



# THE FUNCTION OF THE FOUNDATION FIELD IN DANISH TALK-IN-INTERACTION

ON THE INTERSECTION OF INFORMATION STRUCTURE,  
INTERACTIONAL ORGANIZATION AND SYNTACTIC CODING


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## Resume

Dette speciale undersøger fundamentfeltets funktion i danske samtaler. Specialet indgår i forskningsgruppen DanTINs (Danish Talk-in-Interaction) arbejde, og er inspireret af dennes platform, Samtalegrammatik.dk. Det langsigtede mål med platformen er at beskrive alle aspekter af lingvistisk organisering i danske samtaler, men indtil videre har der mest været fokus på samtalspecifikke fænomener. Et af formålene med dette speciale er at undersøge et kernegrammatisk fænomen fra et interaktionelt perspektiv.

Fundamentfeltet er et essentielt aspekt af dansk syntaks, som er bredt beskrevet i den grammatiske litteratur. Der er en generel enighed i litteraturen om, at det tekstuelte umarkerede fundament er sætningens grammatiske subjekt, som tilmed er en aktiv referent i diskursen. Fundamentet angiver sætningens emne eller afgrænser omstændigheder, hvori sætningens indhold gør sig gældende.

Det primære formål med specialet er at give et generelt overblik over hvordan fundamentfeltet bruges i samtaleproget, og at foreslå funktionelle motivationer for hvorfor det bruges, som det gør. De funktionelle motivationer findes i et bredt teoretisk grundlag: Der gøres rede for en række skæringspunkter mellem interaktionel forskning og funktionelt orienteret grammatik, samt for en række modeller over hvordan informationsstruktur afspejler sig i syntaksen. Funktionelle motivationer er altså at finde både i samtaleanalyse, interaktionel lingvistik, informationsstrukturelle teorier, og en række funktionelle grammatiske teorier.

I analysen har jeg undersøgt hvordan fundamentfeltet bruges i 500 sætninger i videooptagelser af dagligdagssamtaler. For hver sætning har jeg noteret hvordan fundamentfeltet bruges på en række parametre, heraf hvilken form det har, hvilken grammatisk rolle det har i sætningen, hvad der refereres til, og hvilken informationsstrukturel status denne referent har. På baggrund af dette har jeg kigget på mønstre i samspillet mellem disse analytiske kategorier. Det kvantitative overblik ligger til baggrund for en længere kvalitativ analyse, hvori jeg bruger eksempler fra datasættet til nærmere at belyse en række fænomener.

Der er flere uoverensstemmelser mellem hvordan fundamentfeltet bruges i samtaleproget, og hvordan det beskrives i litteraturen. For det første er det slående, hvordan fundamentfeltets fleksibilitet kun sjældent udnyttes i samtaleproget; over halvdelen af de undersøgte sætninger har enten 'det', 'så' eller 'jeg' i fundamentfeltet, og alle andre frekvente fundament er ligeledes pronominer og lette adverbier. Hapax legomena, dvs. fundament er kun forekommer én gang, er forsvindende sjældne.

Brugen af 'det' i fundamentet er meget fleksibel. 'Det's referentielle skopus kan variere fra specifikke neutrum-kønnede referenter til diskursstrukturer bestående af flere taleture. Størstedelen af 'det'-fundamenter refererer til prædikatet i den tidligere sætning; dette er måske den allermindst tekstuelte markerede brug af fundamentet, og den viser ingen klar præference for at være grammatisk subjekt. Faktisk må det antages, at talere ikke nødvendigvis har besluttet sig for 'det's grammatisk rolle, når de påbegynder en sætning med 'det' i fundamentet.

Brugen af 'så' i fundamentet er også meget fleksibel. 'Så' kan bl.a. angive at sætningen udgør en progression i en historiefortællingssekvens, eller at der er en årsagssammenhæng mellem sætning og noget forudgående i diskursen, enten fordi

sætningen er sand pga. noget forudgående, eller fordi den er konditionelt relevant pga. noget forudgående.

Analysen leder til en række foreslåede præferencer for fundamentfeltets brug i samtalesproget: Generelt undgås tunge fundamenter. 'Det' er det foretrukne fundament, hvis sætningen er forankret i den tidligere sætning eller diskurs, eller som tomt subjekt, hvis sætningen slet ikke er forankret i den pragmatiske præsupposition. Hvis sætningen er forankret i en specifik referent (inkl. taleren eller samtalepartneren), bruges et andet pronomen. Disse præferencer gør sig ikke gældende, hvis der er konditionel sammenhæng med den tidligere diskurs, eller sætningen udgør en progression i historiefortælling; i disse tilfælde er 'så' det umarkerede fundament. Der er også visse andre konstruktioner, som f.eks. åbne spørgsmål og nogle kvotativer, hvori præferencerne ikke gør sig gældende. Tunge nominalsyntagmer og adverbialer forekommer meget sjældent.

Mange af disse indsigter har kun været mulige, fordi visse indsigter fra den interaktionelle lingvistik har ligget til baggrund for analysen, og fordi analysen er baseret på eksempler fra samtaledata. Specialet er derfor også en opfordring til andre om ligeledes at arbejde med denne slags data, da mange af de potentielle indsigter simpelthen ikke er opnåelige gennem introspektion.

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## 1 Introduction

Research on grammar has always been subject to what Linell (1982, 2005) calls the written language bias in linguistics: given the close link between the cultural influence of written language and linguists' intuitions about language (Linell 2005: 149), grammatical research mostly describes the norms and rules of written languages. The bias is not theory-specific, but is present in research of all theoretical persuasions. It has skewed the direction of grammatical research so that we know relatively little of how language is used in its most natural habitat, i.e. interpersonal interaction. Much headway has been made in the field of Conversation Analysis (e.g. Sacks et al. 1974), in which many aspects of the structure of interaction have been investigated. A specifically linguistic perspective on the structure of interaction can be found in the loosely connected cluster of research frameworks covered by the term Interactional Linguistics (Couper-Kuhlen & Selting 2001, 2018). Linguistics research programs that have focused specifically on interactional language include Emergent Grammar (e.g. Hopper 1998; Hopper & Thompson 1980, 1984; Anward 2004) and Dialogic Syntax (e.g. Du Bois 2014).

This thesis fits into the work of the research group DanTIN (Danish Talk-in-Interaction), which has in recent years published research on the grammatical structure of Danish talk-in-interaction as part of the online platform Samtalegrammatik.dk (Steensig et al. 2013). The aspiration of the group is to eventually provide a thorough description of the grammar of Danish talk-in-interaction, using a combination of Conversation Analysis and traditional grammatical analytical resources such as syntagmatic and paradigmatic distribution (Samtalegrammatik.dk 2017). Most of the platform remains empty as of yet, and most of the existing work covers interjections or discourse particles. More traditionally grammatical descriptions have covered the functions of certain constituent orders (Mikkelsen 2011; Hamann et al. 2011; Brøcker et al. 2012; Brøcker 2014), constructions (Pedersen 2014; Brøcker 2015), and morphology (Mikkelsen 2014; Kragelund 2015; Monrad 2016). This thesis continues the work of the group with an in-depth investigation into the usage of the foundation field (*fundamentfeltet*) in Danish talk-in-interaction. As with much other work working with the interface between interaction and grammar, the theoretical perspective is usage-based without adhering to any one particular theory.

The foundation field is Diderichsen's (1946) term for the constituent that precedes the finite verb in Danish main clauses. Internationally, it is often referred to as the front field. The foundation field can be a noun phrase of any grammatical role or an adverbial phrase. In Diderichsen's topological description of Danish, all constituents have canonical positions in a clause model, such that e.g. a subject can be either in its canonical position following the finite verb, or in the foundation field preceding the finite verb. A similar phenomenon is found in the other Germanic languages (Platzack 1998: 90; Vikner 1995: 39), although in modern English it only remains in *wh*-questions (Rizzi 1996). The foundation field has been broadly discussed in the linguistic literature (e.g. Hansen 1970; Nielsen 1975; Heltoft 1986; Hansen & Heltoft 2011), but its usage in interactional language differs from these descriptions in many respects: the use of heavy constituents

in the foundation is much less frequent in the spoken language than the general literature would indicate, and heavy constituents are typically allocated to a special position preceding or following the main clause (Brøcker et al. 2012; Brøcker 2014; Jørgensen 2016); the strikingly high frequency of *det* ‘it, that’ and *så* ‘then’ in the foundation goes unmentioned in the literature (although cf. Steensig 1994: 76, 2001: 231); and the proposed preference for subjects in the foundation must be modified when taking into account interactional language.

The primary purpose of the thesis is to provide an overview of how the foundation field is used in interactional language. More specific research questions include how the foundation field is used as a device for information structuring and discourse management, what types of form are typically used for what types of reference, and if the choice of foundation is rule-based on any syntactic, pragmatic or interactional grounds. While no strict rules can be posited to account for the choice of foundation, fairly strong tendencies can be found on the basis of the pragmatic or interactional purpose of the carrier clause.

The thesis is structured as follows: Section 2 presents an overview of the history of the existing research on the foundation field. Section 3 provides a brief introduction to fields of research incorporating the study of both grammar and interaction. Section 4 introduces relevant theories of the interface between information structure and grammar with particular focus on the notion of topicality. Section 5 sums up the preceding theoretical sections and presents specific research questions on the basis of the state of the art of research on the foundation field, talk-in-interaction and the role of topicality in grammatical coding. Section 6 introduces the methodology of the thesis, including a description of the data used and how it is used. Section 7 presents a quantitative overview of the data, while Section 8 presents analyses of illuminating examples from the data corpus. Section 9 sums up the results of the analysis sections and compares them to the current state of the art as summarized in Section 5. Section 10 discusses the choice of using an interactional perspective on this type of phenomenon, as well as other methodological considerations, and Section 11 provides conclusions and sums up the thesis.

## **2 Existing descriptions of the foundation field**

As an integral part of Danish syntax, the foundation field is mentioned in most descriptions of Danish. However, descriptions have generally gone into greater detail with the foundation’s effects on the surrounding syntax, and less detail with its function in and of itself. As with Danish syntax in general, descriptions of the foundation field can be fruitfully divided into those that came before and after Paul Diderichsen’s seminal monograph *Elementær dansk Grammatik* (EDG; 1946, 1962). In the following, I cover some early descriptions of the foundation that influenced EDG, and which may provide some insight into the description of the phenomenon in talk-in-interaction. I will also cover the description in EDG, and some revisions that have been published since. Special attention will be paid to the description in Hansen and Heltoft’s grammar of Danish

(2011), as they provide a thorough analysis of the textual function of the position. The section also includes a brief overview of how the foundation is treated in the generative paradigm, as well as an overview of recent research suggesting a preference for light and short constituents in the foundation field in certain forms of text, including talk-in-interaction.

### *2.1 The foundation field before EDG*

This section presents a few important descriptions of Danish from the early 20th century predating EDG.

Mikkelsen's (1911: 573ff) description is representative of many early ideas about the foundation field and its effects on the syntax of the clause. Mikkelsen considers the distinction between subject-initial and non-subject-initial clauses to be crucial and stresses the markedness of clause-initial non-subjects. This position is often echoed in the more recent literature, and is also reflected in typological work (e.g. Dryer 2013). Subject-initial clauses are considered to have unmarked "straightforward" word order, while interrogative clauses or declarative clauses with non-subjects in the foundation are considered to have inversed word order. In describing the use of inversed word order in declarative clauses he pays little attention to the function of such a construction but does note that the first position of the clause can be used for emphasis, or when "the concept takes precedence over the thought" (ibid: 574, paraphrasing). Given the usage-based perspective of this paper, notions like inversion will generally be avoided, as they assume clauses to be derived from a deeper level of structure beyond the surface (e.g. Dik 1997: 18); this position is hard to support from the vantage point of interactional language.

Brøndal (1928) and Hansen (1933) both challenged the idea that subject-initial clauses and non-subject-initial clauses are fundamentally different, and both are assumed to have had an impact on Diderichsen's notion of the foundation field (Heltoft 1986: 122; Jørgensen 2000). Both Brøndal and Hansen note that the first position in the Danish declarative clause has the function of what is called theme or topic in later linguistic theory (see Chafe 1976; these notions will be discussed further in Section 4); as Brøndal's theoretical framework is highly complex, an introduction to it is beyond the scope of this section.

In Hansen's (1933: 69ff) syntax, the sentence is divided into an A-part and a B-part. The A-part is equivalent to the foundation field. This position, he argues, is the topic which the rest of the clause (the B-part) informs about. The ideas presented here echo later theoretical treatments of topic-comment (or topic-focus) structure (e.g. Li & Thompson 1976) and topicality in general (e.g. Lambrecht 1994). Hansen considers the A-part to be a more cognitively salient syntactic category than the grammatical subject. For the speaker of Danish with no theoretical knowledge of grammar, he argues, there is no difference in markedness between subject-initial clauses and non-subject-initial clauses. The choice of A-part does not rely on grammatical relations but is pragmatically decided. The A-part is thus often chosen before the speaker has fully decided how the utterance is to be structured. The notion that there is a certain temporal structure to



utterance formation is fully acknowledged within the fields of Conversation Analysis (e.g. Jefferson 1973; Sacks et al. 1974; Schegloff 1996a) and Interactional Linguistics (e.g. Auer 2000, 2009; Deppermann & Günthner 2015; Couper-Kuhlen & Selting 2001, 2018), but it is only rarely acknowledged in grammatical research even today (but cf. e.g. Linell 2005: 52ff, Langacker 2008: 79ff; Hopper 2011). Hansen further criticizes another prevalent idea, namely that non-subjects in the A-part have been fronted. Speakers using this construction, he argues, have not made any changes to “thought-out but un-spoken sentences” (Hansen 1933: 74, paraphrasing). He also criticizes the idea that the A-part is used for emphasis, claiming that emphasis is not syntactically marked, but rather prosodically marked; special emphasis on the A-part will require prosodic modification no matter the grammatical role of the constituent in it.

Some of Hansen’s ideas may be considered overly polemic. He argues that the notion of subject is irrelevant in the description of Danish, which can easily be countered with reference to the surviving nominative and oblique case marking in certain pronouns, which no native speakers have problems assigning. But his overall claims remain highly relevant.

## 2.2 The main clause model and foundation field in EDG

In EDG, Diderichsen suggests two different models (*sætningsskemaer*) to schematize the order of constituents in Danish main and subordinate clauses, respectively. The models are didactically elegant, and divide clauses into functionally motivated fields. In what follows, I will present only the main clause model, as subordinate clauses have no foundation field. In actual language use, the distinction between main and subordinate clauses is somewhat more complicated; the definition used in the analysis will be presented in Section 6.1.3.

The main clause model in Diderichsen (1962: 186) is exemplified in Figure 1 (ibid, with modifications):

Figure 1: Main clause model in EDG

Conn. Field	Found. Field	Nexus Field			Content Field				
conj.	found.	finite verb	subject	nexus adverb <sub>n</sub>	aux inf	full inf	object <sub>1</sub>	object <sub>2</sub>	content adverb <sub>n</sub>
og and	så then	kunne could	han he	sikkert probably	få get	sagt said	hende her	besked message	i tide in time

‘and then he could probably tell her about it in time’

The initial connector field can contain a conjunction linking the clause to the preceding clause or discourse. The nexus field potentially contains the finite verb of the clause, the subject, and any number of nexus adverbials. The content field potentially contains two infinite verbs, direct and indirect objects, and any number of content adverbials. The difference between nexus adverbs and content adverbs mostly lies in scopal relations and weight. Discounting the adverbial slots, which have no principal limit on their number of

constituents, the clause model in Figure 1 is maximally filled. Naturally, most clauses in natural language are not maximal, but rather have one or more empty spaces in the clause model.

Diderichsen (1962: 171) writes that it is the unmarked case for the subject to occupy the foundation field but does not otherwise claim any fundamental difference between subject-initial and non-subject-initial clauses. Typically, the foundation consists of a referent which the content of the rest of the clause is about, or a situation in which the clause takes place. He also hints that the foundation field indicates illocutionary force, in that an empty foundation field is a marker of interrogative or imperative mood; as noted in Section 2.4, this idea is central to Hansen and Heltoft's (2011: 1696) analysis of the foundation field.

Diderichsen (1962: 192ff) notes that three primary considerations guide the choice of foundation: a) Consideration for the function of the constituent within the clause; subjects are often found in the foundation as their referents are typically previously mentioned. b) Consideration for the preceding discourse; non-subjects in foundation are typically given in the preceding discourse. c) Emphasis; Diderichsen claims that emphasis is purely syntactic, but recall Hansen's (1933) insistence that emphatic use of the foundation is always also marked prosodically. a) and b) essentially cancel each other out, and cannot easily be tested against each other.

Diderichsen's clause model became immediately popular in teaching (Diderichsen 1966/1964). The original model is still used in textbook grammars of Danish (e.g. Allan et al. 2000: 151ff; Christensen & Christensen 2014: 198ff), it has been used in the description of Swedish and Norwegian (Platzack 1998: 90), and a modified version has been used for German (e.g. Wöllstein-Leisten et al. 1997: 55). Serious theoretical discussion of the model did not begin until the 1970s (Hansen 1970), but since then, several proposals to revise the model have been made.

### *2.3 Revisions to the clause model and the foundation field after EDG*

Several revisions to the clause model have been suggested within function frameworks of grammar (prominent examples include Hansen 1970; Heltoft 1986; Hansen & Heltoft 2011), and several scholars have sought to unify the model with generative grammar (e.g. Nielsen 1975; Basbøll 1976; Platzack 1985, 1998; Vikner 1999; Vikner & Jørgensen 2017). In spite of the theoretical differences between the two frameworks, scholars often arrive at similar conclusions: that the model is too simplistic to handle Danish and other Scandinavian languages in all their complexity; that the models for main and subordinate clauses can and should be combined in a single model; and that there is a preference for subjects in the foundation, which should be reflected in the model. The latter point is of particular interest here. This section will only cover revisions that directly affect the foundation, namely the ones by Nielsen (1975) and Heltoft (1986).

Nielsen (1975) suggested a revision of the clause model based on the preference for subjects in the foundation. In his main clause model, the subject never occupies the

foundation. Instead, he adds a separate subject position after the foundation but preceding the finite verb for subject-initial clauses (ibid: 149):

Table 2: Main clause model, as revised by Nielsen (1975)

Front field	Nexus field				Content field		
	n <sub>1</sub>	v	n <sub>2</sub>	a	V	N	A
–	han <i>he</i>	har <i>has</i>	–	aldrig <i>never</i>	glemt <i>forgotten</i>	bøgerne <i>the books</i>	her <i>here</i>
aldrig <i>never</i>	–	har <i>has</i>	han <i>he</i>	–	glemt <i>forgotten</i>	bøgerne <i>the books</i>	her <i>here</i>

A problem with this model, as Heltoft (1986: fn. 4) points out, is that it cannot be maximally filled; no clause exists in which both the foundation and n<sub>1</sub> are filled, and the foundation is always filled when n<sub>2</sub> is filled. There are thus no syntactically or topologically internal grounds to posit this new slot in the model, and the only motivation is to develop a clause model which reflects a preference for subjects in the first clausal position.

In his revision, Heltoft (1986) also aimed to take into account the preference for subjects in the foundation, while at the same time prioritizing the semantic and syntactic functions of constituents and combining the main and subordinate clause models<sup>1</sup>. Heltoft’s model is less didactically elegant than the EDG model, but it is also able to cover more complex linguistic data as several slots are added. In Heltoft’s model, the foundation is part of the modality field, which also includes a slot for verbs or particles which indicate the clause’s modality, or ‘reality value’ (ibid: 108). His model, which is highly influenced by Platzack’s (1985) generative analysis of Scandinavian clauses, is shown in Figure 3:

Figure 3: Clause model, as revised by Heltoft (1986)

Conj.	Modality field		Core field						Free adv. field	Heavy const. field
	Found.		Nexus field			Content field				
	F/a	m	n	a <sub>1</sub>	v	V	N	A	a <sub>2</sub>	Heavy const.
og <i>and</i>	han <i>he</i>	måtte <i>could</i>	–	ikke <i>not</i>	–	se <i>watch</i>	tv <i>tv</i>	ofte <i>often</i>	for sin mor <i>by his mother</i>	da han var barn <i>when he was a child</i>

‘And his mom didn’t allow him to watch tv a lot when he was a child’

Heltoft assumes subject-initial clauses to be textually unmarked, and non-subject-initial clauses to be textually marked. This allows Heltoft to conclude that textually unmarked clauses have SV constituent order. Similarly, assuming the modality field allows Heltoft to assume a basic NAV constituent order in the nexus field of both main and subordinate

<sup>1</sup> Other attempts to create a model which covers both main and subordinate clauses include Hansen (1977: 73), Allan et al. (1995: 498), Togeby (2003: 98ff), and Becker-Christensen (2010: 82); as none of these suggest changes in the status of the foundation field, they will not be covered here.

clauses, and a basic SV constituent order in the nexus field. This minimizes the difference between main and subordinate clauses and reflects the preference for subjects in the first clausal position. The inclusion of the modality field also allows two positions for nexus: the modality field, and the nexus field. It requires a rather broad conception of the modality position for this model to be maximally filled; in most clauses, a filled m-position will entail an empty v-position and vice versa. In order to pass the test of maximal filling, Heltoft analyzes one usage of conjunction *at* as a place-holder for verbs indicating modality.

