Patrick Grosz

dn in Viennese German

The Syntax of a Clitic Version of
the Discourse Particle *denn*

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Contents

Acknowledgments

This thesis constitutes an approach to treating the phenomenon of German discourse particles within the framework of generative syntax. It investigates the syntactic behavior of one specific particle in one particular variety of German and is thus far from being exhaustive. Nevertheless, I think it shows that these elements can properly be dealt with in this framework. This thesis also shows that even very restrictive topics often require a more extensive treatment than intended. While this is basically a good thing, I would like to advise all future students of linguistics not to try to say everything in their thesis that eventually has to be said, but to rather save part of what can be said for future publications – as larger dimensions make editing and assessment much more time-consuming. I started to work on this thesis quite a while ago and I would like to thank all of the people who directly or indirectly supported me.

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Introduction

This thesis proposes an analysis of the syntactic behavior of the reduced discourse particle *dn* in *Colloquial Non-Standard Viennese German* (Ger. *Wiener gehobene Umgangssprache*, henceforth abbreviated as *VG*). This is a syntactic element whose primary purpose is to *contextualize*, expressing the speaker's assumption that the propositional frame of a wh-question is available to the hearer from the context (cf. chapter 4). The framework is generative, syntactic analyses are based on the *Principles and Parameters Theory* of syntax. The main objective is to determine where VG *dn* is inserted into the structure during the syntactic derivation, where it is spelled out to the *Phonetic Form* (*PF*) interface, and how it is interpreted at the *Logical Form* (*LF*) interface. In order to determine the syntactic behavior of *dn*, I will compare its surface behavior to that of its non-reduced counterpart *denn*. Furthermore, it will be discussed how *dn* interacts with co-occurring discourse particles, adverbials, nouns, pronouns and other elements in the clause.

The discourse particle VG *dn* functionally corresponds to Standard German (henceforth *SG*) *denn* and Bavarian (henceforth *Bav.*) *(a)n/(e)n*. While SG has a full form of *denn* and Bavarian has the clitic forms, VG will be shown to have both a full discourse particle VG *denn* and its clitic counterpart VG *dn*. While their core semantic and pragmatic function can be shown to be equal, they differ not only in their syntactic behavior (*dn* behaving as a syntactic clitic), but also in their licensing conditions. VG *denn* behaves on a par with SG *denn* in that it is licensed in all kinds of interrogatives. In contrast, VG *dn* can exclusively occur in wh-questions (and is never licensed in yes/no-questions). Furthermore, *dn* can only marginally be embedded – again in contrast to *denn*. In this thesis, the respective behavior of VG *dn* is compared to that of SG (and VG) *denn* and possible reasons for the differences are discussed.

In Chapter 1 I provide a general presentation of the phenomenon of German discourse particles. This is followed by an overview on descriptive

attempts to define and classify them (1.1). This introduction is followed by a presentation of my own collected data on the syntactic behavior of VG *dn*, which especially focuses on the overt syntactic behavior of *dn* with respect to the sentential arguments and on its selectional restrictions with respect to sentence types (1.2 and 1.3).

Chapter 2 provides an overview on the general syntactic behavior of discourse particles, based on the descriptive literature (2.1). Then, the theoretical framework is presented in chapter 2.2 and the two main possibilities for analyzing discourse particles within the Generative Framework will be discussed. In chapter 2.3 I demonstrate the possible analysis that they adjoin to functional projections of the IP or VP space. In chapter 2.4 I discuss the alternative analysis that they are generated in the specifier positions of functional projections, as assumed for adverbs by Cinque (1999, 2004). It is shown, how both approaches can be adapted to account for the behavior of discourse particles; the respective advantages and disadvantages are discussed. Finally it is shown Cinque's framework is more appropriate to deal with the phenomenon of German discourse particles.

In chapter 3 (3.1) the phenomena of neutral sentential stress and information structure (i.e. topic-focus and theme-rheme organization) of German clauses is discussed, conveying their interaction with the behavior of VG *dn*. Analyses of the different semantic and syntactic types of DPs are presented to determine their behavior with respect to these discourse particles (3.2). In the third part of chapter 3 (3.3), a short overview on the question of the diachronic sources of *dn*, *denn* and other discourse particles is presented. Finally, an analysis of the overt syntactic behavior of VG *dn* is sketched in which it is analyzed as a syntactic clitic which leaves its base SpecFP position to head adjoin to the canonical clitic position (C^0 or Fin^0) in order to have its lack of prosodic features compensated (3.4). The apparent counter-argument that *dn* is able to follow certain types of contrastively stressed pronouns is explained by proposing that *dn* in these cases does not take scope over the whole

clause, but takes narrow scope over the respective pronoun and is accordingly base-generated within its extended projection (3.2.1, 3.4)

In chapter 4 a semantic analysis of VG *dn* and SG (and VG) *denn* is proposed, based on Kratzer's (1999) and Zimmermann's (2004a, 2004b) approaches to the meaning of discourse particles (in chapter 4.2 and 4.3, respectively) and on traditional observations in the descriptive literature (chapter 4.1). It is argued that discourse particles are modifiers of illocutionary operators and sentence type indicators. Thus, they have to undergo covert quantifier raising at LF to take scope over the respective operators within the CP space.

Chapter 1

The Phenomenon

1.1 Discourse Particles

The particles *denn* and *dn* in *Colloquial Non-Standard Viennese German* (henceforth *VG*) are part of the class of particles which is traditionally labeled the class of *modal particles* (Ger. *Modalpartikel*) or *downtoning particles* (Ger. *Abtönungspartikel*). In recent theoretic literature, the alternative term *discourse particles* (Ger. *Diskurspartikel*) has been introduced. On the one hand, it accounts for the fact that these elements are categorically different from *modal operators* and *modal predicates* (cf. von Fintel and Heim 2002) in that they do not contribute to propositions, but perform the function of integrating utterances into the ongoing discourse (cf. Zimmermann 2004a)[1]. On the other hand, the label *downtoning particles* (cf. Weydt 1969) was based on the politeness effect that such particles trigger. This politeness effect can be shown not to be part of their core semantics – it arises from combining them with certain speech acts and sentence types (cf. Zimmermann 2004a). Since the late 1960's a vast amount of descriptive literature on discourse particles has emerged, followed by a comparatively small number of theoretical approaches. As this is beyond the scope of this thesis, no extensive overview on the literature will be given – instead, the main descriptive generalizations are presented with reference to a selection of descriptive articles; furthermore, a number of promising and recent theoretical attempts will be discussed in detail.

[1] Cf. also Weydt 1977, who analyzes discourse particles as elements that link the modified sentence to the utterance context or express the speaker's disposition with regards to it.

1.1.1 Definition and classification

The class of discourse particles is very heterogeneous which leads Weydt (1969) to consider it a *function class* (i.e. a set of linguistic elements which is defined by their property of performing the same function in a given context) rather than a *word class*[2]. In a recent article, Zimmermann (2004a) even provides evidence for splitting up the class of discourse particles into different sub-classes – at least, into that of speech act modifiers like *ja* and that of sentence type operators like *wohl* – this analysis will be discussed in detail in chapter 4.3. Traditionally, elements from the *function class* of discourse particles are attributed *multiple word class membership* – also labeled *semantic and syntactic polyfunctionality* (cf. Weydt 1969). In other words, for every discourse particle there is a homonym which is not a discourse particle, but belongs to a different word class. In most cases it is evident that the discourse particles have diachronically originated from their non-particle counterparts (cf. Weydt 1969, Thurmair 1991, Abraham 2000, Zimmermann 2004a). While they are synchronically distinct, these counterparts can be elements of the class of *adverbs* or *adjectives* (SG *etwa* 'approximately', *vielleicht* 'perhaps', *doch* 'still', *wohl* 'well', *(ein)mal* 'once', *einfach* 'simply', *eigentlich* 'really, actually', *ruhig* 'quietly', *eben* 'just'), *focus particles* (SG *erst* 'not until', *auch* 'also, even', *schon* 'already', *nur* 'only', *bloß* 'merely'), *conjunctions* (SG *aber* 'but', *denn* 'for') and *sentence equivalents* (SG *ja* 'yes') (cf. von Stechow and Wunderlich 1991; Hartmann 1998). It can be observed that discourse particles are always functional elements, while some of them have non-particle counterparts with lexical meaning (e.g. *ruhig* 'quietly').

Weydt (1969) defines *modal particles* (i.e. discourse particles) as linguistic entities that express the speaker's attitude on the propositional

[2] This distinction resembles the generativist idea that grammatical functions are syntactically defined notions and thus determined by the structural position of elements and not by their lexical entries (cf. Roberts 1997:58).

content of the utterance they occur in or fit it into the context of speech – although this definition has often been refined or modified, it is in essence still valid. Contemporary analyses of the functions of specific particles will be presented in the remainder of this text. Another constitutive property of discourse particles is that they are syntactically integrated into a sentence and modify the whole sentence or utterance, but do not contribute anything to its propositional (i.e. truth-conditional) content (cf. Zimmermann 2004a). On the basis of this observation, Weydt (1969) proposes a division of utterances into their *descriptive* (i.e. propositional) and *intentional* (i.e. "super"-propositional) layer; discourse particles operate in the latter. More recently, Kratzer (1999) has advocated an analogous division between the *descriptive* and *expressive* semantic content of an utterance.

Due to their heterogeneity, discourse particles have traditionally been defined by means of negative properties. The following properties were proposed to be constitutive for their class, in addition to the above mentioned ones (taken from Weydt 1969, von Stechow and Wunderlich 1991, Hartmann 1998, May 2000):

(1) *German discourse particles*

- cannot precede the V2 position or follow the V_{end} position
- cannot bear stress[3]
- cannot be asked for
- cannot be inflected
- cannot be negated
- cannot be paraphrased
- have no lexical meaning
- partition a sentence into its thematic and its rhematic part
- are distributionally dependent on the sentence type and sentence mood
- are never obligatory

[3] Cf. chapter 1.1.2 for a discussion of this property.

(2) *German discourse particles (continued)*
- cannot be coordinated
- cannot be compared or intensified

The properties of discourse particles which are most relevant for the phenomenon in question (and will thus be discussed in more detail) are the following: They are restricted to positions in the *middle field*, i.e. in the area between the finite verb's *Verb Second position* in root sentences (henceforth *the V2 position*) and the verb final position in embedded clauses (henceforth *the* V_{end} *position*, which is traditionally assumed to be the V^0 position within the generative framework). They evidently interact with the clausal information structure, being basically restricted to the border between *thematic* and *rhematic* part of a clause. *Thematic* is the traditional term for *old* information (generally equated with *topic* or *presupposition* within the Generative framework), *rhematic* the one for *new* information (equated with *focus* or *comment* within the Generative framework). Their distribution is sentence type and sentence mood dependent. Finally, it has been shown that co-occurring discourse particles are subject to strict linearization rules (cf. Thurmair 1989, 1991, Abraham 2000).

In the following sub-section, the issue is discussed whether there are stressed discourse particles in German, as has been claimed by different authors in descriptive literature. It is argued that those elements are not discourse particles but adverbials, and therefore not relevant for the ongoing discussion of the syntactic behavior of such particles.

1.1.2 Stressed discourse particles?

While the exact number of German discourse particles is controversial and also strongly dependent on the variety of German which is investigated, most analyses are based on discourse particles from the set which Thurmair (1991:20) labels the *classical sixteen*: *aber, auch, bloß, denn,*

doch, eben, eigentlich, (ein)mal, etwa, halt, ja, nur, ruhig, schon, vielleicht, wohl (cf. also Weydt 1969). While they are by default prosodically weak, most of them have a stressed counterpart (capitals denote stress in all examples)[4]:

(3) a. Wie HEISST du *denn*?
how are.called you *denn*$_{D.PRT}$?
'What is *denn* your name?'
b. Wie heißt du *DENN*? (... wenn du nicht Fritz heißt).
how are.called you *THEN*?
'What *THEN* is your name? (... if it is not Fritz).'
(Weydt 1969:45 – glosses and translation added)

(4) a. Das kann man *wohl* SAGEN.
that can one *wohl*$_{D.PRT}$ SAY
'It is *wohl* possible to say so.'
b. Das kann man *WOHL* sagen. (..., obgleich manche das nicht wahrhaben wollen.)
that can one *WELL* say
'It is *WELL* possible to say so. (..., even if some people do not admit this.)'
(Weydt 1969:56 – glosses and translation added)

To investigate the syntactic behavior of discourse particles we must clarify, whether these stressed elements should also be treated as particles. Traditionally, they have been considered to belong to a different word class, as the impossibility of bearing stress has been assumed to be a

[4] It is controversial whether a stressed counterpart of *denn*, as proposed by Weydt (1969) and illustrated in example (3b), really exists in synchronic Standard German. In this sub-section, chapter 1.1.2, it is argued that the so-called *stressed discourse particles* are in fact no discourse particles at all, and thus not relevant for the ongoing discussion. Therefore, the issue whether stressed *DENN* exists or not is outside of the scope of this thesis and will not be addressed in detail.

defining property of discourse particles (cf. Weydt 1969 and successive work). In contrast to this view, Abraham (2000:324,329) and May (2000) claim that the stressed counterparts should also be treated as discourse particles, namely as special instances of their unstressed homonyms. The stressed versions are assumed to differ from the unstressed ones only in having an additional, more specific meaning and function – the core semantics being shared by both versions.

However, there are strong reasons to assume that this is not the case. May (2000) points out that stressed *DENN*, as in (3b), can be substituted by a stressed version of the adverb *DANN* 'then, than' without a perceivable change in the utterance's overall meaning[5] – or even by a combination of the unstressed discourse particle *denn* and stressed *DANN*. Furthermore, *DENN* can also be paraphrased by the sentence adverbials *in Wirklichkeit* 'in reality' and *tatsächlich* 'actually' (cf. May 2000:145). Therefore, it is more appropriate to consider them sentence adverbs than discourse particles. Another argument against analyzing the stressed counterparts as discourse particles is provided by Thurmair's (1991) observations on *ja* and its counterpart *JA*: Unstressed *ja* can only occur in declarative sentence types while stressed *JA* is restricted to imperative speech acts. If they co-occur with discourse particles that are licensed both in declaratives and imperatives, they pattern as follows: *JA* occurs in the right-most position with respect to the co-occurring discourse particles while *ja* always occurs left-most (elements in angle brackets are to be realized alternatively in all examples):

(5) a. Der hat <*ja*> *auch* <**ja*> seine Hausaufgaben schon gemacht.
this one has <*ja*> *auch*$_{\text{D.PRT}}$ <**ja*> his homework already done.
'He's already done his homework *ja auch*.'
(Thurmair 1991:39,ex.52a – glosses added)

[5] At this point, it should be remarked that May (2000) assumes that the temporal adverb *dann* "then" is the historic origin of *denn*, from which the discourse particle can be analyzed to derive its meaning.

b. Mach <*JA*> *auch* <*JA*> deine Hausaufgaben!
do <*JA*> *auch*$_{D.PRT}$ <*JA*> your homework!
'Do *auch JA* your homework!'
(Thurmair 1991:39,ex.52b – glosses added)

Thurmair claims that this is due to the fact that these are two fundamentally different discourse particles. She points out that their function and distribution is different and that it might even be possible for them to co-occur in declaratives with an imperative interpretation, although this sounds a little odd:

(6) (?) Ich darf *ja JA* meine Unterlagen nicht vergessen.
I may *ja JA* my notes not forget!
'I mustn't *ja JA* forget my notes!'
(Thurmair 1991:39:ex.51 – glosses added)

For these reasons the following investigations will focus exclusively on the unstressed discourse particles, excluding their stressed counterparts which are considered to belong to another class of linguistic elements, presumably to that of adverbials.

Concluding this discussion, it should be noted that researchers have claimed non-arbitrary semantic connections between all homophones of discourse particles since Weydt (1969). In fact, there are reasons to assume that all homophones of discourse particles share one common lexical entry and that their specific meaning arises from the combination of this *lexical root* within a respective structural context. Following Abraham (2000), the context responsible for the discourse particle reading in Standard German might be descriptively identified by their specific *middle field* position which demarcates the border between the *thematic* and the *rhematic* part of the clause. This fundamental issue is left open for further research, as an extensive discussion is beyond the scope of this thesis.

1.1.3 *denn* in Standard German

The Standard German discourse particle *denn*, corresponding to VG *denn* and *dn*, is a prototypical discourse particle (cf. Weydt 1969) and part of Thurmair's (1991) set of the *classical sixteen*. It complies with all of the above mentioned properties of discourse particles. The example in (7) illustrates a prototypical occurrence. *Denn* is restricted to interrogatives, i.e. to yes/no-questions and wh-questions. Its exact distribution and syntactic behavior will be discussed in detail in chapter 2.1.2.

(7) Wie HEISST du *denn*?
how are.called you $denn_{D.PRT}$?
'What is *denn* your name?'
(Weydt 1969:45)

Standard German *denn* has a number of homophones. Apart from its above mentioned stressed counterpart the synchronically most prominent one is the conjunction *denn* 'for' which causally links two matrix clauses:

(8) Ich möchte essen, *denn* ich habe Hunger.
I would.like to.eat, *for* I have hunger
'I would like to eat, *for* I am hungry.'
(Weydt 1969:57 – glosses and translation added)

Furthermore, it has a number of unproductive idiosyncratic homonyms and is regionally homonymous with a dialectal version of *dann* 'then, than' (for an extensive overview cf. May 2000). All different homophones of *denn* share a semantic property, namely to express the utterance's reference to preceding elements in the discourse context (Weydt 1969:60).

At this point, it should be mentioned that in Austrian varieties of German and Bavarian it appears as if the discourse particle *leicht* could be used with the same meaning and in the same contexts as SG *denn*. However there are empirical reasons to assume that they cannot be

treated as synonyms; for instance, VG *dn* (which is assumed to be a reduced version of SG *denn*) and *leicht* are allowed to co-occur in a sentence:

(9) $^{OK?}$ Wieso hat-a DIR-*dn* den Arzt *leicht* empfohlen? (cf. chapter 1.2.3)
Why has-he$_{CL.NOM}$ *YOU*$_{DAT}$-*dn* the$_{ACC}$ doctor *leicht*$_{D.PRT}$ recommended?
'Why did he recommend this doctor to YOU?'

1.1.4 *dn* in Colloquial Non-Standard Viennese German

The main phenomenon under investigation in this thesis is the syntactic behavior of the discourse particle *denn* and its reduced counterpart *dn* in Colloquial Non-Standard Viennese German (*VG*). A prototypical example for VG *dn* would be the following:

(10) Was macht-*dn* der Hansi am Wochenende? (cf. chapter 1.2.4)
what makes-*dn* the Hansi on the week end?
'What is *dn* the Hansi doing on the week end?'

Although they are intuitively perceived to be identical by most speakers and appear to have the same semantic and pragmatic content, their syntactic behavior indicates that *denn* and *dn* are two different elements. Most strikingly, they differ in their sentence type selection restrictions: VG *denn* is licensed in all types of interrogatives – on par with SG *denn* –, while *dn* can only occur in wh-questions and is not allowed in yes/no-questions.

(11) a. ^{OK} Küsst (*denn*) der Otto (*denn*) die Anna? (cf. May 2000)
Kisses-*dn* the$_{NOM}$ Otto the$_{ACC}$ Anna?
'Does Otto kiss Anna?'

b. *? Küsst der Otto-*dn* die Anna? (cf. chapter 1.2.6.)
   *? Küsst-*n* der Otto die Anna?[6]
   Kisses-*dn* the$_{NOM}$ Otto the$_{ACC}$ Anna?
   'Does Otto kiss Anna?'
c. OK Wieso küsst-*n der Otto die Anna*? (cf. chapter 1.2.4)
   Why kisses-*dn the$_{NOM}$ Otto the$_{ACC}$ Anna*?
   'Why does Otto kiss Anna?'

Therefore, it is assumed as a working hypothesis that *dn* is in close relation with *denn*, but that they differ from each other in certain respects which have to be accounted for. Apart from their licensing conditions, two other differences can be observed. First, *dn* is syntactically more restricted than *denn*. More precisely, full referential DPs are only marginally – if at all – allowed to precede *dn*, while they are generally allowed to precede *denn*. Second, *dn* can only very marginally – if at all – be embedded, while *denn* can in principle always be embedded under *verbum dicendi* constructions. These properties of *dn* will be illustrated in the following sub-chapters.

1.2 Data from *Viennese German*: *dn* and its distribution

1.2.1 Conceptual Remarks

The following examples (13) to (96) have been included in questionnaires given to fifty native speakers of Colloquial Non-Standard Viennese German. They were requested to judge whether the respective clauses would be acceptable in casual everyday communication. To account for a certain degree of variability among speakers, a graded concept of grammaticality has been adopted following proposals such as that of Adli (2004a, 2004b). The methodology of using grammaticality judgments for

[6] As *dn* phonologically assimilates to the preceding element, I will write *-n* in cases where assimilation occurs (following /t/, /d/, /s/, etc.), but write *-dn* in the glosses.

assessing the well-formedness of an utterance is justified by the assumption that native language competence enables speakers to judge whether an utterance is well-formed.

However, the outcome appears to be problematic in a number of cases, for there is a lot of variation among speakers with respect to grammaticality judgments. In the case of discourse particles, this is mainly linked to the following facts. Discourse particles do not contribute to the proposition which is expressed by the utterance they occur in. Their meaning and function is very abstract, operating at the semantics and pragmatics interface. It has often been noted in descriptive literature (cf. Weydt 1969 and successive works) that most speakers do not perceive any interpretational difference between a sentence containing a discourse particle and its counterpart without the particle. Therefore, ungrammaticality which is caused by a misplaced discourse particles does not lead to incomprehensibility, which is often the case when verbal predicates or arguments are situated in incorrect positions. The abstract meanings of discourse particles also make it difficult to reflect their behavior and judge the well-formedness of clauses that contain them. Furthermore, discourse particles are mainly a spoken language phenomenon, excluding a "standardization effect" (cf. Weydt 1969 and successive works) and thus allowing for more variability among speakers. They are considered to be results of an ongoing grammaticalization process. This implies that different stages of grammaticalization might be synchronically co-existent (cf. Abraham 2000). In the specific case of VG *dn* a further reason for the observable variability is as follows: Colloquial Non-Standard Viennese German is a variety of German which, like many urban non-standard varieties, is strongly affected by Standard German. This entails the probability of a large number of possible interference effects differing from individual to individual. In spite of all these empirical problems for assessing the grammaticality of utterances containing discourse particles, it is shown in this section that the data gained from questionnaires are in fact more conclusive than might be expected and

allow for a number of justified conclusions on the syntactic behavior of VG *dn*.

To obtain the data which is discussed in the remainder of this chapter, a questionnaire was used, asking speakers to judge whether the given utterances were "acceptable", "not acceptable" or "intermediate" in casual conversations within everyday situations. The conveyed concept of *acceptability* corresponds to the concept of *grammaticality* as used in the generative framework and was explained to the informants in a corresponding manner. *Acceptable* thus equals *grammatical*, *not acceptable* equals *ungrammatical* and *intermediate* equals *marginal*. The *extent of acceptance* in the remainder is thus identical to the extent to which an utterance was judged grammatical by the informants; this notion is explained in the following paragraph.

To process the data, "acceptable" and "not acceptable" were interpreted as 100% and 0% acceptance respectively. "Intermediate" was interpreted as 50% acceptance in compliance with the instructions given to the informants. The average (extent of) acceptance of an utterance (i.e. the extent to which it was judged grammatical) was calculated as the arithmetic mean value of the received votes – a vote x_i having either the value '100', '50' or '0' in percent.

Judgments were then analyzed with a scale of six classes, corresponding to this calculated mean value of acceptance (in percent). Every class of the scale spans a range of 16,6 periodic percent (i.e. one sixth). Therefore a clause with an average percentage of more than 83,3 percent approval (i.e. the respective clause is judged grammatical by more than five-sixth of the speakers) is considered (relatively) grammatical and prefixed with '^{OK}'. If a clause has not received any "intermediate" judgments, these 83,3 percent of approval correspond to at least 42 positive judgments and at most 8 negative judgments.

The six classes of the scale are portioned as displayed in the following table. The third row of the table illustrates the corresponding number of positive votes for cases where no "intermediate" judgments were given. The fourth row illustrates the coarse interpretation of the

results – note that the first two classes are subsumed under the coarse interpretation *grammatical*, the next two classes under *marginal* and the last two classes under *ungrammatical*.

(12) *Interpretation of grammaticality judgments*

marking	OK	OK?	#	##	*?	*
percent	100-83,3	83,3-66,6	66,6-50	50-33,3	33,3-16,6	16,6-0
positive votes	50-42	41-34	33-25	25-17	16-9	8-0
interpretation	grammatical		marginal		ungrammatical	

As the fourth line suggests, it must be explained why the methodological decision has been taken to analyze the data in six classes instead of three. The crucial factor is the subdivision of marginally acceptable clauses into the two (sub-)classes '#' and '##'. This subdivision accounts for the fact that marginal utterances with a mean acceptance between 66,6% and 50% differ from marginal utterances with a mean acceptance between 50% and 33,3%. The former display a tendency to be judged grammatical while the latter display a tendency to be judged ungrammatical. The decision to highlight this difference between "tendency to grammaticality" ('#') and "tendency to ungrammaticality" ('##') among marginal utterances allows to assess the data more accurately as will be shown in the following sub-sections. Consider the possibility of four examples consisting of one structure. Two are clearly judged ungrammatical and two others exhibit a mean acceptance of 40% (marked as '##'). This can be taken as strong evidence that the corresponding structure tends to be judged ungrammatical. In contrast, things are less clear and deserve closer attention if two clearly ungrammatical judgments are paired with two judgments which exhibit a mean acceptance of 60% (marked as '#'). Of course, cases in which the mean acceptance approximates 50% and the distinction between '#' and '##' is thus not significant will explicitly discussed separately.

1.2.2 The default position of *dn*

The default surface position of *dn* appears to be the so-called *Wackernagel position*, the position in the German clause which immediately follows the position of the finite verb in *V2 position*, typically the position of syntactic clitics (cf. Weiß 1998); *dn* can be observed to follow all pronominal clitics. Witness the prototypical examples in (13) and (14):

(13) ^{OK} Wann hat-*n* der Hansi die Anna geküsst?
When has-*dn* the$_{NOM}$ Hansi the$_{ACC}$ Anna kissed?
'When did Hansi kiss Anna?'

(14) a. ^{OK} Was hat-*a-dn*?
What has-*he$_{CL}$-dn*?
'What is his problem?'
b. * Was hat-*n a*?
c. ^{OK} Was hat-*dn der Hans*?
What has-*dn the Hans*?
'What is Hans's problem?'
d. * Was hat *der Hans-n*?

