S.O.S.

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The picture on the frontpage (Pingviner i Aalborg Zoo) is taken and edited by Ehm Hjorth Miltersen.

The editor of this issue is Andrea Bruun.

Editorial comment

In this issue of *Skrifter om Samtalegrammatik*, Rasmus Puggaard investigates why the copula verb *er* ('is') is sometimes reduced or 'dropped' in clauses in Danish talk-in-interaction.

The *DanTIN* project on the grammar of Danish talk-in-interaction has studied this fact before. Earlier publications (for instance Kjær et al. 2020; Kragelund 2015; and the entrance on "Kopuladrop", 'copula drop' on *samtalegrammatik.dk*) were merely descriptive. They established that *er* is often reduced or "dropped" in talk-in-interaction, and that this can happen after pronouns and adverbs that end in a vowel sound, but did not explain when or why this happened in these phonetic environments.

This number of *Skrifter om Samtalegrammatik* takes a step towards explaining when *er* is reduced or "dropped" as opposed to when it is realized as a separate word or even stressed. It uses a specific grammatical theory (Semiotic Grammar), which explains grammatical relations based on evidence from different languages in the world. Some languages express the linking that *er* achieves in clauses by simply putting the items that should be linked side by side. Others use copula verbs, and even others use other grammatical items.

Rasmus Puggaard uses data from the publicly available *samtalebank* and examines 82 cases with the right phonetic environment for copula drop to happen. He finds that drop and reduction are the most frequent "realizations" of the copula, and that there does not seem to be a functional difference between those two. Stressed *er* occurs mainly in clauses that consist of only function words, and the function of those clauses seems to be stressing the truth value of the proposition. The unstressed *er* can be exchanged with the reduced or dropped cases, but one specific environment seems to favor this variant. See more inside!

Rasmus Puggaard also considers whether it makes sense to talk about "dropping" or "zero" in the cases where there is no phonetic realization of the copula. He argues for an analysis that does not see the copula as missing but rather sees the possibility of putting the items to be

linked side by side without a copula as one, meaningful, resource in talk-in-interaction.

This editorial comment was written by Jakob Steensig.

Reference

Kjær, Louise, Brink, Signe & Kølbæk, Johanne. 2020. Hvad *er* det? *Skrifter om Samtalegrammatik* 7 (3).

Kragelund, Mathias Høyer. 2015. Når 'er' ikke er der - en morfologisk undersøgelse af et dansk talesprogsfænomen. *Skrifter om Samtalegrammatik* 2 (5).

A Semiotic Grammar account of copula clauses in Danish

by RASMUS PUGGAARD

1 Introduction

The theory of Semiotic Grammar (McGregor 1997; henceforth SG[1]) provides a typology of relational clause types that is highly suitable for describing copula clauses in Danish. This paper uses this framework for describing static copula clauses in Danish with particular focus on the use and omission of present tense *er* 'is' in interactional Danish. Hamann et al. (2012) and Kragelund (2015) describe how there are often no phonetic traces of a copula in clauses where *er* is expected. The phenomenon is limited to well-defined but very frequent phonetic environments. This subject of 'copula deletion' is somewhat contested. On one hand, from a traditional grammatical perspective, you could argue that the lack of overt *er* is a purely phonological phenomenon, particularly since Kragelund (2015) posits no syntactic or semantic explanations; phonologically conditioned absence may not equate absence in syntactic structure. On the other hand, from an interactional perspective, it is hard to argue for syntactic constituents that have no substance, and there may well be syntactic and semantic explanations for copula drop even if they have yet to be discovered; a basic tenet of the field of Conversation Analysis is to expect "order at all points" (Sacks 1984: 22).[2] Similar sentiments are echoed by Dik (1997: 189) and are generally crucial in usage-based theories of grammar. It provides no explanation of the phenomenon to simply posit a zero copula in the structure.

Section 2 of this paper presents the SG typology of copula functions in relational clauses, using examples from Danish, Gooniyandi, and Standard Chinese. Section 3 looks in-depth at the grammar of *være* 'to

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[1] McGregor (1997) is the primary reference used for Semiotic Grammar in this paper and is used for all general claims about the framework. When citing specific claims, page numbers will be provided.

[2] The phenomenon was described on the online platform on Danish interactional grammar, Samtalegrammatik.dk (2013; see Steensig et al. 2013). This led to an unpublished exchange between interaction researcher Jakob Steensig and generative grammarian Johannes Kizach; the two vantage points taken here roughly echo points mentioned in their discussion.

be' from an SG perspective, and it is suggested that clauses with pre-field topicalization of non-subject clause roles may be better analyzed as being topic prominent rather than subject prominent. In Section 4, the use or omission of *er* in interactional Danish is analyzed based on real-life examples, with particular focus on the syntactic environments in which different phonetic realizations occur, and whether or not Kragelund's (2015) categories of *være*-realization should be considered emic or etic. Section 5 discusses arguments for and against considering relational clauses with no substantial *er* to have a zero copula. Section 6 provides a summary and conclusion of the study.

