The pragmatics and syntax of pronoun preposing

A study of spoken Swedish

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Abstract
Preposed pronouns have a dual role of both connecting the utterance to the context and serving as its starting point. While central to understanding restrictions on syntactic movement to the left periphery, this type of fronting has often been overlooked. We provide an analysis of the pragmatics and syntax of Swedish pronoun preposing based on a study of spontaneously produced spoken language from the Nordic Dialect Corpus. We find that there is a strong preference for preposing pronouns that function as switch topics and that it is also possible to prepose continued topics, but in neither case is the preposing obligatory. We argue that these sentence-external relations of the topic are not encoded in the syntax of the left periphery in Swedish, but reflect pragmatic strategies for discourse progression. The types of topic (switch or continued) are furthermore shown not to correlate with the prosodic realization of the pronoun. A key feature of our analysis is that we distinguish the sentence-external function of the preposed phrase from the sentence-internal function of providing the aboutness topic for the utterance. We adopt an analysis of the left periphery proposed by Holmberg, where FinP acts as a bottleneck, and there is only one, syncretic, Force-Topic head above Fin. The fact that we only see evidence for one topic position to the left of the subject in Swedish sets this language apart from German and Italian as they are analyzed by e.g. Frey and Frascarelli and Hinterhölzl, as does the fact that A′-movement of pronouns in Swedish does not imply any particular prosodic marking.

Keywords A′-movement · Continued topic · Left periphery · Mainland Scandinavian · Object shift · Preposing · Swedish · Switch topic · Topicalization

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1 Introduction

In recent years there has been considerable interest in the interaction between word order, information structure, and prosodic realization in Germanic (see, e.g., Frey 2006; Frascarelli and Hinterhölzl 2007; Molnár and Winkler 2010; Mikkelsen 2015; Fanselow 2016; Bentzen and Anderssen 2019; Holmberg 2020). The issues discussed include which role the discourse context plays in determining the topic type and, more generally, the pragmatic function of preposing. Another question concerns the role of the preposed constituent in the utterance; is it always an aboutness topic, as suggested in Frascarelli and Hinterhölzl (2007)? The correlation between type of topic and prosodic realization has also received attention, and some researchers have proposed that this provides evidence for distinguishing two types of preposing in German, local and non-local (Frey 2006; Fanselow 2016). Andréasson (2010) and Bentzen and Anderssen (2019) have pointed to an interaction between preposing and object shift.

In this article we approach these issues by investigating when pronouns are preposed in Swedish and how this preposing reflects certain discourse strategies. We exclude local fronting of subject pronouns and concentrate on preposed object pronouns and preposed subject pronouns from subordinate clauses. Examples of the former type are given in the short dialogue in (1).

(1) a. Såg du kyrkan?
   saw you church.DEF.CG
   ‘Did you see the church?’

b. Nej, den såg jag inte.
   no it.CG saw I not
   ‘No, I didn’t see it.’

c. Nej, det gjorde jag inte.
   no it.N did I not
   ‘No, I didn’t.’

After the negative response word nej, the answer in (1b) starts with the pronoun den, which agrees with the just mentioned church, which has common gender in Swedish. Given the rest of the utterance, den must be interpreted as the object of såg ‘saw’. Note that den is not stressed here and does not convey any contrast. The alternative answer in (1c) starts with the neuter pronoun det, which is a VP anaphor here, referring back to the VP in the question.

This type of pronoun preposing is hardly used in English. Compare the options for answering the same question in English.

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1 Following Ward (1985), we use the term preposing rather than the commonly used term topicalization since we want to be able to distinguish the syntactic positioning from any information structural effects this may have.

2 As Faarlund (2019, 27) points out, unstressed den and det are personal pronouns whereas the stressed versions function as distal demonstrative pronouns. We gloss the unstressed occurrences as ‘it’ and the stressed ones as ‘that’.
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(2) a. No, I didn’t see it.
b. No, I didn’t.
c. * No, it I didn’t see.
d. # No, THAT I didn’t see.

The natural way to answer this question in English is with the object pronoun *in situ*, as in (2a), or with VP ellipsis, as in (2b). Preposing the pronoun *it* is ungrammatical, (2c), whereas preposing of a stressed demonstrative, as in (2d), would be grammatical but not appropriate in this context.

In addition to the response in (1b), it is also possible to answer the question with the agreeing pronoun *den* in situ, as in (3a), or preceding the negation, as in (3b). The word order in (3b) is an instance of object shift (Holmberg 1986) and we refer to the position of the pronoun as *shifted*.\(^3\)

(3) a. Nej, jag såg inte den.
\(no\ I\ saw\ not\ \text{it.CG}\)
IN SITU

b. Nej, jag såg den inte.
\(no\ I\ saw\ \text{it.CG}\ not\)
SHIFTED

However, when we reorder the answer in (1c) with the VP anaphor *det*, it turns out that only the in situ option is available; the shifted order is not possible in this context.

(4) a. Nej, jag gjorde inte det.
\(no\ I\ did\ not\ \text{it.N}\)
IN SITU

b. * Nej, jag gjorde det inte.
\(no\ I\ did\ \text{it.N}\ not\)
SHIFTED

The preposing patterns in (1) are quite common in Swedish as well as in the other Mainland Scandinavian languages Danish and Norwegian, as shown in Engdahl and Lindahl (2014). We believe that these utterance types may provide a clue to the relationship between syntactic structure and pragmatics in North Germanic, and have conducted a corpus study of spoken Swedish. Previous research on preposing has in large part been based on constructed examples or isolated attested examples. By investigating a substantial number of occurrences of preposed pronouns in their normal context, we are able to discern systematic usage patterns which we can then relate to current research about the interaction between syntax and pragmatics. We combine the results of the corpus searches with systematic assessments of in situ and shifted

\(^3\) Note that both orders can be used in Swedish. Earlier it was common to assume that object shift is obligatory in Danish and Norwegian but optional in Swedish. Andréasson (2008, 2013), among others, has shown that there is actually variation in all three languages. Shortage of spoken data has hampered the comparative research, but the situation has improved considerably with the creation of the Nordic Word order Database (Lundquist et al. 2019). This database contains recordings and transcriptions of more than 37,000 elicited productions of different word order options, including utterances with shifted and unshifted pronouns. Studies using the database show that there is indeed more variation in Swedish (21.9% unshifted out of 791 utterances Larsson and Lundquist 2022) than in Danish (4.9% out of 431 utterances) and Norwegian (5.4% out of 848 utterances). This can be compared with Icelandic, where the speakers consistently shifted the pronouns (324 utterances with only one exception Larsson 2022).
alternatives as in (3) and (4). This has proven to be a good method for identifying
triggering factors (cf., e.g., Mikkelsen 2015; Bentzen and Anderssen 2019).

We find that preposing is typically used as a way of connecting the utterance to
the preceding context. Preposing is also a good strategy for ensuring that the pronoun
is interpreted as the aboutness topic of the utterance. An important theoretical point
of the article is that it is useful to keep these two functions of the preposed phrase
apart, i.e. to distinguish the sentence-external connection to the discourse from the
sentence-internal function as an aboutness topic. These two perspectives have often
been conflated in previous research. We furthermore show that Swedish, unlike Ger-
man and Italian (see Frascarelli and Hinterhölzl 2007), allows at most one topic to be
realized before the subject, and for this reason we adopt Holmberg’s (2020) bottleneck
hypothesis.

The article is structured as follows. In Sect. 2, we describe our data collection and
search methods. In Sect. 3, we define two types of progression in texts and conversa-
tions, topic chaining and focus chaining, and use them to describe the relations between
the preposed pronouns and their antecedents. This gives us an overview of situations
in which a speaker chooses to start with a preposed pronoun. In Sect. 4, we examine
conditions for aboutness topics. In Sect. 5.1, we investigate how strong the preference
for preposing is by comparing the corpus data with manipulated versions where we
have ‘undone’ the preposing, so to speak. In Sect. 5.2, we start from a different data
set with pronouns in situ or shifted and investigate whether they can be preposed.
These two tests give us information about both structural and pragmatic constraints on
preposing. In Sects. 3–5, we concentrate on presenting examples and results from the
 corpus study and the subsequent reordering tests, postponing most of the theoretical
discussion to Sect. 6 where we discuss the consequences for the structure of the left
periphery in Swedish. In this section, we also analyze the prosodic realization of pre-
posed pronouns using Praat (Boersma and Weenink 2020). In Sect. 7, we summarize
our view of the respective roles of syntax and pragmatics in pronoun preposing, and
how the study of spontaneously produced examples in context sheds light on what sets
the Mainland Scandinavian languages apart from other Germanic languages.

2 Preposed pronouns in the Nordic Dialect Corpus (NDC)

One reason for focusing on preposed pronouns is that previous studies on spoken
Swedish have shown that it is common for declarative clauses to start with a pronoun.
This holds for both initial subjects and initial objects. Preposed pronouns are thus
a typical and expected type of sentence introducer in this language and are, as such,
central to understanding the pragmatics of preposing and the basic discourse functions
of phrases in the left periphery of Swedish.

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4 About 65% of declarative utterances are subject-initial in spoken Swedish (Jörgensen 1976). In a recent
study of the Swedish part of the Nordic Dialect Corpus, Lindahl (under review) found that approximately
70% of initial subjects are pronouns. Interestingly, almost the same proportion, 66%, of the utterances
that started with a preposed complement of some sort (object, complement of P, predicate nominals and
adjectives) were pronominal as well.
Our data for this study come from the Nordic Dialect Corpus (Johannessen et al. 2009), which consists of recordings and transcripts of some 750 speakers from Denmark, the Faroe Islands, Iceland, Norway, and Sweden. For the present study, we investigated the Swedish sub-corpus, consisting of 361,184 words produced by 133 speakers in 37 locations in Sweden. The recordings contain both interviews with speakers in various regions and conversations between two speakers from the same region.

The transcripts in the corpus are annotated with morphosyntactic information like part of speech, tense, case, and number, but they are not parsed. Consequently we were not able to extract examples with preposed pronouns automatically. After some pilot investigations, we identified eight verbs which were frequently used with preposed, in situ and shifted pronouns: få ‘get’, göra ‘do’, ha ‘have’, se ‘see’, säga ‘say’, tro ‘believe’, tycka ‘think’, vilja ‘want’. We then carried out searches both for utterances with an initial object pronoun, as in (1b,c), and for utterances with the pronouns in situ or shifted, as in (3) and (4). To find preposed pronouns, we searched for strings consisting of the pronoun, a finite form of the verb, and a noun or pronoun (see Appendix for examples of search strings). This worked well for pronouns dem ‘them’, henne ‘her’, and honom ‘him’, which are distinct from the subject forms. The pronouns den ‘it (common gender)’ and det ‘it (neuter)’ are used both as subject and oblique, but by requiring that the verbs were followed by a noun or a pronoun, we were able to reduce the number of false hits.

From the approximately 800 hits in total, we selected 100 examples, ensuring that we had a comparable number of examples for each of the different verbs. We refer to this data set as Pre-100. Since preposing of the neuter pronoun det, which can have both sentential, VP, and DP antecedents, was by far the most common (it accounted for 95% of the hits across all verbs), we also made sure we included examples with other object pronouns. This means that the Pre-100 sample is biased towards pronouns with DP antecedents.

In order to be able to compare the use of preposed pronouns with the use of shifted and in situ pronouns, we also searched in the same corpus for strings with pronouns in the VP, using the same set of verbs. From this set we selected 100 examples, which we refer to as SIS-100.

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5 We excluded the recordings from Älvdalen, a region of Dalecarlia in Sweden where Övdalian is spoken, since the grammars of Swedish and Övdalian differ on many points (Bentzen et al. 2015).

6 Få ‘get’ and ha ‘have’ are used both as main verbs and auxiliaries. We included examples with both of the uses in our data collection.

7 In addition to returning examples where the pronoun is an object of a transitive verb, the search strings also find pronominal objects of prepositions, pronouns used in copular construction, and pronominal subjects in subordinate clauses, which are also included in our study.

8 We also searched for the forms dig ‘you.acc’, mig ‘me’, oss ‘us’, and er ‘you.pl.acc’ but found no or very few examples, presumably because of the size of the corpus.

9 There were no ambiguous examples where we could not tell if the initial pronoun was a subject or not.

10 We searched for past and present tense forms of the verb and went through a number of randomly selected hits for each verb (100 to 200) in order to find examples with pronouns in situ or shifted. Since we wanted the data set to be roughly comparable to Pre-100 with respect to the number of examples per verb and pronominal form, we also performed some targeted searches to collect missing types, e.g. examples with the verb ha ‘have’ and the pronoun den ‘it’. Examples of search strings used can be found in the Appendix.
The speakers in NDC are identified by location and an index. For example, loderup-ow2 picks out one of the four people who were interviewed in Löderup, an older woman, whereas loderup-ym1 picks out a younger man from the same location. When we give examples from these data sets, we abbreviate the location as in (5), where an older woman from Löderup in south Sweden is talking about her grandchildren.