More examples which illustrate and support this observation are provided in the following sub-sections (chapters 1.2.3 and 1.2.4).

1.2.3 The relative ordering of *dn* and pronouns

The following examples show that all pronominal clitics and the expletive pronoun *es* 'it', as well as the impersonal pronoun *man* 'one', which cannot bear stress, have to precede *dn*, which is what is expected: In Bavarian, the corresponding discourse particle *(a)n*/*(e)n*, which is a syntactic clitic, is preceded by all pronominal clitics, comprising the expletive pronoun *s* 'it'

and the impersonal pronoun *ma* 'one' (cf. Weiß 1998). Furthermore, in Standard German all unstressed pronouns have to precede *denn* (cf. König and Requardt 1991).

(15) [OK] Was hat-*a*-*dn*?
What has-*he*$_{CL}$-*dn*?
'What is his problem?'

(16) [OK] Seit wann regnet-*s*-*n* schon?
Since when rains-*it*$_{CL}$-*dn* already?
'Since when has it been raining?'

(17) [OK] Was macht-*a*-*dn* da?
What makes-*he*$_{CL}$-*dn* there?
'What is he doing?'

(18) [OK] Wie macht *man*-*dn* das?
How makes *one*-*dn* that?
'How do you do that?'

(19) * Seit wann regnet-*n es*?
Since when rains-*dn it*?
'Since when has it been raining?'

(20) * Was schenkt-*n*-*a* dem Hansi?
What gives.as.present-*dn*-*he*$_{CL.NOM}$ the$_{DAT}$ Hansi?
'what does he give to Hansi as a present?'

(21) * Wie macht-*n man* das?
How makes-*dn one* that?
'How do you do that?'

Stressed pronouns are clearly allowed to follow *dn* but may also precede it. In this respect *dn* exhibits the same behavior as the non-clitic *denn* and *ja* in SG which may be both preceded or followed by stressed pronouns, but must be preceded by unstressed ones. This observation appears to favor a treatment of *dn* as a phonologically light element (which might be labeled a *phonological clitic*) rather than a *syntactic clitic* (cf. Zwicky 1977). In this regard *dn* appears to behave differently than its Bavarian counterpart *(a)n* / *(e)n* which is treated as a syntactic clitic by Weiß (1998). However, it will be shown that there are conceptual and empirical reasons to analyze *dn* as a syntactic clitic and to treat the ability of stressed pronouns to precede it as the exceptional case. The following examples in (22) to (25) show that stressed pronouns may follow *dn*:

(22) ^{OK} Wieso hat-a-*dn DIR* den Arzt empfohlen?
Why has-he$_{CL.NOM}$-*dn YOU*$_{DAT}$ the$_{ACC}$ doctor recommended?
'why did he recommend this doctor to YOU?'

(23) ^{OK} Wie lang bleibt-*n SIE* noch?
How long stays-*dn SHE* still?
'How much longer is SHE still staying?'

(24) ^{OK} Wann geht-*n ER* endlich?
When goes-*dn HE* finally?
'When does HE finally leave?'

(25) ^{OK} Was bist-*n DU* für einer?
What are-*dn YOU*$_{SG}$ for one?
'What kind of person are you?'

The examples in (26) to (32) show that stressed pronouns may also precede *dn*.

(26) ^{OK} Wie lang bleibt *SIE-dn* noch?
How long stays *SHE-dn* still?
'How much longer is SHE going to stay?'

(27) ^{OK} Wann seids *IHR-dn* gestern heimgekommen?
When are *YOU*$_{PL}$*-dn* yesterday come.home?
'When did YOU come home yesterday?'

(28) ^{OK} Wann ham *WIR-dn* das gesagt?
When have *WE-dn* that said?
'When did WE say that?'

(29) $^{OK?}$ Wann geht *ER-dn* endlich?
When goes *HE-dn* finally?
'When does HE finally leave?'

(30) $^{OK?}$ Wieso hat-a *DIR-dn* den Arzt leicht empfohlen?
Why has-he$_{CL.NOM}$ *YOU*$_{DAT}$*-dn* the$_{ACC}$ doctor leicht$_{D.PRT}$ recommended?
'Why did he recommend this doctor to YOU?'

(31) $^{OK?}$ Wieso frisst *MIR-dn* der Hund nicht aus der Hand?
Why eats *ME*$_{DAT}$*-dn* the$_{NOM}$ dog not from the hand?
'Why doesn't the dog eat from MY hand?'

(32) $^{OK?}$ Warum ist *ER-dn* da?
Why is *HE-dn* there?
'Why is HE here?'

The examples in (33) to (36) were disapproved of by a larger number of speakers. However, (26) to (32) show that this cannot be due to general constraints on stressed pronouns, but has to be attributed to other contributing factors.

(33) # Wieso krieg *ICH-n* immer die schlechten Karten?
Why get I_{NOM}-*dn* always the$_{ACC}$ bad cards?
'Why do I always get the bad cards?'

(34) # Wieso beißt *MICH-n* dein Hund immer?
Why bites *ME*$_{ACC}$-*dn* your$_{NOM}$ dog always?
'Why does your dog always bite ME?'

(35) # Wer bist *DU-dn*?
Who are *YOU*$_{SG}$-*dn*?
'Who are YOU?'

(36) # Wieso soll ich *EUCH-n* glauben?
Why shall I_{NOM} *YOU*$_{PL.DAT}$-*dn* believe?
'Why should I believe YOU?'

It is not clear at this point, whether Colloquial Non-Standard Viennese German has a two-fold system of pronouns (i.e. a binary opposition of full versus clitic ones) or a three-fold system (strong, weak and clitic pronouns, as proposed by Cardinaletti and Starke 1999). This question will be addressed in detail in chapter 3.2.1. The following examples show that unstressed non-clitic pronouns are able to follow *dn*. Sentential stress is marked to illustrate the fact that the pronoun in question is not contrastively stressed.

(37) ^{OK} Wann seids-*n ihr* gestern HEIMgekommen?
When are-*dn you*$_{PL}$ yesterday come.HOME?
'When did you come home yesterday?'

(38) ^{OK} Was schenkst-*n du ihr* zum GEBURTSTAG?
what give.as.present-*dn you her*$_{DAT}$ to birthday?
'What do you give her for her birthday?'

(39) $^{OK?}$ Wann habts-*n ihr mich* letzte Woche GSEHEN?
when have-*dn you*$_{PL}$ *me*$_{DAT}$ last week seen?
'When did you see me last week?'

(40) $^{OK?}$ Wann hat-*n sie dir* das leicht ERZÄHLT?
when has-*dn she you*$_{DAT}$ that leicht$_{D.PRT}$ told?
'When did she tell you that?'

Informants claim sentences containing *full* (i.e. *non-reduced*) unstressed pronouns preceding *dn* to be well-formed. However, there are reasons to assume that these pronouns are nevertheless treated as clitics. The main empirical reason is that informants who pronounce these clauses themselves generally reduce the pronouns to their clitic versions (e.g. *s* 'they' instead of *sie* 'they' in (41)). In slow pronunciation, informants generally stress those pronouns, indicating that there are no unstressed non-clitic pronouns which may precede *dn*. From this observation it can be concluded that unstressed pronouns which precede *dn* are always treated as pronominal clitics.

(41) ^{OK} Wann ham *sie-dn* den OTTO gefunden?
When have *they-dn* the$_{ACC}$ OTTO found?
'When did they find Otto?'

(42) ^{OK} Wann seids *ihr-dn* gestern HEIMgekommen?
When are *you*$_{PL}$*-dn* yesterday come.HOME?
'When did you come home yesterday?'

(43) $^{OK?}$ Wieso frisst *mir-dn* der Hund nicht aus der HAND?
Why eats *me*$_{DAT}$*-dn* the$_{NOM}$ dog not from the HAND?
'Why doesn't the dog eat from my hand?'

1.2.4 The relative ordering of *dn* and non-pronominal DPs

As the examples in (44) to (46) show, *quantificational DPs* (i.e. DPs with an indefinite determiner) such as *ein Arbeiter* 'a worker' or *ein Mann* 'a man' must follow *dn*[7], which again is expected from the behavior of other discourse particles like *denn* and *ja*, as will be discussed in chapter 3 and 4. As the following examples are crucial for the analysis, the exact number of votes are given at least for utterances which were judged marginally grammatical, i.e. '#' or '##' [8].

(44) [OK] Was macht-*n ein Arbeiter* am Wochenende?
What makes-*dn a worker* on.the week.end?
'What does a worker do on the weekend?'

(45) ## Was macht *ein Mann-dn* am Wochenende?
What makes *a man-dn* on.the week.end?
'What does a man do on the week end?'
(*yes*: 13, *marginal:* 11, *no*: 26, *total*: 50, *acceptance*: 37%)

(46) *[?] Was macht *ein Arbeiter-dn* am Wochenende?
What makes *a worker-dn* on.the week.end?
'What does a worker do on the week end?'

Cross-dialectal differences in behavior can be observed for *proper names* and *referential DPs* (i.e. DPs with a definite determiner) like *der Arbeiter* 'the worker'. While they may both precede and follow the full *denn* in both Standard German and Colloquial Non-Standard Viennese German, they

[7] At this point, it might be proposed that the unacceptability of (45) and (46) is merely due to prosodic or phonologic properties of the full DP serving as the clitic's presumptive host. In chapter 3.5, it will be shown that this is not the case.

[8] *Yes* refers to *"judged grammatical"*, *no* to *"judged ungrammatical"*, *marginal* to *"judged intermediate"*; *acceptance* refers to the mean value of acceptance, as defined in chapter 1.2.1.

by default follow VG *dn* and tend to cause ungrammaticality when they precede it. (47) to (54) are well-formed examples of such definite DPs following *dn*:

(47) [OK] Wieso küsst-*n der Otto die Anna*?
Why kisses-*dn the*$_{NOM}$ *Otto the*$_{ACC}$ *Anna*?
'Why does Otto kiss Anna?'

(48) [OK] Wann hat-*n der Hansi die Anna* geküsst?
When has-*dn the*$_{NOM}$ *Hansi the*$_{ACC}$ *Anna* kissed?
'When did Hansi kiss Anna?'

(49) [OK] Was macht-*n der Arbeiter* da draußen?
What makes-*dn the worker* there outside?
'What is the worker doing out there?'

(50) [OK] Was macht-*n die Frau* da draußen?
What makes-*dn the woman* there outside?
'What is this woman doing out there?'

(51) [OK] Was macht-*n der Hansi* am Wochenende?
What makes-*dn the Hansi* on.the week.end?
'What is Hansi going to do on the week end?'

(52) [OK] Seit wann wohnen-*dn die Herta und der Hugo* getrennt?
Since when live-*dn the Herta and the Hugo* separated?
'Since when have Herta and Hugo been living separately?'

(53) [OK] Seit wann arbeitet-*dn der Hansi* schon dort?
Since when works-*dn the Hansi* already there?
'Since when has Hansi been working there?'

(54) [OK] Wohin gehen-*dn der Gustav und die Johanna*?
Where.to go-*dn the Gustav and the Johanna*?
'Where are Gustav and Johanna going?'

The following examples (55) to (64) show referential DPs are less likely to be accepted or even clearly judged ungrammatical when they precede *dn*. Primarily, this is the key aspect of *dn's* syntactic behavior where grammaticality judgments convey the highest degree of variation among speakers[9]. The first of the following examples are those that received the highest number of positive votes. The last ones are those that were most clearly judged ungrammatical. In spite of the variation, these examples do allow for the conclusion that clauses are generally disapproved of when containing full DPs that precede *dn*. None of the tested examples can be claimed to be grammatical or display a strong tendency towards grammaticality. Evidently examples (55) to (57) are most problematic. Their average degree of acceptance (i.e. the extent to which they are judged grammatical) approximates to 50 percent. In contrast, the degree of acceptance is significantly lower for (58) whereas (59) to (64) are clearly judged ungrammatical. From these comparative facts, it can be concluded that full DPs tend to be ungrammatical when preceding *dn*.

(55) # Was macht *der Arbeiter-dn* da draußen?
What makes *the worker-dn* there outside?
'What is this worker doing out there?'
(*yes*: 20, *marginal:* 12, *no*: 18, *total*: 50, *acceptance*: 52%)

(56) ## Was macht die *Frau-dn* da draußen?
What makes *the woman-dn* there outside?
'What is this woman doing out there?'
(*yes*: 15, *marginal:* 18, *no*: 17, *total*: 50, *acceptance*: 48%)

[9] No correspondencies between the respective judgments and social factors, such as origin, sex, age, education or occupation were identifiable. Therefore, it is not possible to split the tested persons into two distinct idiolectal groups.

(57) ## Was macht *der Mann-dn* da draußen?
What makes *the man-dn* there outside?
'What is this man doing out there?'
(*yes*: 18, *marginal:* 13, *no*: 19, *total*: 50, *acceptance*: 49%)

(58) ## Wohin fährt *der Hansi-dn* am Wochenende?
Where.to goes.by.car *the Hansi-dn* on.the week.end?
'Where is Hansi going on the week end?'
(*yes*: 13, *marginal:* 14, *no*: 23, *total*: 50, *acceptance*: 40%)

(59) *? Was macht *der Arbeiter-dn* mit der Leiter da draußen?
What makes *the worker-dn* with the ladder there outside?
'What is this worker doing with this ladder out there?'
(*yes*: 8, *marginal:* 15, *no*: 27, *total*: 50, *acceptance*: 31%)

(60) *? Wieso küsst *der Otto-dn* die Anna?
Why kisses *the*$_{NOM}$ *Otto-dn* the$_{ACC}$ Anna?
'Why does Otto kiss Anna?'
(*yes*: 11, *marginal:* 9, *no*: 29, *total*: 50, *acceptance*: 32%)

(61) *? Wieso ist *euer Balkon-dn* so verwahrlost?
Why is *your*$_{PL}$ *balcony-dn* so run.down?
'Why is your balcony so run down?'
(*yes*: 7, *marginal:* 16, *no*: 27, *total*: 50, *acceptance*: 30%)

(62) *? Was macht *der Arbeiter mit der Leiter-dn* da draußen?
What makes *the worker with the ladder-dn* there outside?
'What is the worker with the ladder doing out there?'
(*yes*: 7, *marginal:* 11, *no*: 32, *total*: 50, *acceptance*: 25%)

(63) *? Wieso ist *das Bett-n* so hart?
Why is *the bed-dn* so hard?
'Why is the bed so hard?'
(*yes*: 10, *marginal:* 7, *no*: 33, *total*: 50, *acceptance*: 27%)

(64) * Wieso küsst *der Otto die Anna-dn*?
Why kisses *the*$_{NOM}$ *Otto the*$_{ACC}$ *Anna-dn*?
'Why does Otto kiss Anna?'
(*yes*: 3, *marginal:* 9, *no*: 38, *total*: 50, *acceptance*: 15%)

While parts of the data in (55) to (64) are problematic, it is evident that sentences where full DPs precede *dn* are judged less grammatical, compared to the clauses in (47) to (54) where full DPs follow *dn*. In conclusion, full DPs by default follow *dn*. However, they appear to be marginally allowed to precede it.

In chapter 3.2.2 and 3.2.3 more empirical data on the respective behavior of VG *dn* and full DPs will be provided which support the assumption that *dn* generally precedes full DPs and can only marginally follow them. This suggests a clitic analysis of VG *dn*, in analogy to Weiß's (1998) observations on its Bavarian counterpart *(a)n*/*(e)n*.

1.2.5 *dn* in embedded clauses

The following examples show *dn* can only marginally be embedded. While the examples (65) to (67) are clearly judged grammatical, the examples (69) to (72) display a tendency to ungrammaticality, and those in (73) to (75) are clearly ungrammatical.

(65) OK? Ich frag mich, wann-a-s-*(d)n* braucht.
I ask myself, when-he$_{CL.NOM}$-it$_{CL.ACC}$-*(d)n* needs
'I wonder when he will need it.'
(*yes*: 28, *marginal:* 13, *no*: 9, *total*: 50, *acceptance*: 69%)

(66) $^{OK?}$ Wann-a-s-*n* braucht, frag ich mich.
when-he$_{CL.NOM}$-it$_{CL.ACC}$-*(d)n* needs, ask I myself
'I wonder when he will need it.'
(*yes*: 26, *marginal:* 15, *no*: 9, *total*: 50, *acceptance*: 67%)

(67) $^{OK?}$ Ich frag mich, wann-a-s-*(d)n* wirklich braucht.
I ask myself, when-he$_{CL.NOM}$-it$_{CL.ACC}$-*dn* really needs.
'I wonder when he will really need it.'
(*yes*: 27, *marginal:* 13, *no*: 10, *total*: 50, *acceptance*: 67%)

(68) # Ich frag mich, wieso-*dn* der Hansi nicht gekommen ist.
I ask myself, why-*dn* the Hansi not come is.
'I wonder why Hansi didn't come.'
(*yes*: 21, *marginal:* 13, *no*: 16, *total*: 50, *acceptance*: 55%)

(69) ## Ich frag mich, wann-s der Peter-*dn* braucht.
I ask myself, when-it$_{ACC}$ the$_{NOM}$ Peter-*dn* needs.
'I wonder when Peter will need it.'
(*yes*: 10, *marginal:* 18, *no*: 22, *total*: 50, *acceptance*: 38%)

(70) ## Ich frag mich, wann-s-*(d)n* der Peter braucht.
I ask myself, when-it$_{ACC}$-*(d)n* the$_{NOM}$ Peter needs.
'I wonder when Peter will need it.'
(*yes*: 14, *marginal:* 9, *no*: 27, *total*: 50, *acceptance*: 37%)

(71) ## Ich frag mich, welches-*(d)n* dem Otto besser gefällt.
I ask myself, which.one-*(d)n* the$_{DAT}$ Otto better pleases.
'I wonder which one Otto likes better.'
(*yes*: 14, *marginal:* 13, *no*: 23, *total*: 50, *acceptance*: 41%)

(72) ## Ich frag mich, ob-s der Peter-*dn* braucht.
I ask myself, whether-it$_{ACC}$ the$_{NOM}$ Peter-*dn* needs.
'I wonder whether Peter needs it.'
(*yes*: 14, *marginal:* 9, *no*: 27, *total*: 50, *acceptance*: 37%)

(73) *$^{?}$ Ich frag mich, wo sie-*dn* wohnt.
I ask myself, where she-*dn* lives.
'I wonder where she lives.'
(*yes*: 12, *marginal:* 9, *no*: 29, *total*: 50, *acceptance*: 33%)

(74) *$^{?}$ Wo sie-*dn* wohnt, frag ich mich.
where she-*dn* lives, ask I myself
'I wonder where she lives.'
(*yes*: 11, *marginal:* 9, *no*: 30, *total*: 50, *acceptance*: 31%)

(75) *$^{?}$ Ich frag mich, weswegen-*dn* der Hansi nicht gekommen ist.
I ask myself, why-*dn* the Hansi not come is.
'I wonder why Hansi didn't come.'
(*yes*: 7, *marginal:* 15, *no*: 28, *total*: 50, *acceptance*: 29%)

In (76) and (77), a fully grammatical example from Standard German is contrasted with its ungrammatical counterpart in Colloquial Non-Standard Viennese German:

(76) Paul fragte Maria, wo sie *denn* wohne.
Paul asked Maria, where she *denn* lives
'Paul asked Maria, where she *denn* lives.'
(May 2000:130,ex.267)

(77) a. *$^{?}$ Der Paul hat die Maria gefragt, wo sie-*dn* wohnt.
b. *$^{?}$ Der Paul hat die Maria gefragt, wo-*dn* sie wohnt.
the Paul has the$_{ACC}$ Maria asked, where-*dn* she lives
'Paul asked Maria, where she *dn* lives.'

1.2.6 *dn* in yes/no-questions

A further interesting fact is that VG *dn* tends not to be accepted in yes/no-questions as the following examples illustrate. In (78) to (81) the mean acceptance (i.e. the mean extent to which it is judged grammatical) is relatively low, whereas examples (82) to (86) are clearly judged ungrammatical. This is a striking fact, as both SG *denn* and Bav. *(e)n/(a)n* can perfectly occur in yes/no-questions, as shown in (87) and (88).

(78) ## Geht-*n* die Susi noch in die Schule?
Goes-*dn* the Susi still into the school?
'Does Susi still attend school?'
(*yes*: 16, *marginal:* 8, *no*: 26, *total*: 50, *acceptance*: 40%)

(79) ## Geht die Susi-*dn* noch in die Schule?
Goes the Susi-*dn* still into the school?
'Does Susi still attend school?'
(*yes*: 10, *marginal:* 14, *no*: 26, *total*: 50, *acceptance*: 34%)

(80) ## Is(t)-*n* der Otto auch krank?
Is-*dn* the Otto also ill?
'Is Otto ill, too?'
(*yes*: 11, *marginal:* 13, *no*: 26, *total*: 50, *acceptance*: 35%)

(81) ## Hat-*n* der Hansi die Anna auch geküsst?
Has-*dn* the$_{NOM}$ Hansi the$_{ACC}$ Anna also kissed?
'Did Hansi also kiss Anna?'
(*yes*: 15, *marginal:* 10, *no*: 25, *total*: 50, *acceptance*: 40%)

(82) *$^{?}$ Ist der Otto-*dn* auch krank?
Is the Otto-*dn* also ill?
'Is Otto ill, too?'
(*yes*: 10, *marginal:* 12, *no*: 28, *total*: 50, *acceptance*: 32%)

(83) *? Hat der Hansi-*dn* die Anna auch geküsst?
Has the$_{NOM}$ Hansi-*dn* the$_{ACC}$ Anna also kissed?
'Did Hansi also kiss Anna?'
(*yes*: 8, *marginal:* 10, *no*: 32, *total*: 50, *acceptance*: 26%)

(84) *? Küsst-*n* der Otto die Anna?
Kisses-*dn* the$_{NOM}$ Otto the$_{ACC}$ Anna?
'Does Otto kiss Anna?'
(*yes*: 9, *marginal:* 7, *no*: 34, *total*: 50, *acceptance*: 25%)

(85) *? Küsst der Otto-*dn* die Anna?
Kisses the$_{NOM}$ Otto-*dn* the$_{ACC}$ Anna?
'Does Otto kiss Anna?'
(*yes*: 7, *marginal:* 11, *no*: 32, *total*: 50, *acceptance*: 25%)

(86) *? Hat-*n* der Hansi etwa den Film auch gesehen?
Has-*dn* the$_{NOM}$ Hansi etwa$_{D.PRT}$ the$_{ACC}$ movie also seen?
'Did Hansi see the movie, too?'
(*yes*: 6, *marginal:* 11, *no*: 33, *total*: 50, *acceptance*: 23%)

(87) *Bavarian*:
Hod-*an* ea den Film aa oogschaut?
has-*an*$_{D.PRT}$ he the$_{ACC}$ movie also watched?
'Did he also watch that movie?'
(Weiß 1998:99,ex.24a, glosses and translation added)

(88) *Standard German*:
Hast du *denn* gar keine Geschenke zum Geburtstag bekommen?
have you *denn* not any presents to.the birthday gotten
'Didn't you get any presents for your birthday?'
(May 2000:130,ex.262, glosses and translation added)

1.2.7 *dn* in reduced wh-questions

In "reduced" questions, consisting solely of the wh-phrase, *dn* is perfectly grammatical, apart from restrictions which are obviously prosodic in nature.

(89) [OK] Wieso-*dn*?
Why-*dn*?
'Why?'

(90) [OK] Wann-*dn*?
When-*dn*?
'When?'

(91) [OK] Wem-*dn*?
Who_{DAT}-*dn*?
'To who?'

(92) [OK?] Seit wann-*dn*?
Since when-*dn*?
'Since when?'

(93) [OK?] Warum-*dn*?
Why-*dn*?
'Why?'

(94) a. [OK] Was-*n* für welche?
What-*dn* for which?
'What kind of?'
b. # Was für welche-*dn*?

(95) a. [OK] Was-*n* für eines?
What-*dn* for one?
'What kind of?'
b. ## Was für eines-*n*?

(96) ## Aus welchem Grund-*dn*?
From which reason-*dn*?
'For which reason?'

Other wh-phrases to which *dn* can also attach in isolation are *wer* 'who$_{NOM}$', *was* 'what$_{NOM/ACC}$', *wen* 'who$_{ACC}$', *wo* 'where', *wohin* 'where.to' and *woher* 'where.from'.

1.2.8 full *denn* in Colloquial Non-Standard Viennese German

The following examples illustrate that Colloquial Non-Standard Viennese German also has a full discourse particle *denn*, which is an important observation as the comparative facts from Standard German and Bavarian suggest that languages either have a full version (SG *denn*) or a reduced (clitic) version (Bav. *(a)n*/*(e)n*), but not both. The facts are striking as VG *dn* obviously differs from VG *denn* in that it cannot occur in yes/no-questions, cannot be embedded as easily and does not allow full DPs to precede it. In contrast, VG *denn* behaves on a par with SG *denn*. The following examples of clauses containing VG *denn*, show that it really behaves like SG *denn*, unlike VG *dn*.

Examples (97) to (99) show that it can clearly occur in yes/no-questions:

(97) [OK?] Geht der Professor *denn* noch regelmäßig zu seinen Vorlesungen?
Goes the$_{NOM}$ professor *denn* still regularly to his lectures?
'Does the professor still regularly attend his lectures?'

(98) $^{OK?}$ Hat der Hansi die Anna *denn* auch geküsst?
Has the$_{NOM}$ Hansi the$_{ACC}$ Anna *denn* also kissed?
'Did Hansi also kiss Anna?'

(99) $^{OK?}$ Ist der Otto *denn* auch krank?
is the$_{NOM}$ Otto *denn* also ill?
'Is Otto ill, too?'

The following examples illustrate that it is either clearly judged grammatical or tends to be judged grammatical if it is preceded by a full DP (cf. (100) to (103)).

(100)$^{OK?}$ Wieso hat-a DIR den Arzt *denn* empfohlen?
Why has he$_{CL}$ YOU$_{DAT}$ the$_{ACC}$ doctor *denn* recommended?
'Why did he recommend you this doctor?'

(101)$^{OK?}$ Wieso küsst der Hans *denn* die Susi jetzt?
Why kisses the$_{NOM}$ Hans the$_{ACC}$ Susi *denn* now?
'Why is Hans kissing Susi now?'

(102)$^{OK?}$ Wieso küsst der Hans die Susi *denn* jetzt?
Why kisses the$_{NOM}$ Hans the$_{ACC}$ Susi *denn* now?
'Why is Hans kissing Susi now?'

(103)# Was macht der Arbeiter mit der Leiter *denn* da draußen?
What makes the worker with the ladder *denn* there outside?
'What is the worker with the ladder doing out there?'