2 Relational clauses in an SG perspective

SG distinguishes four different levels of grammatical structure: constituency, dependency, conjugation, and linking. When investigating the Danish copula, the relevant levels to look at are *dependency* and *linking*: as a copula verb, *være* 'to be' serves a linking function, connecting two units in a dependency relationship. These two units are the subject and subject predicate (henceforth s-pred).[3] Copula verbs are used in some subtypes of relational clauses; the subtypes that this section focuses on are elaborating clauses and enhancing clauses. Elaborating clauses can be either attributing or identifying: in attributing clauses, the s-pred describes an attribute of the subject; in identifying clauses, the s-pred further identifies the referent of the subject. In enhancing clauses, the s-pred situates the subject in time or place or specifies its direction, condition, etc. (SG: 149). (1-3) are examples of attributing (elaborating relational) clauses from Danish, Standard Chinese, and Gooniyandi.[4]

(1) min   vand-flaske   er   tom
     1SG.GEN.UTER   water-bottle   be.PRS   empty
     'My water bottle is empty'

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[3] The term 'subject predicate' is traditionally used in Danish grammar to indicate the second clausal role in copula clauses (e.g. Hansen & Heltoft 2011: 303). It should not be confused with the term 'predicate' as used in the generative syntax tradition to indicate everything but the subject in a clause.

[4] When no source is provided for a linguistic example, it is constructed by myself. Constructed Danish language examples are based on traditional written-language grammar.

(2) nǚ-háizi   hěn   pìaoliang
     female-child   very   pretty
     'The girl is pretty'

(3) ngirndaji   maa   thoowoorndoo   (SG: 141)
     this   meat   rotten
     'This meat is rotten'

As exemplified in (1-3), different languages use different strategies for establishing the link between subject and s-pred in attributing clauses. In (1), Danish uses a copula verb inflected for tense, *er*. In (2), Standard Chinese uses no such copula, but instead adjectives[5] normally require adverbial modifiers to act as s-pred; the default choice is *hěn* 'very', which is semantically bleached in this position (e.g. Li & Thompson 1981: 143). While not a copula per se, it is possible to think of this modifier as a formal link between subject and s-pred, even though it also serves other functions in the clause. In (3), Gooniyandi uses no form of copula at all, but simply juxtaposes subject and s-pred.

   (4-6) exemplify different ways of creating the link between subject and s-pred in identifying (elaborating relational) clauses:

(4) min   kop   er   den   beskidt-e
     1SG.GEN.UTER   cup   be.PRS   DEF.UTER   dirty-DEF
     'My cup is the dirty one'

(5) wǒ   shì   Ōuzhōu-rén
     1P   be   Europe-human
     'I am a European'

(6) ngarragi   thangarndi Gooniyandi   (SG: 144)
     my   language   Gooniyandi
     'My language is Gooniyandi'

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[5] Whether or not adjectives constitute a separate parts-of-speech in Standard Chinese is a highly contested issue, although the bulk of the evidence points towards adjectives being a subcategory of verbs (Chao 1968: 675ff.; Li & Thompson 1981; cf. Huang et al. 2009: 22ff. and Dixon 2006 for scholars arguing for parts-of-speech status).

In (4), as in (1), Danish uses a copula inflected for tense to establish the link between subject and s-pred, *er*. In (5), in contrast with (2), Standard Chinese uses a copula *shì* to establish the link; whether or not this copula is formally a verb is not clear (SG: 142). In (6), as seen in (3), Gooniyandi simply juxtaposes subject and s-pred.

(7-9) exemplify ways of creating the link between subject and s-pred in enhancing (relational) clauses:

(7) koncert-en   er   i   morgen   aften
     concert-DEF.UTER   be.PRS   in   tomorrow   evening
     'The concert is tomorrow evening'

(8) bàokān-tíng   zài   gōng-yuán   lǐ
     newspaper-booth   at   public-park in
     'The newspaper booth is in the park'

(9) ngarragi   tharra   ngirndaji-ya   (SG: 150)
     my   dog   this-LOC
     'My dog is here'

In (7), Danish once again uses a tense-inflected copula verb, *er,* to establish the link between subject and s-pred. In (8), Standard Chinese uses the verb *zài* to establish the link; *zài* is a member of a small closed class of coverbs, which are used, among other things, to link subject to the s-pred in enhancing clauses (Li & Thompson 1981: 356ff.). In (9), we see that Gooniyandi once again establishes the link between subject and s-pred through juxtaposition.

In the examples above, we see three different strategies for establishing the link between subject and s-pred in these three clause types. Danish and Gooniyandi use similar strategies for all three types: the copula verb *være* inflected for tense in Danish, and juxtaposition in Gooniyandi. Standard Chinese, meanwhile, uses different strategies for all three clause types.