Both Nielsen's (1975) and Heltoft's (1986) reanalyses of the clause model rest partially on a preference for the subject in the foundation. This preference survives as a motivation behind one of the most prevalent revisions of the clause model, i.e. Heltoft's: Hansen and Heltoft (2011) essentially use the same model as Heltoft (1986) for main clauses, although they abandon the idea that main and subordinate clauses must be covered by the same model, and thus they do not analyze subordinate clauses as having a foundation. As shown in Section 8.1 below, simply assuming a preference for subjects in the foundation is not able to explain much of the variation seen in the data.

#### *2.4 The function of the foundation field as per Hansen and Heltoft (2011)*

Hansen and Heltoft's (2011) primary contribution to the description of the foundation is not a revision of the clause model – as mentioned above, the groundworks for their version of the clause model were laid in previous publications – but in their thorough description of the textual function of the field, and in their reanalysis of the primary function of the first clausal position. Much of their terminology relating to information structure is not clearly defined, but they still pose a lot of clear claims regarding the function of the foundation. These claims are discussed later in the thesis.

Hansen and Heltoft suggest (ibid: 328, 1694) that the main function of the first position of a clause is to indicate the illocutionary frame of that clause, rather than to act as foundation. By placing a noun phrase or an adverbial phrase in the first position, one is indicating a declarative frame. Likewise, placing a tense-inflected verb or an interrogative pronoun in the first position indicates an interrogative frame. While this analysis has merit, Hansen and Heltoft tend to use the terms 'first position' and 'foundation field' interchangeably (e.g. ibid: 1713), which causes some problems: while the foundation of a clause can be empty, indicating an interrogative frame, the first position of a clause cannot be.

Hansen and Heltoft (ibid: 1729ff) identify three 'fillings' of the foundation (ibid: 1729ff): a) Anaphoric filling; constituents that refer to something mentioned previously in the text. b) Dynamic filling; referents that are not directly mentioned in the previous text but are activated by previously mentioned referents; c) Focal filling; what the speaker considers the most important part of the clause. Focus is here used differently from much of the usage-based literature (e.g. Lambrecht 1994; Dik 1997) in which focus refers roughly to the new information of a clause. Like the foundation, the subject is also used anaphorically and dynamically, but normally not focally.

Hansen and Heltoft are more cautious than other publications in claiming that the subject is the unmarked foundation of a clause. They note in one place that subjects *or* situative adverbs are unmarked foundations, maintaining that other nominal roles such as objects are marked foundations (ibid: 1713); in another, they note that subjects are the unmarked and expected foundations (ibid: 74). They (ibid: 73, 1197) identify a fundamental difference between categorical and thetical clauses, categorical clauses being ones with meaningful (non-dummy) subjects. These clauses semantically and pragmatically have a theme-rheme structure, in which the subject is the grammaticalized theme which the rest of the clause informs something about. In clauses where the subject is not simultaneously the foundation, there are two topical roles: the topic (the foundation) and the theme (the subject). The subject is considered innately topical, in that it frames the state-of-affairs in a certain light. The relationship between the two topical roles in non-subject-initial clauses is rather unclear. Hansen and Heltoft state clearly that their notion of theme is the one used in the “antique tradition” and not the Hallidayan systemic-functional tradition (ibid: 1258; see Section 4.1), but do not otherwise explain their terminology. This is problematic, as terms denoting topicality and focality (such as theme-rheme, topic-comment, etc.) are generally used interchangeably and inconsistently in the linguistic literature, as discussed by e.g. Chafe (1976).

### *2.5 The generative perspective*

Generative grammar was the mainstream approach to grammatical theory in the latter half of the 20th century (e.g. Joseph 1995), but is only mentioned in passing above. This is because the current section does not focus on the clause model as such, but on the foundation. As mentioned above, several attempts have been made to unite Diderichsen’s approach with a generative approach, and it has been a point of discussion since at least Hansen (1970) whether a topological or generative model is best suited for describing Danish syntax. Studies typically arrive at the conclusion that Diderichsen’s topology and generative syntax trees are mostly compatible (e.g. Basbøll 1976; Vikner 1999; Vikner & Jørgensen 2017). The foundation has not been granted a lot of attention in generative frameworks, as it poses few problems to the purely syntactic description of relevant languages; there is a general consensus that the phrase in the foundation is moved from its canonical position in the underlying structure to the specifier of the complementizer phrase, referred to as  $\bar{S}$ -COMP in Standard Theory (Chomsky 1965; Koster 1975), and as CP-Spec in Government and Binding (e.g. Chomsky 1986; Vikner 1999). It is a general tenet of generative frameworks that grammar is inherently meaningless (e.g. Harris 1951), so the function of the foundation from e.g. an information structural point of view falls outside the scope of traditional generative syntax. However, the syntactic effects of the foundation, i.e. what is called XV (e.g. Heltoft 1992) or V/2 (e.g. Vikner 1995) constituent order, has been discussed a great deal in generative grammar. For discussions of this phenomenon in this framework, see e.g. Koster (1975), Platzack (1985), and Vikner (1995).

### *2.6 Heavy constituents in extraposition*

A few studies have already investigated the use of the foundation on the basis of interactional language (Brøcker et al. 2012; Brøcker 2014). These focus on a particular phenomenon, namely the tendency for language users to avoid heavy constituents in the foundation in talk-in-interaction. Heavy constituents may be syntactically heavy, i.e. consisting of full noun phrases with several words, or pragmatically heavy, i.e. including referents that are not mentioned previously in the interaction. Speakers normally relegate such referents to the extraposition, which is a syntactic position that precedes the foundation field and the clause proper (or, less regularly, to the heavy constituent position that follows the content field and the clause proper; cf. Table 3). The foundation in itself then consists of a light anaphor with reference to the referent in extraposition; typically, an adverb or a pronoun. The phenomenon is also seen in some types of written Danish (Jørgensen 2016) and has also been found in both Norwegian and Swedish (Johannessen 2014). As the previous investigations of this phenomenon are thorough and convincing, the phenomenon will not be a particular object of study in the current thesis, but will be touched upon when relevant.

## **3 The interactional perspective in usage-based grammar**

Several forces in the latter half of the twentieth century can be said to both independently and collaboratively have instigated a movement towards more data-based research on grammar. Emanating from the field of sociology, the research program of Conversation Analysis (CA) studies the structure of social action based on recordings of interaction; although linguistic structure was not originally the object of study in CA, it became obvious to practitioners that detailed study of conversation also required detailed study of language (Fox et al. 2013). Much important research on linguistic structure in talk-in-interaction has been published within CA, and there has been quite a bit of cross-fertilization between CA and linguistics. Outside of CA, particularly the American school of functional grammar also moved towards a more naturalistic data-basis in the latter half of the twentieth century. While the bulk of grammatical research today is still introspective, much important work is being done on the grammar of spoken language.

In the following, I briefly introduce the relationship between CA and grammatical research. Following that, I will discuss the relationship between other theories of linguistic structure and talk-in-interaction.

### *3.1 Conversation Analysis and grammar*

When CA first started in the 1960s, mainstream frameworks in both linguistics and sociology argued against the feasibility of analyzing the structure of language and social action based on real life interaction. Interaction, it was argued, was too messy and disorderly to merit any serious investigation, and researchers in both fields thus based their research on theory and introspection (Sacks 1984; Heritage 1984: 242). The founders of CA were sociologists, but from the first major publication within the framework, the link to linguistics was explicit: the study by Sacks et al. (1974) on the system underlying turn-taking in conversation posited prosody and grammar as crucial parts of that system,

and was furthermore published in *Language*, a major linguistics journal. CA was further solidified as a linguistic field of research with e.g. Goodwin's (1979) work on the sentence as an interactional phenomenon, and Levinson's (1983) detailed description of the field in his seminal introduction to pragmatics.

CA posits that interaction consists of different types of social actions which are sequentially organized. The field's conception of grammar is influenced by Schegloff's (1996a) notion of 'positionally sensitive grammars'; i.e. the idea that different positions in different sequences have different linguistic structures. From this notion follows the rather stronger claim that the entire grammar of a given language is the sum of its linguistic practices in different sequential positions (Fox & Thompson 2010: 154; Ford et al. 2002; Mazeland 2013; Thompson et al. 2015: 8). This requires that grammatical phenomena are systematic first and foremost on the basis of their sequential position and action type. This claim is rather controversial even among functionally oriented linguists, where it can be seen as amounting to what Givón calls the 'grammar denial syndrome' (1995: 175). Given the omnipresence of the foundation field, this thesis can provide an interesting test case to the claim that grammar is generally positionally sensitive.

For many practitioners of CA, the primary focus is on the study of how social action is organized in interaction. But CA has also brought the nature of talk-in-interaction to the attention of several linguists, who have been investigating linguistic structure particularly on the basis of recordings of talk-in-interaction. These can be said to work within Interactional Linguistics (Couper-Kuhlen & Selting 2001, 2018; Lindström 2009), which is an umbrella term for a group of related study programs, including interactional phonetics and phonology (e.g. Kelly & Local 1989), some schools of American functionalism (e.g. Thompson et al. 2015; see Section 3.2), and other linguistically inclined research on the structure of interaction (e.g. Auer 1996, 2005). Interactional Linguistics includes certain insights from CA into the study of linguistic structure, including the temporal structure of utterance formation, a focus on the placement of utterances within social actions, and an insistence on using naturally occurring data as the basis for analysis (Couper-Kuhlen & Selting 2018: 18ff).

### 3.2 Grammatical research and talk-in-interaction

This section provides an overview of the relationship between different schools of grammatical research and talk-in-interaction.

An interactional perspective is more or less entirely integrated in the loosely defined school of American functionalism sometimes called West Coast Functionalism (e.g. Butler 2003: 49ff); most scholars currently working within those frameworks either use interactional data in their research or explicitly practice Interactional Linguistics. This is rather fitting, as the work by West Coast Functionalists in the late 1970s and 1980s is responsible for many of the insights that now form the basis of Interactional Linguistics. Of particular importance is Hopper and Thompson's (1980, 1984; Hopper 1987; Thompson 1989) work on grammar at all levels as emergent phenomena, that are created through, reinforced by and shaped by their use in discourse; this idea has since also become very influential in usage-based approaches to grammaticalization and diachronic linguistics (e.g. Bybee 2006; De Smet 2014; Schmid 2015). While not all work on

emergent grammar is directly related to interaction, it has helped pave the way for a view of grammar that sees usage as absolutely central, and which directly or indirectly calls for studying language in its natural habitat.

There are several cases of grammatical research in languages with written traditions making use of spoken corpora, or even directly incorporate interactional structure in grammatical description; see e.g. the comprehensive grammar of Finnish by Hakulinen et al. (2004), the research on conversational grammar in Swedish (Anward & Nordberg 2005; Lindström 2005, 2008), or Verstraete's (2007) study of English adverbial clauses. However, most usage-based theories of grammar are not well-equipped to deal with talk-in-interaction. Temporal and collaborative aspects of language production are not recognized in either Dik's Functional Grammar (e.g. Dik 1997), Role and Reference Grammar (e.g. Van Valin 1993), or mainstream forms of Construction Grammar (e.g. Goldberg 2006), and there are no obvious ways in which the formal frameworks of the theories can be modified in order to accommodate these aspects.

Cognitive Grammar theoretically acknowledges temporal and collaborative aspects of language production; Langacker (2008: 79ff) explicitly recognizes that the inherently temporal structure of language must have some influence on perception at the clause level, and it follows naturally that it similarly has an influence on production. However, there are no clear ways to demonstrate this insight in the framework of the theory. Langacker (2001) attempts to incorporate dynamic intersubjectivity into the Cognitive Grammar model, but the introspective examples he uses are so simplistic that he does not convincingly demonstrate that the model can be applied to actual talk-in-interaction. There are, however, recent attempts to apply Cognitive Grammar to descriptions of interactional collaboration and intersubjectivity using actual interactional data, although such attempts tend to forego the formal apparatus of the theory (see e.g. Sambre & Feyaerts 2017).

The frameworks of Systemic Functional Grammar (e.g. Halliday & Matthiesen 2004) and Semiotic Grammar (McGregor 1997) are reasonably well-equipped to deal with collaborative and intersubjective aspects of language, in that they comprehensively cover the relationship between the text and grammar, and incorporate what they call the interpersonal metafunction or semiotic as separate layers of description. The temporal aspect to language production is not explicitly mentioned in either theory, though, and it is not obvious how it could be incorporated.

This overview should be seen as simultaneously a call for a more interactional approach within usage-based theories of grammar, and a motivation for not adhering to any one grammatical theory in this thesis. There are many good insights in the theories, but no single one of them can convincingly cover the range of phenomena that motivate the choice of foundation in a clause in talk-in-interaction – with the possible exclusion of West Coast Functionalism, which is not a single coherent framework, but rather a group of loosely connected frameworks.



#### **4 Information structure: topicality and thematicity**

As noted in Hansen and Heltoft's (2011) treatment of the foundation (see Section 2.4), information packaging appears to be a crucial part of its function. Information structure has been a large field of research since its first systematic study by the Prague School (Mathesius 1929), and it is a major part of many theories of linguistic organization. Information structural terminology is also notoriously diffuse; across theories, different terms are used for similar concepts, and the same terms may apply to different concepts, as discussed by e.g. Dahl (1974) and Chafe (1976).

Given the scope of the field, this brief introduction will focus only on the related notions of topic and theme, examining their use in different accounts of information structure. The first section briefly covers the accounts from the Prague School and Systemic Functional Grammar. The notions in other usage-based theories of grammar are then covered, and finally, I briefly discuss what kinds of topical referents are typically accounted for in the literature and what kinds aren't.

##### *4.1 The Prague School and Systemic Functional Grammar*

Members of the Prague School were not the first to note the importance of information structure in linguistic organization, but they were the first to study it systematically (e.g. Mathesius 1929; cf. Hajičová 1995: 254). In the Prague School, information structure was treated under the heading *functional sentence perspective*, and scholars particularly focused on the relations between grammatical structure and what was called topic/focus articulation. Topic/focus articulation was noted to have an important bearing on word order, with topic-focus being considered the natural word order. Topic-focus, topic-comment, and theme-rheme are used somewhat interchangeably in Prague School writings, and topic/theme roughly correspond to given information, while focus/comment/rheme roughly correspond to new information.

Most of the important Prague School work on information structure was written in the latter half of the 20th century, and was thus contemporaneous with Halliday's early work (e.g. 1967) in Systemic Functional Grammar. This includes the work by Daneš (1970, 1974) on thematic progression in text. He noted that as a general rule, the rheme of a clause reappears as theme in the next clause. It follows that a piece of new information introduced into a text will occur late in a clause and reappear early in the following clause.

In his work on communicative dynamism, Firbas (e.g. 1971) investigated the organization of clauses on the basis of how much different elements contribute to the development of communication. In his view, the theme of a clause is the element contributing the least to the development, while the rheme is the element contributing the most. In later work, Firbas (1985) attempted to track communicative dynamism and its interplay with prosody along longer stretches of interaction. Taking the work further into the realm of interactional studies, Hajičová and Vrbová (1981) investigated how topic/focus articulation does not just take into account the speaker's current knowledge, but also their estimation of their interlocutors' knowledge; this idea was presumably inspired by Bühler (1990/1932), and has been further investigated under the heading *audience design* by e.g. Clark and Murphy (1982).

In Systemic Functional Grammar, thematic structure is one of three structures combining to give a clause its contextual meaning (Halliday & Matthiesen 2004: 64ff). It

is the structural equivalent of the textual metafunction (ibid: 169). Although the thematic structure is part of a complex theoretical architecture, the thoughts on theme are in themselves similar to what was found in the Prague school. The theme is defined as the point of departure of a message, and in English its syntactic position is always in the beginning of the clause, and as such it is typically the subject (Halliday 1967; Halliday & Matthiesen 2004); in imperative clauses or yes/no-interrogatives the theme is typically a verb. This is not claimed to be the case for all languages, as e.g. Japanese is noted as not being topic-initial (ibid: 64). However, Systemic Functional Grammar typically only covers English, making it hard to extrapolate directly to the analysis of other languages.

One attempt has been made at applying Systemic Functional Grammar to Danish (Andersen et al. 2001). Here, the first constituent of the clause is also invariably considered the theme. In declarative main clauses – i.e. clauses which have foundations – this corresponds to the foundation. In imperative and yes-no-interrogative clauses, as in English, the theme is the verb. This provides an interesting theoretical link between the foundations in declaratives and the verbs in imperatives and yes-no-interrogatives that is sadly not explored further, and falls outside the scope of this thesis. Andersen et al. (2001: 174ff) also follow Daneš' (1970, 1974) work on thematic progression in showing how rhemes often reappear as the themes of following clauses.

The work on information structure in the Prague school and early Systemic Functional Grammar contributed to laying the groundwork for how information structure is understood today. However, in Prague school writings, topic/theme is essentially a syntactic position, with its function being somewhat incidental. This is less strict in Systemic Functional Grammar and other usage-based frameworks.

#### 4.2 Other usage-based theories of grammar

All major usage-based theories of grammar have theories of how grammar is affected by information structure. A general tenet of usage-based frameworks is that the cleft between pragmatics and grammar is less strict than previously assumed, as the context of an utterance has an observable influence on its structure (e.g. Du Bois 2003). Having introduced the Prague school and Systemic Functional Grammar accounts, I now turn to accounts given in more recent usage-based frameworks. Most mainstream types of Construction Grammar including Berkeley Construction Grammar (e.g. Fillmore 1988; Michaelis & Lambrecht 1996; Fillmore 2013) and the version practiced by Goldberg (e.g. 1995, 2006: 138ff), as well as Role and Reference Grammar (Van Valin 1993: 23ff, 2005: 68ff) all largely base their implementation of information structure on the work by Lambrecht (1987, 1994), who himself works mostly within Berkeley Construction Grammar. Dik's Functional Grammar (1997) has its own theory of information structure, as does Cognitive Grammar (Langacker 2008).

According to Lambrecht, information structure is the component of grammar that chooses one constituent order over competing alternatives (cf. Leino 2013). Lambrecht identifies three components of information structure: a) *Presupposition and assertion*. In a clause, the presupposition refers to what the speaker believes that the hearer knows and is aware of at the time of the utterance, while the assertion refers to “a proposition that is superimposed on and that includes the pragmatic presupposition” (Lambrecht 1994: 206). Assertion thus refers to the pragmatic presupposition as well as the change or addition

that the speaker wishes to effect in it. b) *Identifiability and activation*. This component covers the activation status of referents. Referents can be active, inactive, or semi-active, if they are easily activated through association with other active referents (see also Chafe 1987). c) *Topic and focus*. While similar to the notions of theme and rheme in the Prague school and Systemic Functional Grammar, they are not fully equivalent. Topic and focus are the lexicogrammatical manifestations of presupposition and assertion. The topic of a clause refers to part of the underlying pragmatic presupposition, while the focus is the element of information in a clause “whereby the assertion differs from the proposition” (Lambrecht 1994: 213), i.e. the change or addition itself. Focus typically refers to a smaller portion of the clause than rheme. For example, the verb of a clause is often contextually predictable, and is thus not considered focal in Lambrecht’s theory even if it would be rhematic in Halliday’s or Daneš’ theory. Van Valin (2005: 73) proposes a continuum of referent coding, in which focus is more likely to be coded with full noun phrases, while topic is more likely to be coded with unstressed pronouns.

The notions of topic and focus found in Dik’s Functional Grammar (1997: 309ff) differ largely from those found in Lambrecht. Where Lambrecht’s approach stresses the coding of topic or focus within a given clause, Dik’s approach stresses topic management throughout stretches of discourse. As such, the term *topic* has very different connotations in Dik’s theory, where it is loosely defined as what the clause is about, while focus is loosely defined as the most salient part of a clause. Topic is subdivided into new topic, given topic, sub-topic, and resumed topic. *New topics* introduce new discourse topics; *given topics* are already active in the discourse; *sub-topics* are semi-active, i.e. active through association with a given topic – these are equivalent to what Hansen and Heltoft (2011: 1729) call dynamic foundations (see Section 2.4); *resumed topics* have been active previously in the discourse and are reintroduced after a period of inactivity. The different topics differ in how they are coded. For example, new topics are typically introduced with full noun phrases late in a clause, while given topics are often introduced early in a clause and kept alive through repeated mention using progressively weaker anaphora (cf. Grimes 1975). If a stronger anaphoric reference is used than in the previous mention, it is done to either refresh the reference or because the topic is being resumed.