The observation that *denn* and *dn* coexist in VG with the difference that *dn* is not licensed in yes/no-questions while *denn* is, appears to favor an account which considers *denn* and *dn* as two distinct lexical items. However there are reasons to assume that this is not the case. It appears

that this distinction only applies to their syntactic behavior, not to their semantic denotation which seems to be identical.

1.3 Descriptive generalizations on the surface structure of *dn*

The above examples clearly show that VG *dn* is basically restricted to one sentence type: wh-interrogatives. Its surface position is such that clitic pronouns have to precede it and full DPs by default follow (examples taken from above):

(104) Seit wann regnet (**dn*) es (*dn*) schon? (cf. (16), (19))
'Since when has it been raining?'

(105) Was macht (*dn*) ein Arbeiter (**?dn*) am Wochenende? (cf. (44), (46))
'What does a worker do on the week end?'

(106) Wieso küsst (*dn*) der Otto (**?dn*) die Anna (**dn*)? (cf. (47), (60), (64))
'Why does Otto kiss Anna?'

(107) Was macht (*dn*) der Arbeiter (#*dn*) da draußen? (cf. (49), (55))
'What is the worker doing out there?'

(108) Was macht (*dn*) die Frau (##*dn*) da draußen? (cf. (50), (56))
'What is this woman doing out there?'

(109) *?Wieso ist das Bett-*(d)n* so hart? (cf. (63))
'Why is the bed so hard?'

These data suggest treating *dn* as a syntactic clitic which head-adjoins to the verb in its *V2 position*. However, such an analysis faces the empirical dilemma that *dn* can be both preceded and followed by stressed pronouns, problematic for a clitic analysis. This also challenges the

common assumption that full stressed pronouns behave on a par with full DPs, as this does not seem to be the case here.

(110) Wann geht (*dn*) *ER* (?*dn*) endlich? (cf. (24), (29))
'When does he finally leave?'

(111) Wie lang bleibt (*dn*) *SIE* (*dn*) noch? (cf. (23), (26))
'How much longer is she going to stay?'

(112) OK Wann seids *IHR-dn* gestern heimgekommen? (cf. (27))
When are *YOU*$_{PL}$*-dn* yesterday come.home?
'When did YOU come home yesterday?'

(113) OK Wieso hat-a (*dn*) *DIR* (?*dn*) den Arzt empfohlen? (cf. (22), (30))
'Why did he recommend this doctor to you?'

The observation that VG *dn* obligatorily precedes full DPs indicates that it is spelled out higher than SG (and VG) *denn* which can generally be preceded by such DPs. This phenomenon will be discussed in more detail in chapters 2 and 3.

To complete the overview, it has to be pointed out that *dn* can precede unstressed pronouns:

(114) OK Was schenkst-*n du ihr* zum GEBURTSTAG? (cf. (38))
what give.as.present-*dn you her*$_{DAT}$ to birthday?
'What do you give her for her birthday?'

This observation further supports the hypothesis that *dn* is spelled out higher than *denn*, as SG *denn* obligatorily follows all unstressed pronouns (cf. König and Requardt 1991):

(115)Was schenkst (**denn*) *du ihr* (*denn*) zum GEBURTSTAG?
what give.as.present (**denn*) *you her*$_{DAT}$ (*denn*) to.the birthday?
'What do you give her for her birthday?'

Another observation that has been made is that VG *dn* can only marginally be embedded:

(116)$^{OK?}$ Ich frag mich, wann-a-s-*(d)n* braucht. (cf. (65))
I ask myself, when-he$_{CL.NOM}$-it$_{CL.ACC}$-*(d)n* needs.
'I wonder when he will need it.'

(117)## Ich frag mich, wann-s (*dn*) der Peter (*dn*) braucht. (cf. (69), (70))
I ask myself, when-it$_{ACC}$ the$_{NOM}$ (*dn*) Peter (*dn*) needs.
'I wonder when Peter will need it.'

(118)*$^{?}$ Ich frag mich, wo sie-*dn* wohnt. (cf. (73))
I ask myself, where she-*dn* lives.
'I wonder where she lives.'

1.4 Summary

I have provided an overview of the phenomenon of German discourse particles and how they have been characterized and classified in previous literature. This overview was followed by a short discussion of the basic facts on the Standard German discourse particle *denn* and its counterparts *denn* and *dn* in Colloquial Non-Standard Viennese German (*VG*).

Furthermore, I have included my own data from VG, conveying *dn* follows all pronominal clitics and precedes all full DPs. This suggests *dn* behaves like a syntactic clitic. I have demonstrated that this is problematic, as stressed non-clitic pronouns are able to precede *dn* which for now appears to be incompatible with a clitic analysis of *dn*. I have also

illustrated that VG *dn* differs from SG (and VG) *denn* in that it cannot occur in yes/no-questions and can only marginally – if at all – be embedded.

Chapter 2

Fundamental Issues

2.1 Descriptive generalizations

2.1.1 Discourse particles and the middle field

One of the basic properties of German discourse particles is that they are restricted to the so-called *middle field* – *field* being defined as a partition of the sentence. In traditional German Grammar, German clauses are subdivided into three parts: *front field* (Ger. *Vorfeld*), *middle field* (Ger. *Mittelfeld*) and *back field* (Ger. *Nachfeld*)[10]. This subdivision is anchored to two positions: The V2 position marks the boundary between the front field and the middle field, and the V_{end} position separates the middle field from the back field. In the *Generalized X-Bar Theory* of Generative Syntax on which this analysis is based, the V_{end} position equals V^0. The V2 position in German is commonly assumed to be C^0 (or the lowest CP head in theories which subdivide the CP) to account for the complementary distribution of finite verbs and complementizers. From this we may conclude that discourse particles may overtly occur in the IP space or in the VP space – preceding V^0.

The question of their exact position within the IP or VP space will be investigated in the remainder of this chapter and in chapter 3. In general, Standard German discourse particles follow all unstressed pronominal elements in the clause and may be located at all *major constituent breaks* in the middle field (cf. König and Requardt 1991:64). Furthermore, they are traditionally considered to have a *watershed* function of separating the

[10] Translations vary; other translations that can be found in the literature are *initial field* resp. *pre-field* (for *Vorfeld*), *midfield* (for *Mittelfeld*), and *final field* resp. *post-field* (for *Nachfeld*).

thematic part of a sentence (to their left) from the *rhematic* part of a sentence (to their right) (cf. Krivonosov 1977).

2.1.2 Selectional restrictions on clause types

One of the defining syntactic properties of discourse particles is that they are only licensed for certain sentence types and speech act types (cf. Weydt 1969, Abraham 2000). SG *ja*, for instance, is restricted to declaratives, SG *denn* to interrogatives (cf. also Abraham 1988). Most particles are licensed in more than one different sentence type. Abraham (2000:326) proposes these selection restrictions are due to syntactic behavior and meaning of the non-particle counterparts, from which he derives the particles' meanings. In contrast, Zimmermann (2004a, 2004b) proposes that these selection restrictions are due to the fact that discourse particles modify the sentence type or speech act of the utterance and thus must be compatible with it. Such a proposal was already anticipated by Weydt (1969:36). He argues that discourse particles with the core meaning of expressing astonishment usually cannot appear in interrogatives, as astonishment and interrogative speech act type are mutually exclusive. An exception to this proposal is provided by *denn* which can optionally express astonishment with respect to the proposition that provides the propositional frame for the question.

The Standard German discourse particle *denn* is restricted to the following illocutionary sentence types:

(1) a. *yes/no-questions*
Ist das Essen *denn* kalt?
Is the food *denn* cold?
'Is the food *denn* cold?'
(Weydt 1969:26)

b. *wh-questions*
Wieviel Uhr ist es *denn*?
How much hour is it *denn*?
'What time is it *denn*?'
(Weydt 1969:26)

c. *rhetoric wh-questions*
Warum sollte man ihn *denn* entführt haben?
Why should one him *denn* kidnapped have?
'Why could they *denn* have kidnapped him?'
(Weydt 1969:27)

d. *imperatives with wh-interrogative form*
Wann machst du *denn* endlich das Fenster zu?
when make you *denn* finally the window shut?
'When are you *denn* finally going to shut the window?'
(Abraham 2000:328,ex.11)

At this point it should be remarked that *denn* in (1d) is not licensed by the imperative speech act, but by the interrogative clause type. The imperative results from the contribution of *finally*, probably by means of conversational implicature (cf. Grice 1975). The following example illustrates this fact: The above question without *finally* can only be interpreted as a question, not as an imperative (cf. König 1977).

(2) Wann machst du *denn* das Fenster zu?
when make you *denn* the window shut?
'When are you *denn* going to shut the window?'

Eckardt (2004) claims that *denn* is marginally also licensed in declaratives, see (3). May (2000) argues against such a claim stating that *denn* in such clauses is to be considered an adverb which marks the modified

proposition as a necessary condition for another proposition (denoted by the dots), rather than a discourse particle.

(3) Ja, wenn Sie *denn* aus Bayern sind...
yes, if you *denn* from Bavaria are...
'So, well, if you are from Bavaria...'
(Eckardt 2004:1)

As shown in chapter 1.2, VG *dn*, in contrast to SG and VG *denn*, is only licensed in *wh-questions* and cannot occur in *yes/no-questions* (cf. (47) and (84) in chapter 1, repeated as (4) and (5)). This is one of the most striking differences between VG *dn* and *denn*.

(4) ^{OK} Wieso küsst-*n* der Otto die Anna?
Why kiss(3s)-*dn* the(nom) Otto the(acc) Anna?
'Why does Otto kiss Anna?'

(5) $^{*?}$ Küsst-*n* der Otto die Anna?
Kiss(3s)-*dn* the(nom) Otto the(acc) Anna?
'Does Otto kiss Anna?'

2.1.3 The linearization of co-occurring discourse particles

Weydt (1969), Thurmair (1989, 1991) and Abraham (2000) observe that co-occurring discourse particles in a sentence are subject to strict linearization rules (with a small number of exceptions), similar to those observed for co-occurring adverbials by Cinque (1999). To observe such restrictions, it must be determined which discourse particles can co-occur. The general approach to co-occurrence restrictions is to assume discourse particles may co-occur if they share one clause type in which they are licensed and if their meanings do not contradict each other (cf. Thurmair 1991, Helbig and Buscha 1993, Abraham 2000). The latter

observation is linked to Thurmair's (1991) observation that the meanings of co-occurring particles are added up to result in their overall semantic contribution to the utterance.

As SG *denn* is restricted to interrogatives, it can only co-occur with other discourse particles which are also licensed in interrogatives (cf. Thurmair 1991, Weydt 1969). Therefore it can basically co-occur with *auch*, *eigentlich*, *etwa*, *mal*, *vielleicht* in yes/no-questions, and with *auch*, *bloß*, *eigentlich*, *nur* and *schon* in wh-questions (*auch* being restricted to rhetorical wh-questions) (cf. Weydt 1969, Thurmair 1991). It really does co-occur with every one of these other particles, as its core meaning rarely conflicts with their meanings (cf. Thurmair 1991). As an illustration, consider the following examples:

(6) a. Was wird *denn auch schon* groß sein?
what will *denn auch schon* big be?
'What's this *denn auch schon* all about?'
(slightly modified from Thurmair 1991:28,ex.19)
b. ## Was wird *denn schon auch* groß sein?
c. * Was wird *auch denn schon* groß sein?
d. * Was wird *auch schon denn* groß sein?
e. * Was wird *schon auch denn* groß sein?
f. * Was wird *schon denn auch* groß sein?

Thurmair (1991:29-30) shows linearization rules also hold if other expressions (e.g. DPs) interfere between co-occurring discourse particles; compare (7) to (8):

(7) a. Was ist *denn eigentlich* los?
what is *denn eigentlich* up?
'What's *denn eigentlich* up?'
b. * Was ist *eigentlich denn* los?

(8) a. Wo fährt *denn* dein Bruder *eigentlich* am Wochenende hin?
where goes *denn* your brother *eigentlich* on the weekend to?
'Where does *denn eigentlich* your brother go on the weekend?'
b. * Wo fährt *eigentlich* dein Bruder *denn* am Wochenende hin?

At this point, it should be remarked that analogous strict linearization rules can be found for discourse particles in Dutch (cf. de Vriendt et al. 1991).

Interesting descriptive generalizations can be made regarding *denn*. Thurmair observes that (unstressed) *denn* and *ja*, which can never co-occur, always precede all other discourse particles in the sentence. This observation also applies to Bavarian. According to Weiß (1998:157), their Bavarian counterparts *(a)n*/*(e)n* (corresponding to SG *denn*) and *o* (corresponding to SG *ja*) are left-most of all discourse particles. They are the only Bavarian discourse particles that cliticize to the C^0 position (i.e. the *Wackernagel position*), preceded only by pronominal clitics. In fact, it will be argued in chapter 3.4 that VG *dn* behaves on a par with Bavarian *(a)n/(e)n*, i.e. that *dn* is also a syntactic clitic which cliticizes to C^0. The cases in which it appears to be lower in the structure, namely following stressed pronouns, are the exceptional cases which must be accounted for.

2.1.4 Discourse particles and adverbials

Thurmair (1991:37) observes that discourse particles are not only subject to linearization rules with respect to other co-occurring discourse particles, but also maintain a fixed order with respect to other elements in the middle field. She claims discourse particles precede all sentence adverbs and focus particles; see examples (9) and (10) (emphasis is on the subscripts which denote the function class of the respective elements: *discourse particle* (*D.PRT*), *sentence adverb* (*S.ADV*), *focus particle* (*F.PRT*) or *adverb* (*ADV*)):

(9) a. Was ist *eigentlich*$_{\text{D.PRT}}$ *nur*$_{\text{D.PRT}}$ mit ihm los?
what is *eigentlich nur* with him up?
'What's *eigentlich nur* wrong with him?'
(Thurmair 1991:37,ex.42 – subscripts adapted)

b. * Was ist *nur*$_{\text{D.PRT}}$ *eigentlich*$_{\text{D.PRT}}$ mit ihm los?

c. Was ist *nur*$_{\text{D.PRT}}$ *eigentlich*$_{\text{S.ADV}}$ mit ihm los?
what is *nur really* with him up?
'What's *nur* really wrong with him?'
(Thurmair 1991:37,ex.42 – subscripts adapted)

d. * Was ist *eigentlich*$_{\text{S.ADV}}$ *nur*$_{\text{D.PRT}}$ mit ihm los?

(10) a. Gehen Sie *nur*$_{\text{D.PRT}}$ *ruhig*$_{\text{D.PRT}}$ zur Schule!
go you *nur ruhig* to school!
'Go *nur ruhig* to school!'
(Thurmair 1991:37,ex.43 – subscripts adapted)

b. * Gehen sie *ruhig*$_{\text{D.PRT}}$ *nur*$_{\text{D.PRT}}$ zur Schule!

c. Gehen Sie *ruhig*$_{\text{D.PRT}}$ *nur*$_{\text{F.PRT}}$ zur Schule!
go you *ruhig only* to school!
'Go *ruhig* only to school (and nowhere else)!'
(Thurmair 1991:37,ex.43 – subscripts adapted)

d. * Gehen sie *nur*$_{\text{F.PRT}}$ *ruhig*$_{\text{D.PRT}}$ zur Schule!

Compare (10a+b) also with (11a+b):

(11) a. Gehen Sie *nur*$_{\text{D.PRT}}$ *ruhig*$_{\text{ADV}}$ zur Schule!
go you *nur quietly* to school!
'Go *nur* quietly to school!'

b. * Gehen Sie *ruhig*$_{ADV}$ *nur*$_{D.PRT}$ zur Schule!

Thurmair (1991:38) suggests the following order for the German middle field:

(12) discourse particles > sentence adverbs > focus particles > adverbs

However, things are more complex. The following are possible co-occurrences of the discourse particle *ja* (which is considered the left-most, i.e. structurally highest, of all discourse particles by Thurmair 1991, on a par with *denn* in interrogatives) and *sentence adverbs*:

(13) a. Nun ist Ostern *ja*$_{D.PRT}$ *glücklicherweise*$_{ADV}$ vorbei.
now is Easters *ja luckily* over
'Now, Easters is *ja luckily* over.'

b. In einer Beziehung kann man *glücklicherweise*$_{ADV}$ *ja*$_{D.PRT}$ auch anders verhüten.
in a relationship can one *luckily ja* also different prevent
'In a relationship, there are *luckily ja* other possibilities of prevention.'

The relative orderings of discourse particles and sentence adverbs will be investigated in more detail in the occasion of the discussion of Cinque's (1999) framework in chapter 2.4.

2.2 Analysis

2.2.1 Preliminaries

The informants that have been consulted in the course of this thesis generally perceive VG *dn* to be a reduced version of VG *denn*, corresponding to SG *denn*. As mentioned, *dn* and *denn* display a different

syntactic distribution and behavior, while VG *denn* patterns like SG *denn*. The phenomenon that VG has both a clitic and a full version of *denn* might be rooted in the fact that it is an urban variety of German which is strongly influenced by Standard German. As VG *dn* displays a relatively peculiar syntactic behavior and VG *denn* behaves on a par with SG *denn*, it might be proposed that *dn* is the proper Viennese counterpart of SG *denn* while full VG *denn* is "borrowed" from Standard German in the course of an "interference effect". A more detailed investigation of this phenomenon is beyond the scope of this thesis.

The assumption that *dn* and *denn* perform the same function is supported by the fact that they are not allowed to co-occur. Compare (14a+b) with (14c):

(14) a. $^{OK?}$ Wieso hat-a *DIR-dn* den Arzt *leicht* empfohlen? (cf. (30 in chapter 1))
why has-he$_{CL}$-*dn* YOU$_{DAT}$ the$_{ACC}$ doctor *leicht*$_{D.PRT}$ rec.
'Why did he recommend you this doctor?'

b. $^{OK?}$ Wieso hat-a DIR den Arzt *denn* empfohlen? (cf. (100) in chapter 1)

c. * Wieso hat-a DIR-*dn* den Arzt *denn* empfohlen?

The syntactic differences between VG *dn* and *denn* are that *dn* is more restricted in its syntactic distribution and behavior than *denn*. In particular, it has been shown that *dn* can be assumed to surface higher in the structure and have less distributional freedom. As will be shown in chapter 3.4, these observations are arguments for treating *dn* as a clitic version of *denn*. At any rate, VG *dn* can be assumed to be a counterpart of SG (and VG) *denn* from which it mainly differs in being more restricted. Therefore, the following analyses will first be applied to *denn*; then the syntax of *dn* will be discussed on basis of the gained insights.

2.2.2 Theoretical Grounds

The analysis put forth in this thesis is based on the *Principles and Parameters Framework* (cf. Chomsky 1981) of syntax. Its main ideas are that human language competence rests upon a number of *universal principles* that form the so-called *universal grammar (UG)*. These principles are assumed to be the same for all human languages. Differences between languages are accounted for by the concept of *parameters* - options with respect to the principles of universal grammar which are determined and fixed by the linguistic input during language acquisition.

The grammar of a single language is determined by the universal principles and the specific parameter settings proper to this language. It consists of a lexicon (a finite set of simple categories that are represented by means of their phonological, syntactic and semantic properties) and a computational system which generates an infinite set of complex expressions from the elements contained in this lexicon. These complex expressions can be represented as grammatical structures which serve as input for the two interpretative cognitive systems that process language: the articulatory-perceptual system and the conceptual-intentional system. The respective inputs to these language-external cognitive systems are symbolic representations that are created at the *phonetic form* interface (*PF*) and the *logical form* interface (*LF*).

The Principles and Parameters Framework has been continuously adapted due to explanatory needs and conceptual goals aimed at creating a theory which succeeds in providing adequate explanations for linguistic phenomena. In addition, the framework integrates methodological concepts such as *Occam's Razor*. Such concepts were especially prominent in putting forth what is known as the *Minimalist Program* (*MP*, cf. Chomsky 1995, 1999, 2001). For instance, in the MP only levels of representation that are considered conceptually necessary are assumed, and the "traditional" generalized X-bar structure has been replaced by *bare phrase structure*. A further fundamental difference between the

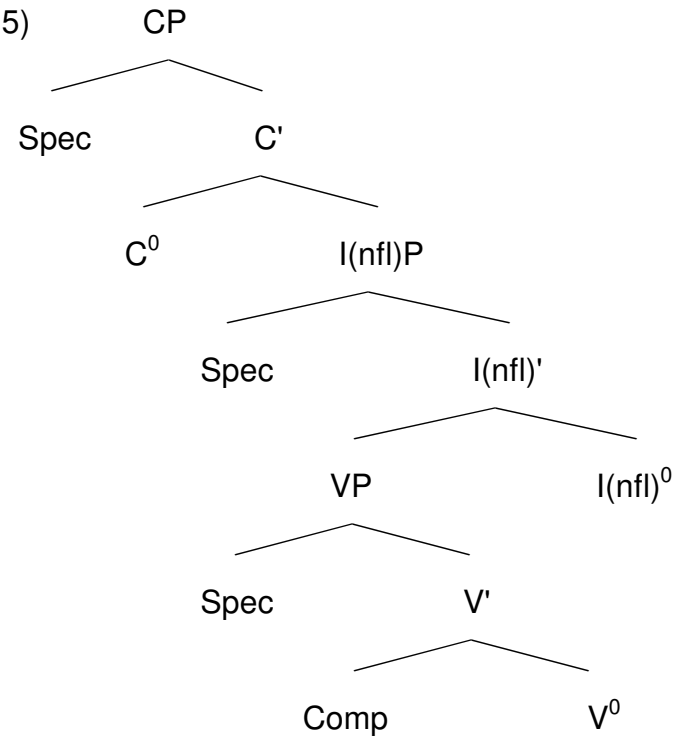
Minimalist Program and traditional approaches is that the latter assume that movement is always allowed if nothing prevents it. MP however assumes that movement is only allowed if it is forced by something (cf. Lasnik et al. 2005). For ease of comprehension, X-bar representation will be used in most instances.

The following sub-chapters will provide an introduction to different possibilities of analyzing discourse particles within the Principles and Parameters Framework. For more general information on the theoretical backgrounds cf. Roberts (1997), Grewendorf (2002), Adger (2003) and Lasnik et al. (2005).

2.2.3 X-bar theory

Generalized X-bar structure is one of the core concepts of earlier and more "traditional" approaches within the Principles and Parameters Framework (cf. Grewendorf 2002:33, Roberts 1997:9). It models syntactic structures as binary branching trees that are constructed by means of a universal scheme in which every syntactic element of a lexical or functional category X is dominated by the head of its projection, i.e. X^0. The element itself is considered the terminal node of its projection. X^0 is dominated by the more complex X' and finally by its maximal projection, the *X-Phrase (XP)*; all projections of X inherit its properties. The status of X' is one of the controversial aspects of the X-bar model – the main renovation of Minimalist *bare phrase structure* is that intermediate projections of the X' type are no longer considered primitives, but to be notational abbreviations for structural nodes which result from merging a node with the categorial features of a category X with another node of a category Y, such that the resulting node inherits the features of X (cf. Lasnik et al. 2005:54-55). The sister of X' is termed the *Specifier (Spec)* of XP, and the sister of X^0 the *Complement* of X^0. Within "traditional" X-bar theory the syntactic structure of a sentence can be represented as in (15) (cf. Grewendorf 2002:34-35):

(15)



In this structure V^0 is the position of the verb, $I(nfl)^0$ the position of the inflectional properties of the sentence, and C^0 the position of the complementizer that embeds the sentence, if there is one. The three phrases correspond to the three types of structural layers. The lexical layer (headed by V^0) and the two functional layers – the inflectional one (headed by I^0) and the complementizer layer (headed by C^0) (cf. Rizzi 1997). In German, C^0 is assumed to be the V2 position in Verb Second Structures accounting for the complementary distribution of Verb Second and embedding complementizers. The subject is generated in SpecIP in this model. CP, IP and DP are considered to be functional categories and NP, VP, PP and AP to be lexical categories (cf. Lasnik et al. 2005:12). This traditional structure, which is already a highly modified version of earlier proposals, has undergone many further developments: CP and IP were split up into a number of CP- and IP-related functional projections (cf. Pollock 1989 for Split-Infl, Rizzi 1997 for Split-CP), VP was split up into so-called *VP-shells* to account for the conceptually favorable idea of a VP-internal subject base position (cf. Larson 1988):

Pollock (1989) proposed to split up the IP into at least two functional projections, Agr(eement)P and T(ense)P. His original proposal that TP dominates AgrP was modified and extended to the following structure of the IP space (cf. Roberts 1997:41-44 for an overview on the development of the Split-IP structure):

(16) (CP –) AgrSP – TP – AgrOP (– VP)

Rizzi's (1997) Split-CP consists of two basic heads Force and Fin. Force being the clause's connection to sentence-external structures and to the context, Fin being its connection to the IP space. Force is considered responsible for sentence type determination bearing a sentence type indicator feature in its head, which can be overtly expressed by means of a complementizer. Fin, on the other hand, is analyzed to be the connection between the CP space and the IP by specifying a sentence as either finite (i.e. tensed) or non-finite – in German, Fin^0 is likely to be the position which serves as the V2-position and attracts the verb (cf. Rizzi 1997:283, Mohr 2001). Force and Fin are assumed to be realizable as one singular head (Force/Fin) unless it is split up by Topic or Focus movement which causes the realization of Foc or Top heads in between Force and Fin. While there is only one Focus head, multiple Topic heads on both sides of it are possible, resulting in the following global structure of the Split-CP:

(17) ForceP – (TopP*) – (FocP) – (TopP*) – FinP (– IP)

Rizzi assumes that speech acts and illocutionary force are specified in positions within the CP space. This assumption seems to contradict the observation that discourse particles which evidently modify the illocutionary force of clauses are restricted to the middle field, i.e. the clausal space which is lower than the V2 position (presumably C^0 or Fin) and higher than V^0. One possible solution would be to assume that these particles are base-generated lower than C^0 and covertly raised at LF. In

fact, such an analysis is proposed by Zimmermann (2004a) on semantic grounds – it will be discussed in more detail in chapter 4.

In this thesis, the traditional notions, *CP*, *IP* and *VP* are used in most cases for ease of notation, while the more specific labels that result from sub-dividing the *(Split-)CP*, *(Split-)IP* and *VP* domain (*ForceP*, *TP*, etc.) are only used when the sub-division is relevant. Nevertheless, at every use of CP, IP and VP the reader is encouraged to bear in mind that this is only a notational abbreviation for the more complex extended structure they contain. At this point, it should be remarked that over the last decade a variety of other functional projections have been postulated by different people assuming an even more complex structure of the *CP, IP* and *VP layers*. Eventually, this approach was also carried over to the *DP layer*. Syntactic approaches which aim at describing these complex basic structures of the different layers are labeled *cartographic* approaches (cf. Cinque 2002)[11].