The subjects and s-preds in all the above clause types are paratactically related, since all units are of similar rank. The direction of elaboration and enhancement is always right-to-left; the last argument modifies the first one. In some cases, particularly in identifying clauses,

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it will be perfectly grammatical to inverse the phrase order, but such an inversion will similarly affect the direction of elaboration (SG: 139). Due to the paratactic nature of the relationship between subjects and s-preds, SG proposes a formalization of this particular relationship which eschews the hierarchic representation of traditional constituent trees. (10-12) show SG formalizations of the dependency and linking relationships in (4-6). The formalization *=i* indicates that the relationship between subject and s-pred is identifying, and the hand symbol indicates that the subject and s-pred are overtly linked.

(10) min kop er den beskidte =i

(11) wǒ shì Ōuzhōurén =i

(12) ngarragi thangarndi Gooniyandi =i
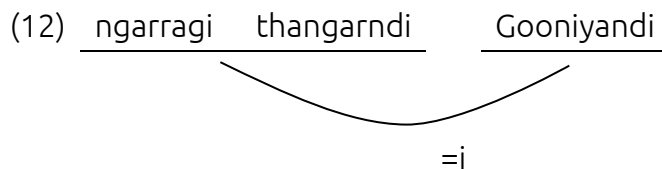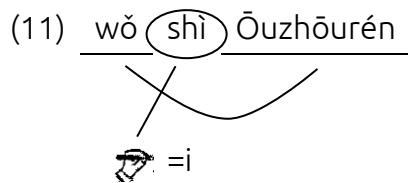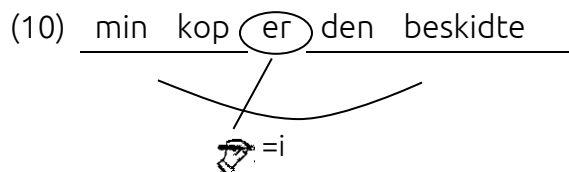
This formalization demonstrates how some languages formally establish the link between subject and s-pred in identifying clauses, while some make do with simple juxtaposition.

3 The Danish copula verb *være*

3.1 The grammar of være

The Danish verb *være* 'be' has two primary functions: it serves as a static copula verb[6] (e.g. Hansen & Heltoft 2011: 921ff.), and as an auxiliary verb (ibid: 630). When functioning as a copula verb, *være* is highly

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[6] As opposed to dynamic copula verbs such as *blive* 'become'.

similar to the English *be*. It inflects for imperative and infinitive mood (*vær*, *være*), as well as past and present tense (*var*, *er*). Since *være* is a static copula verb, the present tense is the semantically unmarked form. Past tense *var* specifically places the relationship between subject and s-pred in the past; present tense *er* places the relationship in the present, but with the possibility to extend to the past and future. Compare (13-14):

(13) vores   hus   var   småt
      1PL.GEN   house   be.PST small.NEU
      'Our house was small'

(14) vores   hus   er   småt
      1PL.GEN   house   be.PRS small.NEU
      'Our house is small'

In (13), at least one aspect of the relationship between subject and s-pred is relegated to the past; which part(s) will depend on the context: perhaps the house is no longer small, but has been expanded; perhaps the house no longer belongs to the subject; perhaps the house no longer exists. While the past tense form does not logically negate the existence of the subject-predicate relationship in the present, the choice of a marked tense form does indicate that the clause is to be understood as equally marked, as per Levinson's M-heuristic (Levinson 1995, 2000). In (14), while the relationship is certainly valid in the present, it is not further specified whether the relationship was also valid in the past or whether it will be in the future; as per Levinson's I-heuristic, "minimal forms warrant maximal interpretations" (1995: 97).[7]

Hansen and Heltoft (2011: 38) write that the general phrase order in Danish is SVO, but the only syntactic commonality that all declarative clauses actually share is that the finite verb is in the second position in the clause (Christensen and Christensen 2009: 200). This can be referred to as XV-order (e.g. Heltoft 1992), or V/2 order (e.g. Vikner 1995). The first position in the clause is the prefield, which can be used for topicalization of non-subject clause roles. The finite verb – e.g. *er* –

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[7] Levinson (1995) labels this the Q2-heuristic, but it was relabeled the I-heuristic in Levinson (2000).

is in the second position regardless of what is in the prefield. This means that copula clauses can be realized in several ways: subject + *være* + s-pred, as we have seen in several examples above; adverb + *være* + subject + s-pred; or even s-pred + *være* + subject. These structures are exemplified in (15-17):

(15) *s*   *v*   *s-pred* *adv*
   vi   er   klar nu
   1PL.NOM be.PRS ready now
   'We are ready now'

(16) *adv* *v*   *s*   *s-pred*
   nu er   vi   klar
   now be.PRS 1PL.NOM ready
   'Now we are ready'

(17) *s-pred* *v*   *s*   *adv*
   klar er   vi   nu
   ready be.PRS 1PL.NOM now
   'Ready is what we are now'

The structures in (15-16) are intuitively about equally common, while the structure in (17) is stylistically marked and not common in everyday language. Following the SG account of the direction of elaboration, there are at least two possible analyses of clauses using prefield topicalization of a non-subject role. In the first and most traditional analysis, the subject *vi* 'we' and s-pred *klar* 'ready' in (16) are simply juxtaposed, and the copula precedes the subject. The direction of elaboration is still right-to-left. SG (145) predicts that the phrase order of attributing clauses can only be inverted as in (17) if the clause is intonationally marked; it indeed seems likely that a clause such as (17) would be highly intonationally marked. An analysis of (17) as having right-to-left direction of elaboration would be rather strange, particularly since *klar* 'ready' is an adjective, and such an analysis would demand that we treat *klar* as the subject of the clause.