In Cognitive Grammar, topic has altogether different connotations. Topic is once again loosely defined as what the sentence is about (Langacker 1991: 313), but it is conceived of as a discourse notion rather than a clausal notion. For example, in the discourse stretch “I’ve been thinking about the wedding [...] The back yard would be a good place”, *the wedding* is considered the topic of both clauses (ibid: 317), while in Dik it would only be considered new topic of the first clause, and in Lambrecht it would not be considered the topic of either clause. Langacker’s notion of topic also has merit as an object of analysis; when used in this thesis, it will be referred to as the discourse topic.

When using the term topic in the rest of the thesis, I will generally be using it in the sense of Lambrecht (1994), i.e. a delimited part of the pragmatic presupposition as chosen by the speaker. When more nuance is needed, I will be using Dik’s subdivisions. In determining the reference of a topical element, I strive to follow Givón’s (1987) critique of traditional information structural analysis, in which he notes that a post hoc determination of what information has which status in a text is a static exercise, while actual meaning-making in interaction is dynamic. It is important to note that the status of

certain information elements in the discourse space changes over time. Due to the interactional perspective in this thesis, the information structural status of an element will always be analyzed as its status at the time of speaking.

#### *4.3 Specificity of topical elements*

In their discussions of topic management, the above-mentioned theories generally take for granted that a discourse topic refers to a specific referent. This is not something the authors discuss per se, but it is clear from their examples. By specific referents I refer to persons, objects, concepts, etc. that are typically coded using nouns or noun phrases, although sometimes specific times or places which are coded using adverbs or adverbial phrases are also covered. This is practical, since scholars can easily track them in discourse; for a pronominal topic, they can easily draw a line to a focal noun phrase in the previous clause. These are presented as the prototypical topics, but as will be shown in Section 8.1.1 below, this is not representative of Danish talk-in-interaction, in which the referential scope of topics tends to be broader and more diffuse. The descriptions of topic management in all of the theories discussed above will require some modification in order to cover diffuse topical elements, such as pronouns covering states-of-affairs or entire discourse stretches.

### **5 State of the art**

The preceding sections provide a picture of what should be expected from looking in-depth at the foundation field. This section boils down the main arguments in the literature to a coherent picture of the function of the foundation from a syntactic and information structural point of view. This will provide some concrete predictions and research questions.

Most research points towards the unmarked foundation being the subject of the clause, with adverbs being more marked and other nominal roles being highly marked. The referent of the foundation is typically already active or semi-active in the discourse, but the foundation can also be used for emphasis. It will typically ‘set the scene’ for the clause by indicating what it is about or indicating a condition in which the state-of-affairs is true or relevant. The traditional grammatical literature does not indicate a preference for e.g. pronominal foundations over full noun phrases, or for short adverbs, although such a preference has been found in talk-in-interaction. In example sentences given in the literature, the foundation typically makes reference to a specific physical or abstract entity (nominal) or a specific physical or temporal setting (adverbial). The primary function of the first constituent of a clause may not be to act as foundation of the clause, but rather to indicate the illocutionary frame of the clause. In Systemic Functional Grammar, the two are not considered mutually exclusive, as the first position of the clause is always thematic.

The foundation is expected to be topical; most literature on information structure assumes the topic (or theme) of a clause to occur early in that clause. Meanwhile, the focus (or rheme) of a clause occurs late in the clause. Typically, either the focus of a clause will reappear as the topic of the following clause, or the same topic will be repeated for several consecutive clauses with progressively weaker anaphorical references. Topic and focus are chosen actively by the speaker as a way of manipulating the viewing

arrangement of a message, and the notions are important in explaining why there are competing word orders for delivering the same core message.

The above allows us to infer what a prototypical foundation might be: its grammatical role is subject, and it refers to some specific physical entity which was mentioned as the focus of the directly preceding clause. As shown in Sections 7 and 8, the prototypical foundation as extrapolated from the literature does not correspond to the prototypical foundation in talk-in-interaction.

## **6 Methodology**

The analysis sections of the thesis present analyses based on naturally occurring data. This section will introduce the approach to data in the CA framework, the data used for this thesis, and the methodology used for analyzing the data.

### *6.1 The CA approach to data*

The data used in the analyses was collected for the purpose of CA research, and as such, the thesis adopts a CA approach to data (e.g. Monada 2013). In essence, this approach means that the researcher strives to gather data which is as natural as possible. Early CA studies (e.g. Schegloff 1968; Sacks et al. 1974) relied on audio recordings of telephone conversations. Video recordings of face-to-face interaction were popularized by Goodwin (1979, 1981) and are the primary form of data used in CA today. Ideally, the modalities available to the interlocutors should also be available for the researcher: audio recordings work well for telephone conversations, as the auditory modality is the only one available to the interlocutors, but for face-to-face conversations, video recordings are preferable. Generally, video recordings are preferable, since fully modal interaction is the most frequent and natural type of interaction, and furthermore, it has been suggested in usage-based frameworks of grammar that linguistic meaning-making involves the construction of fully modal mental representations (e.g. Langacker 2001; Hart 2016), and it follows that language users will generally use every modality at their disposal to convey meaning (e.g. Sambre & Feytaerts 2017).

Ideally, the interlocutors in data collected for CA are not at all affected by the presence of a recording device, but interact exactly how they would have otherwise done. This is never entirely possible, and the recording device is bound to somehow affect the interaction. Labov (1972) in particular spoke of the observer's paradox, and denied the existence of truly naturally occurring data. However, as Goodwin (1981: 45) points out, the presence of a camera is not as disruptive to the interaction as the presence of a researcher; this is presumably all the more true today due to the broad availability of smaller and less conspicuous cameras. It has also since been pointed out that interlocutors' reaction to the camera has been exaggerated in earlier research (e.g. Heath et al. 2010), and that it is generally clearly visible when interlocutors orient toward the camera (Laurier & Philo 2012). In the data used for this thesis, it is occasionally clear that the captured interaction is affected by the presence of a camera, but there are no indications that this affects how the interlocutors' utterances are grammatically coded.

Recordings used in CA are typically transcribed according to Jefferson's (e.g. 2004) conventions (see also Hepburn & Bolden 2013; relevant conventions are given in Appendix A). Jeffersonian transcription essentially follows the orthographical conventions of the target language, but not necessarily the spelling conventions. This allows for relative ease of transcription as compared to phonetic transcription, while also allowing the researcher to show variation in pronunciation through orthographic modification. Pauses, overlap, stress, intonation patterns, and several other types of prosodic modification are all indicated in Jeffersonian transcription. A problem with Jeffersonian transcription is that the status of modification to standard orthography is unclear, leading to a lot of inter-researcher variation (Walker 2013: 471). This is presumed to be particularly problematic in languages such as English and Danish, which are languages with exceptionally opaque orthographies (i.e. poor grapheme-phoneme correspondences; Seymour et al. 2003).

## 6.2 Data used for the analysis

For the analysis, I have used five separate videos of natural face-to-face interaction, in each case between two interlocutors. The videos come from two different corpora: SamtaleBank and AULing.

SamtaleBank is part of the larger freely available online corpus TalkBank (MacWhinney 2000; MacWhinney & Wagner 2010) and consists of approx. 6 hours of naturally occurring interaction in Danish. All videos are fully transcribed following modified Jeffersonian conventions. Examples used in the thesis are retranscribed to follow the original Jeffersonian conventions. The data are anonymized, and names, place names etc. have been changed in the transcriptions and removed from the videos. I use three videos from the corpus:

*Anne\_og\_beate*, a free conversation between two young women. In the video, the two negotiate what had happened during a night out the previous week, and one of the women tell about a party she has attended.

*Preben\_og\_thomas*, a free conversation between a middle-aged man and a younger man. In the video, Preben, the older man, talks about the delay of his daughter's wedding, about the improvements his son-in-law are making to his house, and the two discuss the declining real estate prices at the time of the recording.

*Samfundskrise*, a free conversation between two elderly women. In the video, the two discuss the financial crisis which was current at the time of the recording, and compare it with previous financial crises.

AULing (see Samtalegrammatik.dk 2018) is a large corpus of recordings of natural interaction gathered by researchers and students at Aarhus University. It consists of approx. 70 hours of diverse types of interaction. The data are only available to students and researchers who have signed confidentiality agreements. The data is not in itself anonymized, but names, place names etc. are changed in the transcriptions. Most of the corpus is not transcribed, but parts of it have been transcribed according to Jeffersonian conventions. I use two videos from the corpus:

*Sofasladder*, a free conversation between two teenage girls. In the video, the two briefly touch upon several subjects, including family matters and sexual experience. They

continually orient toward the camera and engage in meta-interaction about the experience of interacting while being filmed.

*Par\_ved\_spisebord*, a conversation between a couple while eating dinner. In the video, the two are discussing a few of the movies that were nominated for Oscars at the time of the recording, followed by a discussion of whether or not students are supposed to read their entire curriculum.

Partially due to the anonymization, the metadata for the videos is very limited, so knowledge of the sociolinguistic situations and regiolects of the speakers is scarce. The language variety found in the recordings is generally Standard Danish with an audible bias towards Western Danish accents. Given the goal of treating grammar as a phenomenon that emerges through social interaction between individual speakers, it would be more optimal to have more information about the speakers available, as the social situation of speakers is expected to influence their language use and linguistic entrenchment processes (Geeraerts 2016). However, since there are no indications in the literature of regional variation in the use of the foundation, the speakers are assumed to be sufficiently representative of the Danish language community.

### 6.3 Treatment of data

The thesis contains a brief quantitative analysis of all the data used, along with more detailed qualitative analyses of individual examples from the same set of data. This section introduces the methodologies used for these analyses.

#### 6.3.1 Quantitative analyses

For each of the five videos presented in Section 6.2, 100 consecutive clauses with main clause constituent order were analyzed starting from the 3-minute mark of each video, in order to have the least possible interference from the presence of the video camera, which participants are assumed to be more aware of shortly after beginning the recording. While the patterns found in the data are not necessarily fully representative of Danish talk-in-interaction, the data appeared to have reached a certain saturation point at 500 examples, in that no new patterns were emerging.

As mentioned in Section 2.2, standard written Danish has a fairly clear-cut distinction between main and subordinate clauses on the basis of constituent order; in subordinate clauses, there is no foundation, and the nexus adverb precedes the finite verb. As noted by Jensen (2011) and Mikkelsen (2011), however, the distinction is less clear-cut in spontaneous spoken language, in which subordinate clauses sometimes have main clause constituent order. Subordinate clauses with main clause constituent order are also occasionally found in the written language, as noted by Christensen and Heltoft (2010). This leads them to suggest that the choice of word order has a complex sign function outside of simply indicating clause type. Clauses are often neutral with regards to constituent order; if a clause has no nexus adverb and is subject-initial, it fits into both the main and subordinate clause model. Subordinate clauses without explicit signs of having declarative phrase order were excluded from the data set; i.e. only subordinate clauses with either non-subject in the foundation or nexus adverb following the finite verb were included.

The following were noted for each video:

*Line.* The line number in which the clause begins in the original transcription.

*Clause.* The carrier clause.

*Form.* The form of the foundation.

*Role.* The grammatical role of the foundation. Marked as either *subject*, *direct or indirect object*, *prepositional object*, *adverb*, *subject of subordinate clause*, *direct or indirect object of subordinate clause*, or *prepositional object of subordinate clause*.

*Information structure.* The information structural role of the foundation. This analysis mostly follows Dik (1997), although the category of given topic is based on the more clear definition of topic by Lambrecht (1994). Each foundation was marked as either one of Dik's categories: *given topic*, *sub-topic*, *resumed topic*, *new topic*; or as one of a number of other categories: *dummy*, used when the foundation contains a dummy subject, which has no reference to the preceding information structure; *new info*, used when the function of the foundation is to indicate that the assertion of the clause is expected to be new or surprising information to the interlocutor; *situation*, used when the foundation specifies a situation (place, time etc.) in which the assertion of the clause holds; *temporal-conditional specification*, used when the foundation specifies that the assertion of the clause follows from the preceding discourse either temporally or as a result of what has been said previously.

*Phoricity.* The direction of the phoric reference in the foundation, if applicable. Foundations are categorized as either *anaphoric*; *cataphoric*; *anaphoric, following full reference in extraposition directly preceding the foundation*, as described in Section 2.6; *cataphoric, referring to referent in extraposition directly following the clause*; *anaphoric-cataphoric split*, used when e.g. a pronoun refers to a referent that is both available in the preceding discourse and later in the clause or directly following the clause; *full reference with no phoric reference*; *empty reference with no phoric reference*.

*Referential scope.* The scope of what is referred to with the foundation. Foundations are categorized as either *person/object*, for when the foundation refers to a specific person, object, concept or other entities which are typically coded with noun phrases; *states-of-affairs*, for when the foundation refers to previously mentioned states-of-affairs which are typically coded with predicates (e.g. Dik 1997: 51ff); *discourse*, for when the foundation refers to discourse entities larger than states-of-affairs; *conditional*, for when the foundation indicates that the following clause is true or relevant as a result of what was said in the preceding discourse; *general*, for when the foundation provides a general, non-specific reference; *rhetorical modification*, used in the sense of McGregor (1997: 222ff) for when the foundation has no clear reference, but rather modifies how the clause is to be understood by the interlocutor; *setting*, for when the foundation specifies a temporal or physical setting in which the clause takes place or is relevant.

*Turn position.* Where within the turn-at-talk the foundation is found. Foundations are categorized as either *initial*, used when the foundation is the first element of the turn-at-talk; *following other element*, for when the carrier clause is turn-initial but the foundation is preceded by another element, such as an extraposition, a conjunction, or another particle; *internal*, for when the carrier clause is not turn-initial.



Summing up, all clauses are tagged for the following:

*Line;*

*Clause;*

*Form;*

*Role:* subject, dir-obj, ind-obj, prep-obj; sub-S, sub-DO, sub-IO, sub-PO, adverb;

*Information structure:* GivTop, SubTop, ResTop, NewTop, dummy, new info, situation, temp-res spec;

*Phoricity:* anaphoric, cataphoric, ana-extra, cat-extra, ana-cat split, full, empty;

*Referential scope:* pers-obj, SoA, discourse, conditional, general, rhet.mod, setting

*Turn position:* initial, post-other, internal

These tags are used to draw some observations about patterns within analytic categories, e.g. what directions of phoric reference or information structural positions are most frequent. They will also be used to investigate relationships between the different analytic categories, e.g. relationships between certain forms and certain types of reference or information structural positions. Data management and statistics has been carried out using the transcription software CLAN (MacWhinney 2000; MacWhinney & Wagner 2010), MS Excel and the JASP software package (JASP Team 2016).

### 6.3.2 *Qualitative analyses*

In the qualitative analyses, examples have been chosen which illuminate certain structures or phenomena. All examples are chosen from the data set presented above. Examples from the data often include multiple clauses of interest along with their surrounding interactional context. All examples are accompanied by vernacular translations, while clauses which are actively used in the analysis are also accompanied by glosses following the Leipzig glossing conventions (Comrie et al. 2015; relevant conventions are given in Appendix B). Note that only the glosses themselves include indications of morpheme boundaries, in order to avoid introducing characters into the examples that have no equivalent in the linguistic substance. The clauses in focus are marked with arrows, and the relevant foundations are in boldface.

The analyses themselves do not adhere to any particular grammatical theory, as motivated in Section 4.2. Rather, they rely on general insights from the usage-based frameworks such as rejection of grammatical deep structure, along with the core assumptions that linguistic variation is meaningful and that pragmatic context helps shape linguistic structure. This is be combined with the insights from CA and Interactional Linguistics that the linguistic structure of a clause in interaction tends to be an effect of its interactional function, and that the inherent temporal structure of language production and processing is reflected in language. As such, the analyses presented will draw on knowledge from a wealth of different frameworks for studying linguistic structure.

## 7 Quantitative patterns

This section analyzes quantitative patterns found in the data. These patterns will guide the direction of the qualitative analyses in Section 8. In Section 7.1, I explore which occurrences are most frequent within the different analytical categories presented in Section 6.3.1; e.g. which forms are most frequent in the foundation, which grammatical roles are most frequent, which directions of phoric reference are most frequent, etc. In Section 7.2, I explore patterns in the relationships between the categories.

### 7.1 Frequent occurrences

This section explores the most frequent occurrences of the different analytical categories proposed in Section 6.3.1 in turn.

#### 7.1.1 Forms

While the foundation can occupy almost any constituent, the vast majority of foundations in interaction are occupied by only a few different forms. Almost half the foundations consist of either *det* ‘it, that’ or *så* ‘then’. The other frequent forms can be seen in Table 1:

Table 1: Most frequent forms in the foundation field

Form	Number
<i>det</i> , ‘it 3SG.NEU, that’	139, 27.8%
<i>så</i> , ‘then’	93, 18.6%
<i>jeg</i> , ‘I’ 1SG.NOM	76, 15.2%
<i>der</i> , ‘there’	34, 6.8%
<i>den</i> , ‘it’ 3SG.UTER	21, 4.2%
<i>han</i> , ‘he’ 3SG.NOM.MASC	21, 4.2%
<i>vi</i> , ‘we’ 1PL.NOM	20, 4%
<i>de</i> , ‘they’ 3PL.NOM	18, 3.6%
<i>hva</i> , ‘what’ <sup>2</sup>	12, 2.4%
<i>du</i> , ‘you’ 2SG.NOM	9, 1.8%
<i>nu</i> , ‘now’	9, 1.8%
<i>hun</i> , ‘she’ 3SG.NOM.FEM	7, 1.4%
<i>other forms</i>	41, 8.2%

As can be seen in Table 1, *det* ‘it, that’ occupies more than a fourth of all foundations, and taken together, *det*, *så* ‘then’, and *jeg* ‘I’ occupy well more than half of all foundations, with all other forms being comparatively rare. It is striking when looking at these numbers that except for the two light adverbs *så* ‘then’ and *nu* ‘now’, all other frequent forms are pronouns<sup>3</sup>. Furthermore, with the exception of *jeg* ‘I’, the most common pronouns are the

<sup>2</sup> *hva* is equivalent to *hvad* ‘what’ in the written language, but as Jørgensen (2015; Brøcker et al. 2012) shows, written *hvad* actually corresponds to three different forms in talk-in-interaction, and the form that can occur in the foundation never has a consonant in its coda. Thus, it is written as *hva* here.

<sup>3</sup> Note that *der* ‘there’ can have the function of both dummy pronoun and spatial adverb, but only its function as dummy pronoun was found in the data.

more abstract ones that either fill a purely grammatical role (dummy pronouns) or refer to referents with low animacy.

The relatively frequent forms shown in Table 1 make up more than 90% of all foundations in the data, clearly indicating a preference for foundations containing brief references to active referents, or to referents that will be or have already been introduced with a more explicit form in extraposition (see Section 2.6). Only 8 of the foundations in the data contain explicit noun phrases or proper nouns, while 3 contain heavy adverbial phrases, and 3 contain quotes, which means that semantically heavier foundations are possible but fairly rare.

### 7.1.2 Grammatical roles

While the majority of foundations are indeed occupied by the grammatical subjects, it is also the case that the foundation can be occupied by any grammatical role; see Table 2:

*Table 2: Frequency of grammatical roles in the foundation field*

<b>Grammatical roles</b>	<b>Number</b>
subject	310, 62%
adverb	122, 24.4%
object	47, 9.4%
subject predicate	7, 1.4%
object of subordinate clause	7, 1.4%
prepositional object	4, 0.8%
subject of subordinate clause	2, 0.4%
prepositional object of subordinate clause	1, 0.2%

As discussed in Section 2, the high frequency of subjects in the foundation are often mentioned in the literature. The numbers in Table 2 partially confirm this; more than half of foundations are grammatical subjects, and only 13.6% are occupied by other nominal roles. Adverbs are, however, also very frequent, making up almost a fourth of all foundations. It is argued in Section 8 that textual markedness of non-subject nominal roles in the foundation has relatively little explanatory value with regards to how the foundation is used.