In the following sections, an attempt will be made to determine the syntactic nature of discourse particles. The main question with respect to their distribution is where and how they are inserted into the syntactic derivation. Like sentence adverbs, with which they share certain distributional properties, they might be analyzed as either adjoining to maximal projections (cf. Roberts 1997, Adger 2003) or being generated in the specifier positions of functional projections (cf. Cinque 1999, 2004). These two options presuppose discourse particles are treated as maximal projections, like adverbials. However, there are reasons to analyze discourse particles as syntactic heads, rather than maximal projections. For instance, they cannot be modified, as shown in (18).

[11] An alternative framework which is based within the Minimalist Program and rejects the concepts of structure and structural positions completely is proposed by Nilsen (2003): He claims that all orderings among functional projections can be derived from interface conditions at the LF interface.

(18) a. Hans ist *ziemlich sicher* schon gegangen.
b. * Hans ist *ziemlich wohl* schon gegangen.[12]
Hans is *quite surely / * quite wohl* already gone
'Hans has *quite surely / * quite wohl* left already.'

In the following sub-section, their projectional status will be discussed. In sections 2.3 and 2.4 an overview is given on the possible implementations of discourse particles in X-bar theory – either as adjuncts (in chapter 2.3) or as specifiers to functional projections (in chapter 2.4). The structural status of adverbials is still controversial and these are the two major approaches (cf. Haider 2000, 2004). More specific questions will be looked at in chapters 3 and 4. In particular the exact base positions of discourse particles, where they are spelled out, and whether they undergo Quantifier Raising at LF.

2.2.4 The projectional status of discourse particles

It is not *a priori* clear, whether discourse particles are maximal projections (XPs) or merely syntactic heads (X^0s). The empiric facts suggest that discourse particles are of the X^0 type, as they can neither be modified nor stressed. The first property illustrated in (19) distinguishes them from adverbs. The second property puts them on a par with unstressed and clitic pronouns and for this reason have often been considered syntactic heads in literature (cf. Abraham 1995):

[12] Bear in mind that the grammatical case of *sehr wohl*, illustrated below, is no counterexample, as it contains the stressed adverbial *WOHL* "well, indeed", rather than the unstressed discourse particle *wohl*:

i. Hans ist *sehr WOHL* / * *sehr wohl* schon gegangen
Hans is *very well* already gone
"Hans has left indeed."

(19)a. Er wird [$_{AdvP}$ [$_{SpecAdvP}$ *ziemlich*] [$_{Adv'}$ [$_{Adv}$ *sicher / wahrscheinlich*]]] kommen.
he will *quite surely* / *probably* come
'He will *quite surely* / *probably* come.'

b. * Er wird [$_{XP}$ [$_{SpecXP}$ *ziemlich*] [$_{X'}$ [$_{X}$ *ja* / *wohl*]]] kommen.
he will *quite ja* / *wohl* come
'He will *quite ja* / *wohl* come.'

Weydt (1969) already pointed out that discourse particles differ from adverbs both syntactically and semantically. They cannot be asked for, they are restricted to the middle field and their meaning is always functional. Furthermore, Abraham (2000) shows that discourse particles cannot be coordinated, in contrast to adjectives and adverbs:

(20) a. * Das Kleid im Schaufenster ist *doch* und *schon* schön.
the dress in the window is *doch* and *schon* beautiful
'The dress in the window is *doch schon* beautiful.'
(Abraham 2000:343,ex.45)

Another fundamental difference between discourse particles and adverbs is that sentences with discourse particles do not allow for a periphrasis analogous to that in (21b) which is derived from (21a). The grammatical German counterpart is given in (22a+b), the ungrammatical example with the discourse particle *ja* is given in (23d), based on the grammatical (22c):

(21) a. Horatio has evidently lost his mind.
b. It is evident that Horatio has lost his mind.
(Jackendoff 1972:50,ex.3.7+3.9)

(22) a. Horatio hat *offensichtlich* seinen Verstand verloren.
Horatio has *evidently* his mind lost
'Horatio *evidently* lost his mind.'

b. Es ist *offensichtlich*, dass Horatio seinen Verstand verloren hat.
   it is *evident* that Horatio his mind lost has
   'It is *evident* that Horatio lost his mind.'
c. Horatio hat *ja* seinen Verstand verloren.
   Horatio has *ja* his mind lost
   'Horatio *ja* lost his mind.'
d. * Es ist *ja*, dass Horatio seinen Verstand verloren hat.

These arguments indicate that discourse particles differ from (sentence) adverbials which suggests that discourse particles are structural heads that do not project.

However, there are conceptual reasons against such a proposal. It is commonly assumed that V2-constructions imply head movement of the verb from V^0 to C^0. Therefore, discourse particles cannot occupy the heads of clausal functional projections as this would block verb movement in terms of the Head Movement Constraint (cf. Roberts 1997, Lasnik et al. 2005). As discourse particles modify the meaning of the whole clause or utterance, these are the only head positions in which they might be generated which implies that this cannot be the right solution. Therefore, discourse particles must be assumed to project XPs. A similar observation is made by Poletto and Zanuttini (2003:9) for modal particles in Badiotto: They also conclude from the fact that such particles do not interfere with verb movement that they are not heads, but located in specifier positions of functional projections. In chapter 3.4, it will be shown that there are conceptual reasons to treat discourse particles on a par with *weak pronouns* in the framework of Cardinaletti and Starke (1999), namely as deficient maximal projections.

2.3 Discourse particles as XP-adjuncts

2.3.1 Basic considerations

With respect to their syntactic behavior and distribution, discourse particles are often assumed to behave like sentence adverbs (cf. Kratzer 1999, Abraham 2000): They appear to occupy the same surface positions as VP- and sentence adverbials in the *middle field*, and they can be shown to be located either higher than the VP or at least not lower than in VP-adjunct positions:

(23) a. dass Hans ja [$_{VP}$ immer [$_{VP}$ ... glücklich ist
b. * dass Hans [$_{VP}$ immer [$_{VP}$ (...) ja ... glücklich ist
that Hans (ja) always (ja) happy is
'that Hans is always happy.'

In traditional X-bar Theory, adverbials are assumed to be adjoined to the clausal structure. Adjunction, is an operation by which a projection X^n is split up into a higher and a lower X^n. Subsequently, a Y^n projection is inserted into the sister node of the lower part. Independently motivated *Structure Preservation Constraints* guarantee that phrases may only adjoin to phrases and heads only to heads (cf. Grewendorf 2002:34). Consider (24) as an illustration of phrasal adjunction:

(24) [$_{XP}$ Spec [$_{X'}$ [$_{X}$ X Comp]]] → [$_{XP}$ Adjunct [$_{XP}$ Spec [$_{X'}$ [$_{X}$ X Comp]]]]

Adverbs are considered maximal projections and therefore must be treated as phrasal adjuncts of the XP-type. It follows that sentence adverbs can only be attached to CP, IP or VP in a traditional X-bar theoretic account. If the possibility of both left- and right-adjunction is assumed, there are six possible structural positions for adverbs. If syntax is assumed to be anti-symmetric, i.e. that only left-adjunction is possible, only three positions are possible. In effect, the exact number of possible

adjunct-positions is theory-dependent, if more complex structures of the (Split-)CP, (Split-)IP and VP space are assumed. For a Minimalist analysis which assumes the basic functional clause structure *CP-TP-vP*, Adger (2003:190-193) proposes that manner adverbs are adjoined to *vP*, while sentence adverbs are adjoined to *TP*.

To adapt the adjunct-analysis to discourse particles, consider König and Requardt's (1991:64) observation that they follow all unstressed pronominal elements and may then occur at all *major constituent breaks* in the middle field (angle brackets denote alternative realization):

(25) Dann hat <*ja*> Horatio <*ja*> seinen Verstand <*ja*> verloren.
then has <*ja*> Horatio <*ja*> his mind <*ja*> lost
'Then Horatio *ja* lost his mind.'

Consider now the following example which complies with the observations in (23) and (25):

(26) Dann hat <*ja*> Horatio <*ja*> [$_{VP}$ immer [$_{VP}$ <*ja> seine Nerven <*ja> verloren.
then has <*ja*> Horatio <*ja*> always <**ja*> his nerves <**ja*> lost
'Then Horatio *ja* always lost his nerves.'

This example shows that *ja* cannot be adjoined lower than to the highest VP projection.

In a traditional CP-IP-VP approach, *Horatio* would be generated in the SpecIP position. In more contemporary approaches, implementing the internal subject hypothesis, *Horatio* has to be assumed to rise out from its VP-internal position to either the SpecTP or the SpecAgrSP position, in order to precede the VP-adjunct *immer* 'always' (cf. Roberts 1997). For now, two interpretations of the examples (23), (25) and (26) are possible. Either *ja* can alternatively be adjoined to different positions, namely to VP or IP (i.e. the IP-projection which hosts the subject), or *ja* is always adjoined to TP or SpecAgrSP and the subject is allowed to optionally rise

to a scrambling position which is higher than *ja*. In any case, right-adjunction of *ja* to clausal maximal projections is excluded as it would imply that *ja* occurs in the *back field* following the V^0 position in the surface realization.

Based on these observations, the structural position of *denn* and *dn* can be investigated. As *dn* appears to be bound to the left border of the IP-space, it is evident that the structure of the left periphery must also be taken into account. The fact that discourse particles, including VG *dn* can only occur in the *middle field* allows for the conclusion that they are always adjoined lower than the C^0 (or Fin) head in which either the complementizer or the finite verb in V2 clauses is located (cf. Rizzi 1997, Roberts and Roussou 1998, Mohr 2001). As both VG *dn* and SG / VG *denn* are restricted to interrogatives, they can thus be assumed to follow the finite verb in its V2 position. It also follows that *dn* and *denn* follow all pronominal clitics, as these can be analyzed to head-adjoin to the C^0 (or Fin) head (cf. chapter 3.2.1). In the following sections, two approaches will be discussed which might shed light on the exact position of VG *dn* and *denn*: Weiß's (1998) analysis of the syntactic structure of Bavarian clitic and non-clitic discourse particles and Abraham's (1988, 1995) approach to Standard German non-clitic discourse particles.

2.3.2 Weiß (1998): The syntactic structure of Bavarian

Weiß (1998) follows Haider (1993:176-179) in assuming a shared VP/IP projection for German and Bavarian and analyzes discourse particles as adjuncts to this VP/IP projection which is dominated by an unspecified functional projection FP. Therefore, the following clause structure is assumed for Standard German (*VP/IP* being abbreviated to *VP*):

(27) $[_{FP}\,[_{?}\,WP\,[_{VP}\,...\,XP_i\,...\,[_{VP}\,P\,[_{VP}\,...\,e_i\,...\,V]]]]$
(taken from Weiß 1998:95,ex.13+14)

The verbal arguments are located within the *VP* to which the particle position *P*, hosting discourse particles, and different Scrambling positions, *XP*, are adjoined. Scrambling is analyzed as adjunction to VP in this model. Finally, the *Wackernagel position (WP)* attaches to the VP-adjuncts. It is considered to be the landing position for unstressed pronouns. Standard German is assumed not to have syntactic clitics at all.

Weiß adapts Haider's approach to Bavarian, redefining the *Wackernagel position* as a position which is exclusively reserved for clitic elements. He proposes to split it up into *WP1* and *WP2* to account for the respective order of clitic pronouns and clitic discourse particles in Bavarian. The latter always follow the former. He proposes the following structure for Bavarian (ignoring the FP under which it is embedded):

(28) $[_{?}$ WP1 $[_{?}$ WP2 $[_{VP}$ ... XP_i ... $[_{VP}$ P $[_{VP}$ ... e_i ... V]]]]]
(taken from Weiß 1998:99,ex.25)

WP1 is reserved for pronominal clitics, *WP2* for clitic discourse particles and *P* is the position of non-clitic discourse particles.

Consider the following examples (syntactic structures and brackets in (b) are added by the author in compliance with Weiß' analysis in (28)):

(29) a. Hod'*a*'*(a)n* des gwisd?
has'*he*$_{CL}$'*an*$_{CL}$ that known?
'Did he know that?'
(Weiß 1998:97,ex.17a, translation and glosses added)

b. Hod $[_{?}$ $[_{WP1}$ $a_i]$ $[_{?}$ $[_{WP2}$ *(a)n*] $[_{VP}$ des_j $[_{VP}$ (P) $[_{VP}$ e_i, e_j gwisd]]]]]

(30) a. Hod'*an ea ebba* den Film aa oogschaut?
has'*an*$_{CL}$ *he ebba*$_{D.PRT}$ the movie also watched?
'Did he also watch that movie?'
(Weiß 1998:99,24d, translation and glosses added)

b. Hod [$_{?}$ (WP1) [$_{?}$ [$_{WP2}$ *an*] [$_{VP}$ *ea*$_{i}$ [$_{VP}$ [$_{P}$ *ebba*] [$_{VP}$ e$_{i}$ den Film aa oogschaut]]]]]

The elements *(a)n* and *ebba* in these examples are the Bavarian counterparts of the Standard German discourse particles *denn* and *etwa* respectively. (29) illustrates the relative structural positions of pronominal clitics and clitic discourse particles, (30) displays those of non-clitic pronouns and discourse particles with respect to the clitic discourse particle *an*.

At this point, it is possible to ask, whether Weiß' analysis can be adopted for *dn* in Colloquial Non-Standard Viennese German. Consider the following grammatical example:

(31) $^{OK?}$ Wieso hat-a DIR-*dn* den Arzt leicht empfohlen? (cf. (30) in ch.1)
Why has-he$_{CL.NOM}$ YOU$_{DAT}$-*dn* the$_{ACC}$ doctor leicht$_{D.PRT}$ recommended?
'Why did he recommend this doctor to YOU?'

If *dn* is to be treated as a syntactic clitic, a structural description which follows Weiß (1998) immediately encounters a problem. The stressed full pronoun *DIR* 'you' is allowed to precede *dn*, thus occurring in a space which is assumed to be exclusively reserved for clitic elements, namely in between WP1 and WP2. Therefore this structure cannot be right.

(32) Wieso hat [$_{?}$ [$_{WP1}$ a$_{i}$] [$_{?}$ *DIR*$_{j}$ [$_{?}$ [$_{WP2}$ *dn*] [$_{VP}$ den Arzt$_{k}$ [$_{VP}$ [$_{P}$ *leicht*] [$_{VP}$ e$_{i}$ e$_{j}$ e$_{k}$ empfohlen]]]]]

In conclusion, *dn* can only be treated as a non-clitic full discourse particle in Weiß's (1998) approach. As such it must be located in the particle position P which would allow both pronouns and full DPs to precede it. However, such an approach does not account for the empirical facts. If *dn* is located in P, it follows that *den Arzt* 'the doctor' cannot have scrambled

out of the VP, implying that the discourse particle *leicht* has to be generated VP-internally:

(33) Wieso hat [$_{?}$ [$_{WP1}$ a_i] [$_{?}$ (WP2) [$_{VP}$ *DIR*$_j$ [$_{VP}$ [$_{P}$ *dn*] [$_{VP}$ e_i e_j den Arzt *leicht* empfohlen]]]]]

This analysis which places *leicht* inside the VP is wrong, as it can be shown that *leicht* has to precede *immer* 'always' which is commonly analyzed as a VP-adjunct:

(34) a. Was erzählt-a *leicht* [$_{VP}$ immer [$_{VP}$ (über die Anna)?
what tells-he$_{CL}$ *leicht* always (about the Anna)
'What does he always tell (about Anna)?'

b. * Was erzählt-a [$_{VP}$ immer [$_{VP}$ leicht (über die Anna)?

Furthermore, Weiß's analysis cannot account for the fact that structures in which full DPs precede *dn* generally tend to be judged ungrammatical:

(35) ## Was macht *der Mann-dn* da draußen? (cf. (57) in chapter 1)
What makes *the man-dn* there outside?
'What is this man doing out there?'

Obviously, Weiß's (1998) analysis does not comply with the empirical data and thus cannot be adopted for Colloquial Non-Standard Viennese German. In the following section a more basic approach to treating discourse particles as adjuncts is presented and discussed.

2.3.3 A more general adjunct approach to *denn* and *dn*

In a more general approach, Abraham (1988:448) suggests the adjunction structure in (37) for the Standard German sentence in (36) which contains

the discourse particles *denn* and *etwa* (elements in angle brackets are to be realized alternatively):

(36) und er fragte, ob <*denn*> sie <*denn*> dem Onkel <*denn*> ein Stück Schokolade *etwa* in die Jackentasche gesteckt haben.
and he asked, whether <*denn*> they <*denn*> the uncle <*denn*> a piece chocolate *etwa* into the jacket pocket put have
'and he asked, whether they *denn* have put a piece chocolate into the pocket of the uncle's jacket'

(37) ... [$_{CP}$ ob [$_{IP}$ <*denn*> [$_{IP}$ sie [$_{I'}$ <*denn*> [$_{I'}$ dem Onkel [$_{VP}$ <*denn*> [$_{VP}$ ein Stück Schokolade [$_{V'}$ *etwa* [$_{V'}$ in die Jackentasche [$_{V}$ ...

According to Abraham, this analysis displays all positions in which phrasal adjuncts might be located in traditional X-bar Theory and discourse particles might thus be generated. However, this analysis faces a number of problems. Adjunction to X'-projections is rather problematic in terms of the Structure Preservation Constraints and recent considerations which fundamentally question the existence of intermediate X'-projections. Furthermore, it has been shown above that discourse particles cannot be generated within the VP as they obligatorily precede adverbs like *immer* 'always' which adjoin to the highest VP-projection. From these observations it must be concluded that *etwa*, being the lowest discourse particle in (36) cannot be allowed to adjoin lower than to the vP projection within an extended X-bar structure. The resulting structural description is quite complex, as the direct object *ein Stück Schokolade* 'a piece of chocolate' must be assumed to have moved out of the VP in order to precede *etwa*:

(38) ... [$_{Split\text{-}CP}$ ob [$_{AgrSP}$ <*denn*> [$_{AgrSP}$ [$_{SpecAgrSP}$ sie$_i$] AgrS^0 [$_{TP}$ <*denn*> [$_{TP}$ T^0 [$_{AgrOP?}$ dem Onkel$_j$ [$_{AgrOP}$ <*denn*> [$_{AgrOP}$ [$_{SpecAgrOP}$ ein Stück Schokolade$_k$] AgrO^0 [$_{VP}$ *etwa* [$_{VP}$ t$_i$ t$_j$ t$_k$ in die Jackentasche gesteckt haben.

Note that the indirect object *dem Onkel* 'the uncle' is tentatively assumed to be adjoined to the AgrOP projection higher than *denn*, in (38). It is not clear at this point where it really has to be allocated.

At this point, the possibility of adopting such an analysis for VG *dn* can be investigated. While *denn* is distributionally rather free – as shown above, it can occupy the same positions in interrogative matrix clauses. VG *dn* is restricted in that it can follow all stressed and unstressed pronouns, but generally cannot be preceded by full DPs:

(39) Wieso küsst <*dn*> der Otto <*$^{?}$*dn*> die Anna <**dn*>? (cf. (47), (60), (64) in chapter 1)
why kisses <*dn*> the Otto <*$^{?}$*dn*> the Anna <**dn*>?
'Why does Otto *dn* kiss Anna?'

Within the approach under discussion, such an example implies that *dn* is more restricted than *denn* with respect to the positions it may adjoin to. In the example (39), *dn* must adjoin at least higher than AgrOP, as the direct object *die Anna* 'Anna' cannot precede *dn*. Furthermore, it appears to be bad if it adjoins lower than AgrSP, as it is judged ungrammatical if following the subject *der Otto* 'Otto':

(40) [$_{CP}$ Wieso [$_{C}$ küsst] [$_{AgrSP}$ <*dn*> [$_{AgrSP}$ der Otto$_i$ [$_{AgrOP}$ <*$^{?}$*dn*> [$_{AgrOP}$ die Anna$_j$ [$_{VP}$ <**dn*> [$_{VP}$ ... t_i t_j ...?

Again, the fact that stressed pronouns, which are commonly treated on a par with full DPs, may precede *dn*, causes a problem for this account:

(41) Wie lang bleibt <*dn*> *SIE* <*dn*> noch? (cf. (23), (26) in chapter 1)
how long stays <*dn*> *SHE* <*dn*> still?
'How much longer is she going to stay?'

If *dn* is assumed to adjoin no lower than AgrSP, stressed pronouns must be assumed to rise to a Scrambling position higher than the position of *dn* in cases where they precede it. Such a solution is problematic, as it is not clear why this Scrambling position is not open to full DPs if they are to be treated on a par with stressed pronouns.

An alternative approach would be to assume that *dn* can in fact be adjoined lower than full DPs, but has to rise across them at the post-syntactic PF level to comply with performance-based constraints such as "heavy DPs have to follow light (i.e., in this case, prosodically deficient) elements such as *dn*". While such an approach might be conceptually and empirically justified, it is hardly falsifiable and also relatively stipulative. In contrast, in chapter 3, empirical and conceptual reasons will be provided for a conceptually more favorable approach in which *dn* is generally treated as a syntactic clitic and the problematic fact that *dn* may follow stressed pronouns is accounted for by proposing a different syntactic derivation for these cases, assuming that *dn* is base-generated within the extended projection of these pronouns.

At this point, another empirical phenomenon which is problematic for an adjunction approach should be mentioned: In Colloquial Non-Standard Viennese German clitic pronouns have to precede *dn* (cf. (42)), while unstressed pronouns may generally follow it (cf. (43) and (44)).

(42) Seit wann regnet (**dn*) es (*dn*) schon? (cf. (16), (19) in chapter 1)
Since when rains (**dn*) it_{CL} (*dn*) already?
'Since when has it been raining?'

(43) Wann seids (*dn*) ihr (*dn*) gestern HEIMgekommen? (cf. (42), (37) in chapter 1)
when are (*dn*) you_{PL} (*dn*) yesterday come home?
'When did you_{pl} come home yesterday?'

(44) Was schenkst-*n du ihr* zum GEBURTSTAG? (cf. (38) in chapter 1)
what give.as.present-*dn you her*$_{DAT}$ to birthday?
'What do you give her for her birthday?'

In contrast, unstressed pronouns always have to precede *denn* in Standard German (cf. König and Requardt 1991):

(45) Wann seid (**denn*) ihr (*denn*) gestern HEIMgekommen?
when are (**denn*) you$_{PL}$ (*denn*) yesterday come.home?
'When did you$_{pl}$ come home yesterday?'

(46) Was schenkst (**denn*) *du ihr* (*denn*) zum GEBURTSTAG?
what give.as.present (**denn*) *you her*$_{DAT}$ (*denn*) to.the birthday?
'What do you give her for her birthday?'

The relevant issue is to explain within an adjunction analysis why Standard German discourse particles obligatorily follow unstressed pronouns and VG *dn* does not. While the VG data in (42) can be explained by having *(e)s* 'it' head adjoin to C^0 as a syntactic clitic, this cannot be assumed for the SG data in (45) and (46), as Standard German does not have syntactic clitics. This is what Haider (1993) accounts for with the WP (Wackernagel position, cf. (27)). It is not clear at this point, how an analysis like that of Abraham (1988) could account for this phenomenon and explain why it does not occur in the Viennese variety. The most promising solution seems to be to combine the attempt of Abraham with that of Haider to result in the following structure for (45):

(47) [$_{CP}$ Wann [$_{C}$ seid] [$_{?}$ <**denn*> [$_{?}$ [$_{WP}$ ihr$_i$] [$_{AgrSP}$ <*denn*> [$_{AgrSP}$ t_i [$_{VP}$ <denn> [$_{VP}$ gestern [$_{VP}$ t_i HEIMgekommen?
'When did you$_{pl}$ come home yesterday?'

The trace of *ihr* 'you' in AgrSP indicates that unstressed pronouns probably have to land in the AgrSP, like full DPs, due to reasons of case

assignment before they move on to the Wackernagel position. To account for the corresponding Viennese example (43), it has to be assumed that *dn* may adjoin to the projection hosting the Wackernagel position in contrast to *denn*. On the other hand, as shown in (40), *dn* cannot adjoin to the VP to which *denn* obviously can (as illustrated in (47), based on the observation in (38)):

(48) [$_{CP}$ Wann [$_{C}$ seids] [$_{?}$ <*dn*> [$_{?}$ [$_{WP}$ ihr$_i$] [$_{AgrSP}$ <*dn*> [$_{AgrSP}$ t$_i$ [$_{VP}$ <*dn> [$_{VP}$
gestern [$_{VP}$ t$_i$ HEIMgekommen?
'When did you$_{pl}$ come home yesterday?'

Ignoring the strange behavior of *dn* with respect to stressed pronouns and full DPs for now, the following observations can be made. The discourse particle *denn* may adjoin to VP and to AgrSP (and probably to all intermediate clausal functional projections), but it may not adjoin to the projection which hosts the Wackernagel position (WP). In contrast, the discourse particle *dn* may adjoin to the latter projection and also to AgrSP, but it may not adjoin to VP and probably not to any of the projections between AgrSP and VP. This comparative observation is summed up in the following illustration:

(49) a. SG *denn*: CP * WP √ AgrS √ T √ AgrO √ VP
b. VG *dn*: CP √ WP √ AgrS ?* T ?* AgrO * VP

This difference in distribution must be explained. The adjunction approach does not provide any possible explanation. Further, it cannot account for the linearization facts with respect to co-occurring discourse particles. Therefore, in the next subsection, another approach is discussed which might provide a more adequate solution. Cinque's (1999) framework treats adverbials as fixed elements in the clause which are located in the specifiers of clausal functional projections. This approach not only provides us with an account for the distribution in (49), but it also allows to account for the strict linearization among co-occurring discourse particles.

2.4 Discourse particles as specifiers of functional projections

2.4.1 The basics of the analysis

Cinque's (1999) analysis is essentially based on Kayne's (1994) framework of the antisymmetry of syntax which culminates in the hypothesis that asymmetrically c-commanded elements follow their c-commanders (the *Linear Correspondence Axiom, LCA*), c-command being basically defined as follows:

(50) *C-command:*
α c-commands β iff α does not dominate β and every category dominating α dominates β
(quoted from Roberts 1997:27,ex.42)

In other words, the antisymmetry of syntax allows for the conclusion that linear ordering reflects hierarchical relations. Its main assumptions are that only left-adjunction is possible and all structures are head-initial.

In contrast to the traditional assumption that adverbials are adjuncts, Cinque (1999) proposes that they are base-generated in the specifier positions of adverb-related functional projections which constitute the essential skeleton of a sentence. This new theory is based on the observation that adverbs syntactically always maintain exactly the same linearization with respect to each other – a phenomenon which can be observed in a large variety of different languages. This observation is even more striking as the same relative linearizations can be observed across languages for all adverbials which perform the corresponding semantic functions, without evident counter-examples (e.g. adverbials expressing epistemic probability and adverbials expressing future tense display the same relative linearizations across languages). Furthermore, the relative orderings of adverbials are mirrored by the relative orderings of suffixes or particles which perform analogous semantic functions.