(5) lo-ow2: vi har ju sex stycken
    we have PRT six pieces

    och dom har jag passat väldigt mycket
    and them have I looked after very much

‘We have six of them and I have looked after them a lot’

The relevant pronoun is in italics and the antecedent is underlined.\textsuperscript{11}

3 Preposed pronouns and discourse strategies

The initial position in an utterance has a double function; it both connects the utterance to the preceding context and serves as a starting point for taking the discourse further. In this section, we give an overview of different ways a pronoun can connect to the preceding context, and in Sect. 4 we turn to the role a preposed pronoun plays in the utterance.

Following Erteschik-Shir (2007, 2–3) we identify two main strategies.\textsuperscript{12} The first strategy is to hold on to the topic of the previous utterance and make a new statement about that topic. We will refer to this as \textit{topic chaining}. A short example is given in (6), taken from Erteschik-Shir (2007, 3).

(6) John likes to read. \underline{He} is intelligent and industrious and will go far.

The first sentence is about John, who is the topic. The pronoun \textit{he} in the second sentence refers back to the topic of the first sentence and we have a topic chain. In this case we can say that \textit{he} is a \textit{continued} topic. Another strategy is shown in (7), adapted from Erteschik-Shir (2007, 3).

(7) There is a smart girl in the class. \underline{She} answered all the questions.

Here, the first sentence is a presentational focus sentence and has no topic. The pronoun \textit{she} refers back to the focus of the first sentence, the newly introduced referent \textit{a smart girl}.

\textsuperscript{11} The transcripts and the sound files can be accessed on the web page of the Text Laboratory at the University of Oslo (https://tekstlab.uio.no/glossa2/ndc2). It is easy to search for the utterances, to listen to them, to increase the context, and to find the location on a map. Word-by-word translation into English is also available. The Swedish transcripts use standard orthography, which facilitates the search. We have retained the standard orthography in the examples cited with the following exceptions: clitic pronouns are separated from the host by ‘ and the third person plural nominative \textit{de} and accusative \textit{dem} are written \textit{dom} as they are both pronounced this way.

\textsuperscript{12} These strategies are inspired by the types of thematic progression proposed in the Prague School (see, e.g., Daneš 1974; Sgall et al. 1986).
girl. We will refer to this type of progression as focus chaining and to the new topic as a switch topic. These two examples involve subject pronouns, and this is clearly most common in both English and Swedish. In this article we show how these strategies apply to initial non-subjects.

Note that we define continued topic and switch topic in terms of the relation to the previous utterance. A continued topic maintains the same topic as the previous utterance whereas a switch topic, by definition, was not a topic in the previous utterance. Some researchers use broader definitions. Frascarelli and Hinterhölzl (2007) use the term continuing topic interchangeably with familiar topic which is also used for “a given or accessible constituent” (p. 88) and is not restricted to a previous topic. Switch topics are similar to Frascarelli & Hinterhölzl’s shifting topics (see Sect. 6 for further discussion).

As a first step in our analysis, we identified the antecedents of the preposed pronouns and classified the relation between the antecedent and the anaphor. In addition to topic chaining and focus chaining, we identified some other patterns which are illustrated below. These involve left dislocation structures and pronouns with remote or cataphoric antecedents.

### 3.1 Topic chaining

As described above we use the label topic chaining for examples where the antecedent of the preposed pronoun has already appeared as a topic in the preceding utterance, typically as a definite or pronominal subject. An example from NDC is shown in (8). The notation (.) indicates a short pause.

(8) ko-om2: då hade karln hennes (.) som var pappa till ungen (.)

then had man her that was dad to kid.DEF

han hade var med i xx-fronten

he had been with in xx-front.DEF

och hade varit med och gjort något sabotage

and had been with and done some sabotage

och eh (.) honom hade de inte fått tag i

and eh him had they not got hold in

‘Then her husband, who was the father of the kid, he had been on the xx-front and had been in on some sabotage and they hadn’t got hold of him.’

Here the antecedent karln hennes ‘her man’ is established in the first line, repeated with the subject pronoun han ‘he’ on the second line which is also the understood subject of the conjoined VP on the third line. On the fourth line, the speaker continues talking about this man, this time using a preposed object pronoun honom.14

13 See Zaenen (to appear) for a useful overview.

14 This type of preposing of a continued topic is common in Danish and Norwegian as well, but not in Romance languages. See Erteschik-Shir (2007, 10–13) for a comparison between Danish and Catalonian.
Established topics are often introduced as definite DPs or proper names in the context. In (9), the woman speaking has told the interviewer a few turns back that she has taken part in a study group where they have read about the county Halland. At the beginning of the excerpt, the interviewer asks what she can tell him about Halland.

(9) st-int: vad har du att berätta om Halland då?

‘What can you say about Halland, then?’

st-ow3: ja det är väl nej DET vill jag inte berätta något om

‘Yes, it probably is—no, I don’t want to talk about that.’

The woman starts by referring back to Halland with the neuter pronoun det, used as a subject. But before she gets very far, she interrupts herself and makes a restart, this time with det as a preposed complement of the preposition om ‘about’.

3.2 Focus chaining

In focus chaining the antecedent is introduced as the focus, or part of the focus, in the preceding utterance. An example from our Pre-100 sample is given in (10) where a man is talking about how things have changed on his family’s farm.

(10) fl-om1: det gick ju en stor kanal här

‘There was a big canal here. We’ve laid pipes in it.’

Here the antecedent en stor kanal ‘a big canal’ is part of the focus of the preceding sentence and den thus functions as a switch topic. Another common type of focus chaining is found in question/answer sequences where the antecedent is introduced in the question.

(11) a. bo-int: tycker du det är roligt med små barn?

‘Do you think small children are fun?’

b. bo-ow1: ja det tycker jag faktiskt

‘Yes, I actually think so.’

The preposed det in the answer refers back to the embedded clause in the interviewer’s question.

We note that focus chaining is often followed by topic chaining as in the following example.
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(12) sk-int: Are you in touch with anyone who did their military service with you?

   sk-ym1: ja (. ) det var två stycken andra plutonsjukvårdare
   yes there were two other paramedics

   dom₁ var från Fagersta
   they were from Fagersta

   så dom₂ har jag ganska bra kontakt med
   so them have I pretty good contact with

   ‘Yes, there were two other paramedics. They were from Fagersta, so I have pretty good contacts with them.’

The interviewer asks if the young man is in touch with others from the (obligatory) military service. He replies with a ja ‘yes’ and mentions two paramedics, who are introduced in a presentational sentence. He then refers to them with the subject dom₁ on the second line, which is an instance of focus chaining, and then again with the preposed object dom₂ on the third line, which we classify as an instance of topic chaining.¹⁵

3.3 Left dislocation: a combination strategy

An interesting type of pronoun preposing is found in utterances with left dislocation. Left dislocation is often seen as a strategy for introducing a new topic; Frascarelli and Hinterhölzl (2007), for example, show that their shifting topics are often introduced as left dislocations. In our Swedish data set, several examples involved left dislocation structures where the initial, often stressed, phrase is doubled by what looks like a preposed pronoun.¹⁶ One example is given in (13) where the speaker is talking about how the young farm hands used to show off by lifting heavy sacks of peas and how one guy lost his balance and hurt his knee so badly that he had problems with it for the rest of his life.

(13) so-om4: men han slant han så han slog knä i [...] but he toppled he so he hit knee in

   den där säcken den hade han hela sitt liv sedan
   that there sack.DEF it had he all refl.poss life then

   ‘But he lost his balance so he hit his knee [...] That sack, he had it for the rest of his life.’

In this excerpt, the dislocated phrase den där säcken functions as a switch topic. It is immediately followed by den, which refers to the newly established topic.

¹⁵ Focus or topic chaining with subject pronouns is of course more common than with object pronouns, but we have concentrated on preposed objects in this article.

¹⁶ In Sect. 6.2.1 we reconsider this description.
This way of picking up a dislocated topic with a proform is very common in spoken Scandinavian.\footnote{The construction was first described for Swedish by Andersson (1982), who called it topic movement.} We follow Eide (2011) and Holmberg (2020) and refer to this type as \textit{Copy Left Dislocation (CLD)}. We restrict the label CLD to utterances which consist of one intonational phrase. For reasons that will be further discussed in Sect. 6.2, CLD should be distinguished from \textit{Hanging Topic Left Dislocation (HTLD)} constructions where there is a pause after the initial phrase and a prosodic reset on the preposed pronoun, as in (14).

\begin{verbatim}
(14) ko-ym3: min hustru då (.) henne har vi kommit
     my wife then her have we come
     betydligt längre bak med
     considerably further back with
     ‘We’ve gotten considerably further back with my wife.’
\end{verbatim}

Here the speaker is talking about his genealogical research and that he has found a number of people from the sixteenth century on his side of the family. He then switches topic and starts talking about his wife, \textit{min hustru då} and after a small break adds that they have gotten a lot further back on her side. Here, too, the preposed pronoun \textit{henne} is in a topic chain with respect to the dislocated phrase, but behaves differently from CLD when it comes to V2, as we will discuss in Sect. 6.2.

\subsection*{3.4 Remote and cataphoric antecedents}

In the topic chaining and focus chaining patterns we have seen so far, the antecedent has been established or introduced in an immediately preceding utterance or as a dislocated phrase in the same utterance. There are also cases where the antecedent has been introduced earlier in the conversation, as in (15), where a man is talking about renting houses. We refer to such antecedents as \textit{remote}.

\begin{verbatim}
(15) vi-ym3: jag vet en som en kompis till mig hyrde
    I know one that a friend to me rented
    en kåk som [...] redan var inlöst (.)
    a house that already was redeemed
    så han hyrde av banverket då
    so he rented of track-company.DEF then

    [THREE UTTERANCES LEFT OUT]
    fast den tror jag de har rivit nu (.) den kåken
    but it think I they have demolished now that house

    ‘I know one that a friend of mine rented, a house that had already been sold, so he rented from the railroad company [...] But I think they have demolished it now, that house.’
\end{verbatim}
After introducing the house, the speaker makes several comments about the rental agreement and the notice time required. At the end he refers back to the house with a preposed *den* which thus has a remote antecedent. This example also shows another common pattern, viz. that preposed pronouns with remote antecedents often are repeated by a right dislocation. In this extract, the preposed *den* also has a cataphoric relation to the right dislocated *den kåken*.

Cataphoric relations are also found between preposed *det* and extraposed clauses, as in (16).

\[ \text{(16) bo-ow2: ja } \text{det säger jag alltid jag ska väl höra med N} \]
\[
\text{yes it say I always I will PRT hear with N}
\]

‘I always say that, “I’ll see what N says”.’

In these cases, the information in the extraposed clause has usually not been discussed earlier. The preposed *det* thus seems to anticipate the content of the extraposed CP, unlike in the cases with DP cataphora. In the DP cataphora cases, the postcedent rather reactivates a remote antecedent, in order to make sure the preposed pronoun is interpreted correctly even though the antecedent was produced some time ago.

### 3.5 Antecedent type

Previous research on Scandinavian has shown that the type of the antecedent for an object pronoun affects where and how it can be realized. For example, Andréasson (2008), Andréasson (2010), and Bentzen and Anderssen (2019) have shown that pronouns that refer to entities are more likely to undergo object shift than pronouns with propositional or VP antecedents. Ørsnes (2013) and Mikkelsen (2015) find that VP anaphors in Danish have to be preposed in some contexts. In order to study to what extent the type of the antecedent affects preposing of pronouns in Swedish, we coded our data for different antecedent types. We have already seen examples of two of these: *entity* for referential antecedents, as in (15), and *proposition*, as in (11). In (17) we see an example where the preposed *det* is a VP anaphor.

\[ \text{(17) a. br-int: tycker du om att vara ute och jobba?} \]
\[
\text{like you PRT to be out and work}
\]
\[ \text{‘Do you like being out working?’} \]

\[ \text{b. br-ow1: jaha (.) det gör jag} \]
\[ \text{yes it I do} \]
\[ \text{‘Yes, I do.’} \]

Some occurrences of *det* do not refer to specific entities but rather to the type, in which case the proform need not agree with the antecedent (Borthen 2003; Josefsson 2012). One example is shown in (18) where a young man is talking about which study program he had chosen in high school.

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18 See Puggaard (2019) for similar examples in Danish.

19 We use the term *propositional antecedent* here as shorthand for clausal antecedents, including both declaratives and questions.
(18) so-ym1: för jag var helt säker på att
because I was completely certain on that

  elektronik det vill jag hålla på med
  electronics.CG it.N want I keep on with

‘Because I was completely certain that electronics, that’s what I want to do.’

Here the antecedent elektronik, which is introduced in a CLD construction in an embedded V2 clause, is common gender and the pronoun is neuter. It turns out that type antecedents are particularly common in CLDs; four of the eight instances are in CLD constructions.

Finally we introduced a category other non-ref for pronouns that refer to expressions or names, as shown in (19).

