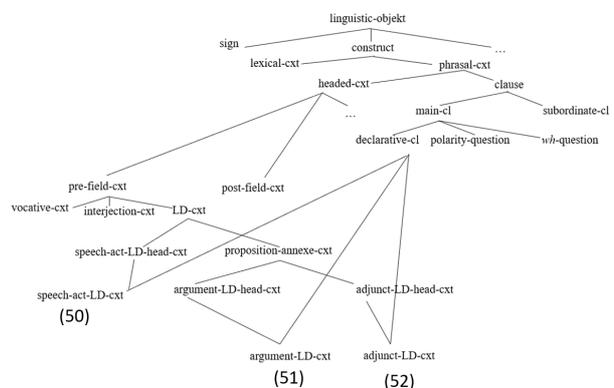
In this section, my analysis of the LD and FIA cxn as part of a Swedish type hierarchy is presented. Following Sag (2012), I will use the term construct when presenting this type hierarchy in Figure 8 below. However, this type hierarchy is still in progress; drawing on Sag (2012), I have kept the nodes in the English hierarchy that I find suitable for Swedish; however, I have only included the nodes necessary for explaining LD- and FIA cxts in Swedish. More research into forming a complete grammar signature of Swedish is still needed.

So far, I have distinguished between LD cxts and FIA cxts, following SAG. As illustrated in the previous sections, though, there are many similarities between the two constructions. Both are clausal constructs with a phrase in the pre-field. When this phrase is an adjunct, it may look the same in a LD cxt as in a FIA cxt – the only difference is that in an LD cxt, there is a COPY-

DTR in the clausal construct. Due to these similarities, I suggest that LD and FIA cxts can be analyzed as one type of cxt, which I will call LD cxts, as LD is the most established term of the two, that can also show the similarities between LD cxts in Swedish and other languages. Hence, in the following, LD cxt will refer to both LD and FIA cxts.

My analysis of a subpart of the Swedish type hierarchy is presented in Figure 8. The type hierarchy should be interpreted as described in the following. Only two linguistic objects have been discussed thoroughly so far, the sign and the construct. Following Sag (2012), I distinguish between lexical and phrasal constructs. As the LD cxt belongs to the latter, only this node is elaborated on here. The node phrasal constructs is parted into headed constructs and clauses. The clauses are further divided into main clauses and subordinate clauses. Under each of these nodes, different types of main and subordinate clauses can be listed. In Figure 8, however, I have only named three main clauses: declaratives, polarity questions and wh-questions. The node headed construct will have a large number of daughters, as many phrasal constructs are headed. In Figure 8, only two of these are recognized: pre-field-constructs, and post field-constructs. The latter has not been investigated in this paper but is included here as it shares several similarities with pre-field-cxts (see for example SAG IV 1999: 6). In the pre-field, we find e.g. vocatives, interjections and LD cxts. These are recognized as sister nodes with a pre-field-cxt as their mother.

**Figure 8. A draft of the Swedish type hierarchy**



As we have seen previously in section 2, there is a group of what I previously called FIA cxts that comment on the speech act of the main clause rather than contributing to the proposition of the main clause, as all the LD cxts do. This is illustrated



with the examples in (3) and (4), repeated here as (48) and (49). In (48), the pre-field contributes to the proposition of the main clause, and in (49) it comments on the speech act.

(48) [När vi gick till affären]  
 when we went to store.DEF  
  
 Frida köpte bara sånt det var  
 Frida bought only only it was  
  
 extrapris på.  
 extra price on

‘When we went to the store,  
 Frida only bought things on sale.’

(49) [Om du undrar] Joakim har bestämt  
 if you wonder Joakim has decided  
  
 sig för att byta lägenhet.  
 REFL. to switch apartment

‘If you would like to know,  
 Joakim has decided to switch apartment.’

As the FIA cxt in (49) differs from the cxt in (48), I will divide the node LD-cxt in my type hierarchy into two nodes: speech-act-LD-head-cxt, to which (49) belongs, and proposition-LD-head-cxt, to which (48) and the rest of the LD-cxts belong. The word head is included in the names to show that these nodes are headed cxts that have not yet combined with a clausal cxt.