These observations lead Cinque to the conclusion that there is one fundamental underlying ordering of functional projections[13]. Their specifier positions can subsequently be occupied by adverbials, their head positions can be filled with particles or suffixes which attach to verbs, modals or auxiliaries – or remain empty in the default case. Therefore, Cinque (1999:106) proposes the hypothesis of a universal hierarchy of functional projections:

(51) *The universal hierarchy of clausal functional projections (a second approximation):*
[*frankly* $\text{Mood}_{\text{speech act}}$ [*fortunately* $\text{Mood}_{\text{evaluative}}$ [*allegedly* $\text{Mood}_{\text{evidential}}$ [*probably* $\text{Mod}_{\text{epistemic}}$ [*once* T(Past) [*then* T(Future) [*perhaps* $\text{Mood}_{\text{irrealis}}$ [*necessarily* $\text{Mod}_{\text{necessity}}$ [*possibly* $\text{Mod}_{\text{possibility}}$ [*usually* $\text{Asp}_{\text{habitual}}$ [*again* $\text{Asp}_{\text{repetitive(I)}}$ [*often* $\text{Asp}_{\text{frequentative(I)}}$ [*intentionally* $\text{Mod}_{\text{volitional}}$ [*quickly* $\text{Asp}_{\text{celerative(I)}}$ [*already* T(Anterior) [*no longer* $\text{Asp}_{\text{terminative}}$ [*still* $\text{Asp}_{\text{continuative}}$ [*always* $\text{Asp}_{\text{perfect(?)}}$ [*just* $\text{Asp}_{\text{retrospective}}$ [*soon* $\text{Asp}_{\text{proximative}}$ [*briefly* $\text{Asp}_{\text{durative}}$ [*characteristically(?)* $\text{Asp}_{\text{generic/progressive}}$ [*almost* $\text{Asp}_{\text{prospective}}$ [*completely* $\text{Asp}_{\text{SgCompletive(I)}}$ [*tutto* $\text{Asp}_{\text{PlCompletive}}$ [*well* Voice [*fast/early* $\text{Asp}_{\text{celerative(II)}}$ [*again* $\text{Asp}_{\text{repetitive(II)}}$ [*often* $\text{Asp}_{\text{frequentative(II)}}$ [*completely* $\text{Asp}_{\text{SgCompletive(II)}}$
(Cinque 1999:106,ex.92)

This universal hierarchy can also be adopted for German adverbials which are subject to the same ordering constraints that are observed by Cinque, as illustrated in (52).

[13] For different approaches which assume that all ordering constraints can be attributed to semantic interface conditions at the LF interface, in terms of scope relations, confer Jackendoff (1972), Haider (2000, 2004) and Nilsen (2003). Cinque (1999, 2004) acknowledges such arguments pointing out that they miss a number of empirical generalizations and that not all ordering constraints can be semantically explained.

(52) [*offen gesagt*[14] $Mood_{speech\ act}$ [*glücklicherweise* $Mood_{evaluative}$ [*angeblich* $Mood_{evidential}$ [*wahrscheinlich* $Mod_{epistemic}$ [*einst* T(Past) [*dann* T(Future) [*vielleicht* $Mood_{irrealis}$ [*unbedingt* $Mod_{necessity}$ [*möglicherweise* $Mod_{possibility}$ [*üblicherweise* $Asp_{habitual}$ [...

Poletto and Zanuttini (2003) argue that the function of adverbials and particles can be seen in *activating* (or *licensing*) the projections in which they occur. They posit that functional projections have to be *active* (i.e. *specified*) to give rise to the interpretation or meaning that is associated with them.

Cinque (1999) claims that AdvPs cannot be moved out of their respective SpecFP positions, except for wh-movement or focus-movement to CP. This claim complies with the observation of von Fintel and Heim (2002) that sentence adverbs never interact scopally which implies that they do not move (neither overtly nor covertly). Cinque observes that the scope of adverbials with respect to wh- or focus-moved co-occurring adverbials remains as if the moved elements were still in their base position, allowing for the conclusion that scope is determined with respect to the trace in such instances.

The observation that verbs, participles and DPs may be located between adverbials in many languages can be perfectly accounted for by Cinque's hypothesis. Verbs and participles are assumed to adjoin to the head positions of the clausal functional projections. For DPs, Cinque (1999:108-109) proposes the existence of *DP-related clausal functional projections* which are interspersed between the adverb-related ones that make up the basic structure of the sentence. DPs are assumed to rise to the specifier positions of these projections to allow for different relative scopes of co-occurring DPs, as well as for particular semantic readings

[14] Ger. *offen gesagt* "frankly (said)" is problematic as it can also be used as an expressive resp. apposition and thus displays much more distributional freedom than *frankly*. However, in some cases which will be addressed, it really appears to be located in the $Mood_{speech\ act}$ projection. In other cases, *ehrlich* "honestly" and *aufrichtig* "sincerely" might be more adequate.

and interpretations such as *existential*, *distributive* or *specific*. In contrast to Theta- and Case-related landing positions for DPs, these FPs are considered to have *interpretive functions* (cf. Cinque 1999:109). As this is evidently important for the phenomenon of discourse particles, which display definiteness effects (cf. Kratzer 1999) and are traditionally considered to partition a clause into its thematic and its rhematic part, it will be discussed in more detail in chapter 3.2.

As has been shown, co-occurring discourse particles are also subject to a strict linearization – possible semantic reasons for their relative ordering will be discussed in chapter 4. Furthermore, it has been shown that the linearization of co-occurring discourse particles also remains unchanged when DPs are placed in between them. Obviously, it should be possible to account for them by means of Cinque's Hierarchy. This is even more plausible, as Cinque's Hierarchy of Functional Projections roughly corresponds to the IP space and is embedded under the CP. Evidently, it corresponds to the descriptive *middle field*, i.e. the area where discourse particles occur. As we have seen, furthermore, these particles behave on a par with adverbials in many regards; it should thus be possible to allocate them to the specifier projections of adverb-related functional projections.

2.4.2 Discourse particles as elements in Cinque's Hierarchy

The main question is, where discourse particles are to be located in Cinque's Hierarchy. This problem will be addressed in the following sub-sections by means of investigating their syntactic distribution. As a starting point, it can be concluded from what has been shown that discourse particles have to be situated in the higher areas of Cinque's Hierarchy. They behave like sentence adverbials, are principally able to precede sentence adverbials and are sentence type and speech act sensitive, indicating that they are either in a local relation with the CP space or somehow connected to $Mood_{speech\ act}$. This is the functional projection

within the IP space that is linked to sentence type and speech act operators, hosting morphemes which express or specify notions such as *imperative*, *interrogative* and *optative* (cf. Cinque 1999:55).

Another argument for allocating discourse particles to the higher parts of Cinque's hierarchy is their scope behavior. As has been mentioned and will be demonstrated for *ja*, *wohl* and *denn* in chapter 4, the main difference between discourse particles and adverbials is that the latter in general add semantic content to the proposition while the former do not. Zimmermann (2004a) shows that this can be explained by means of semantic scope, as discourse particles take scope over the sentence type indicators or the speech act operators of clauses which in turn operate on complete propositions. In fact, this difference between discourse particles and adverbials is not as radical as it might appear. Such scope differences are not fundamental, but gradual differences – in terms of macro level and micro level modification. As Cinque (1999) shows, "height" within the universal hierarchy corresponds to structural complexity of the entity which is modified. The lowest manner adverbials such as *twice* in $Asp_{celerative(II)}$ modify actions within events, while higher manner adverbials such as *twice* in $Asp_{celerative(I)}$ modify the events themselves. Compare the following examples and their corresponding interpretations:

(53) a. John knocked [$Asp_{Celerative(II)}$ *twice*]
b. = John performed one event (or *n* events) of *knocking twice*

(54) a. John knocked [$Asp_{Celerative(I)}$ *twice*]
b. = John performed *two events* of knocking (*n* times)

Sentence adverbials such as $Mod_{possibility}$, which are generated higher in the hierarchy, modify the whole proposition. Obviously, it is quite natural for discourse particles to modify something more complex than a proposition if they operate at an even higher level.

At this point, an attempt shall be made to investigate if and how discourse particles can be implemented in Cinque's Hierarchy to see, what implications such an approach has for the treatment of VG *dn* and *denn*. To do so, it must be investigated how discourse particles linearize with respect to co-occurring adverbials. Every likewise attempt at once confronts a fundamental technical problem, namely that higher sentence adverbs cannot occur in interrogatives. This fact has been pointed out for sentence adverbs like *probably* (in Cinque's $Mod_{epistemic}$), *certainly* and *evidently* (in Cinque's $Mood_{evidential}$) as early as Jackendoff (1972:84):

(55) * Did Frank probably beat all his opponents?
(Jackendoff 1972:ex.3.160)

(56) * Who certainly finished eating dinner?
(Jackendoff 1972:ex.3.161)

More recently, Nilsen (2003, 2004) proposed an account for the phenomenon that higher sentence adverbs cannot occur in questions. He shows that English *speaker oriented* adverbs like *honestly* (Cinque's $Mood_{speech\ act}$), *fortunately* (Cinque's $Mood_{evaluative}$), *evidently* and *allegedly* (Cinque's $Mood_{evidential}$), *possibly*, *hardly*, *probably* and *maybe* (Cinque's $Mod_{epistemic}$), and *paradoxically*, as well as their Norwegian counterparts have to be treated as *Positive Polarity Items* (*PPIs*) as they cannot occur in environments which license *Negative Polarity Items* (*NPI*s) – in other words, these sentence adverbs are barred from all kinds of questions and imperatives, and they further cannot occur in antecedents of conditionals, under negation, under verbal predicates like *hope*, or within the scope of subject quantifiers of the [*no N*] type (cf. Nilsen 2004:3-4). This fact makes it difficult to determine the relative hierarchical position of discourse particles which are restricted to interrogatives such as *denn* and *dn*.

However, following Cinque (1999) it is possible by means of transitivity to infer the relative position of *denn* and *dn* with respect to higher sentence adverbial positions from the behavior of discourse

particles like *wohl* which are licensed both in declaratives and interrogatives and can be assumed to occupy the same structural position in both (cf. Zimmermann 2004a). In the remainder of this section it will be shown that *wohl* by default follows all higher sentence adverbs with which it can co-occur in declaratives and that it always follows *denn* and *dn* with which it may co-occur in interrogatives. From these observations it will be concluded by means of transitivity that *denn* and *dn* are also located higher in Cinque's Hierarchy than all sentence adverbs and thus have to be allocated to a position which is higher than the $\text{Mood}_{\text{speech act}}$ projection.

Following this argument, consider now the behavior of declarative discourse particles to see what inferences can be made on that of discourse particles in interrogatives. Thurmair (1991:33,Table 1) observes the following strict linear orderings among such discourse particles:

(57) a. ja > eben
b. eben > doch
c. doch > ruhig
d. ruhig > mal

(58) a. ja > eben
b. eben > doch
c. doch > wohl
d. wohl > auch

As Thurmair (1991) and Abraham (2000) observe that these strict linearizations are nearly without exceptions, the following linearization patterns can be concluded from (57) and (58) respectively, by means of transitivity:

(59) ja > eben > doch > ruhig > mal

(60) ja > eben > doch > wohl > auch

The predicted relative orders among the different elements in (59) and (60) have been independently tested with native speakers. Intuitions generally match the predictions.

As the relative ordering of *wohl* and *auch* with respect to co-occurring adverbials will be shown to be slightly problematic, the implementation of discourse particles in Cinque's Hierarchy will first be demonstrated for the set of particles linearized in (59). This demonstration and the implications which arise from it will then be used to explain the behavior of *wohl*, and eventually to localize VG *denn* and *dn*.

The following data are based on the grammaticality judgments of native speakers of Austrian varieties of German (- note that in all of the following examples only the unstressed discourse particles have been tested, not their stressed counterparts):

(61) a. ?* Du kannst *ja ruhig mal glücklicherweise* zu ihr rübergehen.
b. ?* Du kannst *ja ruhig glücklicherweise mal* zu ihr rübergehen.
c. ^{OK} Du kannst *ja glücklicherweise ruhig mal* zu ihr rübergehen.
d. ^{OK} Du kannst *glücklicherweise ja ruhig mal* zu ihr rübergehen.
you can *luckily ja ruhig mal* to her go.over
'Luckily you may *ja ruhig mal* go over to her place.'

This data shows that *ja* differs from other (lower) discourse particles with respect to its freedom of distribution. Obviously *ja* is able to precede or follow the $Mood_{evaluative}$ projection (hosting *glücklicherweise* 'luckily'), while other discourse particles like *ruhig* and *mal* have to follow it. This is quite interesting as it indicates the need for sub-classification among discourse particles – a need which is also pointed out by Zimmermann (2004a) and will be discussed extensively in chapter 4. Witness more data:

(62) a. ?* Du kannst *doch ruhig mal offengesagt* zu ihr rübergehen.
b. ## Du kannst *doch ruhig offengesagt mal* zu ihr rübergehen.
c. OK Du kannst *doch offengesagt ruhig mal* zu ihr rübergehen.
d. OK Du kannst *offengesagt doch ruhig mal* zu ihr rübergehen.
you can *frankly(said) doch ruhig mal* to her go.over
'Frankly you may *doch ruhig mal* go over to her place.'

The syntactic restrictions with respect to *offengesagt* indicate that *offengesagt* is herein indeed interpreted as an adverbial, denoting 'frankly', rather than an expressive of the 'frankly said' type which should not lead to ungrammaticality of (62a). Obviously, *doch* is of the "*ja-type*" of discourse particles, as it also allows for more freedom of distribution than *ruhig* and *mal*. Finally, consider the following, slightly intriguing data:

(63) a. OK? Das ist *ja eben glücklicherweise* kein Problem.
b. # Das ist *ja glücklicherweise eben* kein Problem.
c. # Das ist *glücklicherweise ja eben* kein Problem.
that is *luckily ja eben* no problem
'*Luckily* it is *ja eben* no problem.'

Interestingly, both *ja* and *eben* are accepted if they precede the $\text{Mood}_{\text{evaluative}}$ projection, suggesting that *eben* is of the *ja-type* (cf. (63a)). In fact, this can be predicted from the fact that *eben* precedes co-occurring *doch* (cf. (59)). The odd judgments with respect to (63b+c) can be explained by stating that these two examples are too undifferentiated. Witness the following variants of (63b) which differ only in their stress assignment[15]:

(64) a. OK Das ist *ja glücklicherweise eben* KEIN Problem.
b. ?* Das ist *ja glücklicherweise eben* kein PROBLEM.

[15] Thanks are to Matthias Wenigwieser for pointing this out to me.

These examples show that *eben* has to precede *glücklicherweise* 'luckily' in sentences with default stress (cf. (64b)), but may follow it if the constituent that immediately follows it is contrastively stressed. Obviously this is the key to the syntactic behavior of *ja-type* particles such as *ja*, *eben* and *doch*: Cinque (1999:31-32) observes that "higher" adverbials (such as *frankly*, *luckily*, *evidently*, *probably*, *perhaps*) can occupy non-canonical (lower) positions when they perform a particular *focusing function*. In such positions, they do not take scope over the sentence, but only over the constituent which they immediately precede:

(65) a. * Gianni lo merita *francamente/fortunatamente* [...]
'G. deserves it *frankly/luckily* [...]'

b. Gianni lo merita *francamente/fortunatamente* [...] *per più di una ragione*.
'G. deserves it *frankly/luckily* [...] *for more than one reason*.'
(Cinque 1999:31,ex.126a+127 – italicization by Cinque)

In this case, they form a constituent with the phrase that follows them which is proven by their ability to undergo Focus Movement or Clefting:

(66) *Probabilmente per questa RAGIONE*, lo hanno licenziato.
'*Probably for this reason* (focus), they have fired him.'
(Cinque 1999:31,ex.128a – italicization added)

Cinque (1999:31) proposes to treat such "focusing" adverbs as maximally projecting heads which take the modified constituents as their complements:

(67) [$_{AdvP}$ [$_{Adv'}$ [$_{Adv}$ probabilmente] [$_{PP}$per questa ragione]]]
'probably for this reason'

In analogy, the difference between *eben glücklicherweise* and *glücklicherweise eben* in (63a) and (64a), repeated as (68a+b) can be analyzed as *eben* being used as a *focusing adverb* in (64a) and (68b):

(68) a. $^{OK?}$ Das ist ja *eben glücklicherweise* kein Problem.
b. ^{OK} Das ist ja *glücklicherweise eben* KEIN Problem.
that is ja *luckily eben* no problem
'*Luckily* this is ja *eben* no problem.'

In Cinque's terms, the structural description can be written as follows (*FP* denoting *clausal functional projection*):

(69) a. $^{OK?}$ Das ist ja [$_{FP}$ *eben* [$_{Mood\text{-}evaluative}$ *glücklicherweise* kein Problem ...
b. ^{OK} Das ist ja [$_{Mood\text{-}evaluative}$ *glücklicherweise* [$_{AdvP}$ [$_{Adv'}$ [$_{Adv}$ *eben*] [$_{DP}$ KEIN Problem]]] ...

However, this analysis creates another problem, namely that of where to locate the adverbial phrase headed by *eben*. This problem might be avoided, based on Zimmermann's (2004) observations that discourse particles such as *wohl* can be generated within DPs, thus only modifying the (superlative) adjective within the DP:

(70) [$_{DP}$ der *wohl attraktivste* Matrose]
'the *wohl most attractive* sailor'
(Zimmermann 2004a:3,ex.3 – translation added)

Analogically, the above clause might be roughly described as follows:

(71) Das ist ja [$_{Mood\text{-}evaluative}$ *glücklicherweise* [$_{DP}$ *eben KEIN Problem*] ...

Such an analysis is supported by the fact that these are the only cases where discourse particles can overtly occur in the CP space – when such constituents are focused or topicalized:

(72) A: Was ist das?
'What is it?' (*echo question*)
B: [$_{DP}$ *Eben* kein Problem] ist das.
eben no problem is it
'It is *eben* no problem'

However, this cannot be the right solution in all cases, as it leads to wrong predictions: Reconsider the example in (61c+d), repeated as (73a+b):

(73) a. ^{OK} Du kannst *ja glücklicherweise ruhig mal* zu ihr rübergehen.
b. ^{OK} Du kannst *glücklicherweise ja ruhig mal* zu ihr rübergehen.
you can *luckily ja ruhig mal* to her go.over
'Luckily you may *ja ruhig mal* go over to her place.'

Reverting to Cinque's (1999) proposal for sentence adverbs that perform a *focusing use*, the following description can be made.

(74) Du kannst [$_{Mood\text{-}evaluative}$ *glücklicherweise* [$_{AdvP}$ [$_{Adv'}$ [$_{Adv}$ *ja*] [$_{FP}$ *ruhig mal* zu ihr rübergehen]]] ...

In other words, *ja* is an adverbial head and takes the part of the clause as its complement which consists of the whole lower area, up to the functional projection FP which hosts the discourse particle *ruhig*. While it is not clear at this point and has to be further investigated whether this analysis results in the correct interpretation, it is clear that the alternative analysis does not and must thus be discarded – it is perceivably not the case that *ja* only focuses on (i.e. takes narrow scope over) the discourse particle *ruhig* (cf. chapter 4 for a semantic analysis of *ja*), as would be

predicted by having *ja* base-generated within the extended projection of the constituent that immediately follows it (i.e. *ruhig*):

(75) Du kannst [$_{\text{Mood-evaluative}}$ *glücklicherweise* [$_{\text{FP1}}$ [$_{\text{SpecF1}}$ [$_{\text{AdvP}}$ *ja ruhig*]] F_1 [$_{\text{FP2}}$ *mal* zu ihr rübergehen]]] ...

Having illustrated this problem, I will not address it any further as this would exceed the scope of this thesis. However, what is clear is that discourse particles of the *ja-type* (*ja*, *eben*, *doch*) have their canonical base position in a functional projection above $\text{Mood}_{\text{speech act}}$ and $\text{Mood}_{\text{evaluative}}$ and can only follow these higher projections if they perform a *focusing function*, taking scope over the constituent which immediately follows them.

In sum, it has been shown that *ja* and *eben* by default are generated higher than *glücklicherweise* 'luckily' in $\text{Mood}_{\text{evaluative}}$ and only follow it when they perform a *focusing use* (cf. (61), (63), (64)). In contrast, it has been shown that *ruhig* and *mal* always follow *glücklicherweise* (cf. (61)). Furthermore, it has been shown that *doch* by default precedes adverbial *offengesagt* 'frankly' in $\text{Mood}_{\text{speech act}}$ (cf. (62)). As *ja* precedes *eben* which in turn precedes *doch* (cf. (59)), it can be concluded that all three of them (henceforth the *ja-type*) are by default generated higher than $\text{Mood}_{\text{speech act}}$, while *ruhig* and *mal* (henceforth the *mal-type*) are obligatorily generated lower than $\text{Mood}_{\text{evaluative.}}$ This results in the following linearization and corresponding structure (- the structure in (76b) is not claimed to be complete; bear in mind that there might be more functional projections interspersed between the indicated ones):

(76) a. *ja* > *eben* > *doch* > *offengesagt* 'frankly' > *glücklicherweise* 'luckily' > *ruhig* > *mal*

b. [$_{\text{(CP)}}$ [$_{\text{FP1}}$ *ja* [$_{\text{FP2}}$ *eben* [$_{\text{FP3}}$ *doch* [$_{\text{Mood-speech act}}$ *offengesagt* [$_{\text{Mood-evaluative}}$ *glücklicherweise* [$_{\text{FP4}}$ *ruhig* [$_{\text{FP5}}$ *mal* ...

At this point, neither the conceptual favorability of such an analysis will be discussed (i.e. whether it is conceptually adequate to postulate additional clausal functional projections just to fit the explanatory needs of German discourse particles[16]), nor, what the functional contribution of the additional functional projections might be[17]. These questions are left open for further research. In any regard, it has been demonstrated that no other structural description can explain the above examples within Cinque's framework.

An interesting fact which should be pointed out is that discourse particles which occur in their non-canonical *focusing* position can occur as far down in Cinque's Hierarchy as below $Asp_{habitual}$, but not lower. Compare the following examples:

(77) a. Du kannst *ja* [$_{Asp\text{-}habitual}$ *normalerweise* zu ihr rübergehen.
you can *ja usually* to her go.over
'You may *ja usually* go over to her place.'

b. Du kannst [$_{Asp\text{-}habitual}$ *normalerweise ja* zu ihr rübergehen.

(78) a. Du kannst *ja* [$_{Asp\text{-}repetitive(I)}$ *wieder* zu ihr rübergehen.
you can *ja again* to her go.over
'You may *ja* go over to her place again.'

b. * Du kannst [$_{Asp\text{-}repetitive(I)}$ *wieder ja* zu ihr rübergehen.

No explanation can be provided at this point, but it will be shown that VG and SG *denn* behave exactly like *ja* in this regard.

Having presented a possible technique to determine the position of discourse particles in Cinque's Hierarchy, the next task is to determine the behavior of *wohl* – mainly, whether it is of the *ja-type*, the *mal-type*, or a

[16] The question of whether an anti-structural approach such as that of Nilsen (2003) might allow for a conceptually more favorable analysis is left open for further research.

[17] For descriptive attempts at deriving the relative linearization of co-occurring discourse particles which might provide a means to determine the contribution of those FPs, cf. Thurmair (1991) and Abraham (2000)

different third type. Recall that *wohl* follows co-occurring *ja*, *eben*, and *doch*, as shown in (79), repeated from (60):

(79) ja > eben > doch > wohl > auch

The following examples (80a) and (81a) illustrate that *wohl* can precede $\text{Mood}_{\text{evaluative}}$ and is thus rather of the *ja-type* than of the *mal-type.* The examples (80b) and (81b) show that *wohl* may also follow $\text{Mood}_{\text{evaluative}}$, but that this is in some cases judged odd (cf. (81b)), indicating that its default position is the one where it precedes $\text{Mood}_{\text{evaluative}}$.

(80) a. $^{\text{OK}}$ Das ist ja *wohl glücklicherweise* kein Problem.
b. $^{\text{OK}}$ Das ist ja *glücklicherweise wohl* kein Problem.
that is ja *luckily wohl* no problem.
'*Luckily* this is ja *wohl* no problem.'

(81) a. $^{\text{OK?}}$ Du kannst ja *wohl glücklicherweise* zu ihr rübergehen.
b. ## Du kannst ja *glücklicherweise wohl* zu ihr rübergehen.
you can ja *luckily wohl* to her go.over
'*Luckily* you may ja *wohl* go over to her place.'

The following examples indicate that the semantic contribution of *wohl* contradicts that of *offengesagt* 'frankly' which will be shown to derive naturally in chapter 4, as *wohl* can be analyzed as weakening the epistemic security with respect to the expressed proposition, while *offengesagt* 'frankly', on a par with other adverbials in $\text{Mood}_{\text{speech act}}$, like *ehrlich* 'honestly' and *aufrichtig* 'sincerely', qualifies an assertion as an expression of the speakers beliefs or predispositions. Obviously, these semantic contributions do not combine well, which makes it impossible to investigate the location of *wohl* in relation to the $\text{Mood}_{\text{speech act}}$ projection.

(82) a. ## Du kannst doch *wohl offengesagt* zu ihr rübergehen.
b. ## Du kannst doch *offengesagt wohl* zu ihr rübergehen.
you can doch *frankly wohl* to her over.go
'*Frankly* you may doch *wohl* go over to her place.'

As *wohl* is obviously of the *ja-type* and not of the *mal-type* of discourse particles, it might be proposed that *wohl* precedes $\text{Mood}_{\text{speech act}}$. However, there is so far no possibility to verify this proposal, therefore this proposal can only be considered a "wild guess".

However, these observations finally allow us to determine the respective behavior of SG and VG *denn*. Thurmair (1991:33,Table 1) observes that *denn* always precedes *wohl* in wh-questions:

(83) denn > wohl (*wh-questions*)

It has been shown that *wohl* in declaratives follows the discourse particles *ja*, *eben* and *doch*, and by default precedes the adverbial *glücklicherweise* 'luckily' in $\text{Mood}_{\text{evaluative}}$. Zimmermann (2004a) shows that *wohl* has the same semantic content in interrogatives and declaratives, and can be assumed to occupy the same syntactic position in both clause types. Therefore, by means of transitivity, the following linearization and corresponding structure can be derived directly from the empirical facts (the fact that $\text{Mood}_{\text{speech act}}$ is included in parentheses accounts for the fact that the relative position of *wohl* with respect to this functional projection cannot be tested):

(84) a. *denn* > *wohl* > (*$\text{Mood}_{\text{speech act}}$*) > *glücklicherweise* 'luckily'
b. $[_{(\text{CP})}$ $[_{\text{FP1}}$ *denn* $[_{\text{FP2?}}$ *wohl* [($\text{Mood}_{\text{speech act}}$) $[_{\text{Mood-evaluative}}$ *glücklicherweise* ...