(19) no-om2: vi sa sköven
    we said sköven

[TWO UTTERANCES LEFT OUT]

  men det säger jag ju än i dag (. sköven
  but it say I still in day sköven

‘We said sköven […] I still say that today.’

Here the speaker contrasts the way his parents used to refer to skogen ‘the forest’ with the way he and his siblings used to pronounce it.

3.6 Overview of pronoun preposing

We end this section by giving an overview of pronoun preposing in Pre-100 and discussing how it relates to the choice of initial constituents in Swedish more generally. In Table 1 we show the distribution of types of antecedents in the different antecedent-anaphor relations.

| Relation              | Entity | Prop | VP | Type | Non-ref | Total |
|-----------------------|--------|------|----|------|---------|-------|
| Focus chain           | 11     | 22   | 21 | 2    | 4       | 60    |
| Topic chain           | 9      |      | 2  | 2    |         | 13    |
| Copy left dislocation | 5      | 1    | 3  | 3    |         | 12    |
| Hanging topic         | 2      | 1    | 1  |      |         | 4     |
| Remote antecedent     | 4      | 1    |    | 2    |         | 7     |
| Cataphoric CP         | 4      |      |    |      |         | 4     |
| Total                 | 31     | 27   | 23 | 8    | 11      | 100   |

Table 1 Antecedent type and antecedent-anaphor relations in Pre-100
The rightmost column shows that focus chaining is most common, followed by topic chaining and copy left dislocation. Furthermore, in a large majority of the cases, the antecedent of the preposed pronoun is found in the preceding utterance or as a dislocated phrase; there are only seven remote antecedents. Note that the relative frequencies suggested by these numbers do not directly reflect the discourse strategies in spoken Swedish since we have only studied utterances with preposed pronouns. Had we included examples with initial local subject pronouns, the proportion of topic chaining would probably have been much higher since subject pronouns often refer to the topic of the previous utterance, as in (6), which would make them continued topics.

Focus chaining is found with all antecedent types but is especially common when the antecedent is a proposition or a VP. Topic chaining tends to involve entities, and there were no proposition or VP antecedents in Pre-100. Examples can, however, be found in the NDC. They resemble the continued topic example in (8) where the antecedent is first established as a topic in subject position and then preposed. Recall that the relatively high number of entity pronouns, 31, is a consequence of the fact that we explicitly searched for the personal pronouns henne ‘her’, honom ‘him’, and dem ‘them’ to balance the large number of examples with det which can refer to entities, propositions, and VPs.

The fact that focus chaining is so common reflects, we believe, a strong preference in Swedish to use a recently introduced entity, event, or fact as the starting point for the following utterance. This fits well with observations made by Svenonius (2002, 215–218) concerning the initial position in Germanic. According to Svenonius, this is where speakers tend to place elements that “redirect the discourse” such as switch topics, speaker-oriented adverbials, discourse connectives, scene-setting adverbials, and contrastive phrases. He notes further that “if there is no switch topic or other suitable element, a continued topic may appear in initial position (frequently the subject)” (p. 217). As mentioned earlier, we cannot say anything about the frequency of topic chaining with subjects compared to topic chaining with non-subjects given that we have only studied non-subject-initial examples. But we note that in the 13 cases of topic chaining we have found, there were no potential switch topics in the sentence. Neither do any of the examples where the preposed pronoun was classified as remote or cataphoric contain a potential switch topic pronoun.

The relatively large number of dislocation instances, 12 prosodically integrated copy left dislocations and four hanging topics, also fit Svenonius’ generalization since left dislocation is often seen as a strategy for introducing a new topic. The patterns of pronoun preposing we have seen thus seem to reflect general strategies for connecting an utterance to the previous discourse in Swedish. Next we turn to the information-structural function of the initial constituent within the sentence.

4 The role of a preposed pronoun in an utterance

So far we have examined the relation between a preposed pronoun and the preceding context in terms of topic and focus chaining, using the labels switch topic and continued topic for these anaphoric uses. We now change perspective and investigate the role
of the initial pronoun in the utterance. Unsurprisingly, it turns out that it serves as the aboutness topic that the rest of the utterance is understood as providing additional information about (see Reinhart 1981). To identify the aboutness topic of an utterance, we use Reinhart’s rewriting test. In this test, the potential topic phrase is placed in an about-sentence: He said about DP that YP, where YP is the rest of the original sentence. If the resulting sentence is a natural paraphrase, then the DP following about functions as the aboutness topic of the original sentence. Using this test we see that both continued topics and switch topics can function as aboutness topics. This applies both to the subject-initial examples (6) and (7) from Erteschik-Shir (2007), and to the preposed continued topic in (8) and the switch topic in (10).

(20) a. ko-om2: och eh (.) honom hade de inte fått tag i 
   and eh him had they not got hold in
   b. ko-om2 said about him (the missing husband) that they had not got hold of him

(21) a. fl-om1: den har vi lagt ner rör i och
   it have we laid down pipes in and
   b. fl-om1 said about it (the canal) that they had put down pipes in it

The continued topic honom ‘him’ in (20a) works well as an aboutness topic, as shown in (20b), and in (21a) the switch topic den ‘it’ is a plausible aboutness topic. Switch topics introduced in CLD also become natural aboutness topics.

(22) a. so-om4: den där säckens den hade han hela sitt liv sedan
   that there sack.DEF it had he all refl.poss life then
   b. so-om4 said about the sack that he had it for the rest of his life

When we apply Reinhart’s rewriting test to examples with cataphoric pronouns, the initial pronoun seems to work as a topic placeholder for the extraposed phrase.

(23) a. vi-ym3: fast den tror jag de har rivit nu (.l) den käken
   but it think I they have demolished now that house
   b. vi-ym3 said about it (i.e. that house) that he thinks that they have demolished it now

Even if aboutness topics often appear in initial position, it is important to note that they can also appear in other positions. This can be seen most easily when the aboutness topic is a subject, as in the following example.

(24) no-ow1: jag började som köksbiträde, sen så blev jag kokerska och ...
   I started as kitchen maid then PRT became I cook and
   ‘I started as a kitchen maid, then I became a cook.’

To be precise, it is the referent of the DP that is the topic, but we follow common practise in the syntactic literature and call the phrase a topic as well. See also Erteschik-Shir (2007, 13–16) who, following Strawson (1964), defines an aboutness topic as the pivot for truth value assessment.

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Here no-owl is recounting her life story; jag ‘I’ is naturally understood as the aboutness topic also in the second conjunct where the subject follows the finite verb. When it comes to non-subject aboutness topics, there seems to be a strong preference in Swedish to prepose them. Deviations from this pattern are mainly found in yes/no questions and in utterances with an initial contrastive element, as in (25), taken from the same story as (13) about carrying heavy loads. The VP anaphor here is cliticized onto the verb particle om ‘about’, appearing in the clitic form ’et. There are three potential aboutness topics: the subject (man), the adverb (idag), and the cliticized object. The symbol # in (25c,d) indicates that the reading is not available in the context.

(25)  so-om3: det var inte bra för kroppen, man har ju bara en kropp men
     it was not good for body:DEF one has PRT only one body but

     det tänkte man inte då
     it thought one not then

     ‘It was not good for your body, you only have one body, but you didn’t think about that then.’

     a.  so-om3: men iDAG gör man inte om’et
        but today does one not PRTit
        ‘But you wouldn’t do it again today.’

     b.  so-om3 said about it (carrying heavy loads) that one does not do it today

     c.  # so-om3 said about today that one does not carry heavy loads then

     d.  # so-om3 said about one that one does not carry heavy loads today

As shown, the cliticized object pronoun is the most plausible aboutness topic since the utterance cannot be understood as being about the adverb idag ‘today’ or the generic subject man ‘one, you’ in this context.

A sentence out of context can sometimes have several “possible pragmatic assertions” Reinhart (1981, 82–83) but in a given utterance in a context, only one aboutness topic is selected.21 When analyzing recorded speech, it is not always clear what the intended aboutness topic is. This may be the reason why two word orders are sometimes felicitous in the same context.

To summarize, an argument in initial position normally serves as the aboutness topic for the utterance; this applies to subjects and non-subjects alike. In the following section we examine the interaction between the two strategies of focus chaining and topic chaining, and the choice of aboutness topic. We first apply an unpreposing test and then test under what conditions pronoun preposing is dispreferred.

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21 Erteschik-Shir (2007, 22–23) uses the term “main” topic for what we here call aboutness topic, i.e. the topic that is “the locus of assessment”, and refers to other potential topics as subordinate topics. See also the discussion of secondary topics in Dalrymple and Nikolaeva (2011).
5 Testing the strategies

5.1 The unpreposing test

In order to further pin down what triggers preposing, we investigated what happens when we so to speak ‘undo’ the preposing of the object pronouns in Pre-100. Would the versions where the pronouns were realized in the position of the gap sound as natural as the originals? Examples where undoing the preposing sounded unnatural would give us a clue as to what triggers preposing. We took the examples in Pre-100 and changed them so that they had a subject in initial position and the previously preposed object pronoun in the gap position. We then judged whether the result would be a natural contribution in the original context, making notes of any changes in the stress patterns or the information structure. We used the four alternatives shown in (26).

\[
(26) \quad \text{OK} = \text{perfectly natural in the context} \\
? = \text{somewhat strange, less natural than the version with preposing} \\
# = \text{unnatural in the context} \\
* = \text{ungrammatical}
\]

5.1.1 When does unpreposing not work?

As already mentioned, the most common pattern is that the preposed pronoun is a switch topic in a focus chain. Among the 60 examples, 43 involved the pronoun det with a VP or propositional antecedent. Unpreposing such pronouns was judged to change the contribution noticeably, as shown in (27). The original reply in (27a) is marked with speaker information, but not the alternatives.

\[
(27) \quad \text{to-int: är det så att man kommer (.) att man kommer närmare barndomen och att man minns (.) hur det var när man var liten (.) bättre ju äldre man blir (.) kan du hålla med om det eller?}
\]

‘Is it the case that you come closer to your childhood and remember better what it was like when you were a child the older you get, do you agree with that?’

a. \text{to-om1: ja (.) jo det tror jag yes yes it think I}

‘Yes ... yes, I think so.’

---

\[22\text{ Both authors independently judged each example. Altogether we found that unpreposing worked fine in 34 cases, in 28 cases the result was judged unnatural in the context by both authors, and in 19 cases, the result was judged somewhat strange/less natural by both authors. In the remaining 19 cases we had differing judgements (usually ?/# or ?/OK). We base the discussion below on examples where we had the same judgements. We also asked three non-linguist native speakers of Swedish to listen to the original examples from Sects. 5 and 6 in their contexts and judge the reordered versions. Their judgments largely agreed with ours.}\]
b. # ja (.) jo jag tror det yes yes I think it

c. OK ja (.) jo jag TROR det yes yes I think it

‘Yes ... yes I THINK so.’

In (27) the interviewer suggests that the older one gets, the easier it is to remember things from childhood, and asks explicitly if to-om1 agrees with this. The speaker answers somewhat hesitantly, with a short pause followed by a preposed det which refers to the interviewer’s yes/no question. The version in (27b) with det in situ is less natural. Note that the version in (27c) with stressed TROR is fine, strengthening the impression that to-om1 is not sure if he agrees with the interviewer.

A similar example, this time with a preposed VP anaphor, is shown in (28).

(28) fl-int: mm (.) och folk flyttar också

mm and people move also

‘Yes, and people move too.’

a. fl-om1: ja (.) det gör’om yes it do they

‘Yes, they do.’

b. # ja (.) dom gör det yes they do it

c. OK ja (.) dom GÖR det yes they do it

‘Yes, they certainly do move.’

The original comment in (28a) with a preposed VP anaphor is a straightforward confirmation; fl-om1 agrees with the interviewer that people tend to move, with moving understood as the aboutness topic. The in situ version in (28b) is strange, but here too, putting some stress on the verb, as in (28c), makes the in situ word order acceptable. However, this changes the meaning; it now conveys that what people do is move, i.e. dom becomes the aboutness topic. We conclude that unpreposing often changes the meaning when the pronoun is a propositional or VP anaphor in a focus chain.

When we applied the unpreposing test to CLD structures, it became very clear that the pronoun cannot be realized in situ. We can see this in example (13), repeated here as (29).

(29) a. so-om4: den där * säcken den hade han hela sitt liv sedan that there sack.DEF it had he all refl.poss life then

‘That sack, he had it for the rest of his life.’

b. # den där * säcken han hade den hela sitt liv sedan that there sack.DEF he had it all refl.poss life then

Recall that CLD involves a lexical switch topic immediately followed by what looks like a pronoun (see 6.2.1 for details). Unpreposing would break up the close link
between them. The word order in (29b) is only possible if we make a pause between the initial lexical phrase and the rest of the sentence, but this would turn it into an HTLD. In fact, all of our 12 CLD examples were found to be unnatural with unpreposing of the object pronoun, unless a prosodic break was added. We return to the consequences of this for the syntactic structure in Sect. 6.2.