An alternative analysis is possible, where (16-17) are analyzed from the point of view that declarative sentences without initial subject display topic prominence in the sense of Li and Thompson (1976). This

analysis also shows right-to-left direction of elaboration, but instead of the subject necessarily being modified, the topicalized phrase in the prefield position is modified by what comes after the copula. I.e., in (16) the topicalized temporal adverb *nu* 'now' is modified by the status change indicated by the subject and predicate *vi klar* 'we ready'. In (17), the topicalized adjective *klar* 'ready' is modified by the referent of the adjective and the temporal adverb indicating change-of-state, *vi nu* 'we ready'. In this analysis, it makes sense to propose that the direction of elaboration remains right-to-left, but that the type of relationship is no longer attributing, but rather simultaneously elaborating and enhancing; *vi* 'we' identifies the referent of *klar* 'ready', while *nu* 'now' situates the relation in time. The two analyses, applied to (17), are formalized below. The formalization *=a* indicates an attributing relationship between subject and s-pred, while *×t* indicates temporal enhancement.

(18)   klar (er) vi   nu

                =a

(19)   klar (er) vi   nu

             =i, ×t
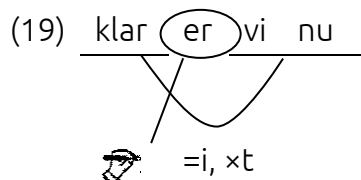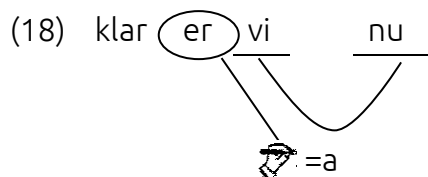
The topic prominence analysis will be revisited in Section 4.4.

3.2 Phonetic realizations of er

Kragelund (2015: 6) distinguishes four different phonetic realizations of the present tense form *er*: stressed, unstressed, incorporated, and deleted (it is somewhat dubious whether 'deleted' should be considered a phonetic realization, but the term is used here for practical reasons). The stressed form is phonetically a diphthong ['æɐ̯]; the unstressed is either a diphthong or a monophthong [a] (Schachtenhaufen 2013: 129); the incorporated form is realized as lengthening of the preceding vowel, and the deleted form has no phonetic substance. The latter two are of particular interest here. These two forms are limited to certain phonetic environments where the preceding word ends

in an open syllable. Kragelund (2015: 1), whose investigation is based on interactional data, only finds *er*-incorporation and deletion in the context of the pronouns *jeg* '1SG.NOM', *du* '2SG.NOM', *det* '3SG.NEU, it, that', *vi* '1PL.NOM', *I* '2PL.NOM', *de* '3PL.NOM', and the adverbs *så* 'so, then', *nu* 'now', and *der* 'there', which can be either a formal subject, a relativizing particle, or a spatial adverb. The context of these words will henceforth be referred to as *drop sites*, and they are the basis for the rest of the investigation. Jensen (2012: 95) hypothesizes that the spatial adverb *her* 'here' is also a possible drop site, which seems highly likely, even if it was not discovered in interactional data by Kragelund. Jensen (ibid.) further hypothesizes that all noun phrases that end on open syllables are possible drop sites; this is not in line with Kragelund's findings. Jensen's study is based on introspection; this method is unavoidably affected by the cultural influence of written language (Linell 2005: 149). There are plenty of reasons to doubt that linguists' intuition about their language reflects actual language use (e.g. Givón 2001: 217ff; Karlsson 2007).

Kragelund (2015: 10) finds that *er* is incorporated or deleted in 61% (n=180) of drop sites, of which 26% are fully deleted. Similarly, Schachtenhaufen (2013: 132) finds that *er* is deleted in 38% (n=1,635) of sentences in which it would be expected; it is not clear whether this number refers to only fully deleted *er* or also incorporated *er*.

Before moving further, it is prudent to discuss whether it even makes sense to talk about '*er*-deletion'. Kragelund (2015: 15) does not believe so, and proposes the process *copula insertion* as an alternative to deletion, since fully realized *er* appears to be the marked case in drop sites. This proposal falls in line with Hansen and Lund's (1983: 58) claim that fully stressed *er* does not actually serve a textual function, but instead has full State-of-Affairs status in the clause. Whether or not one buys Kragelund's proposal is highly related to whether one considers *er*-reduction and deletion to be a syntactic phenomenon or a purely phonetic one. I believe these two options to be inextricably linked. It is certainly a phonetic phenomenon, as evidenced by the fact that 'deletion' is limited to a single well-defined phonetic environment, and that it is highly phonologically motivated; it is similar to some of the myriad schwa-assimilation processes found in Danish (e.g. Basbøll 2005: 293ff.), yet also different in a number of crucial ways. An important further consideration is whether the reduction process is considered synchronic or diachronic. After all, it is not unthinkable for

a diachronic phonetic development to result in a synchronic syntactic irregularity. If an ongoing phonetic change is taking place, it is likely that a corresponding ongoing syntactic change is also taking place.