In conclusion, VG and SG *denn* can be assumed to precede $\text{Mood}_{\text{evaluative}}$ and all lower clausal functional projections within Cinque's Hierarchy. An interesting fact at this point is that, as already mentioned above, *denn* can,

on a par with *ja*, *eben*, *doch* and *wohl* also appear lower in the structure presumably performing a focusing use. In this respect, *denn* behaves exactly like *ja* in that it may occur below $Asp_{habitual}$, but not any lower (cf. (77) and (78) for *ja*):

(85) a. ^{OK} Was machst Du *denn* [$_{Asp\text{-}habitual}$ *normalerweise* als Job?
what make you *denn usually* as job
'What kind of work do you *denn usually* do?'

b. $^{OK?}$ Was machst Du [$_{Asp\text{-}habitual}$ *normalerweise denn* als Job?

(86) a. ^{OK} Wieso gibt's *denn* [$_{Asp\text{-}repetitive(I)}$ *schon wieder* neue Gesetze?
why give-it$_{CL}$ *denn again* new laws
'Why are there *denn* new laws *again*?'

b. * Wieso gibt's [$_{Asp\text{-}repetitive(I)}$ *schon wieder denn* neue Gesetze?

c. * Wieso gibt's [$_{Asp\text{-}repetitive(I)}$ *schon wieder denn* NEUE Gesetze

d. * Wieso gibt's [$_{Asp\text{-}repetitive(I)}$ *schon wieder denn* neue GESETZE?

Concluding this sub-section, an argument can be made in favor of assuming that *denn* not only precedes $Mood_{evaluative}$, but also $Mood_{speech\ act}$: SG *denn* has been shown to behave like *ja* in many regards. Thurmair (1991) points out that both *denn* and *ja* always precede all other co-occurring discourse particles. They can further be shown to contribute similar semantic contexts (cf. chapter 4), from which it might be concluded that they occupy the same functional projection as they are complementarily distributed with respect to their sentence type and speech act specification, i.e. they may never co-occur. Their counterparts in Bavarian (*o* for *ja*; *(a)n*/*(e)n* for *denn*) are the only Bavarian discourse particles that cliticize to C^0. Their non-particle counterparts from which they can be assumed to (diachronically) derive their meaning (the coordinator *denn* ('then, than') and the sentence equivalent *ja* ('yes')) are located at the left-most periphery of the clause (cf. Thurmair 1991, Abraham 2000). All of these correlations indicate that *ja* and *denn* occupy

the same structural position. If this claim could be proven, it would imply that *denn* is also generated higher than the $\text{Mood}_{\text{speech act}}$ projection.

2.4.3 *denn* and *dn* in Cinque's Hierarchy

As has been demonstrated in the preceding section, VG and SG *denn* precedes the discourse particle *wohl*, which in turn precedes $\text{Mood}_{\text{evaluative}}$ and all lower adverb-related clausal functional projections. The same can be shown for VG *dn*, which is what is expected, as *dn* is assumed to be a counterpart of *denn*:

(87) a. $^{\text{OK}}$ Wieso wird-a-*dn wohl* (ge)gangen sein?
why will-he_{CL}-*dn wohl* gone be?
'Why do you think that he *dn wohl* left?'
b. * Wieso wird-a *wohl-dn* (ge)gangen sein?

Like *denn*, VG *dn* also appears to precede all co-occurring discourse particles. In conclusion, the following structure can be determined for *denn* and *dn*:

(88) a. $[_{\text{CP}} [_{\text{FP1}}$ *denn* $[_{\text{FP2}}$ *wohl* $[_{\text{Mood-evaluative}}$ ...
b. $[_{\text{CP}} [_{\text{FP1}}$ *dn* $[_{\text{FP2}}$ *wohl* $[_{\text{Mood-evaluative}}$ ...

In contrast to VG and SG *denn*, VG *dn* does not appear to be able to occur lower than $\text{Mood}_{\text{evaluative}}$. Compare (85), repeated as (89), with (90):

(89) a. $^{\text{OK}}$ Was machst Du *denn* $[_{\text{Asp-habitual}}$ *normalerweise* als Job?
what make you *denn usually* as job
'What kind of work do you *denn usually* do?'
b. $^{\text{OK?}}$ Was machst Du $[_{\text{Asp-habitual}}$ *normalerweise denn* als Job?

(90) a. [OK] Was macht-*dn* der Hansi [$_{\text{Asp-habitual}}$ *normalerweise* am Wochenende?
what makes-*dn* the Hansi *usually* on.the weekend?
'What does Hansi *dn usually* do on the weekend?'

b. * Was macht der Hansi [$_{\text{Asp-habitual}}$ *normalerweise-dn* am Wochenende?

The observation that VG *dn* evidently does not allow for a focusing use has to be accounted for. One possible explanation for this phenomenon is that it is due to the prosodic deficiency of *dn*.

At this point, recall the observations on the differences between *dn* and *denn* that have been discussed before (cf. chapter 1.3 and 2.3, and (49) in the current chapter). VG and SG *denn* obligatorily follow all unstressed pronouns and can precede every other DP. VG *dn* obligatorily follows clitic pronouns, but may precede both unstressed and stressed pronouns as well as follow them. Finally, clauses with *dn* are generally judged ungrammatical if *dn* follows full DPs, while they are perfectly well-formed, if *dn* precedes them. In Cinque's account, the corresponding structure for SG and VG *denn* could be approximated as follows:

(91) *structure of SG and VG denn (first approximation)*:
[$_{\text{CP}}$ [$_{\text{DP-related FP1}}$ ... [$_{\text{FP1}}$ *denn* [$_{\text{DP-related FP2}}$ ... [$_{\text{FP2}}$ *wohl* [...

This structure description accounts for the fact that *denn* might precede and follow all full DPs. They are either located in the DP-related FP_1 (*FP* again denoting *functional projection*) and precede *denn* or they are located in a lower DP-related FP and follow *denn*[18]. Unstressed pronouns, in contrast, obligatorily rise to the DP-related FP_1.

In analogy, the structure of *dn* might be sketched as follows:

[18] Bear in mind that *denn* with clausal scope is assumed to be fixed in its FP_1 position, according to Cinque (1999).

(92) *structure of VG dn (first approximation)*:

[$_{CP}$ [$_{DP\text{-related FP1}}$ ... [$_{FP1}$ *dn* [$_{DP\text{-related FP2}}$ ... [$_{FP2}$ *wohl* [...

To account for the fact that unstressed and stressed pronouns can both precede and follow *dn*, while full DPs have to precede it, the assumptions would have to be made that unstressed pronouns do not obligatorily rise to the DP-related FP_1 (in contrast to what is the case in Standard German). Stressed and unstressed pronouns may rise to the DP-related FP_1, and full DPs may not rise to the DP-related FP_1. This is conceptually a very unfavorable approach which becomes even less favorable when one takes into consideration that Colloquial Non-Standard Viennese German also has a full discourse particle *denn* which patterns on a par with its Standard German counterpart.

Alternatively, the following structure might be proposed which seems to be more adequate to explain the facts:

(93) *structure of VG dn (second approximation)*:

[$_{CP}$ [$_{DP\text{-related FP0}}$ ... [$_{FP0}$ *dn* [$_{DP\text{-related FP1}}$ ... [$_{FP1}$ (*denn*) [$_{DP\text{-related FP2}}$ ... [$_{FP2}$ *wohl* [...

This structure equals that in (91), the only difference being that two more functional projections are assumed to the left of the DP-related FP_1. Again, unstressed pronouns obligatorily rise to the DP-related FP_1 and full DPs are allowed to move there, but in this case stressed and unstressed pronouns may move further up to the DP-related FP_0, while full DPs may not – or only marginally. This solution explains the empirical facts, but is quite stipulative and therefore conceptually unfavorable as well. However it might receive support from the fact that *dn* cannot occur in yes/no-questions. It has been pointed out in literature (most recently in May 2000) that SG *denn* in wh-questions has the defining property of contextualizing the question and can *optionally* express surprise. In contrast, SG *denn* in yes/no-questions only performs the second function which is optional in wh-questions, namely to express the contradiction between an expected

event and an occurred event. While the *contextualizing* function is still present in VG *dn*, it appears as if *dn* were not able to express surprise. Speakers of Colloquial Non-Standard Viennese German rather use *leicht* or full *denn* to perform this function. If it is assumed that the structural position which is linked to expressing surprise (for instance, FP_1) is lower in the structure than the contextualizing position (FP_0), this fact might be explained by analyzing *dn* to be higher in the structure than *denn*, namely base-generated in FP_0. However, this is only a premature sketch and would have to be worked out more completely if it were to be pursued.

Consider the following alternative account, based on the description in (91). VG *dn* and *denn* are assumed to be base-generated in the same functional projection, FP_1. Unstressed pronouns obligatorily move higher than FP_1, to the DP-related FP_1, as noted above. The constellation is spelled out, and PF Movement sets in which rises *dn* across the DP-related FP_1:

(94) a. *structure of VG dn at Spell-Out (second possible approach):*
$[_{CP}\ [_{DP\text{-related FP1}}\ \ldots\ [_{FP1}\ dn\ /\ denn\ [_{DP\text{-related FP2}}\ \ldots\ [_{FP2}\ wohl\ [\ \ldots$

b. *PF-Movement after Spell-Out:*
$[_{CP}\ [dn_k\ [_{DP\text{-related FP1}}\ \ldots\ [_{FP1}\ t_k\ /\ denn\ [_{DP\text{-related FP2}}\ \ldots\ [_{FP2}\ wohl\ [\ \ldots$

This PF-Movement operation is optional in the case where the DP-related FP_1 is occupied by stressed and unstressed pronouns, but obligatory in the case of full DPs – at least for the majority of speakers.

However, in chapter 3 it will be argued that VG *dn* is a clitic version of VG *denn* which is base-generated within the same SpecFP position as *denn* (e.g. $SpecFP_1$) and then moves up and cliticizes to the C^0 head. In contrast to the analysis at hand, it will be argued that this process is obligatory and that the fact that stressed pronouns appear to be able to precede *dn* can be accounted for by assuming that *dn* in these exceptional cases is not base-generated in clausal functional projections, but within the extended projection of the stressed pronoun. It will further be claimed that all unstressed pronouns which precede *dn* can be analyzed as

pronominal clitics which are also head adjoined to the C^0 head, earlier in the derivation than *dn*. It will be shown that this analysis receives both empirical and conceptual support.

At this point it should be remarked that yet another solution is possible: The different behavior of *dn* and *denn* with respect to full DPs might be connected to their different behavior in relation to other adverbials. In other words, the inability of *dn* to follow full DPs might be linked to its inability to occur lower than $Mood_{evaluative}$ – and eventually to the fact that *dn* cannot perform a *focusing use*. To test this hypothesis, it would have to be shown that *denn* by default precedes all full DPs and that structures in which *denn* follows them are marked structures in which it focuses on the successive constituent. However, such an explanation does not explain why *dn* can precede unstressed pronouns while this is not possible for *denn*. Furthermore, it would have to be shown that stressed pronouns differ from full DPs in that they may precede non-focusing *denn*, and thus *dn*, while full DPs may not. Consider again the resulting structure:

(95) *structure of dn (third possible approach):*

$[_{CP}\ [_{DP\text{-related FP1}}\ \ldots\ [_{FP1}\ \textit{dn}\ /\ \textit{denn}\ [_{DP\text{-related FP2}}\ \ldots\ [_{FP2}\ \textit{wohl}\ [\ \ldots$

In this structure, ignoring unstressed pronouns as they are not covered by such an approach, stressed pronouns are allowed both to precede and to follow *dn* and *denn* while full DPs cannot rise higher than to the DP-related FP_2. Therefore, all instances of *denn* following full DPs are instances of *denn* not occurring in its canonical position and performing a focusing use. However, this analysis again assumes a distinction between full DPs and stressed pronouns which is not independently motivated. Only the latter but not the former may move to the DP-related FP_1. Therefore this analysis will not be pursued further, as the above proposed analysis that will be carried out in chapter 3 is conceptually more favorable.

2.4.4 Alternative implementations

At this point, some short remarks should be made on alternatives to the assumption that discourse particles are maximal projections and can be treated on a par with sentence adverbials. If they are assumed to be fundamentally different from adverbials – an assumption which has not received any empirical support up to now – they cannot be considered to be generated in the specifiers of adverb-related functional projections.

The most obvious alternative possibility is to assume that discourse particles structurally differ from sentence adverbs mainly in that they are not maximal projections, but syntactic heads. As shown above, they cannot be assumed to be generated in the head positions of clausal functional projections, as they would interfere with V2-movement. Therefore, they can only be considered to be heads of "empty" maximal projections which are generated in the specifiers of functional projections – it still has to be determined, which functional projections they specify[19]. Such an approach might resemble approaches to clitics in which clitic elements are considered heads of "empty" DPs – their XP status has to be assumed to allow for Case- and theta-assignment. In fact, in chapter 3.4, a similar approach will be proposed for the case of *dn* which is assumed to be a clitic element, based on Cardinaletti and Starke's (1999) analysis of pronominal clitics. Non-clitic discourse particles like *denn* and *ja* will however be treated as maximal projections, corresponding to weak pronouns in Cardinaletti and Starke's analysis.

At this point, one last question should be addressed. If discourse particles were assumed to be neither generated as heads nor as specifiers of adverb-related functional projections, where would they have to be generated? Again, there are two possibilities. Either they are assumed to adjoin to clausal functional projections, or they are assumed to be located in the specifiers of either clausal or non-clausal maximal projections

[19] Note that in a Minimalist approach non-projecting heads are automatically considered to be maximal projections (cf. Lasnik et al. 2005).

different from the adverb-related FPs. The first approach is conceptually problematic as it would presuppose that Cinque's approach is combined with an adjunction approach which would lead to a massive amount of overgeneration. Therefore, only the latter approach might seriously be pursued. As it has been shown that discourse particles must receive an embedded interpretation when they are generated within DPs, they must be assumed to be generated in clausal functional projections to be able to take wide scope over the whole utterance. As it is unlikely that discourse particles are generated in DP-related functional projections, the only possibility which remains would be to assume that there are "discourse-particle-related" functional projections, which might probably be defined more generally as illocution-related functional projections. If any empirical evidence for such projections was gained from cross-linguistic research, this could be a serious alternative to the approach that has been outlined above.

2.5 Summary

In this chapter, the basics for an analysis of discourse particles and in particular the discourse particles VG *dn* and SG (and VG) *denn* have been presented. The chapter contains an overview of relevant descriptive generalizations on the syntactic behavior of discourse particles. It has been shown that German discourse particles are restricted to the descriptive *middle field*, that they are sensitive to sentence type and speech act type and that co-occurring ones are subject to strict linearization rules. Furthermore, an introduction has been provided to the basic issues in treating discourse particles within the Generative framework.

It has been pointed out that two of the most fundamental issues in analyzing German discourse particles within the Generative framework are the issue of their projectional status (i.e. whether they are syntactic heads or maximal projections) and the question whether they are base-generated

as adjuncts or as specifiers to clausal functional projections. It has been shown that their syntactic behavior favors a treatment as maximal projections (as they have sentential scope and nevertheless do not interfere with verb movement). Furthermore, it has been illustrated that an approach within Cinque's framework is more fruitful than an adjunction approach, as it can account for their strict linearization facts which remain unexplained under an adjunction analysis.

Furthermore, Cinque's framework allows for a more precise localization of *denn* and *dn* within the structure of German clauses, namely to a fixed position within the specifier of a functional projection at the upper end of Cinque's hierarchy corresponding to the highest area of the IP space. It has been shown that *dn* behaves like its counterpart *denn* in preceding all other co-occurring discourse particles and sentence adverbs. VG *dn* differs from *denn* in that it cannot be generated in non-canonical positions lower in the structure. In contrast, the adjunction analysis proposes that discourse particles can be adjoined to a variety of different maximal clausal projections without providing any theoretic tools for determining their exact positions. In this regard, the adjunction analysis is rather arbitrary in comparison to the more restrictive analysis within Cinque's framework.

So far, neither the adjunction analysis nor Cinque's framework provide an adequate explanation for the fact that *dn*, but not *denn*, obligatorily precedes full DPs while it is allowed to follow stressed pronouns. However, a possible analysis of this phenomenon has been pointed out which will be further pursued in chapter 3, namely that *dn* and *denn* are base-generated in the specifier of a clausal functional projection within Cinque's Hierarchy and *dn* subsequently undergoes head movement and cliticizes to the C^0 head. It has also been mentioned that *dn* is allowed to follow stressed pronouns which can be treated as an exceptional case in which *dn* can be argued not to take sentential scope, but to take narrow scope over the stressed pronoun and to be base-generated within the pronoun's extended projection. The proposed analysis will also account for the fact that unstressed non-clitic pronouns

may follow VG *dn*, but not SG (and VG) *denn*, as these pronouns can be assumed to obligatorily move to a DP-related functional projection which is higher than the functional projection in which *denn* and *dn* are base-generated. In this regard, an analysis with Cinque's framework is again more favorable than an adjunction approach, as it is more restrictive in positing which position hosts the discourse particles and which position accordingly attracts the unstressed pronouns.

Chapter 3

More Specific Questions

3.1 Sentential Stress and Information Structure

In this section, the phenomena of sentential stress and information structure in German are discussed, followed by an investigation of their relevance for the structural behavior of VG *dn*. I will investigate stress patterns that have been considered neutral stress patterns in German, and compare them to other possible patterns and their motivation. Furthermore this chapter contains a discussion of how concepts of *information structure* such as the distinction between "new" information (labeled *rheme*, *focus* or *comment* in different theories) and "old, given" information (*theme*, *topic* or *presupposition*) can be integrated in the framework. Therefore, only theories will be investigated which are relevant for a treatment of these phenomena within the generative framework, starting with Höhle (1982), Jacobs (1988, 1992) and Zubizarreta (1998). Eventually, it will be discussed how these factors interact with the syntactic behavior of VG *dn* if at all.

3.1.1 Determining Neutrality

In his influential article on neutral sentence structure and neutral stress in German, Höhle (1982) investigates the phenomenon that certain word orders are only licensed under specific stress patterns, while other orders appear to be more general and are thus often considered *normal* or

neutral[20]*:* As Höhle's formalism is not relevant to the topic of this thesis, I will discuss his theory as informally as possible. Höhle proposes the following:

Stylistically normal (neutral) stress (Ger. *stilistisch normale Betonung*) can be determined by comparing a set of clauses which are identical except for their respective stress patterns. The clause which allows for the relatively highest number of *possible foci* can be treated as the stylistically normally stressed one as it is licensed in the largest number of different context types and is thus contextually relatively unmarked with respect to its stress pattern. Consider the following example: The clauses in (1) constitute such a set.

(1) a. Karl hat den HUND gestreichelt.
b. KARL hat den Hund gestreichelt.
Karl has the dog stroked
'Karl stroked the dog.'
(Höhle 1982:101,ex.74a+c)

Höhle (1982:93) assumes that every *focus* of a clause (defined as the part which is marked as conveying *new* information) determines the context types in which the clause can occur. Context types are assumed to be based on the shared knowledge of a speaker and a hearer and may be determined by context questions which express this presupposed knowledge. As illustrated in (2), (1a) has three possible foci (the focused constituents being marked with an *F*) and can thus occur in three different context types, expressed by means of the respective context questions. In contrast, the contextually marked (1b) can only occur in one single context type, namely that in (3). Correspondingly, the clause in (1a) can be claimed to bear *stylistically normal stress*, in contrast to that in (1b).

[20] Note that the existence of *neutral* or *normal* variant of a clause is controversial. As has been pointed out to me by Wolfgang U. Dressler, there are strong arguments against the assumption of *neutral* or *normal* word order and stress.

(2) a. Who did Karl stroke? – Karl hat [$_F$ den HUND] gestreichelt.
b. What did Karl do? – Karl hat [$_F$ den HUND gestreichelt.]
c. What happened? – [$_F$ Karl] hat [$_F$ den HUND gestreichelt.]
Karl has the$_{ACC}$ dog stroked
'Karl stroked the dog.'

(3) Who stroked the dog? – [$_F$ KARL] hat den Hund gestreichelt.

Höhle observes that the stressed constituents are always part of the focus in declaratives[21]. Apart from this observation he assumes that sentential stress is in principle free and eventually determined by pragmatic rules. As the stressed constituent is part of every possible focus, Höhle (1982:98,ex.66) labels it the *minimal focus* of the sentence. Other *possible foci* of a sentence contain it and are assumed to constitute *focus projections* from the minimal to the non-minimal focus.

Höhle further introduces a criterion for *stylistically normal word order* (Ger. *stilistisch normale Wortstellung*): *Stylistically normal word order* can be determined by comparing a set of clauses which only differ with respect to their word-order and stress pattern. From such a set, the clause which allows for the relatively highest number of possible foci and all clauses which share its word-order, may be considered to be the ones with stylistically normal word-order. This is based on the observation that this word-order is licensed in the largest number of different context types. Consider the following example:

(4) a. Karl hat den HUND gestreichelt.
b. den Hund hat KARL gestreichelt.
c. KARL hat den Hund gestreichelt.
Karl has the$_{ACC}$ dog stroked
'Karl stroked the dog.'
(Höhle 1982:101,ex.74 – glosses and translation added)

[21] As will be shown, this descriptive generalization does not apply to interrogatives.

All of the clauses in this set only differ with respect to their word-order and stress pattern. Clause (4a) can have the highest number of possible foci and thus appear in the largest number of different context types. (4a) and (4c) only differ with respect to their stress pattern. Therefore, they display stylistically normal word-order, according to Höhle.

Evidently, if all possible word-orders and stress patterns which can be composed from a specific set of lexical elements are compared, stylistically normal word-order and stress in Höhle's terminology is in general determined as that word-order and stress pattern which has the *set of all constituents* as a possible focus projection. In declaratives, such a focus corresponds to the neutral context question *what happens?* (or to the corresponding *what happened?* and *what will happen?*).

3.1.2 Assigning neutral stress

While Höhle limits himself to stating that the main stress of a declarative has to be part of every possible focus and may be determined by "pragmatic means", other researchers have tried to come up with mechanisms for sentence stress assignment. A first approach was already made in Chomsky and Halle's (1968) *Sound Pattern of English (SPE)* in which sentence stress is assumed to be determined phonologically. More recent approaches such as that of Jacobs (1988, 1992), Cinque (1993) and Zubizarreta (1998) assume a syntactic mechanism of stress assignment. The *SPE* approach and Cinque's (1993) analysis are parallel in that they have neutral sentence stress assigned to one particular position at the level of surface structure, namely the *right-most constituent* (in *SPE*) or the *most deeply embedded one* (in Cinque 1993). These analyses face theoretical and empirical problems, for instance the fact that neutral stress is often assigned to different positions in apparently analogous surface structures (cf. Kahnemuyipour 2004 for a recent discussion). Jacobs (1992) and Zubizarreta (1998), in contrast, deal with this problem by postulating a two-fold mechanism of stress assignment

which is also subject to argument structure and selectional restrictions. Due to restrictions on the scope of this thesis, only Zubizarreta's analysis is discussed in this sub-section.

Zubizarreta proposes a two-fold *Nuclear Stress Rule*, which consists of *C-NSR* and *S-NSR. C-NSR* is only sensitive to asymmetric c-command and thus corresponds to the rules for neutral stress assignment as proposed by Cinque (1993) and Chomsky and Halle (1968); *S-NSR*, on the other hand, operates on the selectional properties of constituents. The function of C-NSR is to assign syntactic prominence to that of two sister nodes which is lower in the structure, assuming Kayne's (1994) *Linear Correspondence Axiom* (cf. Zubizarreta 1998:40). Certain *metrically invisible* elements such as determiners and auxiliaries are ignored by the computation. The second part of the *NSR*, the *S-NSR* assigns syntactic prominence to that of two sister nodes which is lower in the selectional ordering which is drafted as follows:

(5) *Selectional ordering* (Zubizarreta 1998:53)
$C – T – V_1 – ...\ V_i – ...\ P/V_m – D_m$
$\backslash\ D_1 ...\quad \backslash\ D_i ...$

In this draft, V_1, ... V_i, ... and P/V_m are elementary verbs or prepositions which are considered to constitute the lexical verb. Categories which are to the right of other categories in (5) are considered to be *lower* in the selectional ordering. For cases where S-NSR and C-NSR conflict with each other Zubizarreta claims that the S-NSR has primacy in German and C-NSR does not apply. This analysis accounts for the fact that neutral sentence stress in German is commonly claimed to be assigned to the subject in unaccusatives and to the verb in unergatives (cf. Höhle 1982:105):

(6) *Unaccusative*
dass das MÄDCHEN kommt
that the girl comes

(7) *Unergative*
dass das Mädchen GETANZT hat
that the girl danced has

The subject is commonly assumed to be generated in the direct object position in unaccusatives and thus lower in the selectional hierarchy than the verb which explains the correct neutral stress pattern in (6). In contrast, it is base-generated in the subject position in unergatives and thus higher than the predicate which accounts for the stress pattern in (7).

At this point, the issue has to be investigated how these approaches can be carried over to German wh-interrogatives and how possible interactions with the behavior of VG *dn* can be investigated. The traditional literature is mainly based on declaratives, so the first question to ask is, how the informationally neutral word-order and stress in wh-interrogatives might be determined and how neutral stress assignment may take place. Trivially, context questions can never be used as a heuristics. Commonly, wh-questions are assumed to be such that the wh-element constitutes the focus and the rest constitutes the presupposition (cf. de Vriendt et al. 1991). At this point, a contradiction to Höhle's observations emerges. In wh-questions, this presumptively focused element (i.e. the wh-element) is never stressed, except in echo-questions in which it is contrastively focused (cf. Kahnemuyipour 2004:193-203 for a discussion). While indefinite direct objects are assigned neutral stress in declaratives, stress is reversed to the predicate when they are wh-moved. While (8b) is the neutral sentential stress in an out-of-the-blue context, (8c) is only possible in *echo questions* (*%* denotes *not possible in the relevant context and reading*):

(8) a. (What happened?) Der Hans hat BÜCHER gekauft.
the Hans has books bought.
'Hans bought books.'

b. Was hat der Hans GEKAUFT?
what has the Hans bought
'What did Hans buy?'

c. % WAS hat der Hans gekauft? *(in an out-of-the-blue context)*

Kahnemuyipour (2004) assumes the *sentential stress rule* assigns stress to the leftmost element in the spelled out complement at *the spell out phase* within a phase-based analysis (cf. Chomsky 1999 and subsequent work). He further assumes this rule to apply to the *surface structure* at spell out, i.e. to be insensitive to traces. Therefore, wh-moved elements "escape" sentential stress assignment. For cases in which the spelled out complement is phonologically empty, Kahnemuyipour (2004:106) assumes that default stress is assigned to the closest phonologically non-null element. Witness the derivation of (8b) within his hypothesis:

(9) $[_{CP}$ Was$_i$ $[_C$ hat] [der Hans $[_{vP}$ v [t_i GEKAUFT]]]]?