We also found that the subject of the utterance may have an effect. Unpreposing means that we instead place the subject in initial position. When this subject was referential, but did not work as a reasonable aboutness topic at that point in the narrative, the resulting sentence was judged to be unnatural. We see an instance of this in (30) where as-ym1 gives an example of the pronunciation in his dialect.

(30) as-ym1: ibland byter man ut å-ljudet i sova mot söva
sometimes change one out å-sound in sleep against söva
‘Sometimes you change the å-sound in the word sova to söva.’

(a) as-ym1: det säger dom väl i Värmland
it say they PRT in Värmland
‘They say that in Värmland, don’t they?’

(b) # dom säger väl det i Värmland
they say PRT it in Värmland

(31) a. as-ym1 says about it (the word söva) that they say so in Värmland
b. # as-ym1 says about them that they say so in Värmland

In the preposed version in (30a), det is in a focus chain with the word söva and makes a good aboutness topic, as shown in (31a). In the unpreposed version in (30b), the utterance starts with dom ‘they’, presumably referring to people in the province of Värmland. They have been mentioned a few utterances back—in our terminology they would be a remote topic—but making dom the aboutness topic of the new sentence interrupts the narrative, as shown in (31b). Remote topics are apparently not as good candidates for aboutness topics as pronouns which are in direct focus or topic chains. Unpreposing thus seems especially infelicitous when the subject is not in a chain with an antecedent in the previous utterance.

5.1.2 Unpreposing is possible

The infelicitous focus chaining examples in Sect. 5.1.1 involved propositional and VP antecedents. We found that unpreposing works better when the switch topic is an entity, as in (32).

(32) as-om3: det det var en fotboll annars
it it was a soccer ball otherwise
‘It was a soccer ball at other times.’

(a) as-om3: och den fick man inte låna (.) om man sparkade
and it got one not borrow if one kicked
‘And you weren’t allowed to borrow it if you were kicking.’
b. OK och man fick inte låna den (.) om man sparkade
   and one got not borrow it if one kicked

Note that bollen ‘the ball’ continues to be the aboutness topic even when the pronoun is realized in situ as in (32b). Both orders can be paraphrased as in (33a). The generic subject man ‘one, you’ is not an appropriate aboutness topic and this seems to make the unpreposed version more acceptable.

(33) a. as-om3 said about it (the ball) that you weren’t allowed to borrow it if you kicked it
b. # as-om3 said about you that you weren’t allowed to borrow it (the ball) if you kicked it

Turning now to the topic chaining examples, most of them involved entity antecedents and were judged acceptable with unpreposing. We repeat the relevant part of the topic chaining example in (8) in (34a).

(34) a. och eh(.) honom hade dom inte fått tag i
   and eh him had they not got hold of
b. OK och eh(.) dom hade inte fått tag i honom
   and eh they had not got hold of him

The 11 examples where the preposed pronoun was remote or cataphoric also worked fine when we applied unpreposing.

As expected, unpreposing turned out to be possible in the HTLD construction where there is typically a prosodic reset on the preposed pronoun which may be preceded by a pause, as shown in (14). Here unpreposing is unproblematic.

(35) a. min hustru då (.) henne har vi kommit betydligt
   my wife then her have we come considerably
   längre bak med
   further back with
   ‘We’ve gotten considerably further back with my wife.’
b. OK min hustru då (.) vi har kommit betydligt
   my wife then we have come considerably
   längre bak med henne
   further back with her

The in situ version in (35b) is acceptable and requires a prosodic reset on the subject vi ‘we’.

5.1.3 Unpreposing and object shift

The unpreposing test also reveals an interesting negative correlation between preposing and object shift. In 17 of the examples in Pre-100, the clause contains a sentential adverb, which means there are two options for moving the preposed pronoun back:
to the *shifted* position preceding the adverb or to the *in situ* position following the adverb. When we applied the unpreposing test to these examples, it was very clear that a preposed switch topic pronoun could not be realized in the object shift position. This was particularly clear in cases of preposed VP anaphors, as shown in (4b) in the Introduction. In (36) va-om3 quotes someone who asks about his back, and then gives the reply.

(36) va-om3: Har du aldrig ont i ryggen?  
    *have you never* *pain in back.DEF* 
    ‘Don’t you ever have a sore back?’

a. va-om3: nej det har jag inte  
   *no it have I not* 
   ‘No, I don’t.’

b. # Nej jag har inte det.  
   *no I have not it*

c. * Nej jag har det inte.  
   *no I have it not*

The unmarked answer to the question is as in (36a) with a preposed *det*. The version with *det* in situ, (36b), sounds unnatural in this context, whereas (36c), where the pronoun has undergone object shift, is impossible. The next example shows that unpreposing is possible when the verb is stressed (cf. (27) and (28)) but only to the in situ position.

(37) st-ow3: jag trodde jag skulle få äta tillsammans med dem klart  
    *I thought I would get eat together with them clearly* 
    ‘I thought I would be allowed to eat with them of course.’

a. st-ow3: men det FICK jag inte  
   *but it got I not* 
   ‘But I wasn’t’.

b. OK men jag FICK inte det  
   *but I got not it*  
   ‘But I wasn’t’.

c. * men jag FICK det inte  
   *but I got it not*

The speaker first recounts that she thought she would be allowed to eat with the family and then states that she wasn’t allowed, *FICK inte*, with emphasis on the verb.

As Andréasson (2008) and Anderssen et al. (2012) show, object shift is more common with pronouns that refer to individuated entities. Still, if such a pronoun is a switch topic in a focus chain, unpreposing to the shifted position is unnatural. In (38), a woman is talking about how she wanted to make something special for the inauguration of the local heritage society.
The pragmatics and syntax of pronoun preposing

(38) to-ow1: då blev det ju Torsö kyrka (. i halmslöjd
then became it  PART Torsö church  in straw.craft
‘Then I decided on a model of Torsö kyrka in straw.’

a. to-ow1: och den gjorde jag ju då
and it made I  PART then
‘So I made that’.

b. OK och då gjorde jag ju den
and then made I  PART it
‘So I made that.

c. # och då gjorde jag den ju
and then made I  it  PART

In this context, unpreposing den to the shifted position preceding the modal particle ju is unnatural, whereas the in situ position is an option.

The only example where the shifted position seems to be available for a preposed pronoun involves a pronoun with an entity antecedent in a topic chain.

(39) fo-om1: di är ju så nära runt i kring här så det är ju inte
they are PRT so close around here  that it  is PRT not
‘They are so close by so it’s not ...’

a. fo-om1: så dem ser vi ju ofta då
so them see we PRT often then
‘So we see them often’

b. ? så vi ser dem ju ofta då
so we see them PRT often then

Here fo-om1 is talking about his grandchildren. The preposed dem ‘them’ is in a topic chaining relation to the antecedent di ‘they’ and is hence a continued topic. In addition the referents are cognitively accessible since the grandchildren had already been the topic of conversation for a while before these utterances. 23 The results of our unpreposing experiment are thus in line with the observations made in previous research that pronouns with entity referents are more likely to shift (Andréasson 2008), and fit well with the recent proposal by Bentzen and Anderssen (2019) that object shift only applies to continued topics, as we discuss in Sect. 6.4.

5.2 The preposing test

The reverse of the test discussed in the previous section is to take an in situ pronominal object and try to prepose it. Examples where doing this leads to an unnatural result would provide additional information about factors that are necessary for preposing, and natural sounding examples show when preposing is possible. For this purpose we

23 Compare the constructed minimal pair in (3). The shifted version is possible if the antecedent kyrkan ‘the church’ is destressed and hence an accessible referent. If kyrkan is stressed, and hence more likely a focus, the in situ version in (3a) is preferred.
collected the data set which we refer to as *SIS-100*, consisting of 100 examples with the same verbs and pronouns as in *Pre-100* but with the pronoun occurring in situ or in shifted position. The test involved taking an in situ or shifted pronoun, putting it in initial position and judging the result.\(^{24}\)

### 5.2.1 When does preposing not work?

Most of the examples in *SIS-100* were subject-initial (81/100). In the 19 cases where there was some other element preceding the finite verb in the original utterance, demoting this element often led to a change in the narration, especially when the utterance started with the temporal adverb *då* ‘then’. In other cases, demoting the initial non-subject was possible, but the result no longer fitted the original context. This was particularly clear if the initial constituent was a preposed switch topic as in (40c).

(40) a. fr-om3: och efter åtta år så byggde vi här på den platsen
   *and after eight years* PRT built *we here on this place* CG
   ‘And after eight years, we built here in this place.’

   b. EKEBERG heter den officiellt på i papprena
   *Ekeberg is called* it CG officially on in papers DEF
   ‘Ekeberg it’s called in the official papers.’

   c. det har vi döpt den till ja
   *it N have we named it* CG to yes
   ‘We’ve named it that, yes.’

   d. \# den har vi döpt till det
   *it CG have we named to it N*

This example is interesting for several reasons. In the utterance leading up to the relevant example, *fr-om3* mentions the place where they built a house and then in (40b) tells the interviewer the name of the place, *Ekeberg*. Note that although the pronoun *den* ‘it CG’ is in a focus chain with the antecedent *den platsen*, it is not preposed. Instead the name *Ekeberg* is placed in initial position and is realized with a focal accent, being the focus of that utterance. Then comes the original utterance in (40c) which starts off with *det*, referring to the name *Ekeberg*, thereby forming a new focus chain where *det* is a switch topic. The alternative in (40d), where *den* has been preposed instead of *det*, makes the story incoherent. The reason for this is most likely that a preposed pronoun tends to be interpreted as an aboutness topic, but this does not work here. While *den* is plausibly the aboutness topic in (40b), since (41a) is a natural

\(^{24}\) Both authors independently listened to the examples in context and judged the version with preposing using the same rating scale as in the unpreposing experiment; OK for when preposing was judged possible, ? for somewhat strange, \# for unnatural, and * for ungrammatical. There were 31 examples where the resulting sentence with a preposed pronoun was perceived as perfectly natural by both authors, 21 where it was judged as somewhat strange or less natural, and 48 where it was judged as unnatural or ungrammatical in the context. This time our judgments agreed in 95% of the cases, compared to in 81% in the unpreposing test. We take this difference to indicate that, as speakers of Swedish, we have clear intuitions about preposing as this is something we do all the time when speaking. The task in the unpreposing test is more complicated and does not correspond to anything a speaker normally does.
paraphrase, it no longer functions as the aboutness topic of (40c). The paraphrase (41b) is not natural in the context, and as shown in (41c), (40c) is understood to be about the name.

\[(41)\]

a. fr-om3 says about *it* (the place) that it is called Ekeberg
b. # fr-om3 says about *it* (the place) that they have named it so
c. fr-om3 says about *it* (the name) that they have named it (the place) so

We believe that this reveals something important about how the context influences what is a suitable aboutness topic at a given point in the narrative. This example shows that when there is a choice between starting an utterance with a switch topic or a continued topic, and thus promoting that topic to being the aboutness topic of the sentence, Swedish speakers seem to prefer switch topics, as suggested by Svenonius (2002).

Regarding CLD, we saw in 5.1.1 that it was impossible to unprepose the coreferent pronoun which follows the initial phrase. Consequently we would not expect it to be possible to prepose some other pronoun in a CLD construction. In (42) a woman is talking about how her mother used to clean the house in preparation for Sunday; *det* refers to *köksgolvet* ‘the kitchen floor’.

\[(42)\]

a. os-ow2: mor hon skurade det och lade på en ren matta    
   mother she scrubbed it and put on a clean rug
   ‘Mother scrubbed it and put on a clean rug.’

b. * mor det skurade hon och lade på en ren matta    
   mother it scrubbed she and put on a clean rug

Preposing the object pronoun *det*, as in (42b) is impossible, as this breaks up the link between the lexical switch topic *mor* ‘mother’ and the pronoun *hon* ‘she’ in the original CLD structure.

There were a few examples where preposing would have been possible if it had not led to a crossover violation, as in (43).

\[(43)\]

a. in-ow2: hon trodde att jag gjorde narr av henne    
   she thought that I made fool of her
   ‘She thought that I was making fun of her.’

b. * henne trodde hon att jag gjorde narr av    
   her thought she that I made fool of

The matrix subject *hon* ‘she’ in (43a) is coreferent with the object *henne* ‘her’ in the subordinate clause.

### 5.2.2 Preposing is possible

The preposing test worked best when the original utterance was subject-initial and the subject was either a continued topic in a topic chain or a deictic pronoun, most often referring to the speaker. See (44), where an older man is talking about a cottage that he and his family have renovated.
(44) as-om3: sen är det stugan nere vid vägen then is it cottage.down by road.

‘And then there is the cottage down by the road.’

a. as-om3: och vi (.) har byggt till den lite och byggt ett nytt and we have built to it some and built a new uthus där outbuilding there

‘And we’ve extended it a bit and built a new outbuilding there.’

b. OK och den har vi byggt till lite och byggt ett nytt uthus där and it have we built to some and built a new outbuilding there

Here the preposed version was judged to be as natural as the in situ version. The cottage is introduced in the preceding utterance and then referred back to by den, which means it is in a focus chain and works well as an aboutness topic. We note that the deictic subject vi ‘we’ is also a possible aboutness topic.