The proposition-LD-head-cxt will be further divided into two categories: one where the LD is an argument, and one where the LD is an adjunct. These are labelled argument-LD-head-cxt and adjunct-LD-head-cxt in Figure 8. The argument-LD-head-cxts always need a COPY-DTR, whereas the adjunct-LD-head-cxts may have a COPY-DTR, but not necessarily. When these constructs combine with a clausal HD-DTR, the constructs are complete, and the word head is no longer part of the constructs name. Examples of the constructs are given in (50)–(52) below, and the numbers (50)–(52) have also been placed under their corresponding node in the type hierarchy in Figure 8.

(50) Speech-act-LD-cxt (↑speech-act-LD-head-cxt, declarative-cl)

[Om du undrar] Joakim har bestämt sig för att byta lägenhet. (Example (49))

(51) Argument-LD-cxt (↑argument-LD-head-cxt, declarative-cl)

som [den här Gravitation som  
 like that here Gravitation that  
  
 Kent gör också]<sub>LD</sub> [[den]<sub>COPY</sub> e  
 Kent does also it is  
  
 ju helt omöjlig  
 PARTICLE completely impossible  
  
 när man ska lista ut  
 when you will figure out  
  
 vad den handlar om.  
 what it is about

‘Like this Gravitation that Kent also plays, that one is terrible when you’re trying to figure out what it’s about.’

(52) Adjunct-LD-cxt (↑adjunct-LD-head-cxt, declarative-cl)

a) [När vi gick till affären] Frida köpte bara sånt det var extrapris på. (Example (48))

b) [ibland när man har lyssnat  
 sometimes when you have listened

på radio såhär jättemycket] [då] e  
 on radio like a lot then is  
  
 de rätt gött å sätta på-  
 it quite nice to turn on-

‘Sometimes when you have listened to the radio a lot, then this is quite nice to turn on-’

As highlighted above, the type hierarchy is not yet complete although it does show how the family of LD cxns are connected to other constructions in the Swedish grammar. There is also one aspect accounted for in the result sections that is not yet part of the formalizations of the constructions: The formalizations do not account for the position of COPY-DTR. This is because the clausal cxns have not yet been defined structurally. In fact, there is no widely accepted constructionist account of the V2-declarative construct as far as I know.

Therefore, the next step for this or any analysis of LD cxns, or any clausal cxn in Swedish, should be to explore how the simple declarative-cxn can be accounted for, as this is necessary for any theory describing the whole language model.

## 6. Conclusion

This paper has discussed many examples of two sentence-level constructions: in the taxonomy of the Swedish Academy Grammar (SAG), these are called left-dislocation construction (LD cxn) and free initial annex construction (FIA cxn). As I argued, both constructions have been slightly misconceived in the literature so far: The LD cxn is often described as topicalizing, and stereotypically exemplified with topical NPs pre-posed before a declarative clause with a copy pronoun (COPY) in first position, constituting the subject of the clause. The FIA cxn, on the other hand, has not received as much attention in the literature, and is only scarcely mentioned in SAG.

This paper has shown new sides to both constructions, investigating 225 LD cxts from a spoken corpus, and 47 FIA cxts from spontaneous conversation. Although the stereotypical LD cxn described above is the most common one in the material, it is not the only possible LD cxn. In fact, the material includes 70 different types of LD cxn where the syntactic form, the clausal type, the information structural status of the LD and the position of the COPY is the same in every pattern. Moreover, the three most common patterns make up almost half of the constructs in the material. This indicates how productive and flexible the LD cxn is, and underlines that it is a construction serving different purposes.

Moreover, the results show that the semantics of the COPY is essential for how the LD is to be interpreted; an LD with the form of a NP can only be perceived as an adverbial if the COPY constitutes the adverbial of the clause. In other words, without an adverbial COPY, the LD cannot be understood adverbially. This also shows that a movement analysis of the construction is not possible; a LD with the form of an NP cannot have moved from inside the clause leaving an adverbial COPY. Instead, I suggest that the relation between LD and COPY is no different than between any phrase and its anaphora. Also, we have seen that multiple LDs are possible, as long as it is clear which COPY the LDs are co-referent with.