Leaving the issue of stress assignment aside for now, the following examples show that VG *dn* is compatible with all possible stress patterns for (8b), except for the echo-question stress in (10a) – note that (10d) can have both a contrastive narrow focus reading and a "neutral" broad focus reading:

(10) a. * WAS hat-*n* der Hans gekauft?
b. Was HAT-*n* der Hans gekauft?
c. Was hat-*n* der HANS gekauft?
d. Was hat-*n* der Hans GEKAUFT?
what has-*dn* the Hans bought

Regarding the semantic and pragmatic contribution of *dn* (cf. chapter 4), no significant difference can be observed between the clauses in (10). The contribution of *dn* is the same in all narrow focus readings and in their

informationally neutral counterpart being (10d) in its broad focus reading. In all cases, *dn* serves to contextualize the utterance by conveying the speaker's assumption that the hearer is already acquainted with the proposition which makes up the propositional frame of the question and implying that the hearer is able to answer the question. This can be explained by pointing out that *dn* takes clausal scope and modifies the whole speech act – as will be claimed in chapter 4.

The following example shows that VG *dn* is also licensed in clauses in which the constituent that bears neutral sentence stress precedes it. As the clitic pronoun *a* 'he' is metrically invisible and the wh-element has been shown to be generally unable to bear neutral stress. It can only be assigned to the finite verb in Verb Second position (cf. (11b)):

(11) a. * WAS hat-a-dn?
b. Was HAT-a-dn?
what has-he$_{CL}$ *dn*
'What is his problem?'

So far, it has been shown that VG *dn* is independent of different patterns of sentence stress assignment. It does however display a special behavior with respect to one type of narrowly focused constituents, namely to stressed full pronouns (cf. chapters 1 and 2). This phenomenon is investigated in more detail in the following sub-section in which also the question will be discussed what it means for a constituent in a wh-interrogative to be contrastively focused.

3.1.3 The role of focus in the syntactic behavior of VG *dn*

Focus is commonly defined as the non-presupposed part of a sentence which conveys new information, while the rest of the sentence, its *topic* (or *presupposition*), is assumed to be available to the hearer from the relevant context (cf. Chomsky 1971, 1976; Jackendoff 1972; and Höhle 1982). All

declarative sentences have at least one focus marked constituent which bears sentential stress. If the maximal focus projection of this constituent contains all of the clausal constituents, the stress pattern and word-order might be considered *neutral*, and sentential stress in such clauses has often been assumed to be assigned by a process of *neutral stress assignment*. Accordingly, scholars such as Höhle claim that the whole sentence is in focus in neutrally stressed declaratives. Therefore, the corresponding context question for neutrally stressed declaratives is *What happened?* In contrast, it is often assumed for non-neutrally stressed clauses that the minimally focus-marked constituent does not or cannot focus project to all constituents of the clause and does not project at all or only to a certain degree. This phenomenon is commonly labeled *narrow focus* (cf. Jacobs 1992). In the traditional literature, two different kinds of *narrow focus* are assumed, namely *contrastive (or identificational) focus* and non-contrastive *information (or presentational) focus* (cf. Jacobs 1988). Information focus merely conveys non-presupposed information, as illustrated in example (12a), while contrastive focus denies part of the hearer's presupposition, as in (12b).

(12) a. *Information Focus*
(Who feeds the dog?)
[$_F$ HANS] füttert den Hund.
Hans feeds the dog

b. *Contrastive Focus*
(Georg feeds the dog.)
Nein, [$_F$ HANS] füttert den Hund. (... nicht Georg.)
no, Hans feeds the dog (...not Georg.)

Jacobs (1988) objects to such analyses which treat focus as *new* information that can be determined by means of context questions and contrastive comparison. He argues they only apply to assertoric declarative clauses and cannot be used to deal with other clause types. In contrast to such traditional analyses, he proposes that the main function of

focus is to relate the uttered proposition to a set of possible alternatives rather than to mark information as *new*. As a prototypical example of a clause where the focused element conveys old information, he presents the following sentence:

(13) Nicht GERDA hat Ottheinrich geheiratet [, sondern..]
not GERDA has Ottheinrich married [, but..]
'It wasn't Gerda who married Ottheinrich, but..'
(adapted from Jacobs 1988:97,ex.16, glosses and translation added)

He points out that the most natural context for such an utterance is one in which it is immediately preceded by the corresponding affirmative clause in which is claimed that Gerda has married Ottheinrich.

In accordance with his perception of *focus* as a mechanism which relates propositions to possible alternatives, Jacobs shows it is necessary to come up with different testing procedures for different clause types which serve as a heuristics to determine their focus, i.e. their respective sets of possible alternatives. While *context questions* are appropriate testing procedures for assertoric declaratives, Jacobs (1988:98) shows for instance that the focus of imperatives can be determined by means of the *shall-interrogative-test* (Ger. *Soll-Fragetest*). The following example illustrates this for the different possible narrow focus distributions in an imperative formed from a transitive verb:

(14) a. Wen soll ich heiraten? 'Whom shall I marry?'
Heirate [$_F$ LUDWIG]!
b. Was soll ich mit Ludwig tun? 'What shall I do with Ludwig?'
[$_F$ HEIRATE] Ludwig!
'Marry Ludwig!'

Note that (14b) is slightly problematic as it would be more natural to substitute the pronoun *ihn* 'him' for the full DP *Ludwig* 'Ludwig'.

Furthermore, it is not clear, which of the two stress patterns allow for a broad focus reading corresponding to the question *What shall I do?*

Compare the two possibilities in (15).

(15) a. Was soll ich tun? 'What shall I do?'
[$_F$ Heirate LUDWIG]!
b. Was soll ich tun? 'What shall I do?'
[$_F$ HEIRATE Ludwig]!
'Marry Ludwig!'

Jacobs (1988) suggests that only (15a) is possible, and (15b) is excluded. However, neither of the two imperatives in (15) can occur in an informationally neutral *out-of-the-blue context* and both of them in fact appear to be possible answers to the shall-interrogative *What shall I do?* – in contrast to Jacobs's claim. This observation is important as it indicates that such tests for focus structure can only be used as a heuristics and are not always fully reliable. A further investigation of this issue exceeds the scope of this thesis.

At this point, it becomes possible to investigate the function of narrow focus in wh-questions. As has been pointed out, traditional approaches which equate *focus* with *new* information imply that the focused element in a wh-interrogative is always the wh-element. The rest of the clause has to be considered old, presupposed information. As we have further seen, neutral sentential stress cannot be argued to be on the wh-element (except for reduced wh-questions which only consist of the wh-element). Compare the following examples which illustrate a wh-question with neutral stress and one with narrow focus stress[22]:

[22] The focus in this example is on the fact that (16b) in which *Hans* bears sentence stress only allows for a reading in which *Hans* is contrasted with another individual who might be the subject of this clause, and not for a broad focus reading in which the question is not related to such a set of alternative elements. Therefore no other possible stress patterns are discussed here as they are not relevant for the ongoing discussion.

(16) a. *Broad Focus (Neutral Sentence Stress)*
[$_F$ Warum füttert Hans den HUND?]
b. *Narrow Focus*
Warum füttert [$_F$ HANS] den Hund?
why feeds Hans the dog
'Why does Hans feed the dog?'

While it is difficult to come up with an interpretation of (16b) within a traditional analysis that equates *focus* with *new* information, the analysis within Jacob's (1988) framework is straightforward. According to Karttunen (1977), it can be assumed that questions express a propositional frame from which sets of alternative propositions are created. Subsequently, the hearer is requested to select one of these propositions (cf. also the discussion in chapter 4). Within such an approach the proposal can be made that the expressed propositional frame in (16b) is related to other propositional frames which only differ in the subject of the predicate *feed*. Less formally spoken, the proposition in (17a) which determines the set of alternative propositions denoted by the question in (16b) is related to the a set of propositions in which *Hans* is replaced by other possible subjects, exemplified in (17b):

(17) a. Hans feeds the dog, because X
b. {Mary, Tim, George, Lisa} feeds the dog, because X

This approach proposes that narrow focus creates a relation to a set of possible alternative propositions. This seems to fit the intuitions of native speakers. Questions such as (16b) are generally understood such that the speaker wants to know why it is Hans who feeds the dog and not somebody else. Appropriate contexts for uttering (16b) are such that the speaker assumes that Hans is not the right person to feed the dog for whatever reason. As long as *Hans* bears contrastive stress, no other interpretation is possible. Clearly, the fact that it is Hans who feeds the dog is presupposed and focus is not at all related to marking information

as new information. These observations enable us to address the issue of contrastively stressed pronouns in wh-questions and their interaction with VG *dn*. As we have seen in (10), *dn* can co-occur with all possible narrow focus distributions in wh-questions, except for echo-questions, without changing its semantic and pragmatic contribution (cf. chapter 4).

(18) a. * WAS hat-n der Hans gekauft?
b. Was HAT-n der Hans gekauft?
c. Was hat-n der HANS gekauft?
d. Was hat-n der Hans GEKAUFT?
what has-*dn* the Hans bought
'What did Hans buy?'

It is not trivial that *dn* cannot modify echo-questions in an analysis as proposed by Jacobs (1988), where the function of focus is claimed to relate the proposition expressed by the modified utterance to a set of relevant alternatives. However these questions clearly have a separate status as the contribution of focus stress is redundant. According to Karttunen (1977), questions create a set of alternative propositions based on the propositional frame which they express. The wh-element expresses the variable which determines the set of possible alternative propositions. If the wh-element itself bears focus stress, Jacobs's analysis results in the fact that the wh-element is redundantly marked twice as a variable which serves to determine a set of propositions. An exact characterization and explanation of the phenomenon of echo-questions exceeds the scope of this thesis and is thus left open for further research. However, it can be concluded that echo-questions differ from all other wh-questions with contrastively focused constituents in that the latter are related to a *second* set of alternative propositions which is determined by the focus. This is not the case for the former.

At this point it is possible to analyze the interaction between stressed pronouns and *dn* in wh-interrogatives. Recall the following examples:

(19) a. ^{OK} Wie lang bleibt-*n SIE* noch? (cf. (23), (26) in chapter 1)

b. ^{OK} Wie lang bleibt *SIE-dn* noch?
How long stays *SHE-dn* still?
'How much longer is SHE going to stay?'

(20) a. ^{OK} Wieso hat-a-*dn DIR* den Arzt empfohlen? (cf. (22), (30) in chapter 1)

b. $^{OK?}$ Wieso hat-a *DIR-dn* den Arzt leicht empfohlen?
Why has-he$_{CL.NOM}$ *YOU*$_{DAT}$-*dn* the$_{ACC}$ doctor leicht$_{D.PRT}$ recommended?
'Why did he recommend this doctor to YOU?'

The analysis of the function of focus stress in these wh-questions is straight forward within Jacobs's (1988) framework. In (19) the person referred to by the contrastively stressed pronoun *SIE* 'she' is contrasted with other possible referents. The same is the case in (20) for the person referred to by means of the 2nd person singular. A possible context for (19) is one where several people are present but the speaker is only interested in knowing when the one person referred to by *SIE* 'she' is going to leave. Accordingly, in every possible context for (20), the presupposition holds that someone recommended the doctor to more people and not only to the addressee. Again, the speaker uses focus stress to express that she/he is only interested in the propositional frame which contains the addressee as indirect object of the predicate.

The following paradigms shed more light on this phenomenon[23] (% denotes *not possible in the relevant context*) [24]:

[23] Thanks are to Martin Prinzhorn for pointing out the relevant differences to me.

[24] Martin Prinzhorn has pointed the following out to me: Of the questions in (21), (21a) is the most natural utterance, while (21b) appears to be less natural and (21c) least natural.

(21) Context: The party is almost over, but Hans is still sitting on the couch. The speaker asks the hearer when Hans is going to leave.

a. Wann geht ER-dn endlich?

b. Wann geht-n ER endlich?

c. Wann geht ER endlich?

when goes (*dn*) he (*dn*) finally

'When is he finally going to leave?'

(22) Context: Hans and Susi went to two different locations for a holiday.

a. % Wohin ist ER-dn gefahren? (und nicht SIE.)

b. Wohin ist-n ER gefahren? (und nicht SIE.)

c. Wohin ist ER gefahren? (und nicht SIE.)

where.to is (*dn*) he (*dn*) gone.by.car

'Where did he go?'

These examples suggest that the degree of *contextual presence* is relevant for licensing *dn* to follow stressed pronouns. While the stressed pronoun *ER* 'he' in (21) directly refers back to an antecedent which has just been introduced to discourse, *ER* 'he' in (22) picks out an element of a set of elements which is available in the utterance context. This observation is supported by the following example in which the sentence in (22a) is fully acceptable:

(23) Context: Hans and Susi went to two different locations for a holiday.

A: Hans left yesterday.

B: Wohin ist ER-dn gefahren?

where is he-dn gone.by.car

'Where did he go?'

In fact, the ability of *dn* to follow stressed pronouns does not appear to rely on the fact that focus relates the modified proposition to a set of alternatives. Jacobs (1988:115) points out that sentence stress like the

one in (24) is not related to focus marking, but simply is a specific property of exclamatives.

(24) Wie siehst DU denn aus?
how look.like you $denn_{D.PRT}$ out
'What happened to you?' (literally: 'What do you look like?')
(Jacobs 1988:115,ex.4)

The following examples show that *dn* is indeed able to occur in such clauses and follow the stressed pronoun:

(25) Context: The hearer enters the room ragged and with a bleeding nose.
a. Wie schaust DU-dn aus?
b. Wie schaust-n DU aus?
c. Wie schaust DU aus?
how look.like (*dn*) you (*dn*) out
'What happened to you?' (literally: 'What do you look like?')

In conclusion, focus marking is not the relevant factor for licensing *dn* to follow stressed pronouns. Consider some additional examples for situations in which *dn* is licensed to follow stressed pronouns:

(26) A: Ann has left to buy beer. It'll take her at least half an hour.
B: $John_i$, too, has left to buy beer.
a. A: Wann kommt ER_i-dn wieder zurück?
b. A: Wann kommt-n ER_i wieder zurück?
when comes (*dn*) he (*dn*) again back
'When is he coming back again?'

(27) A: John$_i$ has left to buy beer.
B: Ann, too, has left to buy beer. She said it might take her half an hour.
a. C: % Wann kommt ER$_i$-dn wieder zurück?
b. C: Wann kommt-n ER$_i$ wieder zurück?

(28) A: John$_i$ and Ann have gone out to buy beer, independently of each other.
a. B: % Wann kommt ER$_i$-dn wieder zurück?
b. B: Wann kommt-n ER$_i$ wieder zurück?

The relevant feature which distinguishes the clauses in (21), (23), (25) and (26) from (22), (27) and (28) is that *dn* can only follow stressed pronouns which are directly linked to their referent or antecedent in the immediate utterance context (either in the preceding utterance or in the non-linguistic context). In contrast, *dn* cannot follow stressed pronouns which select their antecedent from a set of individuals, even if it is unambiguously clear (by means of gender agreement) which of the individuals is selected.

This difference might be expressed more generally as a difference between deictic reference and reference to an antecedent. Reconsider the examples in (22) and (23). While the stressed pronoun can be replaced by a demonstrative in (23), this is not possible in (22). This phenomenon coincides with the ability to have *dn* follow the pronoun:

(29) A: Hans and Susi went to two different locations for a holiday.
a. B: Wohin ist ER gefahren?
b. B: % Wohin ist ER-dn gefahren?
c. B: % Wohin ist DER(-dn) gefahren?
where is he/that.one (dn) gone.by.car
'Where did he go?'

(30) Context: Hans and Susi went to two different locations for a holiday.
A: Hans left yesterday.
a. B: Wohin ist ER gefahren?
b. B: Wohin ist ER-dn gefahren?
c. B: Wohin ist DER(-dn) gefahren?

It can thus be concluded that *dn* can follow stressed pronouns which refer directly and "deictically" (cf. (30)); it cannot follow stressed pronouns which select an antecedent from a set (cf. (29)). Note that *dn* can co-occur with stressed pronouns in all of the presented cases, as long as it precedes them. It can thus be assumed that the default position of *dn* is that in which it precedes stressed pronouns. As *dn* is assumed to take sentential scope in this default position, it is likely that *dn* has different scope properties when it follows stressed pronouns.

At this point, it is proposed that *dn* which follows stressed pronouns takes narrow scope over these respective pronouns and is accordingly base-generated within their extended projection. It will be shown in chapters 3.2.1 and 3.4 that the fact that *dn* does not move out of the pronominal projection to cliticize to C^0 directly follows from the assumption that clitic elements need to have their lacking prosodic features assigned by an appropriate functional head. Cardinaletti and Starke (1999) argue that such a functional head is contained in the projection of every non-clitic pronoun; therefore it clearly suffices for *dn* to head adjoin to the respective head. The details of this analysis will be discussed in chapter 3.4. Basically, the following fundamentally different structures are assumed for the two different distributions, *dn* preceding stressed pronouns (cf. (31b)) and *dn* following them (cf. (31a)):

(31) a. $[_{CP}$ Wann $[_{C}$ geht$]$ $[_{IP}$ $[_{DP}$ ER-dn$]$ endlich?
b. $[_{CP}$ Wann $[_{C}$ geht-$n_i]$ $[_{IP}$ $[_{F1P}$ $[_{SpecF1P}$ $t_i]$ $[_{F1'}$ $F_1{}^0$ [$[_{DP}$ ER$]$ endlich?

Further conceptual arguments for such an analysis will also be presented in chapters 3.2.1 and 3.4. At this point it can be remarked that such an

analysis accounts for the fact that the ability of *dn* to follow stressed pronouns depends on the semantic properties of the respective pronouns. The main semantic contribution of *dn* is to contextualize the entity to which it applies. It is quite intuitive that its licensing conditions are linked to the semantics of the respective entity. An open issue which remains for further research is why deictic pronouns are rather compatible with a contextualizing element than pronouns which refer back to an antecedent.

3.1.4 Concluding remarks

As mentioned above, in the traditional descriptive literature it has often been claimed that discourse particles interact with information structure in that they demarcate the border between *thematic* (i.e. *topic* or *presupposition*) and *rhematic* part (i.e. *focus* or *comment*) of a sentence (their so-called *watershed* function, cf. Krivonosov 1977:202). At this point it is not clear how these observations can be accounted for in the ongoing discussion. Consider the following example sentence with broad focus structure:

(32) (What happened?)
[$_F$ Gestern hat der Karl den HUND gestreichelt]
yesterday has the$_{NOM}$ Karl the$_{ACC}$ dog stroked
'Yesterday, Karl stroked the dog.'

If we insert the discourse particle *wohl*[25], there are two positions in which it can be inserted without changing the stress pattern:

(33) a. Gestern hat der Karl *wohl* den HUND gestreichelt.

[25] Note that it is not clear what is actually meant by claiming that discourse particles such as *ja* are located at the border of thematic and rhematic part of the clause, as *ja* expresses the assumption that the modified proposition is already known to the hearer, and thus marks the whole proposition as presupposed, old information (cf. chapter 4).

b. Gestern hat *wohl* der Karl den HUND gestreichelt.

According to the traditional analysis of discourse particles, the focus-presupposition structure of these clauses should look as follows:

(34) *Broad Focus reading*
a. Gestern hat der Karl *wohl* [$_F$ den HUND gestreichelt].
b. Gestern hat *wohl* [$_F$ der Karl den HUND gestreichelt].

(35) *Narrow Focus reading*
Gestern hat der Karl *wohl* [$_F$ den HUND] gestreichelt.

In contrast, the following focus-presupposition structure should be excluded (as denoted by the *'*'* in parentheses):

(36) *Broad Focus reading*
(*) [$_F$ Gestern hat der Karl *wohl* den HUND gestreichelt].

It is not clear how this claim could be verified, as the typical test procedures to determine broad focus, context questions and contrastive comparison cannot be applied in this case. Discourse particles always connect the modified clause to some aspects of the discourse situation. Therefore, it can hardly be argued that the utterance might be uttered in an information neutral out-of-the-blue context which is commonly argued to be the only context for a broad focus reading. A further investigation of this issue is beyond the scope of this thesis. However, it is clear that VG *dn* cannot appear in the traditional *watershed* position, as there are arguments to analyze it as a syntactic clitic which cliticizes to the C^0 head – which will be shown in the chapters 3.2 and 3.4.

3.2 Different Syntactic and Semantic Types of DPs

3.2.1 Clitics and pronouns

Recall the observations in chapter 1 on the behavior of VG *dn* with respect to different types of pronouns. As we have seen, clitic pronouns clearly always precede *dn*, which is what we expect as they are commonly assumed to be adjoined to the C^0 head in varieties of German. There are furthermore empirical reasons to assume that clitic discourse particles follow pronominal clitics (cf. Weiß 1998), allowing for the assumption that VG *dn* is a clitic element.

(37) Seit wann regnet (**dn*) es (*dn*) schon? (cf. (16), (19) in chapter 1)
'Since when has it been raining?'

We have further seen that *dn* can apparently both precede and follow unstressed pronouns (sentence stress is marked to indicate that these sentences bear neutral sentence stress):

(38) a. ^{OK} Wann hast-n du ihn das letzte Mal geTROFFEN?
when have-*dn* you him the last time met
'When did you meet him for the last time?'

b. ^{OK} Was schenkst-n du ihr zum GEBURTSTAG?
what give.as.present-*dn* you her to.the birthday
'What do you give her for her birthday?'

c. ^{OK} Wann seids-n ihr gestern HEIMgekommen?
when are-dn you$_{PL}$ yesterday come.home
'When did you come home yesterday?'

(39) a. $^{OK?}$ Wieso beißt mich-n dein HUND immer?
why bites me-dn your dog always
'Why does your dog always bite me?'

b. [OK] Wieso frisst mir-dn der Hund nicht aus der HAND?
why eats me-dn the dog not from the hand
'Why does the dog not eat from my hand?'

c. [OK] Wann seids ihr-dn gestern HEIMgekommen?
when are you-dn yesterday come.home
'When did you come home yesterday?'

As we will see, there are actually reasons to assume that the unstressed pronouns in (39) are treated as clitics and not as unstressed weak or strong pronouns. This assumption is empirically motivated by their tendency to be prosodically reduced when pronounced by informants, and theoretically motivated by Cardinaletti and Starke's (1999) law of *minimize structure*. However, it is clear that the pronouns in (38) are non-clitic and unstressed. It can be concluded that VG *dn* differs from SG *denn* in that *dn*, but not *denn* is allowed to precede unstressed weak pronouns (cf. chapter 2).

Finally, we have seen that stressed pronouns are able to precede as well as to follow *dn*:

(40) a. [OK] Wann geht <[?]ER>-dn <ER> endlich?
when goes <he>-dn <he> finally
'When is he finally going to leave?'

b. [OK] Wieso hat-a <[?]DIR>-dn <DIR> den Arzt leicht empfohlen?
why has-he$_{CL}$ <you$_{DAT}$>-dn <you$_{DAT}$> the doctor leicht$_{D.PRT}$ recommended
'Why did he recommend this doctor to you?'

c. [OK] Wie lang bleibt <SIE>-dn <SIE> noch?
how long stays <she>-dn <she> still
'How much longer is she going to stay?'

d. [OK] Wann seids IHR-dn gestern heimgekommen?
when are you$_{PL}$-dn yesterday come.home
'When did you come home yesterday?'

At this point, some theoretical considerations can be made with respect to the nature of these stressed pronouns which are able to precede *dn*.

In traditional literature it has commonly been assumed that Germanic languages such as Standard German only have one type of pronouns, namely *strong* pronouns, counterexamples such as clitic *es* 'it' being exceptional cases (cf. Cardinaletti 1999). However during the last decade, it has been shown that a bipartition into *strong* and *clitic* pronouns can be observed in most - if not all - varieties of German and Bavarian (cf. Weiß 1998, Abraham 1995). Cardinaletti (1999) and Cardinaletti and Starke (1999) take a more radical position in advocating a universal tripartition of pronouns into *strong*, *weak* and *clitic* pronouns. While these are often homophonous in Germanic languages, they are lexically distinct in languages such as Italian where each of them has one particular syntactic position:

(41) a. *strong*: Non <*a lui> dirò mai <*a lui> tutto <*a lui*>.
no <to.him> say.1sg.FUT never <to.him> everything <to.him>
'I will never say everything to him.'

b. *weak*: Non <*loro> dirò mai <*loro*> tutto <*loro>.
no <to.them> say.1sg.FUT never <to.them> all <to.them>
'I will never say everything to them.'

c. *clitic*: Non <*gli*> dirò mai <*gli> tutto <*gli>.
no <to.him/to.them> say.1sg.FUT never <to.him/to.them> everything <to.him/to.them>
'I will never say everything to him / to them.'
(adapted from Cardinaletti and Starke 1999:166,ex.53a, originally from Cardinaletti 1991)

Cardinaletti and Starke characterize the difference between the three types of pronouns as a relation of *deficiency* (or *impoverishment*). Both *weak* and *clitic* pronouns are deficient with respect to *strong* pronouns.

Clitic pronouns are deficient with respect to *weak* pronouns, resulting in the following ranking of deficiency:

(42) *clitic* < *weak* < *strong*

Cardinaletti and Starke also label weak pronouns *mildly deficient pronouns*, and clitic ones *severely deficient pronouns*. The tripartition is best described as follows, as the main syntactic difference between weak and clitic elements can be observed to be their projectional status:

(43) strong pronouns: strong, phrases
weak pronouns: deficient, phrases
clitic pronouns: deficient, heads
(Cardinaletti and Starke 1999:170, ex.59)

Cardinaletti and Starke's explanation of this tripartition and of the deficiency in general is based on the claim that the three types realize different numbers of syntactic heads. These syntactic heads replace the traditional DP projection. In analogy to the basic clausal structure they are labeled C_NP, I_NP and eventually Σ_NP. C_NP is assumed to contain the referential index which is claimed to be the interpretation of the (functional) case-feature, I_NP contains the ϕ-features, and Σ_NP is assumed to contain the prosody-related features of the Noun Phrase. Accordingly, Cardinaletti and Starke (1999:195) propose the following structures for the three types of pronominal noun phrases:

(44) a. *strong pronouns:* [C_NP ... [Σ_NP ... [I_NP ... [NP ...]]]]
b. *weak pronouns:* [Σ_NP ... [I_NP ... [NP ...]]]
c. *clitic pronouns:* [I_NP ... [NP ...]]