5.2.3 Preposing and object shift

In SIS-100 there were 15 examples where the pronoun was adjacent to a sentence adverbial: ten in situ and five in shifted position. Preposing an in situ pronoun was judged to be possible in most cases. An example is given in (45).

(45) ba-ow1: kommer man ihåg alla

remembers one PRT everyone

‘Do you remember everyone?’

a. ba-ow1: nej jag tror inte det no I think not it

‘No, I don’t think so.’

b. OK nej det tror jag inte no it think I not

In (46) we have an example where an in situ type anaphor can be preposed without any noticeable effect on the dialogue.

(46) a. to-om1: radio fanns men många hade inte det radio existed but many had not it

‘Radios existed, but not many people had one.’

b. OK men det hade inte många but it had not many

‘But not many people had one.’

c. to-om1 said about it (radio) that many didn’t have one
d. # to-om1 said about many that they didn’t have one
This is not surprising since radio is the aboutness topic in both versions; the quantifier många 'many' does not work as an aboutness topic, as shown in (46d).

However, preposing a shifted pronoun was mainly judged to be unnatural. Four of the five shifted examples involved pronouns with entity antecedents as in (47), where two women are talking about an old violin that had been stolen and then returned to the local museum.

(47) a. in-ow3: när de hade stulit fiolen där på Gudmundstjärn
   when they had stolen violin DEF there at Gudmundstjärn
   ‘When they had stolen the violin at Gudmundstjärn.’

b. in-ow2: men är den borttagen för jag såg’en inte
   but is it removed because I saw-it not
   ‘But has it been removed, because I didn’t see it?’

c. ? men är den borttagen för den såg jag inte.
   but is it removed because it saw I not

In the spontaneously produced (47b), the object pronoun is reduced and cliticized onto the verb, såg’en, preceding the negation. Shifted pronouns tend to be well established in the conversation and part of both the speaker’s and the hearer’s common ground (Bentzen and Anderssen 2019). Preposing, as in (47c), is less natural in such situations (see also Sect. 6.4).

The one example where preposing a shifted pronoun was judged to be possible has a propositional antecedent, or rather postcedent since it involves a cataphoric use of det. In (48) no-ow1 is telling the interviewer about nice places in the area.

(48) a. no-ow1: nej (.) men man ser det ju inte själv ju (.)
   no but you see it PRT not self PRT
   hur fint här är väl
   how pretty here is PRT
   ‘No, but you don’t see it yourself, how pretty it is here.’

b. OK nej (.) men det ser man ju inte själv ju (.)
   no but it see you PRT not self PRT
   hur fint här är väl
   how pretty here is PRT

The cataphoric det is pointing forward to the postcedent hur fint här är väl. (48b) is thus similar to the attested examples where a preposed cataphoric det points toward an extraposed clause, e.g. (16) in Sect. 3. None of the shifted pronouns were in a focus chain with their antecedents. This was expected given the observation in Sect. 5.1.3 that switch topics cannot be unpreposed to the shifted position, and is also in line with Bentzen and Anderssen (2019).

25 An interesting question is what sets examples like (47c) apart from other examples with preposed continued topics with entity antecedents where preposing is fine, like (12). We suspect that factors such as type of subordinator, whether there is a change of speaker, and where the antecedent was placed in the preceding utterances may be relevant.
5.3 Summing up

The three factors that we have investigated, i.e. what type of chain the pronoun is in, what type of antecedent it has, and whether it functions as an aboutness topic, all seem to matter for when preposing is used in Swedish. We saw in Sect. 3 that a preposed pronoun is typically in a local chain with its antecedent. Focus chains where the preposed pronoun refers to a recently introduced antecedent seem to be unmarked in many contexts; unpreposing such pronouns often changes the message noticeably. This is particularly clear when the antecedent is a proposition or a VP, as in (28), (30), and (36). Pronouns with entity antecedents are found in both focus and topic chains and can more easily be unpreposed, as illustrated by (34).

For both focus and topic chains, a preposed pronoun is most often understood as a natural aboutness topic at that point in the conversation. This is confirmed by both tests. The way we applied the unpreposing test meant that the subject was placed in initial position and hence became a potential aboutness topic. An interesting finding is that in the few cases where unpreposing of a switch topic was acceptable, the subject was generic or quantified and did not qualify as a good aboutness topic for the utterance, as in (32). The preposing test also showed that it was impossible to replace an already preposed switch topic in examples like (40). In subject-initial utterances, it was sometimes possible to prepose a pronoun, especially if that pronoun was in a focus chain with a newly introduced antecedent, as in (44).

Even if preposing of a switch topic in a focus chain is preferred in many contexts, it is not obligatory in general. There is variation, and other factors such as the type of subject affect the way a speaker chooses to realize an utterance (compare, e.g., (27a) and (45a)). For this reason we believe that in Swedish, the preference for preposing switch topics reflects a discourse strategy which is essentially pragmatic (see further discussion in Sect. 6.1). There is also interaction between topic type, antecedent type, and object shift. As we have seen, switch propositional topics are ungrammatical in the shifted position, (36c), whereas unpreposing a continued entity topic to a shifted position is somewhat marked, (39), but not ungrammatical.

The unpreposing and preposing tests also confirmed that there is a fundamental difference between the CLD and HTLD constructions. An initial pronoun in a CLD can not be unpreposed, as shown by (29), whereas this is possible in the HTLD in (35). Furthermore, the link between a lexical switch topic and the initial pronoun in CLD can not be interrupted by preposing another pronoun, which we saw in (42). These facts are important when we look more closely at the syntactic structure of the left periphery in Swedish.

6 Pronoun preposing and the left periphery in Swedish

In Sects. 3–5, we have mainly looked at pragmatic strategies involving preposed pronouns. In this section, we discuss whether the pragmatic patterns are reflected in the syntactic structure of the left periphery in Swedish main clauses. We begin by discussing what our preposing data say about topic positions in the C-domain and about the positioning of switch topics and continued topics. We first look at the topic hierar-
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We show that this makes incorrect predictions for Swedish and instead adopt the view of the Swedish left periphery proposed by Holmberg (2020). Left dislocation structures are particularly helpful in revealing the structure of the left periphery, and in Sect. 6.2, we take a closer look at how our left dislocation data fit with Holmberg’s analysis. We then turn to the prosodic realization of preposed pronouns in Sect. 6.3. We show that unlike in Italian and German, preposing in Swedish is not necessarily correlated with any particular prosodic contour; pronouns can be preposed even when they are unstressed. In Sect. 6.4, we return to the finding that switch topics in focus chains can not appear in shifted position, and in Sect. 6.5, we discuss some cases of long preposing.

6.1 The C-domain and topic positions

Let us now take a closer look at the structure of the left periphery where the preposed pronouns in our Pre-100 sample appear. A number of proposals for a split CP have been made which differ in the number of different Topic projections they assume, as well as in whether the CP also contains a Focus projection (e.g., Rizzi 1997; Benincà and Poletto 2004). We start from the analysis in Frascarelli and Hinterhölzl (2007), which is particularly relevant from our perspective, since this work shows that discourse properties such as topic type may have structural correlates. Based on a study of 103 spoken Italian and 120 spoken German examples, they argue that different types of topics are realized in different positions, and that they can be distinguished prosodically.

Frascarelli and Hinterhölzl (2007, 112) propose the topic hierarchy shown in (49), which has a syntactic layer, realized as different projections in the C-domain, as well as a phonological layer.

\[
\begin{array}{c}
\text{Syntax} \\
\text{Phonology}
\end{array}
\begin{array}{c}
\text{ShiftP \ [+aboutness]} \\
\text{ContrP} \\
\text{FocP} \\
\text{FamP* \ (continuing, familiar)} \\
\text{IP}
\end{array}
\begin{array}{c}
H \\
L
\end{array}
\]

The highest projection, ShiftP, is the position for a shifting topic which corresponds to what we have called switch topic, a newly introduced referent or issue that was not realized as a topic in the preceding utterance. In FamP we find familiar topics such as given, accessible referents that have been mentioned in the discourse (our remote topics), or that are available deictically. They also include continuing topics, i.e. phrases that refer to the same topic as in the previous utterance. A shifting topic in Italian or German is realized with a recognizable high/rising contour (L*+H in Italian and L+H* in German), while continuing topics are realized with a low tone (L*), or a flat F0 curve. Contrastive topics in German are associated with a distinct contour (L*+H).

In addition to the characteristic high/rising contour, a shifting topic also has the formal feature [+aboutness]. This suggests that a shifting topic is interpreted as an aboutness topic in Reinhart’s sense (see Sect. 4). However, this does not mean that

26 In some places Frascarelli & Hinterhölzl use the term ‘aboutness topic’ instead of shifting topic.
only shifting (switch) topics can function as aboutness topics. Frascarelli & Hinterhölzl assume that the [+aboutness] feature may be part of the featural make-up of continuing topics as well, through Agree between the higher topic head carrying the aboutness feature and the continued topic in the specifier of FamP, indicated by the dotted line in (49). In the latter case they are non-new aboutness topics.\textsuperscript{27}

According to the topic hierarchy, shifting topics should always precede familiar topics. This is the pattern found in the Italian and German data analyzed in Frascarelli and Hinterhölzl (2007, 96–97). In Swedish too, there seems to be a strong preference for starting with a switch topic if the context makes a focus chain possible, as shown in Table 1.\textsuperscript{28} In other contexts, it would be more natural to start with a continued topic (either a subject or a preposed pronoun) or with an expletive, in which case the sentence does not have a topic. Since we have concentrated on utterances with preposed pronouns, we will not attempt to compare them with subject-initial ones. Instead we turn to an interesting prediction made by the topic hierarchy.

### 6.1.1 Topic positions in German

Frascarelli & Hinterhölzl’s analysis predicts that more than one topic may be realized in the C-domain as long as they come in the order shown in (49). This is often the case in their Italian data. For a V2 language like German, only one phrase may precede the finite verb. Frascarelli & Hinterhölzl assume that the highest projection, ForceP, has an EPP feature which attracts the finite verb as well as any constituent that is capable of satisfying the EPP-feature phonologically via A‘-movement to the specifier. If this condition is met, it should be possible to have another topic in the C-domain, after the finite verb but before a subject in IP. A relevant example with more than one topic in the C-domain, based on Frey (2004), is shown in (50).

\begin{equation}
(50) \quad \text{Zum Glück1 wird2 den3 Hans4 [IP t1 t4 morgen t3 treffen t2]} \quad \\
\quad \text{fortunately will the\textunderscore acc Hans Maria tomorrow meet}
\end{equation}

‘Maria will fortunately meet Hans tomorrow.’

The sentential adverb zum Glück has been preposed from its base position inside IP. Assuming that den Hans has a high tone, it will be understood as a shifting topic, preceding the continuing topic Maria, which is pronounced with a low tone.

Frey’s original analysis is different; he assumes only one topic position in the C-domain, in Spec,CP, but assumes that there is a designated topic position initial in the middle field. Frey’s structure is shown in (51). Note that the topic position precedes sentential adverbs.

\begin{equation}
(51) \quad [\text{CP C/V}_{\text{fin1}} [\text{IP Topic Sent-Adv Subj} \ldots t1]]
\end{equation}

\textsuperscript{27} According to Frascarelli and Hinterhölzl (2007, 114), their corpus data show that only one constituent per clause can have an aboutness function. The same is true in our data sets.

\textsuperscript{28} If we count all the cases except the topic chains as switch topics (i.e., where the topic is different from the topic in the preceding utterance), then 87 of the examples in Pre-100 start with a switch topic.
The IP-internal topic position plays an important role in Frey’s account of movement to the prefield in German since it allows an object to be moved by formal movement without the contrast induced by true A∗-movement (Frey 2006). According to Frey, the structure in the case of object preposing would be as in (52b).

(52) a. [ Zum Glück1 wird2 [IP den Hans3 t1 Maria morgen t3 treffen t2]]
   fortunately will the.ACC Hans Maria tomorrow meet
   ‘Maria will fortunately meet Hans tomorrow.’

   b. [ Den Hans1 wird2 [IP t1 zum Glück Maria morgen t1 treffen t2]]
   the.ACC Hans will fortunately Maria tomorrow meet

As shown by the word order in the IP in (52a), the object den Hans can move to the internal topic position and precede the subject Maria. From this topic position, den Hans can be preposed to Spec,CP, as in (52b), via formal movement since it is now the highest argument in the IP.

The IP-internal topic position is also available in subordinate clauses according to Frey (2006). We can see this in (53).

(53) Ich habe gehört dass [IP den Hans1 zum Glück Maria morgen t1 treffen wird ]
   I have heard that the.ACC Hans fortunately Maria tomorrow meet will
   ‘I have heard that Maria fortunately will meet Hans tomorrow.’