Constituents without phonetic substance are widely accepted in mainstream generative syntactic theory; it is quite possible that even if *er* is null-realized, speakers are intuitively aware that it is there, even independently of the written language. However, it is practically impossible in literate cultures to determine which parts of our linguistic knowledge come from our knowledge of the written language (Linell 2005: 149). An argument against speakers being intuitively aware of the copula's existence is that *er*-deletion is a phenomenon in informal written language as well as spoken language. A glance at social media and online message boards reveals many examples, such as (20-21):

(20)   det   nemlig   rigtig
      it   exactly   right
      'That's exactly right'

(21)   det   ren   hygge
      it   pure   hygge
      'It's pure hygge[8]'

Both of these examples are taken from social media (specifically, posts on Facebook), but a quick Google search will expose many examples of exactly these (written) constructions online. It is impossible to say what the phonetic representations behind these sentences are, but there are no indications that omission of *er* is a stylistic choice. In other words, it is certainly possible that sentences such as these echo the spoken language, and that *er* is omitted precisely because it is not considered by the writers to be a component of the sentences. At minimum, the omission is an indication that written *er* does not have to be there to be considered grammatically acceptable to a number of readers and writers of Danish.

There are good indications that the synchronic process under scrutiny should not be considered deletion, since lack of *er* is the unmarked

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[8] *Hygge*, roughly 'coziness', is a Danish cultural keyword and is notoriously untranslatable (Levisen 2012: 80ff).

case in drop sites. But due to lack of a better term, I will continue to label the process *er*-deletion below. In the next section, I look at the contextual patterns governing different *er*-realizations and analyze cases from Danish talk-in-interaction.

4 Present tense copula clauses in interactional Danish

4.1 Distribution

In order to test the distribution of different *er*-realizations in the different clause types described in Section 2, I analyzed all present tense copula clauses in 15 minutes of free, naturally occurring spoken interaction. I used the first five minutes of all dialogues in an online corpus of interactional Danish, Samtalebanken (MacWhinney & Wagner 2010a, b). In this data, I located 82 present tense copula clauses with drop sites. All of these were coded for the dependency relation between subject and s-pred (see Section 2), and the realization (or lack of same) of *er*, using Kragelund's (2015) scale, which was introduced in the previous section. The phonetic coding is based on impressionistic listening.

The distribution is shown in Table 1:

	Enhancement	Attribution	Identification	Auxiliary
stressed	3		10	
unstressed	2	4	5	3
incorporated		7	12	
deleted	5	6	24	1

Table 1: Distribution of phonetic realizations of er *in drop sites by dependency relation.*

The raw numbers do a good job of showing the general tendencies in the data. Enhancement clauses are equally likely to have and not to have overt *er*. Overt *er* is unlikely in elaborating clauses; particularly in attributing clauses, where stressed *er* is not found in the data. When used as an auxiliary verb, *er* was found to be overt in most cases, although the data is too sparse in this area to give any significant results. The clause type itself does not appear to be a particularly good predictor of the type of copula; rather, the syntactic structures associated with the different clause types are relevant for the realization.

The vast majority of copula clauses with drop sites (and presumably copula clauses in general) had *det* 'it, that' as their grammatical subject, and in most cases the prefield was occupied by *det*, *der* 'there', or *så* 'so'; this roughly reflects the general distribution of prefields in Danish talk-in-interaction (Puggaard 2019a, b). Much rarer were clauses with other, more specific, pronouns. I mention specificity here because *det* in most cases does not refer to a physical referent, but instead functions as an anaphora referring to larger discourse elements (ibid.). It may also function as a dummy subject in order for a clause to fulfil the syntactic requirement for an overt subject.

The form in the prefield is not in itself a good predictor of which realization *er* takes. However, some conclusions can be drawn from larger-order syntactic structures and sometimes from the syntactic functions of the preceding elements. While there is some degree of free variation, there are also fairly strong tendencies. The following subsections will present patterns associated with the different realization types.

4.2 Stressed er

Stressed *er* is almost exclusively used in clauses where all other elements are function words. These clauses may make up a whole utterance, but they are often subordinate clauses and parts of longer utterances. If they make up the whole utterance, they are likely to serve discourse functions only, as in (22):

(22) Sam2 | samfundskrise | lines 55-56

A:	der	er	mange	måde-r	at	suppler-e
	there	be.PRS	many	method-PL	INF	complement-INF

	sin		indtægt	på
	3SG.POSS.UTER		income	on

'There are many ways of complementing one's income'

B:	ja	det	ér	der
	yes	3SG.NEU	be.PRS	there

'Yes there is'

In (22), the purpose of B's utterance is to affirm A's previous utterance. *Er* is stressed, since all other elements of the clause are function words. The grammatical subject is an anaphora *det* 'it, that' which refers to the entire proposition of A's previous utterance. The pronoun *der* 'there' further affirms the truth value of the proposition.