### 7.1.3 Information structure

The majority of foundations are occupied by a given topic in the sense of Lambrecht (1994), with other information structural positions being comparatively rare; see Table 3:

*Table 3: Frequency of information structural roles in the foundation field*

<b>Information structure</b>	<b>Number</b>
given topic	282, 56.4%
temporal-conditional specification	72, 14.4%
dummy	48, 9.6%
new info	45, 9%
sub-topic	20, 4%
new topic	10, 2%
situation	10, 2%
resumed topic	9, 1.8%
none	4, 0.8%

As seen in Table 3, information structural roles other than given topic frequently found in the data include: temporal-conditional specification, which is frequently found in storytelling sequences (see Section 8.6.1); dummy pronouns, which do not in themselves occupy any information structural positions; and indicators of new information, which are typically adverbs (see Section 8.6.3) or interrogative pronouns (see Section 8.5). Dik's (1997) other topical positions are only rarely found in the foundation. The four foundations indicated as having no information structural position are all empty foundations, which are nevertheless syntactically and pragmatically analyzable as filled; these are discussed by Jensen (2015) and in Section 8.7 below. On one hand, like all other foundations, empty foundations can be said to fill some information structural position or other, and it is easy to speculate about what information can be found in these gaps; on the other hand, I find it preferable not to comment on the information structure of elements with no substance (for a discussion on this, see McGregor 2003).

#### *7.1.4 Phoricity*

More than half of foundations, nominal as well as adverbial, have some form of anaphoric reference, with other directions of phoric reference being comparatively rare; see Table 4:

*Table 4: Frequency of directions of phoric reference in the foundation field*

<b>Phoric reference</b>	<b>Number</b>
anaphoric	258, 51.6%
full	101, 20.2%
cataphoric	57, 11.4%
none	39, 7.8%
anaphoric, full reference in extraposition	31, 6.2%
anaphoric-cataphoric split	12, 2.4%
cataphoric, full reference in extraposition	2, 0.4%

Full references are also relatively frequent, because elements with clear situational deictic reference which need no further specification are counted as having full reference. These include e.g. pronouns referring to the interlocutors (see Section 8.2). The most frequent type of cataphoric references are dummy pronouns, which are often analyzable as having

cataphoric reference, and are thus not semantically empty but rather refer to something later in the clause (see Section 8.1.3). Quite a few foundations do not have a specific reference pointing either way in the discourse, but cannot be said to have full reference; these include e.g. particle-like adverbs or pronouns with general reference (see Section 8.4). Also relatively frequent are clauses with light anaphors in the foundation referring to heavier constituents in extraposition.

#### 7.1.5 Referential scope

The most frequent reference types found in the foundation are ones that denote either nominal-type elements such as persons, things, specific concepts etc. and, perhaps more surprisingly, ones that denote predicate-type elements, i.e. states-of-affairs. The scope of a state-of-affairs reference is sometimes contextually clear, and sometimes not, as further discussed in Section 8.1.

Table 5: Frequency of scopes of reference in the foundation field

<b>Referential scope</b>	<b>Number</b>
person/object	193, 38.6%
SOA	104, 20.8%
setting	62, 12.4%
rhetorical modification	42, 8.4%
conditional	40, 8%
discourse	34, 6.8%
general	19, 3.8%
none	6, 1.2%

Other frequent reference types include references to setting (see e.g. Section 8.6.1), references that modify how the message of the clause is to be understood (see Section 8.6.3), and foundations indicating that the clause is true or relevant as a result of preceding discourse (see Section 8.6.2; for a further discussion of the relation between truth and relevance in natural language, see e.g. Sweetser 1990: 113ff). References to entire discourse stretches are relatively infrequent compared to nominal-type and predicate-type references. A few foundations do not have specified referential scope, but rather have general reference; these are typically generalized *du* ‘you’ or *man* ‘one’. Only very few foundations can be said to have no distinguishable reference, including dummy pronouns in unfinished clauses, and clauses with unoccupied foundations, as discussed in Section 7.1.3 above and further in Section 8.7.

#### 7.1.6 Turn position

The number of foundations found at different positions of turn-at-talks does not tell much about the use of the foundation in talk-in-interaction, but more about the relationship between clauses and turns-at-talk. However, in the interest of providing a full picture, they are shown in Table 6 below:

Table 6: Frequency of foundations in turn positions

<b>Position in turn-at-talk</b>	<b>Number</b>
Turn-internal	311, 62.2%
Turn-initial, following other element	136, 27.2%
Turn-initial	53, 10.6%

The majority of foundations are turn-internal, simply indicating that most turns-at-talk in the data consist of multiple clauses. Of the foundations that are turn-initial, the majority follow some other linguistic element, typically a discourse particle or conjunction. This finding is in agreement with the finding of Sacks et al. (1974) that most turns begin with a linguistic element, the function of which is to indicate a relation to the preceding discourse and to project the direction in which the turn-at-talk is heading (see also Schegloff 1996a; Steensig 2001: 207). While indicative of how turns-at-talk are linguistically organized, this says little of how the foundation is used.

## 7.2 Patterns

This section explores patterns across the different analytic categories.

### 7.2.1 Patterning of nominal foundations

When looking at the patterns of different forms in the data set, it is apparent that *det* ‘it, that’ behaves differently from other nominal foundations in its interaction with many of the analytical categories.

With regards to reference, the majority of other nominal foundations only refer to persons, objects, concepts, etc. The related third person pronoun *den* ‘it’ (3SG.UTER) has a much narrower scope than *det*, and refers to specific objects or concepts in all but one case. However, *det* refers to specific nominal-type objects in only 12.2% (n=17) of its uses, while references to states-of affairs (61.9%, n=86) and discourse stretches (22.3%, n=31) are both more frequent. This difference in scope between *det* and *den* is also noted by Diderichsen (1946: 94) and Kappelgaard and Hjorth (2017: 23).

Looking at the grammatical role of nominal foundations, almost all nominal foundations which are hapax legomena (i.e. appear in the foundation only once in the data set) are also subjects. The only exceptions to this pattern are direct quotes, which are all grammatical objects (see Section 8.2.2). Foundations with no phoric reference – i.e. full noun phrases or first and second person pronouns – are almost always subjects. Likewise, most personal pronouns only appear in their nominative forms, with the exception of the feminine third person singular pronoun *hende* ‘her’, and the third person plural pronoun *dem* ‘them’, which both appear once as non-subjects in their oblique forms. Note that the neuter and uter<sup>4</sup> third person singular pronouns *det* and *den* do not take case inflection, which makes their use in the foundation more flexible than the other personal pronouns; for this reason, *det* or *den* occupying the foundation gives comparatively few cues to the interlocutor with regards to the syntactic direction a clause is taking, as discussed further in Section 8.1. Both *det* and *den* tend to be subjects when they appear in the foundation

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<sup>4</sup> Occasionally called “common gender” in the literature.

(*det*: 68.3%, n=95, *den*: 76.2%, n=16), but *det* is also found as occupying every other possible nominal role, and none of these are treated as marked.

*Det* is notably more likely than other nominal foundations to be turn-initial rather than turn-internal. While *det* accounts for almost a third of all foundations in the data (see Section 7.1.1), it accounts for only 18.8% (n=57) of turn-internal foundations. This is striking, as it makes *det* the only one of the frequent foundations to occur turn-initially more often than turn-internally.

Looking at the relationship between grammatical role and reference type, it is notable that subjects in the foundation tend to have relatively narrow referential scope and refer to specific nominal-type referents in 57.7% (n=179) of cases, while broader references to states-of-affairs or discourse stretches are less frequently subjects (30.3%, n=94). Objects in the foundation, however, have broader referential scope in the majority of cases, with references to states-of-affairs or discourse stretches accounting for 68.1% (n=32) of all cases, while only 17% (n=8) have narrow referential scope. A chi-square test reveals that this association between grammatical role and reference type is significant ( $\chi^2(49) = 487.9, p < .001$ ) with a large effect size ( $\phi_c = .373$ ).

This observation further indicates that the behavior of *det* in foundation differs from that of other nominal foundations. Its function in discourse management appears more important than its ability to point out a single referent. It is often used turn-initially to indicate that the following turn-at-talk is based on part of the active discourse space; typically, that it takes its basis in the contents of the previous clause or turn-at-talk (see Section 8.1.1). While *det* in foundation is statistically more likely to be a subject than not, non-subject *det* is not normally prosodically marked, nor can it otherwise be shown to be treated as marked by language users. Its referential scope tends to be broad when it functions as a non-subject. Other nominal foundations are much more likely to have narrow referential scope and to be grammatical subjects.

### 7.2.2 Patterning of adverbial foundations

By far the most frequent adverb to occupy the foundation is *så* 'then', and this is also the functionally most flexible adverb. Adverbs in the foundation have three primary functions which are roughly equally frequent: to indicate the setting of the clause (39.3%, n=48), to indicate that the clause is true or relevant as a result of the preceding discourse (32%, n=39), or to indicate a certain frame of understanding for the clause, i.e. rhetorical modification (26.2%, n=32). These frequencies more or less mirror the ones found for *så*, while other adverbs typically have one primary function.

Adverbs in the foundation occur turn-internally in the vast majority of cases (74.6%, n=91), and are used turn-initially less frequently than nominal foundations. *Så* mirrors the general pattern for adverbs in foundation, as it is found turn-initially in 77.4% (n=72) of its uses. This is at least partially because *så* is a very frequent choice of foundation in storytelling sequences to indicate the temporal relationship between clauses (see Section 8.6.1), and such storytelling sequences typically consist of single turns composed of several clauses. The use of *så* in foundation gives relatively few cues to the interlocutor as to the direction in which a clause is going, since its function is so flexible.

### 7.2.3 Information structure and turn position

There are no clear patterns between information structure and turn position. It might have been expected that certain turn positions were associated with certain types of information structure; this is not the case. Rather, it is generally the case that for a certain information structural feature, the turn distribution mirrors that of the overall data set. For example, given topics occur turn-initially 13.5% (n=38), compared to 10.6% for the overall data set; they occur turn-initially following another linguistic element 27.3% (n=77) of the time, compared to 27.2% for the overall data set; and they occur turn-internally 59.3% (n=167) of the time, compared to 62.2% for the overall data set. The same general picture appears when looking at other types of information structure, although the pattern is less clear with foundations which specify temporal setting, which have more of a tendency to occur turn-internally. In conclusion, although one might expect a certain connection between information structure and turn position, the two appear to be almost entirely independent.

## 8 Functions of the foundation field in talk-in-interaction

The previous section gave an indication of which forms typically occupy the foundation in interaction, and how different forms pattern with different functions. On the basis of the observations made in the previous section, this section will investigate different functions of the foundation in talk-in-interaction based on stretches of conversation from the data set. The analysis is based on both form and function, investigating the myriad functions of some of the most frequent forms, as well as looking closer at some frequent functions, in order to get a fuller picture of how speakers make use of this syntactic tool.

In Section 8.1, the function of the most frequent foundation, *det* ‘it, that’, is investigated. In Section 8.2, I investigate foundations with fully specified reference, including heavy constituents such as quotes, and frequent foundations with deictic reference, such as *jeg* ‘I’ and *nu* ‘now’. Section 8.3 briefly investigates the use of third person pronouns with specific reference. In Section 8.4, foundations with general reference are investigated, with particular focus on *du* ‘you’. Section 8.5 contains a brief discussion of interrogative pronouns in foundation. In Section 8.6, I investigate the different functions of the second most frequent foundation, the adverb *så* ‘then’, while Section 8.7 contains a brief discussion of declarative clauses with empty foundations.

### 8.1 Det

As mentioned in Section 7.1.1, *det* ‘it, that’ is the most frequent foundation in Danish talk-in-interaction, accounting for more than a fourth of all foundations. This section explores its function by analyzing several examples, focusing first on the flexible referential scope of *det*, then taking into account some examples of this flexibility leading to unclear reference of *det*, and finally exploring cataphoric and dummy uses.



### 8.1.1 Varying referential scope

As noted in Section 7.2.1, *det* can have both relatively narrow and very broad referential scope. In this section, I investigate the different types of referential scope *det* can have. In Example 1, *det* is used with narrow reference to a nominal-type referent. The example also includes other uses of *det*. *Det* with narrow scope clearly differs from *det* with broad scope, in that it exhibits neuter gender agreement with a noun phrase, while grammatical gender is irrelevant to *det* with broad scope (e.g. Kappelgaard & Hjorth 2017: 23).

#### Example 1 / Samtalebank / preben\_og\_thomas / l.299

- 01 PRE: så de nødt til å ha nogen værelser  
so 3PL.NOM need\_to to INF have some room-PL  
so they need to have some rooms
- 02 → å de:t de nødt til  
and that\be.PRS 3PL.NOM need\_to to  
and they need to
- 03 å lave nede i kælderen,  
INF make.INF down in basement-DEF.UTER  
make them down in the basement,
- 04 fordi: at de:r- der er kun tre værelser ovenpå,  
because there are- there are only three rooms upstairs,
- 05 → de:t kun (.) femoghalvtres kvadratmeter  
3SG.NEU\be.PRS only five\_and\_fifty square-meter  
it's only fiftyfive square meters
- 06 i grund (.) rids huset.  
in ground plan house-DEF.NEU  
in ground (.) plan the house.
- 07 THO: | ja |  
yeah
- 08 PRE: |å så det| i to plan  
and then 3SG.NEU in two floor  
and then it's two floors
- 09 → det så hundredogti kvadratmeter,  
that then hundred\_and\_ten square\_meter  
so that's a hundred and ten square meters,

In Example 1, Preben and Thomas are discussing the house that Preben's daughter and son-in-law have recently bought, and how they will need to build rooms in the basement to increase the living area of the property. There are several uses of *det* in foundation in the example with varying referential scope. In line 5, *det*<sup>5</sup> is used in foundation with reference to *huset* 'the house'. *Det* is the grammatical subject of the clause, as is the case for all but one example of *det* with narrow scope in the data. By line 5, *huset* 'the house' is the discourse topic, although by this point it has been a while since it was mentioned either explicitly or with an anaphor, with the interaction instead revolving around sub-

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<sup>5</sup> The verb in this clause is a present tense copula verb which is phonetically integrated into *det*; the present tense copula verb is often either incorporated into the foundation or fully deleted when the foundation has a vowel in its coda, as described by Hamann et al. (2012), Jensen (2012) and Kragelund (2015).

topics such as the basement, the rooms, etc. *Huset* ‘the house’ is in itself only semi-active as this point (cf. Lambrecht 1994), and Preben appears to recognize that the anaphor may be an insufficient reference, as he refreshes it with a full mention of *huset* ‘the house’ in extraposition following the clause proper in line 6. *Det* in line 5 can thus be said to have anaphoric-cataphoric split reference, referring both to the semi-active discourse topic and the extraposition. It exhibits neuter gender agreement with *huset*. The anaphoric-cataphoric split reference of *det* in line 5 is illustrated in Figure 4:

Figure 4: Illustration of narrow anaphoric-cataphoric split reference

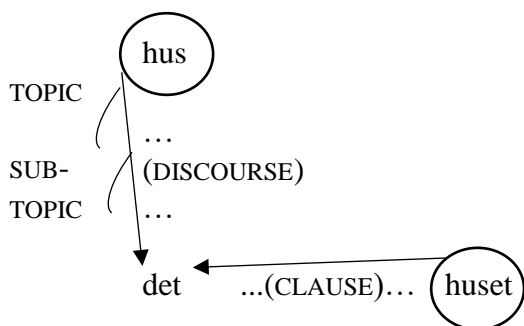


Figure 4 illustrates how the intended reference of *det* in line 5 is *huset* ‘the house’, the last explicit mention of which is approximately 30 seconds earlier in the interaction. The reference is somewhat obsolete; *huset* ‘the house’ was the given topic for a few clauses, but was since replaced by a range of sub-topics. As these sub-topics became given topics, *huset* ‘the house’ receded into the background, but remained active through its conceptual association with the current given topics (Dik 1997: 314). The *det*-reference in line 5 is thus too weak for easy recognition, which Preben remedies by clarifying the reference in the extraposition.

Line 8 contains another *det* with direct reference to the house. This *det*, however, is not in the foundation of the clause; *så* ‘then’ is, the function of which is explored in Section 8.6. There are two other examples of *det* in foundation in Example 1, neither of which refer directly to a referent that can be as clearly delimited. In line 2, *det* is in foundation; this *det* is the object of the subordinate clause (line 3). It is semantically incompatible with *the house* – clearly, *the house* cannot be built in the basement of the house – and grammatically incompatible with *værelser* ‘rooms’ of line 1, as that would have required an oblique case third person plural pronoun *dem* ‘them’. Rather, this *det* refers to the state-of-affairs of the previous clause (line 1), i.e. the conceptual content of the predicate *nødt til å ha nogen værelser* ‘need to have some rooms’<sup>6</sup>. *Det* must refer to the predicate and not the full content of the clause, as the subject from line 1, *de* ‘they’, is repeated in line 2. The given topic of the clause in line 2 thus does not refer to a nominal-type entity, but rather the assertion of the preceding clause. This makes perfect sense from an interactional, pragmatic point of view: clauses build upon each other, and will thus be

<sup>6</sup> While the clause in line 1 is a copula clause, there is no phonetic trace of a copula verb.

naturally prone to include relevant portions of the discourse space or pragmatic presupposition with a reference that is as light as possible. However, as noted in Section 4.3, this use of broad-reference topics is not typically mentioned in the literature.

In line 9, *det* does not refer to the house, but anaphorically refers to the previously mentioned numbers and cataphorically refers to the sum of the equation (55 times two).

Example 2 contains two instances of *det* referring to states-of-affairs:

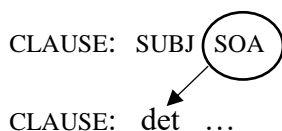
*Example 2 | Samtalebank | samfundskrise | l.278*

- 01 AST: altså hvis det er aktier å det ʃer-ɫ du ʃved-ɫ det halvt-  
 you know if it's stocks and it's- you know- it's fift-  
 02 LIS: lja,ɹ lja,ɹ  
 yeah, yeah,  
 03 AST: de er faldet til det halve,  
 3PL.NOM be.PRS fall-PST\_PTCP to DEF.NEU half-DEF  
 they have dropped to half,  
 04 → .hhh **det** er aktierne jo. (.) faktisk.  
 that be.PRS STOCK.PL-DEF PRT actually  
 the stocks actually did that.  
 05 LIS: nåja så ka man jo m<sub>i</sub>ste det h<sub>a</sub>lve der ja  
 oh yeah then you can lose half there yeah  
 06 → **de:t** rigtig nok,  
 that\be.PRS right enough  
 that's right,

In Example 2, Asta and Lis are discussing how much the value of stocks have dropped in the wake of the financial crisis. In lines 1-4<sup>7</sup>, Asta is saying that stocks have dropped to half of what their value was before the crisis, and in lines 5-6, Lis repeats this information to indicate her understanding.

*Det* is in the foundation of the clause in line 4, and its reference here covers the state-of-affairs in the preceding clause in line 3, which is the complex predicate *er faldet til det halve* ‘have fallen to half’; *det* is not compatible with any other linguistic element in the immediately preceding discourse. The grammatical role of *det* in line 4 is subject predicate. The states-of-affairs reference is illustrated in Figure 5:

Figure 5: Illustration of states-of-affairs reference



Once again, *det* refers to the state-of-affairs and not the entire preceding clause, as the grammatical subject of line 3 is repeated in line 4; interestingly, it is repeated with a stronger reference in line 4, being referred to with a pronoun *de* ‘they’ in line 3 but a full

<sup>7</sup> Some overlap during the production of line 1 has been removed from the transcription.

noun *aktierne* ‘the stocks’ in line 4. Grimes (1975) claims that referents are generally coded with progressively weaker references within the same identification span of the referent; this would indicate that part of the communicative purpose of the clause in line 4 is to clarify the pronominal reference in line 3.

In line 5, after uttering the realization token *nåja* (Emmertsen & Heinemann 2010), Lis reformulates the gist of Asta’s turn in order to display her understanding, in what Heritage and Watson (1979) call an upshot formulation. The preferred response to an upshot formulation is a confirmation (ibid), but rather than waiting for a confirmation from Asta, Lis produces one herself in line 6. *Det* is in the foundation in line 6, with the most likely referent being the directly preceding states-of-affairs.

Example 3 contains an instance of *det* referring to a longer stretch of discourse:

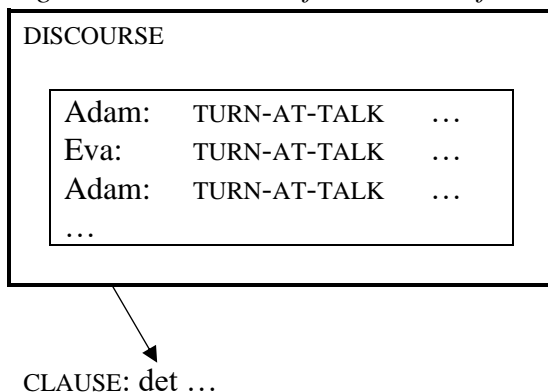
*Example 3 / AULing / par\_ved\_spisebord / l.394*

- 01 ADAM: da: øh  
then uh
- 02 EVA: m'n hva har det med den første computer å gøre.  
but what does that have to do with the first computer.
- 03 ADAM: ler de i gang med  
they're in the process of
- 04 (0.9)
- 05 men der er det simpelthen at han udvikler, (.)  
but that's exactly when he develops, (.)
- 06 verdens første computer,  
the world's first computer,
- 07 (0.7)
- 08 EVA: under anden verdenskrig,  
during world war two,
- 09 ADAM: sån simpel computer  
like simple computer
- 10 ja (.) der omkring,  
yeah (.) around then,
- 11 ·hhh asså sån-  
you know like-
- 12 i- ikke en decideret computer den ka kun en ting  
n- not an actual computer it can only do one thing
- 13 me- men en- en maskine,  
bu- but a- a machine,
- 14 ·hhh som: (.) som regner det ud for dem.  
whi:ch (.) which figures it out for them.
- 15 EVA: m: ,  
16 (2.4)
- 17 → jamen **det** lyder da meget spændende.  
*PRT that sound-PRS PRT very exciting*  
well that sounds pretty exciting.