Given that examples like these are grammatical in German, it seems that the syntax must allow for more than one topic preceding the subject in German. This can be achieved either by postulating several topic positions in the C-domain, as suggested by Frascarelli & Hinterhölzl, or by assuming an IP-internal topic position, as Frey does.  

6.1.2 Topic positions in Swedish

Turning now to Swedish, we note that it is not possible to have more than one topic before the subject. The Swedish version of (50) in (54a) is clearly ungrammatical; only the version with the object in situ in (54b) is grammatical. Since Swedish lacks case marking on lexically headed DPs, we have replaced the subject DP with a nominative pronoun.

(54) a. * Lyckligtvis ska2 [IP Hans1 hon [V P t2 träffa t1 i morgon ]]
   fortunately will Hans she meet tomorrow

   b. Lyckligtvis ska2 [IP hon [V P t2 träffa Hans i morgon ]].
   fortunately will she meet Hans tomorrow
   ‘She will fortunately meet Hans tomorrow.’

29 Frey (2006) also argues that the medial topic position is necessary in order to account for the interaction between scrambling and preposing.
Similarly, as we see in (55a), there is no topic position available in IP in subordinate clauses. Preposing in a subordinate clause is possible, but only with main clause word order, as in (55c).

(55) a. *Jag har hört att [IP Hans₁ hon ska träffa t₁ i morgon ]
   I have heard that Hans she will meet tomorrow
b. Jag har hört att [IP hon ska träffa Hans i morgon ].
   I have heard that she will meet Hans tomorrow.
   ‘I have heard that she will meet Hans tomorrow.’
c. Jag har hört att [CP Hans₁ ska₂ [IP hon t₂ träffa t₁ i morgon ]]
   I have heard that Hans will she meet tomorrow
   ‘I have heard that Hans, she will meet tomorrow.’

The kind of data that motivate Frey’s and Frascarelli & Hinterhölzl’s proposals for German are thus not found in Swedish. Instead we follow the approach presented by Holmberg (2020), according to which Spec.FinP (a projection immediately above IP) acts as a bottleneck for items that can ‘check V2’, i.e. satisfy the V2 condition. 30 This ensures that at most one phrase can move to the left periphery, and rules out examples like those in (56), in addition to (54a) and (55a).

(56) a. *Lyckligtvis hon ska träffa Hans i morgon.
   fortunately she will meet Hans tomorrow
b. *I morgon hon ska träffa Hans
tomorrow she will meet Hans
c. *Hans hon ska träffa i morgon.
   Hans she will meet tomorrow

As we have seen, the preposed pronoun can be either a switch topic in a focus chain or a continued topic in a topic chain. In both cases it acts as the aboutness topic for the utterance. Holmberg assumes that a topic may move from Spec.FinP to the specifier of ForceTopP, a syncretized projection from a single head (ForceTop) combining Force and Topic. The structure is shown in (57).

(57) [ForceTopP ForceTop [FinP Fin [IP IP]]]

According to Holmberg, ForceTop has a [+aboutness] feature, which ensures that an initial topic is interpreted as the aboutness topic of the utterance. In a sentence with a preposed pronoun, for example (11), we assume the derivation in (58).

(58) [ForceTopP det₁ ForceTop[+about] [FinP t₁ tycker2 [IP jag faktiskt [VP t₂ t₁ ]]]]
   it think I actually
   ‘I actually think so.’

30 See also Haegeman (1996), Roberts (2004), and Mohr (2009).
31 See Walkden (2017) for a similar proposal for a multifunctional, syncretic clause-initial position in Germanic languages.
Phrases that do not qualify as topics, such as expletives and generic and quantified subjects, presumably remain in Spec, FinP, thereby blocking any movement of another phrase to Spec, ForceTopP. This accounts for our finding that a phrase inside the clause can be interpreted as an aboutness topic when the initial subject is not a good topic candidate, illustrated by (25) and (33). We assume that when Spec, FinP is blocked by another phrase, the A(boutness)-feature can be associated with a low topic phrase by Agree without movement. In addition to Fin and ForceTop, we assume, with Holmberg, that there is a Foc-head in the left periphery of Swedish, as required for instance in the example with focus preposing in (40).

6.2 Holmberg’s inner and outer topic positions

As we have seen, there are systematic differences between HTLD and CLD. The dislocated phrase in HTLD is separated from the rest of the utterance by a pause, followed by a prosodic reset, and the pronoun may be unpreposed. In CLD there is no pause or prosodic reset, and the pronoun may not be unpreposed. Holmberg links these differences to whether or not the dislocated phrase checks V2 in Spec, FinP. If it does, then it is realized in an inner topic position, Spec, ForceTopP. If it does not, then it is externally merged in an outer topic position. We first examine CLD in more detail, and then compare it to HTLD.

6.2.1 Copy left dislocation

Holmberg (2020, 43–44), following Eide (2011), argues that in CLD, the lexical phrase is first internally merged in Spec, FinP, thereby checking V2, and thereafter attracted to Spec, ForceTopP by an unvalued feature. This means that the adjacent pronoun cannot have moved to this position since only one item can pass through the bottleneck (Spec, FinP). Instead Holmberg analyzes the pronoun as the spell-out of phi-feature agreement in the head of ForceTopP. The CLD examples in our data set should consequently not be seen as examples of pronoun preposing.

Let us see how our CLD example in (13), repeated here in (59a), would be analyzed on this approach. As we have seen, unpreposing is not possible, (59b).

(59) a. so-om4: den där säcken  
   den hade han hela sitt  
   liv sedan  
   that there sack.DEF it  
   had he all  
   REFL.POSS life then
   ‘That sack, he had it for the rest of his life.’

b. # den där säcken
   han hade den hela sitt  liv sedan  
   that there sack.DEF he had it all  
   REFL.POSS life then

c. den där säcken
   hade han hela sitt  liv sedan  
   that there sack.DEF had he all  
   REFL.POSS life then
   ‘That sack, he had all his life.’
The preposed phrase *den där säcken* is moved from within IP, through Spec,FinP, landing in Spec,ForceTopP. The movement is thus very similar to that in the topicalized version in (59c). The difference is that the ForceTop head in (60) has unvalued phi-features which are assigned values by the attracted DP *den säcken* and spelled out as the weak pronoun *den* (Holmberg 2020, 44). If *den* has not moved and is not a real pronoun, then it comes as no surprise that it cannot be unpreposed.32 It also follows from this analysis that it is impossible to prepose some other phrase in a CLD structure, as we saw in connection with example (42b).

Since CLD involves movement to a topic position and spellout of ForceTop, we would not expect it to appear in interrogatives, which are commonly assumed to involve a Focus projection. This prediction is borne out; (61) is impossible.

(61) * Vilken säck *den hade han hela sitt liv?
   *which sack* *it had he whole REFL.POSS life*

The preposed wh-phrase *vilken säck* can not be followed by a proform.

### 6.2.2 Hanging topic left dislocation

In the HTLD construction, as we have seen, there is typically a short pause between the hanging topic and the rest of the utterance. In (62), familiar from Sect. 3, there is also a particle, *då* ‘then’.

(62) min hustru då (. ) henne har vi kommit betydligt längre bak med
    *my wife* *then her* *have we come considerably further back with*
    ‘We’ve gotten considerably further back with my wife.’

32 Holmberg (2020) shows that temporal and locative topic phrases may be spelled out as *då* ‘then’ and *där* ‘there’ respectively. Non-argument topics may be spelled out as the proform *så*. Our data show that non-referential DPs may be spelled out as *det*, as in example (18). This type of non-congruent agreement with *det* is quite common (see Josefsson 2010, 2012); half of our CLD examples were of this kind.
Holmberg describes such particles as topic marking. Other examples include *ja* ‘yes’, and *alt så* ‘thus’. They optionally occur with hanging topics, but not in CLD constructions. The particle and the short pause indicate that the dislocated phrase is in a position outside the core clause. Since it is not merged inside the clause in Spec, FinP it does not satisfy the V2 requirement. (63) cannot be interpreted as a declarative HTLD construction, only as a yes/no question.

(63) Min hustru då (.) har vi kommit längre bak med henne?

my wife then have we come further back with her

‘Concerning my wife, have we gotten further back with her?’

Further evidence that the hanging topic is in a clause external position comes from examples like (64) showing that it can co-occur with a *wh*-phrase.

(64) Din hustru då (.) vem intervjuade henne?

your wife then who interviewed her

‘Your wife then, who interviewed her?’

If the dislocated phrase does not satisfy the V2 requirement, this means that the pronoun *henne* in (62) must have moved via Spec,FinP and checked V2. Consequently it must be a real pronoun which can carry stress, if contrasted. Holmberg assumes that the hanging topic is merged in a frame field, an outer topic position hosting externally merged phrases (see also Benincà and Poletto 2004). The structure of (62) on this view is given in (65).

(65)  

[ FRAME min hustru då (.) [FoTopP henne1 [FinP t1 har2 [IP vi t2 kommit betydligt längre bak med t1 ]]]]

The pronoun *henne* has moved from within IP through Spec,FinP, satisfying the V2 requirement. Since it is a topic, it finally lands in Spec,ForceTopP. There is a coreference relation between the dislocated *min hustru* and the preposed *henne*, but there is no syntactic relation. Not surprisingly the pronoun may be unpreposed, as we saw in (35b), repeated here as (66).

(66) min hustru då (.) vi har kommit betydligt längre bak med henne

my wife then we have come considerably further back with her

Here, it is the subject *vi* ‘we’ that satisfies the V2 requirement in Spec,FinP and *henne*, referring back to the dislocated phrase *min hustru*, is left in situ.

### 6.2.3 Summary

As we have seen, the CLD and the HTLD constructions differ both syntactically and prosodically. On Holmberg’s analysis these differences are linked to whether or not the dislocated phrase checks V2. In CLD, where V2 is checked, the preposed phrase is an internally merged inner topic whose phi-features are spelled out as agreement. In HTLD, the initial phrase does not satisfy V2; it is hence in an outer topic position.
and can be separated from the rest of the utterance. These two syntactic structures fit nicely with the prosodic evidence, as we will see in Sect. 6.3.

The two constructions HTLD and CLD are found in German as well, with similar distinguishing properties to the ones we have found for Swedish. They are not discussed by Frascarelli and Hinterhölzl (2007) since they did not appear in the German data set used.33 However, since they involve demonstrative pronouns rather than personal pronouns, Holmberg’s analysis involving feature spell-out would have to be adapted for German.

6.3 Prosody

As mentioned in connection with the topic hierarchy in (49), the different topic types in Italian and German are distinguished both by placement and by their prosodic realization; shifting topics are realized with a recognizable high/rising contour whereas familiar and continuing topics in German are realized with a low tone (L*), or a flat F0 curve. Before turning to Swedish we note that there are important differences between Frascarelli & Hinterhölzl’s investigation and ours. Firstly, most of their shifting topics are lexically headed while we only look at preposed pronouns. Secondly, they concentrate on topics with entity antecedents and say little about topics referring back to propositions. They do, however, include pronominals in their generalization about shifting topics in Italian and claim that when a pronoun is merged in Spec,ShiftP, it is also marked by an intonational rise (p. 95). With respect to German, the pronouns they analyze as topics are continuing topics with entity antecedents. None of their examples involve a preposed pronoun and the pronouns are all either deaccented or realized with a low tone.34

In this section we describe the realization possibilities for preposed pronouns in Swedish based on analysis in Praat (Boersma and Weenink 2020). We are not aware of any previous study of the prosody of different topic types in Swedish, but recent work by Myrberg and Riad (2015) and Myrberg (2021) explores in some detail how phrases in the preverbal position of declarative clauses are realized prosodically. The variety of Swedish they study, Stockholm Swedish, has two levels of intonational prominence (Bruce 1977, 2007; Myrberg and Riad 2015). In the terminology of Myrberg and Riad (2015), a prosodic word is marked by a SMALL ACCENT, and a prosodic phrase by a BIG ACCENT.35 According to Bruce (2007), the distinction between two levels of intonational prominence is found in most areas of Sweden except for the varieties spoken in Gotland, Dalecarlia, Northern Sweden, and Finland. The examples investigated in this section are all from regions where the distinction is found.

33 R. Hinterhölzl, e-mail May 2020. A detailed analysis can be found in Grewendorf (2011).
34 We thank an anonymous reviewer for prompting us to clarify this point.
35 There is furthermore a lexical tone distinction in Swedish, between tone accent 1 and tone accent 2. Together with the BIG/SMALL distinction, this gives us four basic tonal contours. The table below exemplifies the four-way distinction using the tonal contours from Stockholm Swedish (Myrberg and Riad 2015, 116). See Riad (2014, 189–190) for an overview of accent patterns in different varieties of Swedish.

|                | Tone accent 1 | Tone accent 2 |
|----------------|---------------|---------------|
| Big accent     | L*H           | H*LH          |
| Small accent   | HL*           | H*L           |

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Myrberg and Riad’s study shows that when the preverbal position in a main clause is filled by a DP with a lexical head, it will always contain at least one prosodic phrase, and hence also at least one big accent. The prosodic phrasing of this type of clause is shown in (67a). Prosodic phrases are marked with parentheses and big accents with small caps in the examples, which are adapted from Myrberg and Riad (2015, 133).36

(67) a. (Den bruna HAREN) (bor i PARKEN).
   the brown hare lives in park.DEF
   ‘The brown hare lives in the park.’

b. (Den bor i PARKEN).
   it lives in park.DEF
   ‘It lives in the park.’

c. (DEN) (bor i PARKEN)
   that lives in park.DEF
   ‘That one lives in the park.’