The paper has also showed that Swedish exhibits a FIA cxn where an initial scene-setting adverbial (FIA) is followed by a declarative clause

without any COPY that is co-referent with the FIA. In spoken language, the construction is completely natural sounding, but in written language, it is likely to be perceived as a violation of the verb second rule and considered to be L2-Swedish. I argue that this underlines the importance of prosody to the FIA cxn, and that this makes it hard for the construction to be used in written language.

Finally, the paper has presented a Sign-based Construction Grammar analysis of LD and FIA cxn, and a draft of a type hierarchy of the Swedish grammar that can be used in further studies of clausal constructions in Swedish. In this hierarchy, I merge LD and FIA cxn into one category with the name LD cxn as the constructions share a lot of similarities. This offers a new view of the LD cxns, but for this work to continue, more research into abstract clausal patterns is needed.

## References

- Andersson, Lars-Gunnar. 1982. What is Swedish an exception to? Extractions and island-constraints. In Elisabet Engdahl & Eva Ejerhed, eds. *Readings on Unbounded Dependencies in Scandinavian Languages*. (Acta Universitatis Umensis 43.) Stockholm: Almqvist & Wiksell International, 33-45.
- Duden. *Die Grammatik*. 2005. Mannheim: Dudenverlag.
- Eide, Kristin Melum. 2011. Norwegian (non-V2) declaratives, resumptive elements, and the Wagnagel position. *Nordic Journal of Linguistics* 34:2: 179-213.
- Fillmore, Charles J., Russel R. Lee-Goldman & Russel Rhodes. 2012. The FrameNet Construction. In Hans C. Boas & Ivan A. Sag, eds. *Sign-based Construction Grammar*. Stanford: CSLI, 69-202.
- Fillmore, Charles J. 2013. Berkeley Construction Grammar. In Thomas Hoffmann & Graeme Trousdale, eds. *The Oxford Handbook of Construction Grammar*. Oxford & New York: Oxford University Press, 15-31.
- Gregory, Michelle L. & Laura A. Michaelis. 2001. Topicalization and left-dislocation: A functional opposition revisited. *Journal of Pragmatics* 33: 1665-1706.
- Hansen, Erik & Lars Heltoft. 2011. *Grammatik over det Danske Sprog*. Published by Det Danske Sprog- og Litteraturselskab.
- Hoffmann, Thomas. 2013. Abstract phrasal and clausal constructions. In Thomas Hoffmann & Graeme Trousdale, eds. *The Oxford Handbook of Construction Grammar*. Oxford: Oxford University Press, 307-328.
- Holmberg, Anders. 2019. The bottleneck hypothesis of V2 in Swedish. In Rebecca Woods, Sam Wolfe & Theresa Biberauer, eds. *Rethinking Verb Second*. Oxford: Oxford University Press.