In Example 3, Adam is summarizing the plot of a film to Eva, in which the protagonist builds the world's first computer in order to decode messages that the Allies intercepted from Germans during the Second World War<sup>8</sup>. This film has been the discourse topic for a while at this point in the interaction, with various sub-topics being introduced and discussed along the way. Prior to the sequence in Example 3, Adam has explained the notion of decoding messages, when Eva asks in line 2 what decoding has to do with the world's first computer. Adam responds in line 5-14 by explaining what is meant by computer in this context. In lines 15-17, Eva wraps up the discourse topic with a particle indicating her understanding *m.*, followed by an assessment of the plot.

The focus of this analysis is the clause in line 17, in which *det* is in foundation. This *det* does not refer to any specific predicate-type or nominal-type referent; it cannot refer to the discourse topic *filmen* 'the film', as that would require utterer gender agreement. Rather, it refers to the entire preceding stretch of discourse, scoping over several turns-at-talk, presumably including not just the sequence included in Example 3, but what precedes it as well. The discourse reference of this *det* is illustrated in Figure 6:

Figure 6: Illustration of discourse reference



*Det* in foundation with discourse reference tends to be the grammatical subject of the carrier clause. This pattern is functionally motivated: when a clause has *det* with discourse reference in its foundation, the clause mostly provides an assessment of the discourse topic of the preceding discourse stretch. These tend to be predicative clause, often with the format *det* + COPULA VERB + ASSESSMENT (Garly 2018: 37). Assessments are a typical resource for closing storytelling sequences (Goodwin & Goodwin 1987; Garly 2018: 17).

*Det* with either nominal-type reference and discourse reference tends to be the subject of its carrier clause (see Section 7.2). This is not the case when *det* in foundation refers to states-of-affairs. In these clauses, there is a strong tendency which can be formulated as follows: when a clause contains *det* referring to states-of-affairs, it is generally the foundation, no matter what its grammatical role is in the clause. Here, the information

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<sup>8</sup> The pauses in Example 3, and in subsequent examples from *par\_ved\_spisebord*, may seem uncharacteristically long, but this is simply due to the fact that the interlocutors are eating dinner at the time of recording.

structural function overshadows the grammatical role in the clause. This tendency is demonstrated in Example 4:

Example 4 / AULing / par\_ved\_spisebord / l.250

- 01 EVA: det godt nok nogen små hår,  
 it's really some small hairs,  
 02 (1.4)  
 03 øhm:  
 uhm:  
 04 ADAM: det ka være de:t din trøje,  
 it can.PRS be-INF it\be.PRS 2SG.GEN.UTER shirt  
 it might be it's your shirt,  
 05 EVA: → ↑nå:: ja det kan det °da nemt være°.  
 PRT yeah that can.PRS that PRT easy-ADVZ be.INF  
 ↑oh:: yeah that could °easily be°.

In Example 4, Eva and Adam talk about some small hairs that Eva has found in their food. Adam suggests that the hairs might come from Eva's shirt, and she responds in line 5 first by indicating that she had not thought of it, and then by saying that it might very well be the case.

In line 4, *det* is in foundation; this *det* is the grammatical subject of the clause, and refers cataphorically to the assertion in the subordinate clause *de:t din trøje* 'it's your shirt'. Line 5 is interactionally similar to a clause analyzed from Example 2; it begins with the realization token *nåja* (Emmertsen & Heinemann 2010), which is lengthened here, and otherwise consists of an upshot formulation used to indicate understanding. There are two instances of *det* in line 5 which compete for the foundation. One is the subject, which is a dummy element and is there to fulfill the syntactic requirement for a subject. This *det* is not in the foundation, but rather follows the verb *kan* 'can'. The *det* in the foundation is grammatically the subject predicate of the clause, and refers anaphorically to the state-of-affairs of the preceding clause; as predicted by Grimes (1975), the rhematic information (assertion) of the preceding clause in line 4 is topical in line 5, although with the discourse being shaped collaboratively by the interlocutors. The *det* in the foundation is clearly not the grammatical subject, as that would require a different syntactic organization, as illustrated in Figure 7, which shows the alternation between the clause in line 5 and a corresponding subject-initial clause.

Figure 7: Clause model showing alternation between SPred and Subj in foundation

	Foundation field	Nexus field			Content field		
	Foundation	v	n	a	V	N	A
SPred- initial	det <i>that</i>	kan <i>can</i>	det <i>that</i>	da nemt PRT <i>easily</i>	være <i>be</i>	–	–
Subj- initial	det <i>that</i>	kan <i>can</i>	–	da nemt PRT <i>easily</i>	være <i>be</i>	det <i>that</i>	–

Example 4 has an example of competition between *det* as subject and *det* as given topic. The unmarked foundation is the given topic. Generally, when the given topic of a clause is *det* referring to the state-of-affairs in the previous clause, the given topic is the unmarked foundation rather than the subject. Theories on information structure have since the Prague School (see Section 4) assumed that a clause tends to take the preceding clause's message (rheme, assertion, focus, etc.) as its starting point, and clauses containing *det* with broad referential scope in the foundation are a construction for doing just that. The use of *det* with states-of-affairs reference conflicts with assumptions about markedness found in most accounts in the literature; it is certainly not the case that *det* in foundation as non-subject is textually marked, as suggested by e.g. Heltoft (1986; cf. Section 2.3).

### 8.1.2 Unclear reference and flexibility

In the examples analyzed in Section 8.1.1, the references and grammatical roles of *det* were relatively clear. There are, however, quite a few examples in the data of *det* having unclear reference, typically because the original clause format is abandoned before the clause is finished. In a few cases, this leads to the grammatical role of *det* being unclear. These examples can illuminate some features of the use of *det* in foundation in talk-in-interaction. Example 5 illustrates a clause format being abandoned, leaving *det* with unclear reference:

#### Example 5 / Samtalebank / samfundskrise / 1.411

01           men der var [så ] det i [det a vi ku trække det fra, ]  
               but there was the thing that we could deduct it,  
 02 LIS:                   [men- ]           [>der var vel os det med< olien, ]  
                                   but-                   but there was also the oil thing right,  
 03           ja du ku trække det fra i skat ja.=  
               yeah it was tax-deductible yeah.=  
 04 AST: → =så det var fās kun- (0.4)  
               so it be.PST actually just  
               =so it was actually just-  
 05           hvis du betalte tyve så betalte du t\_i.  
               if 2SG.NOM pay-PST twenty then pay-PST 2SG.NOM ten  
               if you paid twenty then you paid ten.

In Example 5, Asta and Lis are comparing the financial crisis of the late '00s with the oil crisis in the 1970s. In the example, the two are talking about how high interests during the oil crisis were tax deductible, so that if your interest was at 20%, you actually only had to pay around 10%. Asta makes this point in lines 4-5. In the initial clause in line 4, *det* is in the foundation. It is the grammatical subject of the clause, as observable from the fact that no other nominal referent follows the verb (cf. the clause model in Figure 7). This format is abandoned before the clause is finished, and after a brief pause, it is reformulated as a conditional clause. Since the clause in line 4 is never finished, the referential scope of *det* never becomes clear. It mostly resembles a dummy subject, which

points forward in the clause and not backwards to the preceding discourse – particularly since we are privy to the intended message, as it appears in line 5. But if the format was finished, it may have also been revealed to be an anaphorical reference with broad referential scope, or a cataphor to be expanded upon in extraposition.

The flexibility in referential scope may actually be an advantage to language users. As evidenced by lines 4-5 in Example 5, it is often the case that a language user does not have a finished format for a clause by the time they start uttering it; rather, clauses take shape as they are being uttered (Auer 2009), and sometimes the originally chosen format for a clause only reveals itself to the speaker to be impractical when the clause is already underway, as is the case in lines 4-5 above. Given this insight, it is very practical for language users to have a standardized clause format that is also highly flexible, which is the case for clauses with *det* in foundation. These are highly flexible with regards to both referential scope, grammatical role, direction of phoricity, etc.; since *det* can be in the foundation of almost any clause, it is also a useful placeholder for when a language user has not yet fully decided upon a fitting format for their message.

An example of a clause with *det* in foundation in which the grammatical role of *det* is unclear can be seen in Example 6:

*Example 6 / AULing / par\_ved\_spisebord / l.283*

- 01 ADAM: du sagde i går du ik gad se den,  
 2SG.NOM say.PST in yesterday 2SG.NOM NEG want\_to.PST see 3SG.UTER  
 you said yesterday you didn't wanna see it,
- 02 EVA: ja (.) men det har jeg fundet ud af-  
 yeah but that have.PRS 1SG.NOM find-PST\_PTCP out of  
 yeah (.) but I found out-
- 03 ADAM: den gider jeg godt nok ik å se.  
 that one I really don't wanna see.
- 04 EVA: a he he har jeg fundet ud af at  
 1SG.NOM have.PRS find-PST\_PTCP out of SUB  
 a he he I found out that
- 05 ADAM: L (sagde du)  
 (you said)
- 06 EVA: → det vil jeg gerne alligevel,  
 that want.PRS 1SG.NOM like\_to actually  
 actually I do want to,

The interaction in Example 6 takes place just before that in Example 3; Eva has just said that she wants to see the film *The Imitation Game*, and Adam brings up that she mentioned the day before that she did not want to see it. In line 2, Eva begins uttering a clause in which she intends to say that she changed her mind, but this format is abandoned, presumably due to extensive overlap from Adam in which he reenacts her saying that she does not want to see it. In lines 4-6, Eva delivers her message with a new format, in which *jeg* 'I' is in the foundation of the main clause, while the format with *det* in foundation is used in the subordinate clause (which has main clause constituent order, cf. Section 6.3.1).



The clause in line 2 has *det* in its foundation, with reference to the state-of-affairs in the previous clause in line 1<sup>9</sup>. Since the format in line 2 is abandoned before the clause is finished, the grammatical role of *det* is unclear. It is not the grammatical subject – *jeg* ‘I’ is – but rather a constituent in a subordinate clause which is never realized. Depending on how the clause would have been formed, it could have been both subject, object, or prepositional object of that subordinate clause. The speaker herself may not have had a notion of what its grammatical role was. While the clause in line 2 was in all probability not abandoned due to the format, but rather due to Adam’s overlapping parody, it remains the case that a standardized clause format with a semantically and syntactically flexible first position is very advantageous to language users when interacting in real time.

As mentioned above, *det* does not take case inflection, as opposed to most other personal pronouns in Danish. This serves to make *det* more flexible in the foundation, and may serve to explain why the *det*-in-foundation construction is so popular. Speakers of Danish appear to find it highly intuitive for *det* to occupy the foundation, and they are not discouraged when *det* fulfills a grammatical role which has a canonical position much further into the clause. This may precisely be because the grammatical role of *det* does not need to be specified before beginning the clause. *Det* in the foundation can thus be considered a place-holder of sorts for clauses which are to some extent based on part of the active discourse space; this goes for most clauses in interaction. From the vantage point of information packaging, the reference of *det* is generally vague – it only becomes clear in the context of its carrier sentence.

There are advantages of using *det* in foundation for both the speaker and the hearer. If *det* refers to a specific nominal-type referent, it will normally quickly be identified as such on the basis of gender agreement, particularly since uter gendered nouns are more frequent than neuter gendered ones (approx. 75% of nouns are uter gendered; Hansen 1967b: 29). *Det* with broad referential scope is thus quickly identifiable as such, and a light anaphor for this purpose is necessary to solve what Levinson (1995) calls the ‘bottleneck in human communication’: the conceptual structure of a linguistic message is generally much more complex than what can be extrapolated from the linguistic substance itself, which is why languages need generalized patterns dedicated to e.g. indicating a relationship between a clause and the preceding clause. The *det*-in-foundation construction is an example of such a pattern, which is explainable in part by Levinson’s (1995, 2000) I-heuristic: “minimal forms warrant maximal interpretations” (1995: 97). In other words, for the hearer, *det* can easily be parsed as having broad reference, precisely due to its flexibility in referential scope.

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<sup>9</sup> Note that the negation in line 1 is outside the referential scope of *det* in line 2; this is interesting, as negations are assumed to operate at the predicate level in e.g. Dik’s Functional Grammar, cf. Hengeveld (1989).

### 8.1.3 Cataphoric reference and dummy function

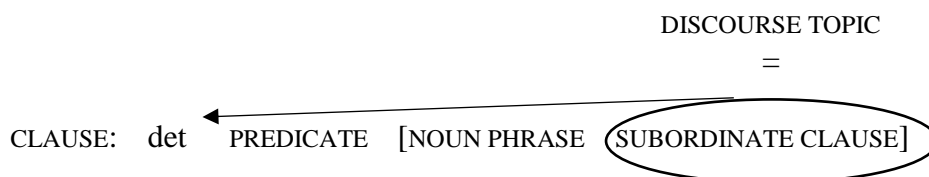
Dummy pronouns are frequently found in foundation. While dummy pronouns in foundation are always subjects, it is not the case that dummy subjects are always in foundation, as seen in e.g. Example 4. Their function is to satisfy the syntactic requirement for a subject in clauses which do not have an obvious semantic subject. The dummy subjects are typically *det* or *der* ‘there’, and the majority of clauses with dummy subjects are copular, in that they either have an overt copula verb or direct juxtaposition of subject and subject predicate due to copula deletion. Dummy foundations are typically not referentially meaningless, but rather cataphorically refer to a later part of the clause. This can be seen in Example 7:

Example 7 / *Samtalebank* / *preben\_og\_thomas* / l.365

01 TH0: når nu de har- >så ka de å få lidt mere for det  
 now that they've- >then they can also get a bit more for it  
 02 hvis de endelig vil have det< solgt jo.  
 if ever they wanna< sell it.  
 03 PRE: ((coughs))  
 04 lige præcis jo.  
 yeah exactly.  
 05 → det jo en s- det jo: det jo en god investering  
 it PRT INDEF.UTER good invest-NMLZ  
 it's a s- it's: it's a good investment  
 06 å gå å lave sånoget selv.  
 SUB walk and make-INF such-something self  
 to be doing such stuff yourself.

In Example 7, as in Example 1, Preben and Thomas are discussing the house that Preben's son-in-law just bought, and discussing how making changes to a house yourself is a good investment, because the selling price will increase compared to the buying price. In the sentence in lines 5-6, the subject as well as foundation is *det*. This *det* does not anaphorically refer to anything in the preceding discourse. It rather refers cataphorically to the subordinate clause in line 6. The assertion in line 5 is that *det* is a good investment, with the semantic content of *det* only being specified later. While *å gå å lave sånoget selv* ‘to be doing such stuff yourself’ can reasonably be considered the discourse topic of a stretch of discourse, it is not immediately recoverable without the specification in line 6. The reference of this *det* is illustrated in Figure 8:

Figure 8: Illustration of dummy subject with cataphorically specified reference



As illustrated in Figure 8, *det* in line 5 cataphorically refers to a delimited part of the subject predicate, i.e. the subordinate clause. The subordinate clause is in itself an overt mention of the discourse topic of discourse. The clause would have been syntactically complete without the subordinate clause, which is there to clarify the reference of *det*. That this clarification is necessary might be an indication that the discourse topic of discourse – Langacker’s (1987) notion of topic, cf. Section 4.2 – is not something speakers orient toward at the level of syntactic coding, and that the discourse topic of discourse is not an easily recoverable referent.

The dummy pronoun in Example 7 obtains a recoverable cataphoric reference. In their interactional usage, such dummy pronouns are not easily distinguishable from the ones seen in the previous sections, as the referential scope of *det* does not need to be decided by the speaker by the time they start uttering the clause. There are, however, also examples of dummy *det* in which there is no recoverable reference. These are typically found in clauses which have constructional status, in the sense that speakers presumably store them as units, and that they are idiomatic in the sense that their semantic content cannot be extrapolated from its individual parts (Fillmore et al. 1988). An example of such a construction can be seen in Example 8:

*Example 8 | Samtalebank | preben\_og\_thomas | l.387*

01 PRE: å så det jo nok ik lige nu man ska sælge hus jo  
 and it’s probably not right now you should sell your house  
 02 men [det kommer jo igen, ]  
 but it’ll come back,  
 03 THO: [ne:j de:t ik lige ] t[iden ] her.  
 no: it’s not really the time here.  
 04 PRE: [altså:  
 y’know:  
 05 (3.3)  
 06 THO: → nej det går lidt hårdt for sig nu.  
 no it go.PRS a little hard-ADVZ for REFL now  
 no it’s pretty rough around now.

In Example 8, Preben and Thomas are discussing the influence of the financial crisis on the housing market, concluding that now is not the time to be selling a house; as Thomas says in line 6, *det går lidt hårdt for sig nu*, which roughly translates to ‘it’s pretty rough around now’. The *det* of line 6 does not have any recoverable anaphoric or cataphoric reference. This is presumed to be because *det går hårdt for sig* is an idiomatic construction in Danish, and as such, there is no need for a recoverable reference. The construction is probably formed on the basis of analogy with *det*-foundations with more easily recoverable references. The construction remains compositional, as adverbs and particles can be entered at will, as is the case with *lidt* ‘a little’ and *nu* ‘now’ in Example 8.

*Det* with recoverable anaphoric reference is chosen as foundation because, as a given topic, it partially delimits which part of the pragmatic presupposition is relevant for the

assertion of a clause. This would suggest a preference for clause-initial topical elements, as is generally stated in the literature on information structure (cf. Section 4). However, dummy pronouns are chosen as foundation when there is no part of the pragmatic presupposition to draw upon in making an assertion, which suggests that Danish talk-in-interaction does not simply have a preferred ordering of elements on the basis of their contribution to the information structure of the clause, but rather a preference against clause-initial focal elements, even when there are no topical elements.

## 8.2 Full reference

This section focuses on foundations which have no discourse-internal phoric reference, either because the meaning is fully specified in the foundation itself, because the reference relies on shared knowledge between the speakers that is not specific to the current interaction, or because the reference is deictic. Common deictic references include pronominal references to discourse participants. The fully specified and shared knowledge foundations appear to be coded similarly, the main requirement being that they are fully identifiable to the interlocutors on the basis of the reference in the foundation alone without requiring any further specification. Deictic references are treated together in Section 8.2.1, while fully specified and shared knowledge references are treated together in Section 8.2.2.

### 8.2.1 Deictic reference

This section covers foundations with conventionalized deictic reference. These first and foremost include first and second person pronouns in nominative and oblique case, and adverbs indicating a setting in time and space such as *nu* ‘now’ and *her* ‘here’.

The first person singular pronouns *jeg*, *mig*, ‘I, me’ are typically fully specified in their conventional association with the speaker, but may require some form of anaphoric reference if e.g. the speaker is reporting on the speech or thoughts of another. The second person singular pronouns *du*, *dig*, ‘you’ are also typically fully specified in their association with a specific interlocutor, but may also require anaphoric reference in reported speech, or take on a general meaning as opposed to a specific meaning, in which case there is no deictic reference (see Section 8.4). The first person plural pronouns *vi*, *os*, ‘we, us’ cover both inclusive and exclusive meanings, so that it may cover either only the interlocutors, or the interlocutors as well as others, or only the speaker and one or more other persons. Only the first option is purely deictic; the other options will require further specification. The second person plural pronouns *I*, *jer*, ‘you’ can likewise cover either two or more current interlocutors, or the interlocutor(s) and others who are not present. The first option is not found in the data set for this thesis, as all conversations analyzed involve two participants only. Oblique case deictic pronouns are rarely found in the foundation, and no instances are found in the data. Fully deictic pronouns are always analyzed as given topics, not because they were necessarily focal in the preceding discourse, but because they are by definition present in the pragmatic presupposition of a clause (Lambrecht 1994; Langacker 2001).

Example 9 illustrates the deictic pronoun, *jeg*, ‘I’, used in the foundation.