(23) is an example of stressed *er* in a subordinate clause:

(23) Sam2 | preben_og_thomas | line 138

det	en	af	mine	børne-børn
3SG.NEU	INDEF.UTER	of	1SG.POSS.PL	child.PL-REDUP

der	ér	der
there	be.PRS	there

'It's one of my grandchildren there'

The subordinated clause in (23) is *der ér der* 'who is there'. In this clause, the first *der* functions simultaneously as a subordinating particle and as dummy subject of the clause. The second *der* is a demonstrative pronoun, referring to a specific position in the interactional frame, which has been pointed out by the interlocutor immediately prior to the utterance. These two types of context make up the vast majority of fully stressed *er* in the data. There are two other occurrences of stressed *er* in the data; in both of these clauses, stressed *er* has the function of stressing the truth value of the proposition, as in (24):

(24) Sam2 | samfundskrise | lines 279-280

de	er	fald-et	til	det	halv-e
3PL.NOM	be.PRS	fall-PSTPRT	to	DEF.NEU	half-DEF

det	ér	aktie-r-ne	jo
3SG.NEU	be.PRS	stock-PL-DEF	PRT

'They have fallen to half their value, the stocks have'

Given the functions described above, it is unsurprising that stressed *er* does not occur in attributing clauses in the data, since attributing clauses usually have content words as their s-preds.

4.3 Unstressed er

In some contexts, unstressed *er* appears to be in more or less free variation with incorporated or deleted *er*. However, one pattern is generally associated only with unstressed *er* in the data: when a phrase from a subordinate clause is in the prefield of a superordinate clause. This results in fully pronounced but unstressed *er*, whether it is part of the subordinate or the superordinate clause. It should be noted that, as per SG, I do not presume that the topicalized phrase has been 'moved' to the prefield from a separate position in an underlying structure (SG: 3, Dik 1997: 19ff); that being said, the topicalized phrases clearly serve roles in the subordinate clauses. Examples of the pattern can be seen in (25-26), where the canonical position of the prefield constituent is indicated with 0, following Jakobsen (1995):

(25) Sam2 | samfundskrise | line 92

det	synes	jeg	0	er	lidt	træls
3SG.NEU	think.PRS	1SG.NOM	0	be.PRS	little	annoying

'I think that's a little annoying'

(26) Sam2 | samfundskrise | line 69

det	er	der	rigtig	mange	der	gør	0
3SG.NEU	be.PRS	there	really	many	there	do.PRS	0

'Really many people do that'

In both (25-26), the prefield is occupied by instances of *det*, which serve grammatical functions in the subordinate clauses. In (25), *er* is the verb of a subordinate clause from which the subject is topicalized. In (26), *er* is the main verb of the superordinate clause, but is directly preceded by *det*, which is grammatically the object of the subordinate clause. The relevant conjugational and linking relationships in (25) can be seen in (27):

(27)
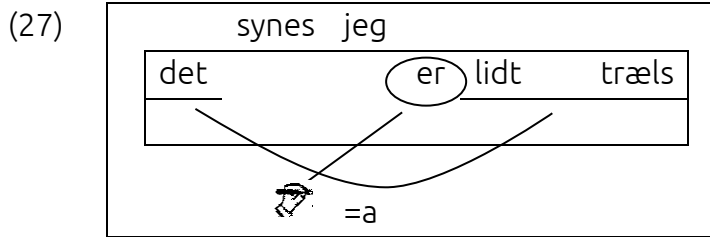


4.4 Incorporated and deleted er

The unmarked present tense copula clause with a drop site takes either incorporated *er* or none at all. As opposed to the distinction between stressed and unstressed *er*, the data gives no indication that the distinction between incorporated and deleted copula is emic. There is a tendency for incorporated copula to occur in shorter utterances, while longer utterances do not have an overt copula. There are exceptions though, and this is probably not a syntactic pattern, but rather evidence for a higher degree of phonetic reduction in longer utterances.

Since most copula clauses with incorporated or no substantial copula are syntactically unmarked in the sense that they are similar to those presented in Section 3.1 above, I will briefly discuss a few of the more marked clauses without realized copula, such as that in (28):

(28) Sam2 | samfundskrise | line 219

det	vi	jo	ude	over	Asta
3SG.NEU	1PL.NOM	PRT	out	over	PN

'We're over that, Asta'

Similarly to (26), the prefield in (28) is occupied by *det*, which is a constituent of the clausal s-pred *ude over (det)* 'over (that)', and refers to a preceding discourse stretch. In a traditional analysis, *vi* '1PL.NOM' is the subject of the clause, while *ude over (det)* is the s-pred. With no realized copula, no juxtaposition of subject and s-pred, and no internal coherence in the predicate, this yields a very complex structure with multiple attributing relationships and no overt linking element; see (29).