If the preverbal constituent is a pronoun or some other item that does not carry lexical stress, it does not need to form a prosodic phrase on its own. Instead the unstressed item is incorporated into a prosodic phrase with the verb, as shown in (67b). If the preverbal pronoun is stressed, it will form a prosodic phrase of its own and carry a big accent, as in (67c).37

6.3.1 Preposing of unaccented pronouns

The most notable result of our prosodic study is that Swedish preposed pronouns, which arguably function as topics, do not need to be prosodically marked. Many of the pronouns in Pre-100 were realized with a flat F0 curve. One example of this is given in Fig. 1 below, which shows the pitch track of example (10).38 In this example the pronoun functions as a switch topic and, as we can see, it was realized without pitch movement and with fairly short duration (0.16 seconds). The pronoun in Fig. 1 has an entity antecedent, but unstressed pronouns with propositional antecedents are also common in our data set. In (68) the speaker is talking about computer classes.

36 For lexically headed DPs, a number of additional accent placements are possible (see Myrberg 2021), but these will not concern us here since we are focusing on pronouns.

37 The big accent is used for marking contrast and focus, as well as serving as the phrasal accent. This makes Swedish look very different from German, as it is analyzed by Frascarelli and Hinterhölzl (2007), but see Féry (2007). Note also that the stressed den in (67c) is interpreted as a demonstrative pronoun.

38 Unless mentioned in the text, we follow the same orthographic conventions in the figures as in the rest of the article. That means that some unpronounced segments are included. For example, och ‘and’ in Fig. 1 was actually pronounced [ɔ].
In (68), the speaker starts out with a preposed pronoun that refers back to the focus in (68a). As can be seen in Fig. 2, the pronoun was pronounced with no discernible pitch movement and very short duration (0.05 seconds). The verb har ‘have’ is realized with an L*H contour, which here conveys a verum focus interpretation.

Additional evidence that a preposed pronoun can be unaccented comes from examples like (11). The F0 curve of this example is given in Fig. 3. In the transcript, we have used the form ’re for the pronoun det ‘it’, to illustrate that it has undergone d-continuization (/d/ → [r]). This is a process that applies to some unstressed pronominal forms in Swedish when they are incorporated into a stressed item to their left to form a minimal word with it (Teleman 2013; Riad 2014; Myrberg and Riad 2015). The fact that preposed pronouns can undergo d-continuization is thus further evidence that they can be unstressed. The pronoun here differs from the pronominal subject in (67b) and the preposed pronouns in Figs. 1 and 2 in that it is arguably incorporated into an item to its left and not into the verb to its right. But like the other unaccented pronouns, it does not form its own prosodic phrase.

We also find unaccented continued topics in our data set. One example is the preposed det ‘it’ in (69).39

39 We use (69) to illustrate an unaccented continued topic rather than (12), where creaky voice made the pitch track unclear.
(69) vi-om1: ja, det står stadigt huset (.)
  yes it stands steady house.DEF
  för det har jag själv spikat ihop
  because it have I self nailed together.

‘Yes, it stands steady, the house, because I built it myself.’

The antecedent appears twice in the sentence immediately preceding the preposing sentence, once as a clause-initial subject, and once as a right dislocated DP. As can be seen in Fig. 4, the tonal contour on the pronoun is fairly flat, and the duration short (0.10 seconds). The nuclear accent falls on själv ‘self’. 
We did not see any systematic difference in the realization of switch topics and continued (or remote) topics in Pre-100. Even though this distinction is an important predictor of which phrase is promoted to the preverbal position, it does not seem to be reflected in the possible prosodic realizations. The fact that preposed pronouns can be unaccented, and that this is also common in spoken discourse and not a marginal option, is an important result of our investigation.

6.3.2 Preposed pronouns with big accents

Like the subject pronoun in (67c), preposed pronouns can be realized with a big accent. Figure 5 shows the F0 curve of (27), an example where the preposed pronoun is a switch topic. There is some pitch movement on det and the duration is longer (0.42 seconds) than the duration of the unaccented pronouns we have seen previously.

Figure 6 shows the F0 curve of a sentence with an accented continued topic, (8). The pronoun honom ‘him’ is pronounced with an H*LH contour, which is the realization of the big accent for accent 2 words in a number of Swedish varieties.

6.3.3 Contrastive topics

Contrastively stressed phrases in Swedish are also realized with big accents, often with a larger pitch excursion (see, e.g., Riad 2014, 256–257). Example (9), repeated here as (70), provides a clear illustration. The F0 curve is shown in Fig. 7.
Fig. 7 Contrastively stressed pronoun

(70) st-int: vad har du att berätta om Halland då?

*What can you say about Halland, then?*

st-ow3: ja det är väl nej DET vill jag inte berätta något om

*Yes, it is part no that want I not tell anything about*

‘Yes, it probably is- no, I don’t want to talk about that.’

This sentence was produced by the same speaker who produced the deaccented pronoun in Fig. 2, but here there is a large pitch movement on the preposed pronoun. The speaker thereby conveys that she does not want to talk about Halland, but that she would be happy to talk about other things. This example is one of only a handful of examples with contrastive stress on a preposed pronoun in *Pre-100*.

This example illustrates a further difference between preposing of pronouns and preposing of lexical phrases. Most previous research on topicalization, which we prefer to call preposing, has focused on lexically headed phrases. These are typically stressed and convey that the referent is contrasted with other possible referents. This is common in Swedish as well; we often see preposed, stressed DPs in environments where things are listed or enumerated, or else contrast with other referents. This is illustrated in (71).

(71) a. När ska du träffa *dina syskon* i sommar?

*When will you meet your siblings in summer*

b. Jag ska hälsa på *min SYSter* i juni

*I will visit my sister in June*

och *min BROR* kommer hit i augusti.

*And my brother comes here in August*

‘I will visit my sister in June and my brother is coming here in August.’

c. *Min SYSter* ska jag hälsa på i juni

*My sister will I visit in June*

och *min BROR* träffar jag i augusti.

*And my brother meet I in August*

‘My sister, I’ll visit in June and my brother I’ll see in August.’
The question introduces a set of referents, *dina syskon* ‘your siblings’. In the answer, each of the siblings acts as an aboutness topic\(^{40}\) and is realized with contrastive stress, both in situ (71b) and preposed (71c). Starting an utterance with a stressed DP thus typically conveys that the referent is a member of a set which either has been explicitly mentioned or can be accommodated, given mutual knowledge. However, in our focus and topic chaining examples, there is normally just one possible referent available for the preposed pronoun. Stressing the preposed pronoun does not by itself invoke alternative referents, but if the speaker also negates the utterance, then he or she may convey that it does not hold for this referent but for other potential topics, as shown by the way (70) is interpreted. The examples in *Pre-100* that convey a clearly contrastive interpretation of the preposed pronoun all contain negation.

\[\text{Fig. 8} \quad \text{Clitic left dislocation}\]

### 6.3.4 Prosody in left dislocation structures

The difference in prosodic realization between the CLD and HTLD constructions that we have described in previous sections is also confirmed by analysis in Praat. Consider first the pitch track of the familiar CLD example, (13), given in Fig. 8.

The nuclear accent (L*H) falls on *liv* ‘life’. As can be seen from the pitch track, the pronoun-like element *den* has an entirely flat F0, and there is no prosodic break between the left-dislocated phrase and the rest of the sentence. In our HTLD example in Fig. 9, on the other hand, we see a noticeable break (0.22 seconds) and a big accent on the preposed pronoun *hene* ‘her’.\(^{41}\) The particle *då* ‘then’ has undergone \(d\)-continuization and is realized as *rå*. It is integrated in the prosodic phrase of the preceding left-dislocated phrase.

\(^{40}\) Erteschik-Shir (2007, 3) refers to these as *derived* topics since they are derived from the same *hypertheme* (Daneš 1974).

\(^{41}\) The example is shown in two parts here since it was too long to fit in one.
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6.3.5 Summary

The correlation between topic type and prosodic realization that Frascarelli and Hinterhölzl (2007) report for Italian and German, and which they include in the topic hierarchy in (49), is not found in our Swedish preposing data. While the distinction between focus chaining (involving switch topics) and topic chaining (involving continued topics) reflects different coherence strategies, it does not affect the prosodic realization of the preposed pronoun. Both switch topics and continued topics can be realized either with a flat contour or with pitch movement. The actual prosodic contour of the initial pronoun is primarily determined by the information structure of the utterance, for example whether it involves alternatives, as in the case of the negated utterance in (70) shown in Fig. 7. With respect to prosodic phrasing, we have seen nothing to suggest that object pronouns are more restricted than subject pronouns when they appear in the preverbal position.

42 It seems, however, that switch topics with propositional antecedents can also be realized with a flat contour in German (see the discussion of example (31) in Frascarelli and Hinterhölzl 2007, 108–109).

43 One reviewer pointed out that the lack of correlation between topic type and prosodic contour in Swedish is actually to be expected on Frascarelli and Hinterhölzl’s approach. Since the functional positions in their cartographic program depend both on semantic/pragmatic and phonological features, one would not expect a language to make a phonological distinction between switch and continued topics if it only has one topic position.

44 One reviewer would have liked to see prosodic analyses of some of the SIS-100 material as well with pronouns in situ or shifted position. We agree that this would have been interesting, but this was not possible within the limits of this article. Additional data are now available through the recordings in the Nordic Word order Database and show, as expected, that shifted pronouns are unstressed but also that pronouns in situ are not always stressed. See also Erteschik-Shir et al. (2020).
6.4 Object shift

Although we have not investigated object shift per se, some of our findings bear on this construction since there is a correlation between topic type and whether the topic can be shifted or not. The unpreposing test in Sect. 5.1.3 showed that switch topic pronouns in focus chains cannot be realized in the shifted position, as illustrated by (36), whereas this is possible for continued topics, i.e. pronouns that are already established as topics. The same finding is reported by Bentzen and Anderssen (2019) based on acceptability studies of Norwegian examples involving pronouns with either entity or propositional antecedents in different positions (in situ, shifted, or preposed). Bentzen and Anderssen show that once a switch topic has been established, it can be shifted. This is illustrated with a constructed example in Norwegian (Bentzen and Anderssen 2019, 176). The Swedish version in (72) shows the same pattern.

\[(72)\] John gick till arbetet. Maria förväntade sig inte det\textsubscript{1}.
John walked to work. Maria expected REF\textsubscript{1} not it

Susanne förväntade sig det\textsubscript{2} inte heller.
Susanne expected REF\textsubscript{2} it not either

‘John walked to work. Maria didn’t expect that. Susanne didn’t expect it either.’

Assuming that det\textsubscript{1} refers to the VP gick till arbetet ‘walked to work’, det\textsubscript{1} can be seen as a switch topic in a focus chain and should either be preposed or realized in situ. In the next sentence det\textsubscript{2} refers to the same topic and is hence a continued topic, and OS is possible.

Anderssen and Bentzen (2012), in a precursor to their 2019 article, propose that the shifted position should be analyzed as an IP-internal topic position, reserved for familiar topics, including continued topics such as det\textsubscript{2} in (72), but excluding switch topics such as det\textsubscript{1}. This is an interesting suggestion which accords well with the fact that not only objects but also deictic adverbs may be shifted in Norwegian and Swedish. Anderssen and Bentzen (2012, 18) present their analysis as an adapted version of Frascarelli & Hinterhölzl’s topic hierarchy in (49) but choose to use the term aboutness topic instead of switch (or shifting) topic. We think that this is unfortunate since, as we have shown, whether or not a phrase functions as an aboutness topic is independent both of the referent’s status as a switch topic or continued topic, and of the type of its antecedent. Preposed pronouns can always be understood as aboutness topics whereas non-initial pronouns are only understood as aboutness topics if the subject is unsuitable as such, for instance when it is generic or quantificational.

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45 Example (10) in Bentzen and Anderssen (2019, 175), taken from NDC and previously discussed by Anderssen and Bentzen (2012), is very similar to our example (36).