*Example 9 / Samtalebank / anne\_og\_beate / l.161*

- 01 BE: → jeg stod inde-  
1SG.NOM stand.PST in  
 I was standing-
- 02 (0.3)
- 03 → jeg stod inde ved jakker-  
1SG.NOM stand.PST in by jacket-PL  
 I was standing by the jack-
- 04 → jeg har lige lagt min jakke,  
1SG.NOM have.PRS just put\_down-PST\_PTCP 1SG.GEN.UTER jacket  
 I've just put away my jacket,
- 05 (0.4)
- 06 å så ringer du å  
 and then you call and
- 07 → jeg ku overhovedet >ik høre hva du siger<,  
1SG.NOM can.PST at\_all NEG hear-INF what 2SG.NOM say-PRS  
 I couldn't at all >hear what you're saying<,
- 08 (0.5)
- 09 å >så siger jeg m vi: på< Lux å så siger du tja:,  
 and >then I say m we're at< Lux and then you say ↑yeah:,

The interaction in Example 9 is part of a longer sequence of collaborative storytelling in which Anne and Beate are reaching a common understanding of what had happened on the previous Saturday night. Beate tells of how she had just entered the nightclub Lux, and received a phone call from Anne just after putting down her jacket. The sequence in Example 9 constitutes part of a turn-at-talk which starts at line 1. All clauses in the sequence have either *jeg* or *så* ‘then’ in foundation. *Jeg* is used when the clause indicates either an action or perspective of the speaker, whereas *så* ‘then’ is used to indicate that the carrier clause includes a progression in the storytelling, as further argued in Section 8.6.1. *Jeg* is first found in foundation in lines 1 and 3; the clause in line 1 is cut off, while the clause in line 3 restarts with the same format, but is also abandoned before it is finished. The clauses describe where Beate was at the time of the actions described by Anne just prior to what we see in Example 9. As this has not been discussed before, all other information than the subject is focal, and the first person pronoun is the only available given topic. In line 4, once again, all other information than the first person reference is focal. The clause in line 6 constitutes a progression in the story – Beate receives a phone call – and thus has *så* ‘then’ in foundation. The clause in line 7 describes her experience in receiving this phone call, and thus has *jeg* in foundation as the only available topical element.

Own personal experience is a domain in which speakers have incontrovertible epistemic authority, so it follows that speakers’ own perspective often form the basis of their utterances (Pomerantz 1980). This is essentially what happens in Example 9, and in most clauses with *jeg* in foundation: if no other given topics have been established in the preceding discourse, *jeg* is always available as a given topic. On the other hand, it also follows that if the assertion of a clause is not suited to be told on the basis of the speaker’s own perspective, another given topic will normally have to be established before the assertion can be made.

A frequent non-pronominal deictic foundation is the adverb *nu* ‘now’, which typically indicates that its carrier clause takes place at the current time, and at an unspecified period of time before and after the current time. *Nu* can also have contrastive meaning, in which case it will indicate that a change has taken place in its carrier clause in the temporal setting currently being described as opposed to previous temporal settings. This meaning is partially anaphoric, as it requires a specified time frame and knowledge of the state of things prior to the indicated change. *Nu* with contrastive meaning is more common in the data than purely deictic *nu*. *Her* ‘here’ can essentially have the same functions as *nu*, albeit with reference to a physical rather than temporal setting. It will not be discussed further here, as *her* only rarely occurs in the foundation, and no examples were found in the data.

Example 10 shows *nu* used in the sense of approximate current time, although to some degree extendible to the past and future:

*Example 10 / Samtalebank / preben\_og\_thomas / l.279*<sup>10</sup>

- 01 PRE: de købte hu:s he:r for et års tid siden  
they bought a hou:se arou:nd a year ago  
02 han går satme til den #nede i det hus#.   
he’s damn well getting something done #down in that house#.   
03 TH0: [så han går selv å laver det å sånoget,   
so he himself is building it and stuff,   
04 PRE: l nede i:- ]   
down in:-   
05 han går selv å laver det hele   
he’s doing everything himself   
06 → nu han ved å grave kælder ud,   
now 3SG.MASC.NOM about INF dig\INF basement out   
now he’s digging out a basement,

In this sequence, as in Example 1, Preben and Thomas are discussing the house of Preben’s daughter and son-in-law, and how the son-in-law is very active in refashioning the house. In line 6, Preben says that his son-in-law is currently digging out a basement. scope of *nu* as a temporal adverb extends beyond just the current moment, and covers also a certain portion of the past and future, which is also indicated by *ved å* ‘about to’, which is put before a verb to indicate that the action is ongoing (Hansen & Heltoft 2011: 1446). *Nu* is fully deictic, as nothing in the preceding or immediately following discourse serves to delimit its temporal scope. Such a delimitation must come from the semantics of the state-of-affairs, in this case the interlocutors’ conceptual knowledge of how long it takes to dig out a basement. An example of *nu* that is not fully deictic can be seen in Example 11:

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<sup>10</sup> The character # is not mentioned in Jefferson’s (2004) glossary of transcription conventions, but is used by e.g. Local et al. (1985) to indicate creaky voice.

*Example 11 / AULing / sofasladder / l.81*

01 CLA: hvorfor ka vi ik bare snakke?  
 why can't we just talk?  
 02 snak snak.  
 talk talk.  
 03 DIT: m det ved jeg ik men vi plejer jo å sån-  
 m I don't know but usually we're like-  
 04 (3.2)  
 05 °ej jeg bange for der er nogen der ka høre os°  
 °I'm afraid someone can hear us°  
 06 he he hum  
 07 → [nu blir] det filmet, [hu hu hu]  
 now become.PRS it film.PST\_PTCP  
 now it's being filmed  
 08 CLA: [ja ] [ja ]  
 yeah yeah

In Example 11, Clara and Ditte are talking about why they are having trouble interacting naturally when they are being recorded. Ditte suggests that they are normally afraid of being heard by others, making it only natural that they would have further reservations when being videotaped. In the clause in line 7, *nu* is in the foundation. The temporal scope here is actually narrower than it was in Example 10; the two are being filmed right at the moment of speaking. This time frame, however, is not all that is being referred to in line 7. The function of this *nu* is not just to indicate the temporal scope of the assertion of the clause, but rather to indicate that the assertion of the clause is taking place right now, and that it contrasts with past experience. This shows that linguistic elements with meanings which canonically have purely deictic reference can be used contrastively in discourse, and when they are used in this way, their meanings are dependent on what precedes them in the discourse.

*8.2.2 Fully identifiable foundations*

This section covers foundations which are fully identifiable to the extent that they do not have reference to anything discourse-internal. These are per definition heavy constituents, and as such are exceedingly rare in the foundation; when they do occur, they typically consist of quotative constructions. An example of a heavy constituent in foundation can be seen in Example 12:

*Example 12 / Samtalebank / samfundskrise / l.368*

- 01 AST: å det er jo nok i bund å grund  
 and it's probably when it comes down to it  
 02 s:tammer det jo lidt fra USA.  
 it hails a bit from the USA.  
 03 (0.8)  
 04 at de uhæmmet har (.)  
 that they've uninhibitedly (.)  
 05 LIS: ja: de har 'gjort et forfærdelig nn  
 yeah: they've done a terrible nn  
 06 AST: I kørte det der,  
 done that,  
 07 LIS: ·hh' hhh >jeg ka ik forstå de< f- I  
 >I don't understand they< f-  
 08 AST: → I altså de danske I banker  
PRT DEF.PL Danish-DEF/PL bank-PL  
 I mean the Danish banks  
 09 har da os været med på den men altså-  
have.PRS PRT also be-PST\_PTCP with on 3SG.NEU but PRT  
 have also been in on it but you know-

In Example 12, Asta and Lis are discussing the background of the ongoing financial crisis, with Asta mentioning in line 1 that it all started in the USA. In lines 8-9, she admits that Danish banks are also complicit, even if they can not be blamed for instigating the crisis. The clause begins with the particle *altså*, which according to Heinemann and Steensig (forthcoming) is used to indicate that the clause will include a departure from progressivity involving an elaboration of something prior. The full noun phrase *de danske banker* 'the Danish banks' is in the foundation of the clause. The Danish banks are not mentioned previously in the recorded interaction between the two. Even though it is used in the definite form, the reference is to Danish banks generally; *danske* 'Danish' is stressed, which has contrastive focus function (Grønnum 2005: 196). The example shows that fully identifiable heavy constituents can occupy the foundation; examples like this are, however, exceedingly rare in talk-in-interaction, and in the vast majority of similar examples an anaphoric copy (e.g. *de* 'they') is used in the foundation instead of the heavy constituent, as discussed in Section 2.6 and briefly in Section 8.3 below.

Excluding the rare full noun phrases, heavy constituents in the foundation typically consist of nominal clauses in the form of quotes. This is illustrated in Example 13:



*Example 13 / Samtalebank / anne\_og\_beate / l.314*

01 BE: så siger jeg sån t̄nå men øhm:.  
 then say.PRS 1SG.NOM like PRT but uhm  
 then I say like ↑well but uhm:.

02 (0.6)

03 hva k- hva- hva koster den så sån en:  
 what cost-PRS 3SG.NEU then such INDEF.NEU  
 how m- how- how much is it such a:  
 den er rigtig rigtig fed jo.  
 it's really really cool.

04

05 hva koster den ehe  
 how much is it ehe

06 → ·hh ja den er ret dyr.  
 yes 3SG.NEU be.PRS rather expensive  
 yeah it's pretty expensive.

07 (0.3)

08 t̄siger han så bare,  
 say.PRS 3SG.MASC.NOM then just  
 ↑he just says then,

In Example 13, Beate is telling Anne about her experience going to the apartment of a friend of her boyfriend's for a party. She generally had problems conversing with the friend, and when asking him how expensive the apartment was, she got a brief answer simply saying that it was *ret dyr* 'pretty expensive'. The sequence contains two different quotative constructions. Lines 6-8 contain a single clause, the foundation of which is the quote *ja den er ret dyr* 'yeah it's pretty expensive'. This clause is the grammatical object of the carrier clause, with *han* 'he' being the subject; as was noted in Section 7.2.1 above, it is uncommon for infrequent nominal foundations to be anything else than the grammatical subject, unless they constitute reported speech or thought. The quote in line 6 is in itself a well-formed clause, in which Beate imitates the prosodic pattern of a different speaker, solidifying that the communicative purpose of the clause would have been clear without the specified quotative format in line 8. There is turn-transition relevance following the clause in line 6 (see Sacks et al. 1974), and the quotative format is added after a brief pause in phonation. This indicates that the QUOTE *siger han så bare* 'QUOTE he just says then' format was not chosen by Beate by the time she started uttering the quote in line 6. As described in Section 8.6.1, the temporal adverb *så* in line 8 typically occurs in the foundation or not at all; in lines 6-8, however, the quote takes precedence over *så*, further indicating that the full quotative construction was not decided upon from the beginning.

Lines 1-3 contain a different quotative construction, which is syntactically the inverse of the one in lines 6-8. In this clause, *så* is in the foundation. The quote itself, which is once again the grammatical object of the clause, is presented in the canonical position for grammatical objects as per the clause model (see Section 2.2). There are two candidate explanations for why the two quotatives in Example 13 exhibit opposite constituent orders: 1) The quotative construction takes precedence over the actual quote in lines 1-3, because Beate had decided that a quote was the next step in the storytelling sequence before deciding on a syntactic format for the actual quote; this is likely, as the reported speech

itself includes several restarts, hesitation markers, and an internal pause. In lines 6-8, the quote itself takes precedence over the quotative construction, because Beate had already decided on a format for the quote. 2) The quotative construction precedes the quote in lines 1-3 because it is necessary to demarcate the following as a quote; in lines 1-3, Beate is reporting her own speech, and it is not otherwise preceded by reported speech in the storytelling sequence, so reported speech is not expected in this position. Lines 6-8, however, are preceded by other reported speech, so she is already reporting on interaction at this point in the storytelling sequence; furthermore, she reports the speech of another in lines 6-8, which gives her the option of mimicking that other speaker's speech patterns. Reported speech is expected in lines 6-8 and not in lines 1-3, which means that it is less interactionally necessary to demarcate the reported speech in line 6 as being such. The two explanatory patterns are not considered mutually exclusive.

Another common construction that typically includes a clausal foundation is the QUOTE *vil jeg sige*-construction 'I'd say QUOTE'. This construction is not used for reporting speech, but rather for framing a clause in a certain way, as illustrated in Example 14:

*Example 14 / AULing / par\_ved\_spisebord / l.452*

- 01 EVA: mmh det smager virkelig godt det her.  
mmh it tastes really good this.
- 02 ADAM: mm,  
03 (2.2)  
04 → je:g slemt godt tilfreds vil jeg sige.  
*1SG.NOM\be.PRS bad-ADVZ good-ADVZ satisfied will.PRS 1SG.NOM say-INF*  
I'm very satisfied I'd say.

In Example 14, Adam and Eva are praising their food. Eva praises the taste in line 1, and Adam follows up with an agreement particle in line 2 and a longer clause indicating agreement in line 4. This clause uses the QUOTE *vil jeg sige* format. The "quote" as well as the foundation of the clause is *je:g slemt godt tilfreds* 'I'm very satisfied', which is the grammatical object of the carrier clause. This clause does not have a topic-focus division in the traditional sense: the quote, which is syntactically in a topical position, is complete from an informational structural point of view, and has its own assertion, i.e. expressing agreement with the assessment in line 1. The rest of the carrier clause *vil jeg sige* 'I'd say' provides no new information and has no individual assertion; it is simply a way of rhetorically framing the "quoted" clause which happens to have syntactic scope over it. Due to the idiomatic status of this type of construction, foundations such as the one in line 4 clearly behave differently than other foundations. A thorough treatment of the construction is beyond the scope of this thesis, but it is expected to be similar to e.g. the QUOTE *hvis jeg selv skal sige det* 'QUOTE if I may say so myself' construction, the English equivalent of which has been described as alternatively expressing pride (Fraser 1996) and modesty (Geis & Lycan 1993). This makes sense, as Adam is presumably praising food that he himself had a hand in making, and a general preference against self-praise is reported by e.g. Pomerantz (1978). A similar construction, which was not found in the data, is the relatively frequent CLAUSE *synes jeg* 'CLAUSE I think' construction, in which the first clause, which may be a very heavy and complex constituent, is in the foundation.

In this construction, *synes jeg* ‘I think’ often appears to be added as an afterthought to modify the modal status of the clause, and the full format does not need to be pre-planned as before the speaker starts uttering the clause.

Summing up, fully identifiable foundations are only rarely found in talk-in-interaction, and when they are found, they are typically part of quotative or idiomatic constructions. In these constructions, the quotes are typically the grammatical objects of their carrier clauses; a grammatical role which is assigned to them only if and when the framing construction is added.

### 8.3 *Specific third person pronouns and extraposition*

Apart from *det*-foundations, *så*-foundations (Section 8.6), and foundations consisting of deictic pronouns, the most frequent grouping of foundations consists of third person pronouns with specific reference; this excludes non-specific *det*, but otherwise includes third person singular pronouns of all four genders (masculine, feminine, neuter, and uter) and of all cases, as well as plural third person pronouns of all cases. As previously mentioned, third person pronouns in foundation with specific reference are grammatical subjects in the vast majority of cases, so for most of these there are only examples with nominative case in the data; furthermore, the ones that are most frequently found as non-subjects are the neuter and uter pronouns *det* and *den* ‘it’ which do not differ in nominative and oblique case. Third person references in foundation can be fruitfully divided into two groups: 1) those, whose references are recoverable on the basis of the preceding discourse, and 2) those, whose references are explicated in extraposition (as described in Section 2.6).

The majority of third person pronoun foundations are in the first group. These are treated similarly to the deictic pronouns described in Section 8.2.1; their referent is clear and specific, and they are used in foundation because that referent is the given topic of the clause from an information structural point of view. In other words, the assertion of the clause is made about the referent of the pronoun. This is mostly also the case for third person pronouns in the second group, with the difference being that in these cases the referent of the pronoun is not an active part of the pragmatic presupposition. Instead of introducing such topics as focal information in separate clauses, they are introduced as extra-clausal constituents. Language users thus have two primary choices for introducing third-person referents: as focal information of a separate clause, or outside a clause proper. This is further evidence for a preference against clause-initial focal constituents. An instance of extrapositional introduction of a topical referent can be seen in Example 15:

*Example 15 / Samtalebank / preben\_og\_thomas / l.230*

- 01 PRE: men så bliver det jo å en kæmpe fest jo.=  
but then it'll also be a huge party.=
- 02 TH0: =det gør det.=  
=it will.=
- 03 PRE: =i stedet for,=  
=instead,=
- 04 TH0: → =min mor å far de gjorde det os me#:#.  
*1SG.GEN.UTER mother and father 3PL.NOM do.PST it also with*  
=my mom and dad they also did it wi#:#th#.
- 05 med kobberbryllup da det var  
*with copper-wedding when 3SG.NEU be.PST*  
with 12½ years' wedding anniversary (lit. "copper wedding") when it was
- 06 oven#i:# to gange fyrre års,  
*above-in two time\PL forty year-GEN*  
at the same time #a:s# two fortieth birthdays,

In Example 15, Preben and Thomas are discussing combining festive events in order to throw bigger parties. In lines 4-6, Thomas is explaining how his parents combined their 12½ years' wedding anniversary ("copper wedding") with both of their fortieth birthdays. The foundation of the clause is *de* 'they'. The referent of this pronoun is not specified anywhere in the preceding discourse, but is rather specified as an extra-clausal constituent (extraposition) in the beginning of the turn-at-talk: *min mor å far* 'my mom and dad'. There is no prosodic break separating the extraposition and the clause proper, so the two are prosodically a single unit; syntactically, though, the extraposition allows the foundation to act as given topic, and serves the purpose of avoiding new or focal information directly in the foundation. The extraposition strategy is relatively rare in written language, which suggests one of two things: either 1) foundations are more likely to be introduced as focal information in preceding clauses in written Danish, or 2) the preference against focal information in foundation is less pronounced in written Danish.

#### 8.4 General reference

A small subset of the foundations in the data set have general reference. Instead of referring to any specific referent or subset of referents, they refer to people in general, although with the referential scope limited by the pragmatic context. General references mostly use the pronouns *du* 'you' or *man* 'one'. The use of general reference in foundation is illustrated in Example 16:

*Example 16 / Samtalebank / samfundskrise / l.311*

- 01 LIS: men de:r det der med hvis  
*but there\be.PRS that there with if*  
 but there's the thing with if
- 02 når du bliver halvfjerds  
*when 2SG.NOM become.PRS seventy*  
 when you turn seventy
- 03 så ska du jo hæve den ik os?  
*then must.PRS 2SG.NOM PRT raise-INF 3SG.UTER NEG also*  
 then you need to raise it right?
- 04 (0.4)
- 05 AST: → jo: men r du behøver jo ik-  
*yes but 2SG.NOM need\_to-PRS PRT NEG*  
 ye:s but you don't need-
- 06 LIS: l så ska du ud å sælge,  
*then must.PRS 2SG.NOM out and sell-INF*  
 then you need to go out and sell,
- 07 AST: → du behøver jo ik å købe aktier for dem.  
*2SG.NOM need\_to-PRS PRT NEG INF buy\INF stock-PL for 3PL.OBL*  
 you don't need to use them to buy stocks.
- 08 (1.0)
- 09 LIS: → .hhh nej men du ska ud å (.) å sælge (.)  
*no but 2SG.NOM must.PRS out and and sell-INF*  
 no but you need to go out and (.) and sell (.)
- 10 af din kapitalpension.  
*of 2SG.GEN.UTER capital-pension*  
 parts of your capital pension

In Example 16, Asta and Lis are discussing how to handle pensions and retirement savings in the wake of the financial crisis. In the sequence seen in Example 16, generalized *du* ‘you’ (see Hansen & Heltoft 2011: 553-554) is continually used as the grammatical subject, and in lines 5, 7, and 9, it is in the foundation. The example is interesting, as it is easy to follow how generalized *du* quickly becomes the common way to refer to a generalized referent. *Du* is first mentioned in line 2 in the subordinate clause *når du bliver halvfjerd*s ‘when you turn seventy’. It is immediately clear that *du* is not used deictically, but generally. *Du* is repeated as the grammatical subject in line 3, and is in foundation in line 4. It reappears as the subject in line 5, where *så* is in foundation, and reappears as the foundation in lines 7 and 9. In the clause in lines 9-10, the second person reference is repeated in the genitive case as part of the prepositional object, *din kapitalpension* ‘your capital pension’. The repeated references indicate that the generalized referent materializes as an actual referent in the discourse space; i.e. *du* does not simply refer to people in general, but to a generalized referent that is relevant to the current discourse, which may take on certain qualities and opinions throughout the collaborative formation of the discourse space. As an actual referent, it is also possible for generalized *du* to reappear in several clauses in a row as a given discourse topic, and not just as repeated instances of an empty subject.