(29) det   vi jo ude over

=a
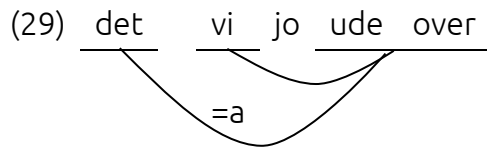
This analysis may be overly complex, considering the relatively simple proposition of the clause. Once again, it may be more prudent to consider such a clause as topic-prominent, with the comment modifying the topic through juxtaposition, also with no overt link; compare (30).

(30) det   vi jo ude over
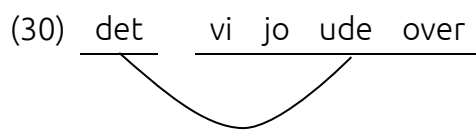
(30) seems to better indicate what is actually achieved with the topicalization strategy than (29); the topicalization of *det* 'it, that' does not just involve moving a phrase or part of one to the beginning of the clause, but also involves a change in the direction of modification and internal relations among phrases. If one assumes grammatical topic prominence in a sentence like this, the relationship between topic and comment does not lend itself easily to the relationship types presented in Section 2, and for this reason no relationship type is indicated in (30). Note that the discourse particle *jo* is only indicated as part of the modifying entity because only dependency relationships are formalized in (29-30); it actually stands in a conjugational relationship to the rest of the clause (cf. SG: 209ff).

5 Implications of postulating a zero copula

This section discusses whether it makes sense to postulate a zero copula in clauses with incorporated or no copula, such as those discussed in the previous section. The section is based on the SG account of 'zeros and nothings' in linguistics presented by McGregor (2003).

McGregor (2003) points out that the notion of zero has often been overused in modern linguistics, particularly in post-1930s American structuralism; examples include linguists who have posited zero singular suffixes in English nouns, and linguists who have claimed that irregular verbs such as *went* have zero past tense suffixes (Bloch 1947; cf. McGregor 2003: 77). Syntactic slots have also sometimes been filled

with zeros. An example of this is Bally's (1922) proposal that Russian uses a zero present tense copula in unmarked copula clauses, since these contrast with overt copulas in past tense clauses and emphasized present tense clauses. This example is of particular interest here because it is similar to the pattern of *være* in copula drop sites in spoken Danish, where an emphasized or past tense copula is also obligatorily overt.

McGregor is inspired by Haas' (1957: 49) two criteria for postulating linguistic zeros: that the zero is in paradigmatic contrast with overt forms, and that a zero is an allomorph of morphemes that have corresponding overt allomorphs (McGregor 2003: 84). McGregor (ibid: 85) considers the second criterion too harsh, and instead proposes a 'non-distinction of indiscernibles' constraint. According to this constraint, one zero morpheme cannot contrast with another zero morpheme. In other words, a zero can only be motivated by value of its contrast with other overt members of a paradigm, and accordingly, a paradigm cannot have several distinct zeros. McGregor (ibid: 111ff) furthermore proposes that the term zero be replaced by *gap*, since the current term indicates that there is actually something *there* in the structure that is simply invisible. In reality, analytical zeros should not indicate that something with no substance is actually there and has a distinct meaning, but rather that the lack of something in a certain context can have meaning in itself.

McGregor's discussion of gaps mostly is mostly concerned with morphology, while a zero copula is a syntactic gap. As mentioned above, zeros in syntax are widespread in mainstream generative linguistics. Harris (1957) proposed that zero-realized lexemes are quite frequent; e.g. in a sentence such as *I'll go if you will* (compare *I'll go if you will go*), where he posits a zero-realized sentence-final *go* (ibid: 305). The concept *trace*, often used in generative syntax as an indication of the deep-structure position of phrases which have been moved in the surface structure, is also a type of zero element. Going back to *I'll go if you will* Ø, if we look at McGregor's constraints, the zero is certainly in paradigmatic contrast with other elements which could go in the same position, i.e. all infinite verbs. But how does it fare with regards to the 'non-distinction of indiscernibles' constraint? In one respect it fails, as many other infinite verbs could similarly fit into this position. In another respect it does not fail, as a gap only allows for

one interpretation of the sentence, and only a gap allows for this interpretation; any other verb would result in a different interpretation, that could not be provided by a gap. Thus, a gap analysis has merit, but once again it is important not to mistake gap for zero; the sentence does not take its meaning because of a covert element which actually exists in the underlying structure, but precisely because there is nothing in the structure.