46 As mentioned in footnote 26, Frascarelli & Hinterhölzl use aboutness topic instead of shifting topic in some places.

47 Consequently we disagree with Bentzen and Anderssen when they analyze det\textsubscript{1} in (72) as an aboutness topic. To our Swedish ears, Maria would be the natural aboutness topic in this sentence. However, if det\textsubscript{1} is preposed, then it can function as the aboutness topic and the second reference, det\textsubscript{2}, would be a continued topic which can be shifted.
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The reason a VP or propositional det cannot appear in the shifted position when it is a switch topic is, according to Bentzen and Anderssen (2019), that the proposition or property it refers to has not been added to the common ground and is not yet accessible to both interlocutors. The absence of attested examples with a switch topic in shifted position in our data supports this analysis, as does the example in (48a), repeated here as (73a). Here a shifted det refers back remotely to the general topic of the conversation. (It would be a familiar topic according to Bentzen and Anderssen.)

\[ (73) \quad \text{a. no-ow1: nej (.) men man ser det ju inte själv ju (.)} \]
\[ \text{no but you see it PRT not self PRT} \]
\[ \text{hur fint här är väl} \]
\[ \text{how pretty here is PRT} \]
\[ \text{‘No, but you don’t see it yourself, how pretty it is here.’} \]

\[ \text{b. no-ow1 says about it (how pretty it is here) that one doesn’t see it oneself} \]
\[ \text{c. # no-ow1 says about one that one doesn’t see how pretty it is here oneself} \]

This remote topic is also in a cataphoric relation to the extraposed clause. The rewriting test shows that this det is the natural aboutness topic of the utterance. Consequently it would be wrong to exclude aboutness topics in shifted position.

Our study thus supports the claim that information structure, and in particular topic type, plays a role in a full account of object shift, as suggested by Andréasson (2008), Anderssen and Bentzen (2012), and Bentzen and Anderssen (2019). The informants in Bentzen and Anderssen’s last study accepted pronouns in the clause initial position more often than in the other two positions, which fits well with our findings (Bentzen and Anderssen 2019, 184). 48

6.5 Long preposing

A majority of the preposed pronouns in Pre-100 are from the same clause, but 15 are from subordinate clauses, like (15). Prosodically, these examples do not differ from the ones with local preposing; the preposed pronoun can be either unstressed or accented. In this respect, preposing in Swedish differs from preposing in German where, according to Frey (2006) and Fanselow (2016), long preposing requires a contrastive accent. 49 In Swedish, it is not whether the movement is local or non-local that forces a contrastive interpretation. Rather, it is the type of preposed item and its role in the discourse that determines both its prosodic realization and the way it is interpreted.

We also find preposed pronouns from embedded questions, as in (74).

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48 It is possible that Norwegian speakers have somewhat different preferences for placing anaphoric pronouns, in particular with regard to preposing pronouns with entity (individuated) antecedents. Anderssen et al. (2012, 43) write: “the pronominal objects that undergo OS in Norwegian cannot undergo topicalization to a clause initial position”. They illustrate this with a constructed example, very similar to our (1) and (3b), marking the preposed option (1b) with #. Anderssen et al. (2012) also assume that object shift is obligatory with unstressed pronouns in Norwegian, but data in the Nordic Word order Database show that there is actually some variation also in Norwegian.

49 Frey distinguishes local formal movement from true A’-movement. Fanselow distinguishes unrestricted V2 from pragmatically restricted V2.
As shown in (74c), the preposed *det* functions as the aboutness topic. It is also not uncommon to find similar examples with pronoun preposing out of relative clauses, as in (75a) from Lindahl (2017,126), where *det* refers to driving across the US in a car.

(75) a. A: Ja, *det* är häftigt! *Det vet* jag en som har gjort.
   yes it is cool it know I one who has done
   ‘Yes, that is cool! I know someone who has done that!’

b. A said about *it* (driving across the US) that he knows someone who has done that.

In fact, many of the spontaneously produced instances of extraction from embedded questions and relative clauses in Swedish involve preposed pronouns (Engdahl 1997; Lindahl 2017; Engdahl and Lindahl 2022). Many of these examples involve presentational constructions with expletive subjects and the pronoun typically functioning as the aboutness topic of the utterance. We can illustrate this with the example in (76) where *ny-om1* tells the interviewer that people in that area used to pronounce *kom* ‘came’ as *kym*.

(76) a. *ny-om1*: de säger (.) *kym* istället för *kom* [...] they say kym instead for kom
   ‘They say *kym* instead of *kom*.’

b. *ny-int*: men nu är *det* ingen som ...
   *but* now is there no one that
   ‘But now there’s no one who ...’

c. *ny-om1*: nä (.) nu är *det* ingen som säger *det* inte
   no now is there no one who says it not
   ‘No, there’s no one who says that now, no.’

d. *ny-om1* said about *it* (the word ‘kym’) that nobody uses it now

e. * ny-om1* said about nobody that he or she does not use it now

f. *OK* men *det* är *det* ingen som säger nu
   *but* it is there no one who says now
   ‘But there is no one who says that now.’
The pronoun *det* is in a focus chain with *kym* ‘came’ and this is furthermore the only possible aboutness topic in this utterance; the expletive subject or the negative quantifier *ingen* ‘nobody’ is not an option, as shown by the ungrammaticality of (76e). Given that *det* functions as the aboutness topic, it is not surprising that the preposed version in (76f) is fine.50

Preposing is thus a good strategy for clarifying what the aboutness topic of an utterance is. This may explain why preposing of VP anaphors and propositional anaphors is particularly common, since it ensures that they are interpreted as the aboutness topic of the utterance. If they instead are realized in situ, it is more likely that the subject is interpreted as the aboutness topic of the utterance. We saw an example of this in (28), where unpreposing made the reading where this was a comment about the subject more likely. But if the subject is not a possible aboutness topic, then examples with *det* in situ are used, as e.g. (25), (46), and (76c) illustrate.

7 Concluding remarks

The initial position in an utterance has a double function; it both connects the utterance to preceding utterances and serves as the starting point for a new utterance. In this article we have studied preposed pronouns and found that they—just like subjects—connect to the preceding context using the common discourse strategies of topic chaining (maintaining the same topic) and focus chaining (switching topic), thereby contributing to the coherence of the conversation. A preposed pronoun also provides the natural aboutness topic for the subsequent utterance and preposing can thus be seen as a way for the speaker to signal how he or she intends the utterance to be interpreted.

Throughout the article we have emphasized the importance of keeping these two functions distinct in the analysis. The different types of topics, continued or switch, are determined by the context, whereas the status of an initial pronoun as a possible aboutness topic reflects the information structure internal to the utterance where it occurs. In doing this we deviate from many previous studies which tend to conflate the utterance-external and utterance-internal notions. By keeping these distinct, we are able to distinguish external factors that influence the choice of topic type (switch or continued) from internal factors such as the availability of suitable aboutness topics in a given utterance. If the preceding utterance introduces a new referent, property or event, then the preferred option in Swedish is to start with a pronoun that refers to the newly introduced item, i.e. a switch topic in a focus chain. However, if this is not the case, then it is common to continue to talk about the same topic as in the preceding utterance, i.e. to create a topic chain. Topic chaining with subjects is common in most languages. What distinguishes Swedish and the other mainland Scandinavian languages from other languages like Dutch, German, and English is that continued non-subject topics are also quite often preposed without invoking a sense of contrast.

50 Mikkelsen (2015, 629) discusses a similar pair in Danish. Lindahl’s (2017) Swedish data set is available online at https://svn.spraakbanken.gu.se/sb-arkiv/pub/lindahl/2017/. In her Sample B, which comprises 100 extraction sentences from spontaneously produced discourse (conversation, TV and radio), there are 56 examples where the preposed phrase is a pronoun.
Even if there is a preference for switch topics to be preposed, we do not think that this needs to be encoded in the hierarchical structure of the C-domain in Swedish. There is variation in the choice of initial topic type, as our unpreposing and preposing tests show. For this reason, we believe that the choice of topic should be seen as a choice between pragmatic strategies, focus chaining or topic chaining.51

As for utterance-internal factors, we have shown that a preposed pronoun will always be interpreted as an aboutness topic. Following Holmberg (2020), we account for this by assuming that the highest projection in the C-domain in Swedish, ForceTopP, has an A(boutness)-topic feature. However, if Spec,ForceTopP is not filled, as is the case when the utterance starts with a generic, quantificational, or expletive subject, or with a preposed focus, then the aboutness topic may be realized inside the clause, for example via Agree. We saw an example of this in (40). The strong preference for preposing VP and propositional anaphors can be seen as a strategy to ensure that they are understood as the aboutness topic of the utterance, especially when the subject is referential and hence a potential aboutness topic.

The comparison with German in Sect. 6 reveals a difference which has consequences both for the structure of the left periphery and for the prosodic realization of topics. Whereas more than one topic can precede the subject in German, as predicted by Frascarelli and Hinterhölzl’s (2007) topic hierarchy, this is not possible in Swedish. Since only one Spec position in the C-domain can be filled, we adopt Holmberg’s proposal that Spec,FinP serves as a bottleneck. We also follow Holmberg’s analysis of the copy left dislocation construction as involving feature spell-out rather than pronoun preposing. Furthermore, if only one topic position is available, then the lack of correlation between topic type and prosodic contour in Swedish is actually expected if one assumes, as Frascarelli and Hinterhölzl do, that functional positions depend on both semantic/pragmatic and phonological features. More research on the theoretical implications of these facts is clearly needed.

One advantage of working with a corpus of spontaneous spoken data is that we can investigate whether switch and continued topics are realized with different prosodic contours, as reported for Italian and German by Frascarelli and Hinterhölzl (2007). We did not find any correlation between topic type and prosodic contour in Swedish. Both continued and switch topics can be realized either with a flat contour or with pitch movement, as shown in Sect. 6.3. The cases where the preposed pronoun was realized with contrastive stress were mainly found in negated utterances which invoke alternatives.

Most of the examples referred to in previous studies of preposing (topicalization) involve lexical phrases, primarily DPs, which usually get a contrastive reading when preposed. This has led several researchers to conclude that contrast is an intrinsic aspect of preposing, in particular the type of non-local preposing which involves (true) A’-
movement (Frey 2006; Fanselow 2016). However, when we look at the way preposed pronouns are used in Swedish, it becomes very clear that in most cases the pronouns do not invoke any contrast. They are preposed as a way of maintaining the same topic as in the preceding utterance or switching topic to a newly introduced item. This cohesive function of preposing is particularly visible in the type of data we have investigated in this article.

In languages like English, Dutch, and German, preposed demonstrative pronouns are much more common than preposed personal pronouns. Initial demonstrative pronouns tend to be stressed and share a number of features with contrastive topics (Light 2012). Swedish, Danish, and Norwegian stand out since these languages use local and non-local preposing of unstressed personal pronouns as a strategy for connecting utterances. Consequently A′-movement in these languages is not correlated with marked prosody and contrastive interpretation the way it is often described in English and German. We believe that this may be one reason why spontaneous extractions out of so-called syntactic islands are much more common in the mainland Scandinavian languages than in English, Dutch, and German, where long extractions are rarely found and are judged to be degraded (Engdahl and Lindahl 2022).52

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Declarations

Conflicts of interest The authors declare that they have no conflict of interest.

Online resources Nordic Dialect Corpus: https://tekstlab.uio.no/glossa2/ndc2
Nordic Word order Database: https://tekstlab.uio.no/nwd.

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52 The insular Scandinavian languages Faroese and Icelandic are different in this respect. Extractions from relative clauses are judged to be unacceptable in most cases (Zaenen 1985; Thráinsson et al. 2004; Thráinsson 2007; Lindahl to appear). Interestingly, corpus studies reveal that object pronouns are seldom preposed in spoken Icelandic (see Engdahl and Lindahl 2022; Lindahl 2022).
Appendix

Searches were carried out in the *Nordic Dialect Corpus* at https://tekstlab.uio.no/glossa2/ndc2 using the Glossa corpus search system.

**Pre-100 – Data set with preposed pronouns**

Search strings used for collecting the data set *Pre-100* were of the form in (i).

(i) \[
\text{[word="det" %c] [lemma="tro" %c] [((pos="pron") | (pos="noun"))]
\]

The search strings return hits with an initial pronoun, here *det*, and a form of the lemma for one of our verbs, here *tro* ‘think’, followed by either a noun or a pronoun.

The verbs we used in the searches were *få* ‘get/receive’, *göra* ‘do’, *ha* ‘have’, *se* ‘see’, *såga* ‘say’, *tro* ‘think/believe’, *tycka* ‘think/opine’, *vilja* ‘want’. For each verb, we searched with the pronouns *det* ‘it/that’, *den* ‘it’, *hene* ‘her’, *hononom* ‘him’, *mig* ‘me’, *dig* ‘you.sg’, *er* ‘you.pl.’, *oss* ‘us’, and *dem* ‘dem’ in initial position.

**SIS-100 – Data set with pronouns in situ or shifted**

Search strings used for collecting the data set *SIS-100* were of the form in (ii).

(ii) \[
\text{[([word="ser" %c] | [word="såg" %c])}
\]

An example of a search string used for a targeted search is given in (iii).

(iii) \[
\text{[[(word="hade" %c)] [0,10 [(word="den" %c))]] | [(((word="har" %c)]) [0,10 [((word="den" %c))]]}
\]

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