In Ducrot’s (e.g. 1984) work on polyphony, such a generalized topic would be called an enunciator, defined as a “discourse being corresponding to a certain point of view

which has not necessarily been expressed by a speaker” (1984: 193, quoted from Roulet 2011). Example 16 illustrates how such a discourse being can be topicalized through repeated usage, and can be associated with a certain set of requirements, practices or opinions. Many generalized references are used only once, and do not build up a separate identity; these cannot be analyzed as given topics, as they have no place in the pragmatic presupposition prior to their first mention. In the quantitative analysis (Section 7), generalized references are analyzed as a separate category, but it is worth recognizing that they have quite a bit in common with other discourse topics.

### 8.5 *Interrogative pronouns*

In clauses which constitute open questions, the foundation is typically occupied by an interrogative pronoun. These interrogative pronouns are typically not the subjects of the clause, but can have a variety of different grammatical roles. By far the most frequent interrogative pronoun in foundation in Danish talk-in-interaction is *hva* ‘what’, which is represented as *hvad* in written Danish, but has been shown by Brøcker et al. (2012) and Jørgensen (2015) to be a separate word with completely separate distribution from other words represented as *hvad* in the written language. Other interrogative pronouns occur relatively sparsely in the data. They will not be covered further here, as there are no indications that they are used significantly differently in talk-in-interaction from how they are described in the literature.

### 8.6 *Så*

The second-most frequent foundation, and by far the most frequent adverbial foundation, is *så* ‘then’, which accounts for approximately a fifth of foundations in the data. As with *det* ‘it, that’, *så* has several different functions when occupying the foundation. Focus will first be on its function in specifying the temporal setting of the assertion of the carrier clause, then its function in specifying a conditional relationship to the preceding discourse, and finally its function in rhetorically modifying the carrier clause.

#### 8.6.1 *Temporal specification*

The most common function of *så* in the foundation is to indicate that the current clause follows or follows from what has been said in the immediately preceding discourse. It may temporally follow, in that the state-of-affairs being described occur after previously described states-of-affairs. It may follow from, in that it is true or contextually relevant as a result of something previously said. This section covers temporal specification, while the next will cover conditional specification. There is quite a bit of overlap between the two; for example, one state-of-affairs may be relevant in the context of another because it temporally follows it. The ambivalence of *så* in the foundation indicates that the two are also conceptually closely related.

Temporal *så* is associated with storytelling sequences, as seen in Example 17:

*Example 17 / Samtalebank / anne\_og\_beate / l.190*

- 01 BEA: → nå: oka:y men altså så ringer du  
PRT okay but PRT then call-PRS 2SG.NOM  
 oh oka:y but well then you call
- 02 å jeg >sagde til dig rigtig mange gange at du sku< komme,  
 and I >told you a bunch of times that you should< come,
- 03 (0.4)
- 04 på Lux, (.) å det ville du ik,  
 to Lux, (.) and you wouldn't,
- 05 (0.9)
- 06 å (.) [jam. ]  
 and (.) well.
- 07 ANN: → [så ] faldt jeg i søvn.  
then fall-PST 1SG.NOM in sleep  
 then I fell asleep.
- 08 (0.6)
- 09 BEA: ↑gjorde du,  
 ↑you did,
- 10 >nå okay for jeg troede nemlig<  
 >oh okay because I actually thought<
- 11 jeg tænkte at je:g (.) øh var høl vild led nu  
 I thought that I: (.) was being totally mean now
- 12 → fordi at så glemte jeg h: [tha .h: ]  
because SUB then forget-PST 1SG.NOM  
 because then I forgot h: ↑ha .h:
- 13 ANN: [hh ]
- 14 BEA: → så glemte jeg at du havde haft ringet  
then forget-PST 1SG.NOM SUB 2SG.NOM have-PST have-PST\_PTCP call-PST\_PTCP  
 then I forgot that you'd called
- 15 >fordi at jeg var såhnn ved at være rimelig vissen<,  
 >because I was lihhke pretty shitfaced about then<,
- 16 → .hh så::øh- >å så t-kiggede jeg  
then uh and then look-PST 1SG.NOM  
 so::uh- >and then I looked
- 17 → på min telefon senere å så havde du  
on 1SG.GEN.UTER phone later and then have-PST 2SG.NOM  
 at my phone later and then you'd
- 18 skrevet en besked< me:d kom ned til Magasin.  
write-PST\_PTCP INDEF.UTER message with come down to PN  
 written a message< wi:th come down to Magasin.

In Example 17, as in Example 9 above, Anne and Beate are negotiating a common understanding of what had happened the previous Saturday night, where the two were supposed to meet up but failed to do so due to a series of misunderstandings. The sequence seen in Example 17 mostly consists of Beate presenting the events of that night chronologically, frequently using *så* in foundation to indicate temporal progression. The clauses with *så* in foundation (lines 1, 7, 12, 14, 16, 17) constitute new events in the story, while the other clauses consist of disruptions in the temporal progression of the story. In

line 1, Beate references a phone call she made to Anne; the phone call is a progression in the ongoing story, and thus has *så* in foundation. Lines 2-6 relay the contents of the phone call, and do not in themselves include temporal progressions in the story; none of the clauses have *så* in foundation. The only full clause by Anne (line 7) also has *så* in its foundation, as it is a contribution to Beate's story which modifies Beate's understanding of the events. Beate indicates in lines 9-11 that her understanding has changed, before progressing with the story in line 12. Accordingly, the clause in line 12 has *så* in foundation, but the ones in lines 9-11 do not. Line 14 is also a progression of the story with *så* in foundation. Line 15 is not a progression of the story, but an explanation for the message in line 14, and thus does not have *så* in foundation. Lines 16-18 are all progressions in the story, and all have *så* in foundation. It may not always be the case that progressions in storytelling have *så* in foundation, but there is a fairly strong tendency.

### 8.6.2 Conditional specification

Apart from temporal specification, *så* in foundation is often used for specifying a conditional relationship with the preceding discourse. This usage is not associated with story-telling sequences, and is thus more likely than temporal *så* to occur turn-initially. The function of conditional *så* may be formalized as:

*Given p, then q* (is now relevant),  
wherein *p* = an active and immediately accessible part of the preceding discourse,  
and *q* = the assertion of the carrier clause.

This use of *så* is probably formed on the basis of analogy with conditional clauses with the *hvis p så q* 'if *p* then *q*' format. In such conditionals, the protasis is syntactically in the extraposition, while the apodosis has *så* in foundation (e.g. Diderichsen 1962: 204), which follows Haiman's (1978) claim that conditionals typologically behave like topics. Clauses with conditional *så* in foundation are pragmatically analogous to conditional clauses (as characterized by Comrie 1986), but instead of the protasis being found in extraposition, it is found in a different clause or across several clauses, possibly during a different speaker's turn.

Several instances of turn-initial conditional *så* can be seen in Example 18, which partially overlaps with the previous Example 2:



*Example 18 / Samtalebank / samfundskrise / l.278*

- 01 AST: de er faldet til det halve,  
 they have dropped to half,  
 02 ·hhh det er aktierne jo. (.) faktisk.  
 the stocks did that (.) actually.  
 03 LIS: → nåja så ka man jo miste det halve der  
*PRT then can.PRS one PRT lose.INF DEF.NEU half-DEF there*  
 oh yeah then you can lose half there  
 04 ↑ja det er rigtig nok. ↑  
 yeah that's right.  
 05 AST: → Lså har der ik- så har  
*then have.PRS there NEG then have.PRS*  
 then there hasn't- then  
 06 du jo ↑kun >hundredoghalv<treds tilbage.  
*2SG.NOM PRT only hundred-and-fifty left*  
 you only have a >hundred and fifty< left.  
 07 LIS: → L·hhhh jamen så har hun jo  
*yes-but then have.PRS 3SG.FEM.NOM PRT*  
 well then she's  
 08 været heldig ka man sige.  
*be-PST\_PART LUCK-ADJZ can.PRS one say\INF*  
 been lucky you might say.  
 09 AST: ↑jaja.  
 ↑yeah yeah.

In Example 18, Asta and Lis are discussing the state of the stock market. In the preceding discourse, Lis has mentioned a friend who lost 50,000 DKK of a 300,000 DKK savings account due to the stock market crash. Asta is making the point that many people had it much worse, and that many people's stocks dropped to half. In line 7, Lis concludes that her friend was actually comparatively lucky. In this brief example, *så* is used in the foundation four times. In line 3, Lis starts her turn with the realization token *nåja*, used to indicate that a problem in her epistemic access has been solved (Emmertsen & Heinemann 2010). The rest of the clause is an upshot formulation (Heritage & Watson 1979), further used to indicate that Lis' understanding is up to date, and that the two are now on the same page. In line 5, Asta begins another clause with *så*-foundation and the dummy subject *der* 'there'; she abandons this format in favor of another, which also has *så* in the foundation, but which uses generalized *du* 'you' as its subject. If analyzed as conditional, the protasis to this clause consists of the assertion in lines 1-2:

p = the stocks have dropped to half

q = a stock-based savings account of 300,000 DKK might drop to 150,000 DKK

The clause in line 7 also has *så* in its foundation. It is not unclear if this clause constitutes a separate turn from the one in lines 3-4, as Lis has been speaking in overlap with Asta almost throughout Asta's turn in lines 5-6. The scope of the protasis in this clause is not

clearly delimited, but refers to at least the assertion in lines 1-2 and presumably also her own realization in lines 3-4.

In Example 19, several examples are shown of *så* being in the foundation turn-internally. In turn-initial instances of *så*, it is particularly difficult to distinguish between temporal and conditional readings:

*Example 19 | Samtalebank | anne\_og\_beate | l.243*

- 01 AN: → *men så var- alle lavede et eller andet*  
*but then be.PST all-PL do-PST one.NEU or other.NEU*  
*but then- everybody was doing something*
- 02 → *#så var jeg bare sådan#, (0.7) pfh (0.3) #nå#.*  
*then be.PST 1SG.NOM just like\_this PRT*  
*#then I was just like#, (0.7) pfh (0.3) #oh well#.*
- 03 (0.3)
- 04 → *så gi' der jeg ik*  
*then want.PRS 1SG.NOM NEG*  
*then I don't want to*
- 05 BE: *lwhatever hu hu hu*  
*whatever hu hu hu*
- 06 AN: *jeg kender jo heller ik de der ka#rate (.) guys#*  
*I don't know those #karate (.) guys# anyways*
- 06 (.)
- 07 AN: *#så:# (0.3) jeg tænkte de:t fint*  
*so 1SG.NOM think-PST that\be.PRS fine-DEF*  
*#so:# (0.3) I figured it's fine*
- 08 → *så lægger jeg mig til å tsove,*  
*then lie.PRS 1SG.NOM 1SG.OBL to INF sleep-INF*  
*then I'll go to tsleep,*
- 09 *så det tgjorde jeg,*  
*so that do.PST 1SG.NOM*  
*so I tdid,*

In Example 19, as in previous examples, Anne and Beate are discussing what happened on the previous Saturday night. Anne says that she called up various friends of hers, but that all of them were busy with something. Furthermore, she did not know the *karate guys* (line 6) that Beate was with at the time, so she decided to go to sleep. In line 1, Anne initiates a clause with *så* in foundation, but abandons the format right after the finite verb, as she finds that either the structure is inconvenient for her message, or more explanation is necessary. She initiates another clause with *så* in foundation in line 2, which may be the same clause that she originally intended in line 1. The clause in line 2 consists of a quotative construction. The construction SUBJ *være*[TENSE] (*bare*) *sådan* QUOTE ‘SUBJ be[TENSE] (just) like QUOTE’, alternatively *så være*[TENSE] SUBJ *bare sådan* QUOTE ‘then SUBJ be[TENSE] (just) like QUOTE’, is common in some varieties of Danish talk-in-interaction, albeit not well-described. The quote does not need to be represented speech, but can also be represented thought, as is intended in lines 2-3. It is similar to the ‘be like’-quotative construction that is found in many varieties of English (e.g. Buchstaller &

D’Arcy 2009). The construction is probably a prefabricated combination or ‘prefab’ (Erman & Warren 2000), so the specific functions and references of individual elements may be difficult to identify. This is the case here; the *så* in line 2 can be analyzed as indicating either temporal or conditional specification. Example 19 is part of a larger storytelling sequence, so *så* in line 2 may indicate that the clause temporally follows the previously covered event, as discussed in Section 8.6.1, or may indicate that the represented thought follows as a result of the preceding discourse, i.e. that all of the friends that Anne called already had other plans. The two meanings are so interrelated that neither can be convincingly argued for.

The *så* in the foundation of the clause in line 4 is more easily recognizable as having conditional meaning, since it does not describe an event per se, and has no temporal position in the storytelling sequence. As described above, it constitutes represented thought, but it is easily analyzed as a consequence of the clause in line 1:

p = everyone is busy with something

q = I don’t want to go out

The clause in line 8 also has *så* in foundation. Here as well the temporal and conditional meanings are hard to tease apart. The clause is part of a storytelling sequence, and can reasonably be analyzed as temporally following the preceding parts of the sequence: the decision to go to sleep temporally follows the decision not to go out. It can also be analyzed as conditionally following the preceding, as the decision to go to sleep may follow as a result of deciding not to go out. As with *det*, it is probably the case that the frequency and semantic flexibility of the *så*-in-foundation construction are mutually strengthening. Due to its semantic flexibility, it can effectively be used as a placeholder by the speaker before they have decided upon the full format of a clause, as long as they have decided the primary pragmatic function of the clause, i.e. to provide an assertion which somehow follows (from) the preceding discourse. The extreme frequency of the construction leads to a certain degree of polysemy, which is to be expected (e.g. Langacker 1995; cf. Geeraerts 1993 for a critical discussion of the notion of polysemy).

As a slight diversion, it is noteworthy that the *så*’s in lines 7 and 9 seem to carry out a similar pragmatic function. They are far from identical; in fact, they have different phonetic, distributional and interactional properties. The *så*’s in lines 7 and 9 are conjunctions and occupy the connector field in Diderichsen’s clause model (cf. Section 2.2). They can be realized with creaky voice and can be prolonged, as in line 7, which is not the case for adverbial *så*. The *så* in line 7 is realized as what Jefferson (1983: 6) calls a trail-off conjunction, which means that there is speaker-transition relevance following it, which is also not the case for adverbial *så* in foundation. In spite of their multiple differences, the *så*-conjunction has certain semantic and pragmatic similarities, and part of their function in lines 7 and 9 is to specify a temporal and conditional relationship to the preceding clauses. This may indicate that *så* can have a placeholder function similar to *det* ‘it, that’ in interaction, and that speakers need not have decided the format of the

clause or the grammatical role of *så* in it when they use it clause-initially, but have only decided that the assertion of the clause has a temporal or conditional relationship to part of the preceding discourse. Given the different options for phonetic modification and distributional properties, this is more speculative than was the case for *det*. It is clear, however, that adverbial and conjunctive *så* must be closely conceptually related, and this is expected to have an effect on their usage.

Finally, it is worth noting that while it is fully grammatical for both temporal and conditional *så* to occur in the canonical position for adverbs in the clause model, they are only rarely found outside of the foundation in the data set. This further indicates that the unmarked foundation is not the clause's subject, but a fitting discourse structuring device.

### 8.6.3 Rhetorical modification

The final frequent function that *så* has in the foundation can be called rhetorical modification in the sense of McGregor (1997: 222ff). This *så* has the function of indicating that the assertion of the carrier clause provides additional information about a discourse topic, possibly by indicating the speaker's opinion of some aspect of the discourse topic. It clarifies the information structural function of its carrier clause.

This function is illustrated in Example 20:

#### Example 20 | AULing | sofasladder | l.107

- 01 DIT: jeg fandt lige nogen øh fine billede:r øh af ham i dag.  
 I just found some uh nice picture:s uh of him today.
- 02 da han blev ↑konfirmehh ↑ha ↑·hhh,  
 from when he was ↑confirmehh(d) ↑ha,
- 03 CLA: L ↑nå::,  
 ↑oh::,
- 04 ej jeg ↑trøede det var nogen andre billeder,=  
 oh I ↑thought they were some other pictures,=  
 05 DIT: =han havde farvet sit hår sort,  
 =he'd dyed his hair black,
- 06 → å så har han hår herved til.  
 and then have.PRS 3SG.MASC.NOM hair here-down to  
 and he's got hair down to here.
- 07 ((indicates length of hair with arm))  
 08 (1.2)
- 09 CLA: s- til sin konfirmation?  
 s- for his confirmation?
- 10 (0.5)
- 11 DIT: ((nods))
- 12 → >å så havde han sån nogen<  
 and then have-PST 3SG.MASC.NOM such some.PL/UTER  
 >and then he wore these<
- 13 kæmpe bhhriller på  
 huge glass-PL on  
 huge ghlasses

In Example 20, Clara has just asked Ditte how it is going with a mutual acquaintance of theirs. In the sequence seen above, Ditte tells Clara of some embarrassing pictures she has uncovered of him from when he had his Confirmation, a common rite of passage for adolescents in Danish society. The sequence contains two instances of *så* used in foundation. In lines 5-6, Ditte explains how his hair was dyed black at the time, and was very long, which she indicates with an arm gesture. The clauses in lines 5-6 provide closely related assertions. The function of *så* in line 6 is to indicate that the assertion of the clause provides additional information about the discourse topic introduced in line 5. *Så* is once again in the foundation in the clause in lines 12-13. The assertion in this clause also modifies the pragmatic understanding of the discourse topic – the picture – but is not related to the immediate topic, i.e. his hair. Once again, the purpose of *så* is to indicate that the carrier clause will provide additional information about the discourse topic, without foregrounding any one particular element of it.

*Så* indicating rhetorical modification is typically found turn-internally, as the additional information typically modifies an discourse topic introduced by the same speaker. Often, but not always, it is preceded by *å* ‘and’. As with temporal and conditional *så*, it typically occurs in the foundation or not at all, although it is not syntactically restricted to the foundation. This makes good sense, since its meaning is primarily modal, and an indication of the rhetorical function of a clause will be most informative if preceding the assertion.

None of the functions of *så* are topical. The temporal and conditional functions have anaphoric reference, as their meanings are specified by the surrounding discourse; temporal *så*, for instance, is specified on the basis of the temporal setting of the preceding discourse. Rhetorical *så* does not have any phoric reference, as its specific meaning does not lie in any of the preceding or following discourse. Generally, this means that *så* in foundation does not neatly fit into any of Dik’s (1997; see Section 4.2) topical categories, nor can it be covered by Lambrecht’s notion of topicality; in the context of Systemic Functional Grammar (e.g. Andersen et al. 2001), it is also problematic to consider it thematic. For speakers, however, it is a useful tool for grounding a clause in the surrounding discourse, either by specifying its relation to what precedes it, or by indicating the interactional function of the carrier clause.

### 8.7 *Empty foundation*

A few cases of empty foundation were found in the data. By empty foundation is meant verb-initial declarative clauses in which a gap in the clause model reveals that a constituent has been omitted.

Subject ellipsis in the written language has been described often in the literature, and is characterized by e.g. Hansen (1967a: 209) as being colorful language that characterizes certain moods, as well as being associated with “telegram or diary style”. More recently, it has been associated with different generations of digital interaction by Hougaard (2004: 158) and Rathje (2013). Its use in talk-in-interaction is illustrated in Example 21:

Example 21 / Samtalebank / anne\_og\_beate / l.148

01 AN: men bare lige ring (.) hvis I går.  
 but just call me (.) if you leave.  
 02 fordi jeg gider ik gå ned på Lux alene,  
 because I don't wanna go down to Lux alone,  
 03 ·hh å tså,  
 and ↑then,  
 04 så siger du >nejnej m vi er her stadig bare skynd< dig.  
 then you say >no no m we're still here just hurry< up.  
 05 ·hh å så- gør jeg mig klar,  
 and then do.PRS 1SG.NOM 1SG.OBL ready  
 and then- I get ready,  
 06 → ser (0.9) lidt bedre ud end  
 look.PRS little good.COMP out than  
 look a little better than  
 07 jeg gjorde dehhh hehe før,  
 1SG.NOM do.PST there(?) before  
 than I did thehhh before,  
 08 BE: l hhn hhn hhn  
 09 AN: → fik lige gjort mig klar,  
 get.PST just do.PST 1SG.OBL ready  
 just got ready,

As in previous examples, Anne and Beate are negotiating what happened on the previous Saturday night. Anne is describing a phone call between them, in which they agreed that Beate would give Anne a call if she and her friends left her apartment. Anne got ready to go meet them, which is described in lines 5-9. Line 5 has *så* in foundation, since the clause constitutes a progression in the storytelling sequence. The clause in lines 6-7, however, has no foundation, nor the one in line 9. In both cases it is clear that the omitted element is the subject of the clause, as there are gaps in both the foundation and the canonical subject position, as illustrated in Figure 8:

Figure 8: Clause model showing empty foundation

Foundation field	Nexus field			Content field		
Foundation	v	n	a	V	N	A
–	fik	–	lige	gjort	mig klar	–
	got		just	got	me ready	

In both lines 6 and 9, it is clear from the context that the omitted subject is a first person reference. In lines 6-7, there is a fairly long pause following the initial verb, which might indicate the speaker's realization that her clause format is not optimal; she follows through eventually, and the omitted subject is clear because it is explicated in the subordinate clause in line 7. In line 9, she once again uses a format with no subject, a past participle version of the Danish *gøre sig klar* 'get ready (lit. get oneself ready)'

construction, which is a reflexive construction that requires concord between the subject and the oblique object; the subject is thus fully omissible here.