Going back to Danish, can a similar argument be used with regards to copula clauses with no substantial copula? We will use the sentence in (31) to explore this question:

(31) Sam2 | preben_og_thomas | line 116

det ærger-lig

3SG.NEU vex-ADJZ

'That's a shame'

(31) can be analyzed either as having subject and s-pred juxtaposed, or as having a zero-realized copula verb linking the two together. Held up against McGregor's criteria for posing zeros, a possible zero copula would be in paradigmatic contrast with a series of other verbs, such as *virker* 'appears' and *synes* 'seems to be'. It also does not fail the non-distinction of indiscernibles' constraint, as a gap here is only possible if the s-pred is in an attributing relationship with the subject; and similarly, a gap can only have this function. Once again, I do not believe that suggesting a gap in this position is the same as suggesting a zero. Compare (32-33):

(32)

(33)
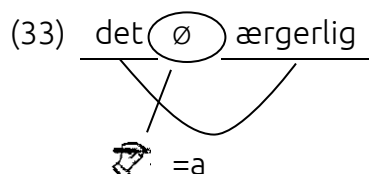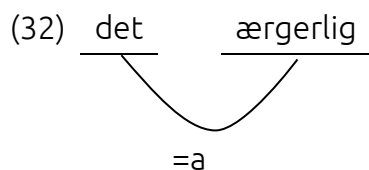
In (32), an attributing relationship between subject and object is simply achieved through juxtaposition. In (33), it is achieved with an overt link – which happens to have no phonetic substance. Neither of these analyses are entirely convincing; (32) is somewhat oversimplified, while (33) is overcomplicated. The analysis in (32) misses that simple juxtaposition of subject and predicate is only allowed here because there is a gap in the verb slot of the clause. In (33) however, the gap is treated as an overt element with the ability to formally link subject and predicate; such a formal link is simply nowhere to be found in the structure. Juxtaposition is allowed because of the gap in the structure – this does not mean that the gap, a non-entity, has a formal relationship to other elements of the clause.

The copula verb carries tense marking, and one argument for recognizing a zero copula is that these clauses are always in the present tense, a fact which speakers may be intuitively aware of. But as discussed in Section 3.1, the present tense has highly general applicability in copula clauses, and really only marks the absence of exclusive past tense. In other words, exclusive past tense needs to be marked; the absence of past tense does not.

I wrote in Section 4.4 that the distinction between incorporated copula and non-realized copula does not appear to be emic, since I found no obvious semantic differences between their usage, or syntactic constraints guiding the choice. This does not mean that they have the same impact on the structure of the clause. Vowel lengthening in the subject could be considered a formal link between the subject and the s-pred. If vowel lengthening is phonetically deleted, the formal link is deleted as well.

I would argue that the phonetic deletion of a formal link between subject and s-pred in the clause types discussed indeed means that the clauses are left with no copula. The gap in the verbal slot of the clause, however, makes it clear that simple juxtaposition of subject and predicate indicates a relationship between the two; a relationship that would not be indicated if the verb slot was filled. Positing a zero copula in these clause types only serves to obscure the difference between clauses with and without overt copula, and stresses only the abstract similarity between clause types while ignoring the overt differences. Paraphrasing Dik (1997: 18), the working assumption of the grammarian should always be that linguistic variation is meaningful.

6 Conclusion

This paper has presented an SG account of *være* copula clauses in Danish. The SG typology of relational clause types provides a good framework for analyzing *være* clauses, with its division of copula clauses into three types: attributing clauses, identifying clauses, and enhancing clauses. All three exist in Danish, and all three use the same tense-inflected copula verb to formalize the relationship between subject and subject predicate. SG also predicts that modification in these relational clause types is always right-to-left, with the last clause element modifying the first. The use of prefield topicalization in Danish syntax causes a problem for a traditional analysis of Danish that assumes subject prominence in all clause types; I suggest that copula clauses with adverbs or subject predicates in the front field should instead be analyzed as topic prominent, in which case right-to-left modification can be maintained.

The paper also presents an SG account of clauses with different phonetic realizations of the present tense copula *er*: stressed, unstressed, incorporated in the preceding syllable, and deleted. The two last types are used only after a subset of frequent open syllables. Using interactional data, I find that stressed *er* is used in clauses with purely functional lexemes that often only serve discourse functions, and to stress the truth value of a proposition; unstressed *er* is used somewhat interchangeably with incorporated and deleted *er*, but is generally used in utterances which have phrases from a subordinate clause in the prefield of the superordinate clause; incorporated and deleted *er* is the norm when it is phonologically allowed, and is found most frequently in all clause types. I find no evidence that the distinction between incorporated and deleted *er* is emic. The paper argues against an analysis which posits a zero copula in clauses with incorporated and deleted *er*, since such an analysis only serves to obscure overt linguistic variation. It is, however, important to realize that the gap in clauses with deleted *er* is not semiotically meaningless, but is a prerequisite for direct juxtaposition of subject and subject predicate in relational clauses.

Epilogue

This paper was written for a class on Semiotic Grammar in 2017. The SG framework deals with the grammar of copula clauses in an insightful way, but it may not be perfect for telling the full story of the emerging syntactic irregularity surrounding Danish copula drop. In particular, the phenomenon deserves a more thorough phonological analysis, and a fuller corpus study. A thorough phonological analysis is needed to determine why *er* participates in some schwa assimilation processes, but not in others; what underlying representation causes it to merge with full vowels, but not sonorant consonants? And why does this process interact with lexical (or collocational) frequency? I further suspect that a larger corpus study might find both 1) specific lexical effects, and 2) an unbroken continuum between incorporated and deleted *er*, rather than a categorical distinction.

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