

Topic and focus in local subject extractions in Danish

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1 Introduction

In standard Danish the word *der*, ‘there’, is used in embedded subject interrogative clauses, but not in bound subject relative clauses introduced by a relative pronoun.¹ This is shown in (1).

- (1) a. Jeg ved hvem der vandt.
I know who there won
b. Jeg kender manden hvis bror _ vandt.
I know the man whose brother _ won

Traditionally, the *der* in (1) is assumed to be the same *der* that occurs in e.g. existential and presentational clauses where it functions as an expletive subject filler when a subject does not appear in subject position, cf. Wiwel (1901), Diderichsen (1957) and Hansen (1974). In more recent, generative literature on *der*, it has been discussed whether *der* in embedded interrogative and relative clauses is indeed an expletive in subject position, cf. the syntactic analyses in Erteschik-Shir (1984), Vikner (1991) and Mikkelsen (2002). The inconsistent distribution of *der* in standard Danish embedded clauses has, however, not been a focus of attention.

The present paper addresses the inconsistent distribution of *der* shown in (1). The proposed analysis is based on both syntactic and information structural properties of the clauses. Apart from explaining the distribution in (1), incorporating information structure in the analysis simultaneously lends support to the argument that *der* in embedded interrogatives and relatives is indeed an expletive subject filler in subject position.

2 More data

Hansen (1974) gives an account of *der* insertion in both standard and non-standard Danish. He concludes that for some non-standard dialects *der* insertion is a coldblooded transformation which fills every empty subject position. We therefore also find *der* inserted in (1b) in non-standard dialects, as shown in (2).

¹The subject relative clauses that we are interested in here are clauses involving pied-piping where the relative pronoun is part of the extracted subject. Relative clauses that are not head-filler constructions as in (1) are not dealt with here.

- (1) Manden der vidste for meget
The-man there knew too much

Cf. Bjerre (To appearb) for an account of this type of relative clause.

- (2) ?Jeg kender manden hvis bror der vandt.
 I know the man whose brother there won

We cannot do justice to the data in Hansen (1974) in this abstract, but can conclude that in standard Danish *der* is inserted in embedded subject interrogatives, but not in bound pied piping subject relative clauses. In non-standard Danish dialects *der* is inserted as a subject filler in more or less every empty subject position with varying degrees of acceptability in different clause types, including pied piping subject relative clauses. In this paper we describe the distribution of *der* in standard Danish, but the non-standard distributions will be shown to follow from exempting non-standard Danish from one of two constraints to be presented in section 5 governing the standard distribution.

3 Previous analyses

As mentioned earlier previous analyses have focused on syntax. Erteschik-Shir (1984) assumes that *der* is an expletive subject, and restricts the insertion of *der* to contexts where “co-superscripting”, or agreement, can occur with an adjacent operator. This is shown in (3).

- (3) a. Jeg ved ikke hvemⁱ derⁱ kan lide ham.
 I know not who there likes him
 b. ?Manden hvis hestⁱ derⁱ vandt løbet
 The man whose horse there won the race

In (3) *hvem* and *hvis hest* are adjacent operators licensing *der* insertion²

Vikner (1991) puts forward an analysis which assumes *der* to occur in C^0 position, rather than being an expletive. On this analysis *der* may only occur if the specifier of its complement is coindexed with its own specifier in which case it may properly govern the specifier of its complement. The examples in (4) illustrate.

- (4) a. Jeg ved [_{CP} hvis hund_i der_i [_{IP} t_i spiser æbler]]
 I know whose dog there eats apples
 b. ??Jeg kender en pige [_{CP} hvis hund_i der_i [_{IP} t_i spiser æbler]]
 I know a girl whose dog there eats apples

In the examples the operator moves from IP-spec to CP-spec, leaving a trace in IP-spec and *der* is inserted in C^0 . *Der*'s complement is the IP, and *der*'s specifier is the operator in CP-spec. The examples are well-formed, as the specifier of *der*'s complement is coindexed with *der*'s own specifier.

What the previous analyses have in common is that they explain the standard occurrence of *der* in embedded interrogatives and the non-standard occurrence of *der* in pied piping subject relative clauses. But they do not explain why *der* does not occur in standard Danish pied piping relative clauses. The latter clauses have the same syntactic structure as the embedded interrogatives and non-standard relatives in these analyses. The inconsistent distribution cannot readily be explained in terms of syntax.

4 Analysis

The analysis presented in this paper is based on the account of the information structure of interrogative and relative clauses put forward in Bresnan and Mchombo (1987). Here three

²Erteschik-Shir (1984, p. 134) mentions that topics do not license *der* insertion, however this aside observation is not incorporated into her proposed analysis.

principles about the role of the topic and focus functions in the grammars of natural language are established, based also on evidence from Kuno (1976) and Dik (1978). In relative clauses the relative pronoun universally bears the topic function. In interrogative clauses the interrogative pronoun universally bears the focus function. And, finally, the same constituent cannot be both focus and topic of the same level of clause structure. The discourse functions of the relative and interrogative pronouns are grammaticalized discourse functions. Bresnan and Mchombo (1987) argue that to provide a natural analysis of the agreement system of Chicheŵa, both syntactic and discourse functions have to be taken into account.

The Danish examples in (5) show that these principles hold for Danish, clefting being a test for focus.

- (5) a. Jeg ved hvem det er hun har inviteret til festen.
 I know who it is she has invited to the party
- b. ??? Jeg kender manden hvem det er hun har inviteret til festen.
 I know the man who it is she has invited to the party

The example in (5a) where the interrogative pronoun is clefted is fine whereas the example in (5b) where the relative pronoun is clefted is questionable.