In her study on text message communication, Jensen (2015) noted that this is not a subject ellipsis phenomenon at all, but rather an information structural phenomenon in which all redundant information can be omitted. She only touches upon omission of nominal constituents, but in my data there are also a few examples of adverbial constituents being omitted, suggesting that expected foundations are generally omissible. An adverbial constituent is omitted in Example 22:

*Example 22 / AULing / sofasladder / l.232*

- 01 DIT: men det bliver jo hel vild pinligt.  
but that'll be super embarrassing.
- 02 → kommer der lige sånnoen mega gode nogen å mega seje  
*come.PRS there just such-some mega good\PL some and mega cool\PL*  
some really good ones will come and really cool
- 03 [å sånnoget å så ska vi spille bagefter.]  
*and such-something and then must.PRS 1PL.NOM play\INF afterwards*  
and stuff and then we're playing afterwards.
- 04 CLA: I jeg håber virkelig vi: først. (.) thhi ]  
*1SG.NOM hope.PRS really 1PL.NOM\be.PRS first*  
I really hope we're up first.
- 05 håber vi: først,  
*hope.PRS 1PL.NOM\be.PRS first*  
hope we're up first,

In Example 22, Ditte and Clara are talking about how a very experienced band will play at a concert where their own much less experienced band will also be playing. There are two instances of empty foundation in this sequence. The one in line 5 is similar to those in Example 21, with a first person reference omitted. The omitted foundation is clearly identifiable as a first person reference, as the clause in line 5 is a reduced version of that in line 4, presumably repeated because the clause in line 4 was spoken in overlap with Ditte. The other omitted foundation is in line 2. This clause has a dummy subject *der* 'there' which follows the finite verb, making it clear that the clause has a gap in the foundation, which must needs be an adverbial constituent, as the clause has an overt object. The omitted foundation is easily interpretable as *så* due to the extreme frequency of *så* in foundations; less common foundations cannot be omitted, while very common foundations tend to be salvageable from the context.

While there are only a few cases of empty foundation in the data, it is notable that all examples come from the two videos in which younger female speakers are interacting, indicating that the tendency to omit foundations is associated with a certain sociolect. This is supported by the fact that the phenomenon is most well-described in online and text message interaction, which is generally associated with emerging and "young" forms of language.

## 9 The foundation field in interaction: overview

Taken together, the analyses in Section 8 provide an overview of the principles guiding the use of the foundation in talk-in-interaction. This section summarizes some major principles.

The primary functions of some common foundations are summarized in Table 7:

Table 7: Primary functions of common foundations

Form	Information structural function
<i>det</i> , dummy	Message of clause is purely focal
<i>det</i> , SOA or discourse reference	Basis of assertion is available in preceding clause or discourse
<i>jeg</i>	Basis of assertion is personal experience or point-of-view
<i>du</i>	Basis of assertion is speaker's judgment of interlocutor's personal experience or point-of-view
<i>du/man</i> , general	Basis of assertion is discourse-specific enunciator
3rd person pronouns (incl. specific <i>det</i> )	Basis of assertion is person, object, concept etc. introduced previously in the discourse or in extra-position
quote	Syntactically required in common quotative constructions
other heavy noun phrases	Introduction of new topic or sub-topic
<i>så</i> , temporal	Message of clause constitutes progression in ongoing story
<i>så</i> , conditional specification	Message of clause is true or relevant as result of previously covered ground in discourse
<i>så</i> , rhetorical	Message of clause will provide additional (possibly attitudinal) information about discourse topic
<i>nu</i>	State-of-affairs is ongoing, or constitutes a change as opposed to previously

Throughout Section 8, some suggestions were also made with regards to preferences of different foundations, which to some extent intersects with action type. The proposed preferences can be summarized as follows:

- Heavy constituents are avoided in the foundation.
- If a clause's assertion is grounded in the preceding clause or discourse, *det* is the preferred foundation, no matter its grammatical role.
- If a clause's assertion is *not* grounded in the preceding clause or discourse, its basis is typically a more concrete topical element, which is referred to by another pronoun than *det*. In this case, the foundation is typically also the subject.
- If a clause's message is purely focal, *det* is also the preferred foundation. Its reference is either empty or cataphoric.



- The above preferences are void if the clause is part of a storytelling sequence in which it constitutes a progression. In this case, *så* is the preferred foundation.
- Likewise, the preferences are void if the clause conditionally follows something in the preceding discourse, as either a result, or because something is conditionally relevant. In this case *så* is used in foundation.
- Some constructions, such as the quotative construction described in Section 8.2.2 or open question constructions described in Section 8.5 require other foundations.

While none of these preferences are absolute, there are good motivations why language users would make active use of broadly functional, partially prefabricated constructions in interacting with each other, and why these constructions would be particularly flexible in the early stages of clause formation, since at this point, the language user may have a good idea of what information structural and interactional considerations should be kept in mind, but not yet what the actual format of the clause should be.

## **10 Discussion**

In this section, I will discuss the relationship between the outcome of the analysis and the theory presented in Sections 2-5; furthermore, I will discuss the methodology used. First, I will focus on how the current description differs from and is similar to the state of the art in the literature, as summarized in Section 5. Next, I will discuss the merits of taking an interactional perspective in describing a grammatical phenomenon such as the foundation, taking into account interaction-specific phenomena such as the temporal structure of utterance formation and positional sensitivity. Following that, I will briefly discuss the role of optionality in clause formation, some limitations to the current study, and some motivations for the methodology underlying the analysis.

### *10.1 The state of the art from an interactional perspective*

The current description of the foundation is similar to descriptions of its usage in the written language in some respects, and differs in other respects. This section covers the main similarities and dissimilarities.

What has been written about topics in the information structural literature matches many of the findings above. First of all, it was noted in Sections 4 and 5 that foundations were generally expected to be topical, and in most cases, they are indeed references to delimited parts of the pragmatic presupposition underlying the clause – i.e. topics according Lambrecht's (1994) definition, which in itself borrows from and expands upon definitions of theme in the Prague School and Systemic Functional Grammar. As mentioned in Section 4.2, Dik (1997) distinguishes between four different types of topics; the foundation mostly corresponds to the given topic, and only rarely to the other categories. Langacker's (1987) notion of topic refers to what I have called the discourse topic, and as was shown in Section 8.1.3, this does not appear to be something speakers orient to when coding utterances. The description of the foundation as topical matches nominal foundations much better than it matches adverbial foundations; not because the descriptions are easily proven false for adverbial foundations, but because adverbial foundations such as the *så*-foundations described in Section 8.6 can often not be described

with the same terminology as nominal referents. For example, it is not feasible to analyze the activation status of a particle which modifies the rhetorical status of a clause. As mentioned quite often in the literature on Danish grammar, the foundation can be reasonably described as ‘setting the scene’ for a clause by indicating what the clause is about or indicating a condition in which the rest of the clause holds true; it is not clear how such a description corresponds to the information structural literature.

In the information structural literature, it is also often mentioned that the topic tends to be part of the focus of the preceding clause (see Section 4.1). When *det* ‘it, that’ is in foundation, it is often with reference to the entire focus of the preceding clause. This type of reference fits well into the overall arc of the information structural literature, but the literature tends to focus on more concrete references. When the foundation has deictic reference, it is topical (as argued in Section 8.2.1), but it is not normally focal in the preceding clause. While other personal pronouns may be focal in the preceding clause, there is also a high likelihood that their referent is in extraposition and not mentioned in the preceding clause. It is frequently stated in the literature that topics tend to be repeated using progressively weaker anaphora (e.g. Grimes 1975). This is not normally the case for the foundation; most often, a topical reference in the foundation has the weakest possible reference by its first mention, in the form of an unstressed pronoun. Once again, most adverbial foundations cannot feasibly be described using this terminology

A point often made in the literature on Danish grammar is that textually unmarked foundations are subjects in their carrier clauses (e.g. Nielsen 1975; Heltoft 1986). This point in itself can explain little of the variation found above. Foundations are indeed quantitatively likely to be subjects, with almost two thirds of foundations being subjects. But as argued above, in many types of interaction, the unmarked foundation simply appears to be *det* ‘it, that’, as its use in the foundation is highly multifunctional. *Det*, unlike other nominal foundations, does not exhibit a clear preference for functioning as subject, and even if there is a quantitative preference for *det* to be the grammatical subject of its carrier clause, there are absolutely no other indications (prosodic or otherwise) that other grammatical roles are marked. Furthermore, in some interactional contexts, *så* is the unmarked foundation, with subjects in foundation being textually marked.

The traditional Danish grammarian whose description of the foundation comes closest to how it is used in interaction is probably Hansen (1933; see Section 2.1) with his division of the clause into an A-part and a B-part, which are essentially equivalent to topic and focus. His relatively broad description of the A-part furthermore allows for at least some adverbial functions, although not e.g. rhetorical modification. However, while he provides insights into how the foundation helps organize the information in clauses, he does not describe how it is actually used, i.e. how it is generally filled.

One of the most striking findings in the above analyses is the clear preference for short, unmarked constituents in the foundation, which is in line with Van Valin’s (2005) continuum of referent coding, as introduced in Section 4.3. This preference is immediately clear when working with interactional data but largely goes unmentioned in the literature about the foundation. The rather extreme frequency of the few most frequent foundations also goes unmentioned; this is particularly striking given that the three most frequent forms occur in more than half of the foundations in the data.

Hansen and Heltoft (2011; cf. Section 2.4) make two primary claims about the foundation that are not covered above. One concerns the three primary ‘fillings’ (anaphoric, dynamic, focal) of the foundation, while the other concerns the textual function of the foundation. Their claim about the primary fillings does not match the current analysis particularly well; while anaphoric filling is indeed frequent, both dynamic and focal filling is highly infrequent in talk-in-interaction. Furthermore, they do not cover the very frequent deictic or modal fillings of the foundation; their account is essentially unable to account for the frequency of *jeg* ‘I’ or *så* ‘then’ in foundation. Their claim that the primary function of the foundation is to act as the illocutionary frame of the clause is a highly theoretical one and is not easily testable from an interactional perspective. If the dichotomy of filled versus unfilled foundation is accepted as grammatically relevant (as opposed to, say, foundation-initial versus verb-initial clauses), then the claim cannot be opposed on interactional grounds. But the interactional perspective can show that the foundation has a very important discourse regulating function, a fact which is easily overlooked if one focuses instead on its proposed function as indicator of illocutionary frame.

### *10.2 Merits of the interactional perspective*

The interactional perspective taken in this thesis is the basis for the discrepancies found from the state of the art in the literature. Superficially, this perspective has been crucial because the use of interactional data in itself reveals major differences in the use of the foundation between talk-in-interaction and other types of language use. From a more analytical point of view, it has been crucial because explanatory patterns covering e.g. how the temporal structure of clause formation affects the structure of clauses have been instrumental, as well as explanatory patterns covering how action types may affect the structure of clauses.

The analysis relies on a connection between the temporal nature of language, the frequency of certain phenomena, and the role of prefabricated and formulaic language use. This connection is echoed in some strains of discourse-oriented grammatical work; put simply by Du Bois (2003: 49): “Grammars code best what speakers do most”. In other words, the most immediately available grammatical constructions are the ones that are most frequently used. In interactional language use, where utterances are formed as they are spoken (Auer 2009), language users are accordingly more likely to use grammatical constructions that are available to them with relatively little modification. From this point of view, it is of particular significance that the foundation is so early in the clause, as such a position can be used very flexibly. This connection can explain three important uses of the foundation in interaction: 1) the highly frequent use of *det*, 2) the low frequency of hapax legomena, i.e. unique foundations, and 3) the use of clausal foundations as part of formulaic constructions. *Det* is very frequent in part because it is very flexible, and vice versa. Its use in the foundation can be seen as a partially formulaic construction; due to its high flexibility, language users need not have decided upon either the referential scope of *det* or the format of the clause prior to using the construction, as it can be used to make an assertion based on a discourse entity of any size, and can alternatively be used with cataphoric or dummy reference. Self-evidently, hapax legomena are infrequent because rare constructions are less immediately available to the speaker. As such, it makes sense

that a frequently employed strategy is to introduce heavy constituents elsewhere than in the foundation – either in extraposition, in which case the subject matter of the clause is acutely clear to the speaker, or later in the clause, in which case the speaker has time to choose a fitting format for introducing an infrequent constituent. Clausal foundations as part of formulaic constructions do not require the speaker to have decided upon a finished format by the beginning of the utterance, as these clausal foundations are acceptable without the formulaic frame; quotes are typically both prosodically marked as such and pragmatically expected to be such. In e.g. a CLAUSE *synes jeg* ‘CLAUSE I think’ construction, the end of the clausal foundation is always a transition relevant place, and *synes jeg* may even be added after a pause in phonation.

Most of the usage patterns of the foundation appear to be independent of action type, and thus not positionally sensitive as per Schegloff (1996a). A notable exception is storytelling sequences, in which there are a strong tendency to use *så* in foundation when the clause indicates a progression in storytelling. With regards to other patterns, the information structure of the clause appears to be a better predictor of the choice of foundation than interactional organization. It is possible, however, that this finding is partially the result of the methodological choices, as discussed in the following section.

### *10.3 Optionality, sample size and direction of analysis*

An aspect of grammar that has not been discussed at all in the above is optionality or freedom of choice. Whenever a language user forms a clause, they must choose among a number of different possibilities for coding roughly the same meaning. It is an integral part of usage-based grammar that the choice they make in this respect is not trivial; a choice between similar options will typically reflect some modal, interpersonal, or connotational meaning. However, the function of the foundation is broad, and the discussion of preference and markedness in Section 9 is tendency-based rather than rule-based, and these facts allow language users a great deal of flexibility in forming clauses. Thus, it is worth considering that not every choice made in the clause formation process is equally meaningful, or at least not equally suitable for post-hoc analysis. For this reason, it is important to note that the preferences that were posited in Section 9 may provide functional explanations for some quantitative tendencies seen in a reasonably broad data set, but they cannot form grammatical rules per se, and it is not likely that deviations from these tendencies will be oriented to by language users as being grammatically problematic.

The sample size underlying the analysis is relatively small for some purposes, and sufficiently large for other purposes. After 500 examples had been analyzed, the data had reached a saturation point with regards to description of “normal” foundations; these examples seem to provide a good overview of how language users usually use the foundation in unmarked clauses. However, since the foundation is an extremely frequent phenomenon, 500 examples only cover few minutes of naturally occurring interaction, which means that many frequent constructions which deviate from the normal usage of the foundation are not found in the data, or found only once. It also does not provide a lot of data for systematic analysis of deviant cases. The choice to simply use 5 x 100 consecutive foundations instead of looking particularly at special constructions and deviant usage has to do with the focus of the thesis, which is simply to describe how the foundation is used in talk-in-interaction, and explore the functional motivations

underlying it. This core aspect of Danish syntax has not previously been described from this perspective, and thus takes precedence over a focus on special constructions. Constructions and deviant cases are very interesting, and dedicated investigations would hugely further our understanding of the foundation, but a broader understanding has been the objective here.

In Conversation Analysis, the method for analyzing a phenomenon typically involves building a collection of normal instances of that phenomenon in data, and examining this collection in order to describe the phenomenon (Schegloff 1996b). The course of action in this thesis has been very different, because the object of inquiry is not an interactional phenomenon as such, but rather how a grammatical tool is used in interaction. As a result, the qualitative analyses in Section 8 were guided by a quantitative overview, which was in itself guided by the existing literature. This led to a focus on grammatical roles and information structure, which may have skewed the analysis towards finding results in which interactional organization appears to be less of a determining factor in the choice of foundation. Had the thesis been e.g. a collection-based analysis of how quotative constructions are used in interaction, it is possible that the results would primarily have relied on interactional organization. Nonetheless, as an overview of how a grammatical tool is normally used in interaction, such an analysis would not have been feasible, and I have attempted to include insights from the interactional frameworks in the analysis whenever they appeared relevant.

## 11 Conclusions

This thesis has investigated the usage of the foundation field in Danish talk-in-interaction, and in doing so, uncovered some striking discrepancies between its usage in talk-in-interaction and how it is described in previous research. While almost any constituent can fill the foundation, this flexibility is rarely exploited; the majority of foundations consist of *det* ‘it, that’, *så* ‘then’, or *jeg* ‘I’, and when not filled by either of these, it typically consists of other pronouns or light adverbs. This reveals a preference for light constituents in the foundation, but perhaps more importantly also reveals a preference for constituents that can serve to clarify the relationship between the current clause and the preceding discourse; in the foundation field position, *det* is most frequently used as an anaphor with reference to previously mentioned states-of-affairs or larger discourse structures, and *så* mostly indicates the temporal or logical relation between the current clause and the preceding discourse. One of the most important functions of the foundation is thus discourse management.

The results go against the generally accepted claim that the unmarked foundation consists of a subject. The preferred grammatical role of the foundation in fact depends on a host of other factors, such as the information structural role or referential scope of the foundation, or the nature of the action type which the carrier clause fits into. If the assertion of a clause is based on the state-of-affairs of the preceding clause, which is very often the case in talk-in-interaction, a preference for having *det* ‘it, that’ in foundation outranks any preference based on grammatical role. If the assertion of the clause consists

of a temporal progression in a story-telling sequence, a preference for *så* ‘then’ in foundation also outranks other preferences. A functional motivation for these preferences can be found in the temporal structure of clause formation; both of these foundations are semantically and functionally flexible, and are thus available to speakers before they have fully decided upon a syntactic format for the message they wish to deliver, as long as they have decided upon the overall interactional function of the clause.

The thesis may be seen as a general call to take interactional language seriously when investigating grammar, and to use actual interactional data when doing so, as many of the potential insights are not immediately available from introspection alone. While there is certainly value to grammatical research based on written language standards, this should not be done at the expense of research on interactional language, as plenty of insights can be made on the basis of interactional language that cannot otherwise be made. The type of data investigated in this thesis is not less Danish or less grammatical than the standard written language, and the discrepancy between the results found here and the existing literature can be seen as an indication of just how little we know about the language and how much work is still required.

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## Appendix A: Transcription conventions

The following is a glossary of transcription conventions used in the thesis, excluding orthographical modifications, the nature of which are introduced in Section 6.1:

→	This line is in focus in the analysis
,	Slightly rising intonation
.	Falling intonation
?	Strongly rising intonation
×	Primary stress
:	Lengthening
(.)	A brief pause
(1.0)	A longer pause; length is indicated
-	Audible cut-off
[ l	Beginning of overlap
l ]	Ending of overlap
·hh	Audible inbreath
hh	Audible outbreath
↑	Shift into especially high pitch
°xxx°	Softer than surrounding speech
> <	Speeded up
((xxx))	Non-linguistic information
=	No gap between turns
#	Creaky voice



## Appendix B: Glossing conventions

The following characters are to delineate morphemes in glosses:

-	Boundary between linear morphemes
\	Boundary between non-linear morphemes. Note that many grammatical morphemes which are indicated linearly in the written language are indicated with stem-internal suprasegmental changes in talk-in-interaction. This is noted on a case-by-case basis, and may not be clear in the transcriptions.
.	Boundary between different pieces of grammatical information in e.g. portmanteau morphemes
–	Used when something is best described with two words in English, but only one morpheme in Danish
/	Used when a morpheme may be analyzed as having two different meanings
	Note: if there is no linguistic substance in the recording, no corresponding morpheme is indicated in the gloss

The following abbreviations are used in the glosses:

1/2/3	First, second, and third person
ADJZ	Adjectivizing affix
ADVZ	Adverbializing affix
COMP	Comparative degree
DEF	Definite
GEN	Genitive case
INDEF	Indefinite
INF	Infinitive mood
MASC	Masculine gender
NEG	Negative polarity
NEU	Neuter gender
NMLZ	Nominalizing affix
NOM	Nominative case
OBL	Oblique case
PL	Plural number
PN	Proper noun
PRS	Present tense
PRT	Particle
PST	Past tense
PST_PTCP	Past participle
REFL	Reflexive pronoun
SG	Singular number
SUB	Subordinating particle
UTER	Uter gender