- Huang, C.-T. James. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15,4: 531-574.
- Kay, Paul & Charles J. Fillmore. 1999. Grammatical constructions and linguistic generalizations: The *What's X doing Y?* construction. *Language* 75: 1-33.
- Lagerholm, Per. 2008. *Stilistik*. Lund: Studentlitteratur.
- Lambrecht, Knud. 1994. *Information Structure and Sentence Form: Topic, Focus, and the Mental Representations of Discourse Referents*. (Cambridge Studies in Linguistics 71.) Cambridge: Cambridge University Press.
- Leino, Jaakko. 2013. Information structure. In Thomas Hoffmann & Graeme Trousdale, eds. *The Oxford Handbook of Construction Grammar*. Oxford & New York: Oxford University Press, 15-31.
- Lindahl, Filippa. 2017. *Extraction from Relative Clauses in Swedish*. (Göteborgsstudier i nordisk språkvetenskap 30.) Gothenburg: Department of Swedish, University of Gothenburg. URL: [https://gupea.ub.gu.se/bitstream/2077/51985/1/gupea\\_2077\\_51985\\_1.pdf](https://gupea.ub.gu.se/bitstream/2077/51985/1/gupea_2077_51985_1.pdf)
- Lyngfelt, Benjamin, Linnéa Bäckström, Lars Borin, Anna Ehrlemark & Rudolf Rydstedt. 2018. Constructicography at work: Theory meets practice in the Swedish constructicon. In Benjamin Lyngfelt, Lars Borin, Kyoko Ohara & Tiago Timponi Torrent, eds. *Constructicography: Construction Development across languages*. Amsterdam/Philadelphia: John Benjamins Publishing Company, 41-106.
- Pollard, Carl Jesse & Ivan. A. Sag. 1994. *Head-Driven Phrase Structure Grammar*. (Studies in Contemporary Linguistics 3.) Chicago: The University of Chicago Press.
- Reinhart, Tanya. 1981. Pragmatics and linguistics: An analysis of sentence topics. *Philosophica* 27,1: 53-94.
- SAG = Teleman, Ulf, Staffan Hellberg & Erik Andersson. 1999. *Svenska Akademiens grammatik*. [The Swedish Academy grammar.] Stockholm: Norstedts Ordbok.
- Sag, Ivan A. 2012. Sign-Based Construction Grammar: An informal synopsis. In Hans C. Boas & Ivan A. Sag, eds. *Sign-based Construction Grammar*. Stanford: CSLI, 69-202.
- Strandberg, Viktoria. 2017. *Syntaktiska perspektiv på initiala annex i talspråket*. [Syntactical Perspectives on Initial Annex in Spoken language.] (Unpublished Bachelor's thesis). Gothenburg: University of Gothenburg. URL: [https://gupea.ub.gu.se/bitstream/2077/51501/1/gupea\\_2077\\_51501\\_1.pdf](https://gupea.ub.gu.se/bitstream/2077/51501/1/gupea_2077_51501_1.pdf)
- Strandberg, Viktoria. 2019. *Initiala annex i en teckenbaserad konstruktionsgrammatik*. [Initial annex in a Sign-based construction grammar.] (Research Reports from the Department of Swedish). Gothenburg: University of Gothenburg. URL: [https://gupea.ub.gu.se/bitstream/2077/59102/1/gupea\\_2077\\_59102\\_1.pdf](https://gupea.ub.gu.se/bitstream/2077/59102/1/gupea_2077_59102_1.pdf)
- Walkden, George. 2017. Language contact and V3 in Germanic varieties new and old. *The Journal of Comparative Germanic Linguistics* 20: 49-81.
- Wirdeñäs, Karolina. 2002. *Ungdomars argumentation. Om argumentationstekniker i gruppsamtal*. [The Argumentation of Senior High School Students. On argumentative techniques in group conversations.] (Acta Universitatis Gothenburgensis 26.) Gothenburg: Department of Swedish, University of Gothenburg. URL: <https://gupea.ub.gu.se/handle/2077/15730>

## Notes

- <sup>1</sup> I would like to thank Benjamin Lyngfelt and Elisabet Engdahl for providing helpful feedback and support on the early versions of this article. The comments from two anonymous reviewers have also contributed with significant input on the article, which I am very thankful for.
- <sup>2</sup> I will hereafter use indexed brackets in the examples to mark LD and COPY.
- <sup>3</sup> In certain constructions, the sentence adverbial precedes the subject. As this is not something that affects this investigation, I will not go into detail about this structure here. See instead SAG 1999.
- <sup>4</sup> An example of a main clause with a post-field is *Det här var jättegott, eller hur?* 'This was really tasty, right?', where the phrase *eller hur* 'right' occupied the post-field.
- <sup>5</sup> Therefore, the prosody of the constructions could not be analyzed systematically in this study.
- <sup>6</sup> Strandberg 2019 also includes a fourth methodological step in which the LD- and FIA Cxns were formalized as construction posts in the Swedish Constructicon.
- <sup>7</sup> The meaning of the term construct in SBCG differs from other constructional approaches.
- <sup>8</sup> The transcriptions of the Swedish examples of LD CXN from the corpus *Gymnasisters språk- och musikvärldar* in Table 2 and the rest of this paper have been adapted to how the words are uttered in the context, and hence the spelling diverges slightly from standard Swedish spelling. In the transcriptions, I also use the sign (.) to account for pauses. However, these pauses are not accounted for in the English translations.
- <sup>9</sup> This *då* 'then' could also be analyzed as a particle used in the end of questions, as in the last example of this table. With the context in mind, I have not analyzed the example that way. However, only the recordings of the examples can show for sure whether this is a question particle or not. As mentioned in section 3, this was not possible as I did not have access to all of the recordings.