We propose that we can use this difference in information structure of the two types of clause as described by Bresnan and Mchombo (1987) to account for the occurrence of *der* in standard Danish, and that a purely syntactic analysis fails to explain the difference in distribution of *der* in interrogatives and pied piping subject relatives. *Der* is inserted when the “subject” appears in a local extracted position to receive focus, either itself or part of it. In pied piping subject relative clauses the subject is not extracted to receive focus. This is shown in (6).

- (6) a. Jeg ved [hvem_{focus} der vandt].
 I know who there won
- b. Jeg kender manden [hvis_{topic} bror _ vandt].
 I know the man whose brother _ won

5 Formalization

The syntactic and semantic part of our formalization is based on the formal frameworks set up in Ginzburg and Sag (2000), Bjerre (To appearb) and Bjerre (To appeara). The information structure part of our formalization is based on Paggio (2009), but cf. Engdahl and Vallduví (1996), Vallduví and Engdahl (1996), Kuthy (2002) and Kuthy and Meurers (2003) for analyses of information structure in e.g. English and German.

Embedded interrogative and some relative clauses are filler-gap constructions. In our analysis the expletive is analyzed as a “semantic gap”, and a subtype of both *canon-ss* and *noncanon-ss*. It only puts its CONTENT value in its SLASH set. The Argument Realization Principle for Danish removes a subject *gap-ss*, but not an *expl-ss* from the SUBJ list. In addition to filler-gap constructions, we have filler-expletive constructions in Danish where an expletive appears instead of a gap.

We adopt the feature INFOSTR from Paggio (2009) to encode the grammaticalized discourse functions of interrogative and relative pronouns. The feature INFOSTR is part of the CONTEXT and it has the features TOPIC and FOCUS, each taking as its value a list of semantic indices. As stated in section 4, *der* insertion indicates that the subject appears in extracted position to receive focus, either itself or part of it. In our analysis the occurrence of an expletive subject in the subject “gap” position is licensed by the occurrence of a subject filler marked for focus. In (7)³ we show the constraint licensing *der* in finite-*wh*-subject-interrogative clauses.

³Following Meurers (1999) we further assume a SUBJECT feature as part of *head*.

$$(7) \textit{fin-wh-su-int-cl}: \left[\begin{array}{c} \left[\quad \right] \rightarrow \left[\begin{array}{c} \text{SS} | \text{WH} \left\{ \begin{array}{c} \left[\begin{array}{c} \textit{param} \end{array} \right] \\ \left[\text{IND } \boxed{_} \end{array} \right] \end{array} \right\} \\ \text{CTXT} | \text{INFOSTR} \left[\text{FOCUS } \langle \boxed{_} \rangle \right] \end{array} \right], \mathbf{H} \left[\text{SS} | \text{L} | \text{C} | \text{H} | \text{SUBJECT } \langle \textit{expl-ss} \rangle \right]$$

Interrogative pronouns lexically have a non-empty FOCUS list. The constraint ensures that the subject of the head daughter is an expletive, not a gap.

Topic subject fillers do not license *der*, as shown in the constraint on finite-*wh*-subject-relative clauses in (8).

$$(8) \textit{fin-wh-su-rel-cl}: \left[\begin{array}{c} \left[\quad \right] \rightarrow \left[\begin{array}{c} \text{SS} | \text{REL} \left\{ \begin{array}{c} \left[\begin{array}{c} \textit{param} \end{array} \right] \\ \left[\text{IND } \boxed{_} \end{array} \right] \end{array} \right\} \\ \text{CTXT} | \text{INFOSTR} \left[\text{TOPIC } \langle \boxed{_} \rangle \right] \end{array} \right], \mathbf{H} \left[\text{SS} | \text{L} | \text{C} | \text{H} | \text{SUBJECT } \langle \textit{gap-ss} \rangle \right]$$

Relative pronouns lexically have a non-empty TOPIC list. The constraint ensures that the subject of the head daughter is a gap, not an expletive.

To account for the distribution of *der* in non-standard Danish, we simply propose that the constraint in (8) does not apply. This means that either an *expl-ss* subject or a *gap-ss* subject may occur. In non-standard Danish, a focus filler requires *der* insertion, however, *der* insertion no longer requires a focus filler. The development seems to be towards *der* functioning as a resumptive subject pronoun in Danish.

6 Conclusion

In this paper an analysis of the distribution of *der* in embedded interrogative and pied piping subject relative clauses in standard Danish is proposed. The analysis sets itself apart from previous analyses in combining syntactic and information structural constraints rather than relying solely on syntax. We have shown that the grammaticalized discourse function of the extracted subject in the clauses in question determines whether *der* insertion takes place in standard Danish. When the subject is extracted to receive focus, itself or part of it, *der* is inserted. We have shown that in non-standard Danish *der* may be inserted in pied piping subject relative clauses as well, and that the constraint on *fin-wh-su-rel-cl* in (8) does not apply, suggesting that in Danish the development seems to be towards *der* functioning as a resumptive subject pronoun. We further believe that the proposed analysis lends support to the position that *der* in interrogatives and relatives is an expletive subject filler. In existential and presentational clauses, the subject is also moved to a focus position, the direct object position, cf. Platzack (1983), Askedal (1986), Lødrup (2000) and Bjerre and Bjerre (2008). This means that from an information structural point of view, the *der* in existential, presentational, embedded interrogatives and relative clauses is indeed the same *der*.

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