The lack of functional case-features in deficient (i.e. weak and clitic) elements triggers their movement to an AgrP where they are in a local configuration with the Agr^0 by which they are assigned functional case.

Both weak and clitic elements are assumed to start off as XPs within the VP and move to the respective SpecAgrP position. This assumption explains the cross-linguistic phenomenon of (weak) pronoun movement which has been observed for most German and Romance languages (cf. Cardinaletti 1999). For German, Abraham (1995) observes that unstressed (weak) pronouns obligatorily move out of the VP and to the left of all other DPs in the clause, while stressed strong pronouns behave like (stressed) full DPs and thus are also allowed to remain within the VP space.

In analogy, clitic pronouns have to move further to associate with prosodic features due to their lack of Σ^0. As clitic elements are deficient in the same way that weak elements are, they also have to remain in a local relation with the relevant Agr^0 head. Therefore, Cardinaletti and Starke propose that the clitic is base-generated as an XP and rises to the SpecAgrP position. Subsequently, the X^0 head is moved out and incorporated (i.e. head-adjoined) to the head of the clitic's host. Consider the following abstract illustration of the case of a Bavarian subject clitic (denoted by X^0 and XP respectively)[26]:

(45) $[_{CP} \ldots [_{C} V^0 + X_i^0] [_{AgrsP} [_{SpecAgrsP} [_{XP} t_i]_i] [_{Agrs'} [Agrs^0] [_{VP} \ldots t_i \ldots]]]]]$

Cardinaletti and Starke propose an economy rule which determines the choice of pronominal type:

(46) *Economy of Representations*
Minimize structure.
(Cardinaletti and Starke 1999:198, ex.117)

[26] Adapting Kayne's (1994) Antisymmetry framework, it has to be assumed that head adjunction is always left adjunction and the verb in this case moves up and left-adjoins to the subject clitic. This has been left away for reasons of clarity.

Containing a C_NP projection implies having a referential index which in turn implies having a range. Lack of a C_NP makes modification and coordination impossible. This is what constitutes the difference between weak and strong pronouns. Clitic pronouns differ from weak pronouns in that they cannot bear word stress while the latter can.

For the case of German and Bavarian varieties, Cardinaletti and Starke only discuss the case of Olang Tirolese, which according to them only displays a clitic-weak distinction. They claim that Standard German has a weak-strong distinction, despite of the homophony of weak and strong elements. Let us now investigate what types of pronouns are at hand in Viennese German. First, it is evident that there are clitic pronouns. These pronouns are prosodically deficient, cannot bear word stress and no constituent may interfere between them and their host (the finite verb in its V2 position, Fin^0 or C^0). Compare in particular (48) to (49). In (48) the subject pronoun is a clitic. In contrast, it is not a clitic in (49) (it is not clear at this point, whether it is of the *weak* or of the *strong* type of pronouns).

(47) a. ^{OK} Seit wann regnet-*s*-*n* schon? (cf. (16), (19) in chapter 1)
b. * Seit wann regnet-*n es* schon?
Since when rains-*it*$_{CL}$-*dn* already?
'Since when has it been raining?'

(48) a. ^{OK} Was schenkt-a-*dn* dem Hansi?
b. * Was schenkt-*n*-*a* dem Hansi?
what gives.as.present-*dn*-*he*$_{CL.NOM}$ the$_{DAT}$ Hansi?
'What does he give to Hansi as a present?'

(49) ^{OK} Was schenkt-*n ER* dem Hansi?
what gives.as.present-*dn*-*he*$_{CL.NOM}$ the$_{DAT}$ Hansi?
'What does he give to Hansi as a present?'

It is further obvious that there are strong pronouns, as they can be modified and coordinated which is illustrated in (50).

(50) a. Warum hat der Hund [IHN und die Anna] gebissen?
b. Warum hat der Hund [nur IHN] gebissen?
why has the dog [him and the Anna / only him] bitten
'Why did the dog bite him and the Anna / only him?'

The core issue is whether there are also weak pronouns and how they behave. While weak pronouns were traditionally assumed to be unable to bear contrastive stress, Cardinaletti and Starke (1999:153) show that this is a wrong assumption and that weak pronouns can indeed be contrastively focused and accompany ostension as long as they refer to a discourse prominent entity. Consider now the following example of a case where *dn* is allowed to follow the stressed pronoun *DIR* 'to you':

(51) $^{OK?}$ Wieso hat-a *DIR-dn* den Arzt leicht empfohlen? (cf. (30) in chapter 1)
Why has-he$_{CL.NOM}$ *YOU*$_{DAT}$*-dn* the$_{ACC}$ doctor leicht$_{D.PRT}$ recommended?
'Why did he recommend this doctor to YOU?'

The following examples illustrate that *DIR* 'to you' cannot be modified by the focus particle *nur* 'only', if it precedes the non-clitic discourse particle *leicht*. In contrast, *DIR* 'to you' can be modified by *nur* 'only' if it is located lower in the structure than *leicht.* This might indicate that only weak pronouns are allowed to precede *leicht*.

(52) a. $^{*?}$ Wieso hat-a [nur DIR]$_i$ den Arzt leicht t_i empfohlen?
b. $^{OK?}$ Wieso hat-a den Arzt leicht [nur DIR] empfohlen? (und sonst niemandem)
c. $^{OK?}$ Wieso hat-a DIR$_i$ den Arzt leicht t_i empfohlen?
why has-he$_{CL}$ <(*only) you> the doctor leicht$_{D.PRT}$ <only you> recommended
'Why did he recommend this doctor to you?'

This hypothesis can be falsified, as *DIR* 'to you' can indeed by coordinated in its higher structural position.

(53) a. ^{OK} Wieso hat er [DIR und DEINER FREUNDIN]$_i$ den Arzt leicht t_i empfohlen?

b. ^{OK} Wieso hat er den Arzt leicht [DIR und DEINER FREUNDIN] empfohlen?
why has he <you and your girlfriend> the doctor leicht$_{D.PRT}$ <you and your girlfriend> recommended
'Why did he recommend this doctor to you and your girlfriend?'

There are reasons to assume that the inability of stressed pronouns in the higher position to be modified by *nur* 'only' is due to other factors. For instance, Jacobs (1988) points out that *nur* 'only' interacts with information structure in that it changes the truth-conditions of focus-marked clauses.

At this point the case of demonstrative pronouns can be discussed to shed more light on the data. Consider the following example of a wh-question with a stressed pronoun that precedes *dn*. Both the personal pronoun *sie* 'she' and the demonstrative *die* 'that one' are possible in such a context, as illustrated in the example.

(54) a. ^{OK} Wie lang bleibt *SIE-dn* noch?

b. ^{OK} Wie lang bleibt *DIE-dn* noch?
How long stays *SHE/THAT.ONE -dn* still?
'How much longer is she / that one going to stay?'

(54a) and (54b) appear to differ with respect to the context in which they are adequate, but the exact difference in terms of contextual licensing conditions cannot be easily determined. An interesting solution is proposed by Bosch et al. (2003):

They observe that personal pronouns tend to be non-referential, while demonstrative pronouns are always referential. Therefore

demonstratives cannot have a bound-pronoun reading, while personal pronouns can:

(55) a. Jeder Lehrer$_i$ glaubt, dass er$_i$ intelligent ist.
every teacher believes that he intelligent is
b. * Jeder Lehrer$_i$ glaubt, dass der$_i$ intelligent ist.
every teacher believes that that.one intelligent is
'Every teacher believes that he is intelligent.'

Bosch et al. also observe that personal pronouns are more appropriate when they select a discourse topic as their antecedent while demonstrative pronouns are claimed to prefer non-topical ("new") referents. In contexts where demonstratives refer to topics, they can be argued to be of a contrastive nature. These observations are illustrated in the following example:

(56) a. Paul$_i$ wollte mit Peter$_k$ laufen gehen. Aber er$_{i\,/\,*k}$ war erkältet.
b. Paul$_i$ wollte mit Peter$_k$ laufen gehen. Aber der$_{k\,/\,*i}$ war erkältet.
Paul wanted with Peter running go. But he/that.one was having.a.cold
'Paul wanted to go running with Peter. But he/HE had a cold.'[27]
(Bosch et al. 2003:1,ex.1, glosses and translation added)

(56a) shows that the personal pronoun can only refer to the subject of the preceding clause, (56b) shows that the demonstrative can only refer to its object. Bosch et al. propose nominative noun phrases are more likely to establish a referent as the topic for the following sentence than noun phrases which are not in the nominative. As this is not crucial for the ongoing analysis, I will not go further into depth.

[27] Note that this is not a literal translation, as English does not have demonstratives of the German type. However, the difference between personal pronouns and demonstrative pronouns resembles the difference between stressed and unstressed pronouns in English.

These observations are relevant for the ongoing discussion, as it has been shown that VG *dn* can follow both stressed personal pronouns and stressed demonstratives. Following Bosch et al. in claiming that demonstratives are always referential, those pronouns have to be considered *strong* in Cardinaletti and Starke's (1999) terminology. Recall they claim that weak pronouns cannot refer on their own but depend on a fully referential antecedent, while strong pronouns may refer to a non-prominent discourse referent. In favor of a unitary analysis, it can be proposed that *dn* is generally able to follow stressed pronouns which are *strong* in this terminology. This claim is supported by the observation that no evident differences can be observed between the syntactic patterns in (54a) and (54b). The question whether they can also follow *weak* pronouns cannot be answered so far, as it is not even clarified whether a separate class of *weak* pronouns exists in Viennese German. It is not clear at this point, how it could be tested whether weak pronouns exist in VG; however, this issue will not be further investigated as it exceeds the scope of this thesis.

In this short discussion it has been shown that stressed strong (and possibly weak) pronouns are allowed to precede *dn*. It has been stated that no conclusion can be made so far on whether Viennese German has a tripartition into clitic, weak and strong pronouns or only a bipartition into clitic and strong ones. Furthermore, it has been shown in chapter 3.1.3 that stressed pronouns which precede *dn* have to refer in a deictic manner (in contrast to pronouns which are bound by antecedents) – this again complies to the above observation that demonstratives which are always referential and therefore cannot be bound may precede *dn*.

Concluding this sub-section, it can be said that the main function of *dn* and *denn*, namely to *contextualize* the modified entity, is compatible with the semantics of *strong* personal and demonstrative pronouns. If *dn* is base generated within the extended pronominal projections of referential strong pronouns, it can be analyzed to convey the information that the referent of the strong pronoun is contextually available. In other words, *dn* can be claimed to express the fact that the referent which is selected by

the strong pronoun is available to the speaker from the immediate (preceding) context of the utterance. Either it has been introduced by a preceding utterance or it is contained in the non-linguistic context which is available to the hearer (cf. chapter 4).

3.2.2 Definite DPs

In this sub-section, the behavior of VG *dn* with respect to definite DPs is discussed. Definite DPs like *the dog* basically allow for two readings: a *specific* reading and a *generic* one (cf. Frege 1879, 1892; cf. also Haiden 1995 for a discussion):

(57) a. *specific reading*
The dog is in its doghouse.
b. *generic reading*
The dog is a mammal.

Definite DPs with a specific reading trigger an existential presupposition, i.e. that an entity of the type denoted by the noun phrase exists in the possible world to which the utterance refers (cf. also Heim and Kratzer 1998, von Fintel and Heim 2002). Generic DPs behave like universal quantifiers. It can be shown that both types of definite DPs by default occur to the left of sentence adverbials, i.e. outside of the VP space. Diesing (1992) assumes that DPs must move out of VP and into IP in order to receive a presuppositional interpretation, explaining the obligatory raising of definite DPs. Note that in all of the subsequent examples, grammaticality is evaluated for the neutral stress pattern if not indicated otherwise. In many cases, DPs are allowed to occur lower in the structure if they are contrastively stressed:

(58) a. *specific reading*
dass <der Hund> *ja tatsächlich* <*der Hund> in seiner Hütte ist.
that <the dog> *ja really* <*the dog> in its doghouse is
'...that the dog really is in its doghouse.'

b. *generic reading*[28]
dass <der Hund> *ja normalerweise* <*der Hund> ein Fleischfresser ist.
that <the dog> *ja normally* <*the dog> a carnivore is
'...that the dog usually is a carnivore.'

The following example shows that definite DPs are allowed to occur lower than discourse particles and sentence adverbials when they are contrastively stressed.

(59) dass *ja tatsächlich* der HUND in seiner Hütte ist. (... nicht der Tiger.)
that *ja really* the dog in its doghouse is (... not the tiger.)
'...that the dog really is in its doghouse.' (... not the tiger.)

Interestingly, the discourse particle SG *denn* differs from *ja* and sentence adverbials in that *denn* can precede definite DPs which are not contrastively stressed (cf. König and Requardt 1991), while the latter cannot[29].

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[28] Note that the DP in (58b) can occur lower in the structure if *normalerweise* "normally" is contrastively stressed, as pointed out to me by W. U. Dressler (p.c., September 2, 2005):

(i) dass ja NORMALERWEISE der Hund ein Fleischfresser ist.
that ja normally the dog a carnivore is
"...that the dog usually is a carnivore."

However, it might be argued within Cinque's (1999) framework that *normalerweise* "normally" is performing a *focusing use* in this case, thus being licensed to occur in a non-canonical lower position (cf. chapter 2.4.2).

[29] Again the same observation can be made for (61) that has been made for (58b) in footnote 28.

(60) Wohin fährt <der Chef> *denn* <der CHEF / der Chef> am Wochenende?
Where.to goes.by.car <the boss> *denn* <the boss> on.the week.end?
'Where is *denn* the boss going on the week end?'

(61) .. da <der Chef> *ja tatsächlich* <der CHEF / *der Chef> nach Rom fährt.
..because <the boss> *ja really* <the boss> to Rome goes.by.car
'because the boss will *ja really* go to Rome (by car). '

The following data from Colloquial Non-Standard Viennese German show that VG *dn* does not behave like a typical sentence adverb or discourse particle. It is perfectly accepted when preceding definite DPs and rejected when following them.

(62) *generic readings*
a. OK Wieviele Schnurrbarthaare hat-*n die Wildkatze* im NORMALFALL?
b. ## Wieviele Schnurrbarthaare hat *die Wildkatze-dn* im NORMALFALL?
how.many whiskers.hairs has (*dn*) *the wildcat* (*dn*) in.the normal.case
'How many hairs does the wildcat usually have in its whiskers?'
c. OK Wie findet-*n der Geiger* die richtigen Positionen am STEG?
d. *? Wie findet *der Geiger-dn* die richtigen Positionen am STEG?
how finds (*dn*) *the fiddler* (*dn*) the right positions on.the bridge
'How does the fiddler find the right positions on the bridge?'

(63) *specific readings*

a. [OK] Was macht-*n die Katze* auf der TERRASSE?

b. [*?] Was macht *die Katze-dn* auf der TERRASSE?
what makes (*dn*) *the cat* (*dn*) on the terrace
'What is the cat doing on the terrace?'

c. [OK?] Zu welchem Nachbarn geht-*n die Katze* am ABEND immer?

d. [*?] Zu welchem Nachbarn geht *die Katze-dn* am ABEND immer?
to which neighbor goes (*dn*) *the cat* (*dn*) on.the evening always
'To which neighbor does the cat always go in the evening?'

Interestingly, there are some cases which receive a better evaluation without any obvious reason:

(64) a. # Was macht *der Arbeiter-dn* da draußen?
what makes the worker-*dn* there outside
'What is the worker doing outside?'

b. # Was macht *deine Frau-dn* am Wochenende?
what makes your wife-*dn* on.the week.end
'What is your wife usually doing on the week end?'

The examples in (64a) and (64b) do not fundamentally differ from those in (63b) and (63d) respectively. Nevertheless, they show a slight tendency towards grammaticality. A prosodic explanation of these intriguing data is problematic as it would have to confront the following judgments, given by the same test persons.

(65) a. [*?] Was macht *der Arbeiter-dn* mit der Leiter da draußen?
what makes the worker-dn with the ladder there outside
'What is the worker doing out there with the ladder?'

b. ## Was macht *die Frau-dn* da draußen?
what makes the woman-*dn* there outside
'What is that woman doing out there?'

Further investigations of those interesting observations exceed the scope of this thesis and are thus left open for further research.

Having discussed specific and generic definite DPs, I will now discuss proper names which can be treated as a special type of definite DPs. In formal semantics, they are generally characterized as being *rigid designators*. In other words, they are claimed to have the same value and refer to the same individual in every possible world. Again, it can be shown that proper names by default occur to the left of sentence adverbials. Note that again all instances of *der Hans* are assumed not to be contrastively stressed:

(66) dass <*der Hans*> *ja tatsächlich* <**der Hans*> angekommen ist.
that <*the Hans*> *ja*$_{\text{D.PRT}}$ *really* <**the Hans*> arrived is
'...that Hans has really arrived.'

While in many languages, such as English and Standard German, proper names (of persons) generally cannot be modified by determiners, the definite determiner is obligatory in Bavarian and Colloquial Non-Standard Viennese German (cf. Weiß 1998:70-71).

The following examples illustrate that proper names indeed behave like definite DPs in Colloquial Non-Standard Viennese German, i.e. they obligatorily follow *dn*:

(67) a. $^{\text{OK}}$ Wann kommt-*n der Hansi* heut nachHAUSE?
b. *$^{?}$ Wann kommt *der Hansi-dn* heut nachHAUSE?
when comes (*dn*) *the Hansi* (*dn*) today home
'When is Hansi coming home today?'
c. $^{\text{OK}}$ Was macht-*n der Hansi* immer im GARTEN?
d. *$^{?}$ Was macht *der Hansi-dn* immer im GARTEN?
what makes (*dn*) *the Hansi* (*dn*) always in.the garden
'What is Hansi always doing in the garden?'

The same observation holds for transitives, as shown in (68).

(68) a. ^{OK} Wieso küsst-*n der Otto die Anna*?
b. $*^{?}$ Wieso küsst *der Otto-dn die Anna*?
c. * Wieso küsst *der Otto die Anna-dn*?
why kisses (*dn*) *the$_{NOM}$ Otto* (*dn*) *the$_{ACC}$ Anna* (*dn*)
'Why does Otto kiss Anna?'

Furthermore it holds for ditransitives. Interestingly, *dn* appears to be slightly better if it follows the indirect object in ditransitives than if it is located between subject and indirect object. This is surprising, but not significant for the ongoing discussion as these clauses still clearly tend to be judged ungrammatical.

(69) a. ^{OK} Was schenkt-*n der Hansi der Susi* zum GEBURTSTAG?
b. $*^{?}$ Was schenkt *der Hansi-dn der Susi* zum GEBURTSTAG?
c. ## Was schenkt *der Hansi der Susi-dn* zum GEBURTSTAG?
what gives.as.a.present (*dn*) *the$_{NOM}$ Hansi* (*dn*) *the$_{DAT}$ Susi* (*dn*)
to.the birthday
'What does Hansi give Susi for her birthday?'

Now compare clauses with different argument structures to see if this has any impact on the behavior of VG *dn*. First the following examples illustrate that *unaccusatives* pattern as lined out above:

(70) *unaccusatives*
a. ^{OK} Wann is-*n der Präsident* geKOMMEN?
b. $*^{?}$ Wann is *der Präsident-dn* geKOMMEN?
when is (*dn*) *the president* (*dn*) come
'When did the president arrive?'
c. ^{OK} Wann wird-*n der Lehrer* heute KOMMEN?
d. ## Wann wird *der Lehrer-dn* heute KOMMEN?
when will (*dn*) *the teacher* (*dn*) today come
'When will the teacher arrive today?'

Note that the ungrammaticality of (70b) cannot be due to prosodic or phonologic reasons as the following example in which the phonological unit emerging from *dn* cliticizing to its predecessor corresponds to that in (70b) and is fully grammatical:

(71) ^{OK} Seit wann *kennt-dn* der Hansi den Otto?
since when *knows-dn* the$_{NOM}$ Hansi the$_{ACC}$ Otto
'How long has Hansi known Otto?'

Witness now the case of *unergatives* which pattern as lined out above.

(72) *unergatives*
a. ^{OK} Wann wird-*n der Bursche* morgen TANZEN?
b. $*^{?}$ Wann wird *der Bursche-dn* morgen TANZEN?
when will (*dn*) *the boy* (*dn*) tomorrow dance?
'When is the boy going to dance tomorrow?'
c. ^{OK} Wo hat-*dn der Präsident* geTANZT?
d. $*^{?}$ Wo hat *der Präsident-dn* geTANZT?
where has (*dn*) *the president* (*dn*) danced
'Where did the president dance?'

Now consider the relevant patterns in transitives.

(73) *subjects in transitives*
a. ^{OK} Wen jagt-*n die Katze* im GARTEN?
b. ## Wen jagt *die Katze-dn* im GARTEN?
who hunts (*dn*) *the cat* (*dn*) in the garden
'Whom does the cat hunt in the garden?'

The following examples illustrate that it is not the case that *dn* is more likely to be accepted when following accusative objects.

(74) *accusative objects in transitives*

a. $^{OK?}$ Wer küsst-*n den Maurer* da drüben in der ECKE?

b. $^{*?}$ Wer küsst *den Maurer-dn* da drüben in der ECKE?
who kisses (*dn*) *the bricklayer* (*dn*) over there in the corner
'Who kisses that bricklayer, over there in the corner?'

c. $^{OK?}$ Wieso trifft-a-*dn die Mönche* jeden Tag am Weg zur UNI?

d. $^{*?}$ Wieso trifft-a *die Mönche-dn* jeden Tag am Weg zur UNI?
why meets-he$_{CL}$ (*dn*) *the monks* (*dn*) every day on.the way to.the uni
'Why does he meet the monks every day on his way to uni?'

However, *dn* seems to be more accepted when following dative objects of transitive predicates which assign nominative and dative case.

(75) *dative objects in transitives*

a. $^{OK?}$ Wieso eifert-a-*dn seiner Frau* in letzter Zeit so NACH?

b. # Wieso eifert-a *seiner Frau-dn* in letzter Zeit so NACH?
why emulates-he$_{CL}$ (*dn*) *his$_{DAT}$ wife* (*dn*) in last time so after$_{V.PRT}$
'Why does he emulate his wife so much recently?'

As has been shown above and is repeated in the following example, this again cannot be due to prosodic reasons (cf. also chapter 3.5 for a more extensive discussion).

(76) ## Was macht *die Frau-dn* da draußen?
what makes *the woman-dn* there outside
'What is this woman doing out there?'

Consider now more cases of ditransitives in (77) to (80).

(77) *subjects in ditransitives*

a. ^{OK} Wieso stellt-*n die Nonne* das Buch ins REGAL?

b. ## Wieso stellt *die Nonne-dn* das Buch ins REGAL?
why puts (*dn*) *the nun* (*dn*) the book into.the shelf
'Why does the nun put the book on the shelf?'

(78) *direct objects in ditransitives of the* put *type*

a. ^{OK} Wer stellt-*n das Buch* immer ins REGAL?

b. $*^{?}$ Wer stellt *das Buch-n* immer ins REGAL?
who puts (*dn*) *the book* (*dn*) always into.the shelf
'Who always puts the book on the shelf?'

(79) *indirect objects in ditransitives of the* give *type*

a. ^{OK} Wer gibt-*n dem Arbeiter* das GELD?

b. $*^{?}$ Wer gibt *dem Arbeiter-dn* das GELD?
who gives (*dn*) *the worker* (*dn*) the money
'Who gives the money to the worker?'

c. ^{OK} Wer gibt-*n dem Hund* das FUTTER?

d. $*^{?}$ Wer gibt *dem Hund-n* das FUTTER?
who gives (*dn*) *the dog* (*dn*) the food
'Who gives the food to the dog?'

Interestingly, accusative objects in ditransitives receive a better evaluation than dative objects and subjects.

(80) *direct objects in ditransitives of the* give *type*

a. ^{OK} Wem gibt-a-*dn das Geld* NORMALERWEISE?

b. # Wem gibt-a *das Geld-n* NORMALERWEISE?
whom gives-he$_{CL}$ (*dn*) *the money* (*dn*) normally
'Whom does he normally give the money?'

3.2.3 Indefinite DPs

There are at least three types of indefinite DPs: DPs with *weak determiners* (such as *a*, *two*, *some*, etc.), DPs with *strong determiners* (such as *all*, *no*, etc.) and *bare plural* DPs (cf. Heim 1982, Diesing 1992, and Haiden 1995 for a recent discussion). While DPs with strong determiners can only receive a proportional or generic interpretation, all other indefinite DPs allow for an *existential* and a *non-existential* interpretation which will be discussed in detail in this sub-section. It can generally be observed that the respective readings are connected to the structural positions of the indefinite DPs. If they occur to the right of sentence adverbials, they receive an interpretation which can roughly be labeled *existential* (i.e. the existence of the denoted set of entities is asserted). If they occur to their left, they receive the *non-existential* interpretation (*generic* in the case of *a*, *presuppositional* in the case of numerals, *proportional* in the case of determiners such as *some*). This observation has lead scholars, such as Diesing (1992) to propose that the *existential closure* takes place in the VP, i.e. that indefinite DPs which remain inside of the VP are attributed an existential interpretation while those which move out into the IP receive a different *non-existential* one (i.e. the existence of the referents is not asserted but presupposed). Interestingly, the VP space in which the existential closure takes place is that area of the clause which in informationally neutral clauses contains the *minimal focus*, i.e. the constituent to which neutral sentential stress is assigned (cf. chapter. 3.1.1).

Consider first the case of DPs with *weak determiners*. If the determiner is *a*, they are ambiguous between a *quantificational* and an *existential* reading which are connected to their respective structural position. DPs which occur to the left of sentence adverbials and discourse particles receive a quantificational interpretation while DPs which occur to their right receive an existential one (*%* denotes *impossible under the relevant reading*):

(81) a. *existential*
dass <% *ein Hund*> *ja doch* <*ein Hund*> hereingekommen ist
that <% *a dog*> *ja*$_{D.PRT}$ *doch*$_{D.PRT}$ <*a dog*> come.in is
'...that a dog has come in.'

b. *quantificational (generic)*
dass <*ein Hund*> *ja doch* <% *ein Hund*> vier Beine hat.
that <*a dog*> *ja*$_{D.PRT}$ *doch*$_{D.PRT}$ <% *a dog*> four legs has
'...that a dog has four legs.'

In (81b) the DP *ein Hund* 'a dog' receives a generic reading. However, the term *quantificational* has been chosen as this is not a necessary fact. If such clauses are modified by adverbial quantifiers such as *sometimes*, the DP may receive a proportional reading. For instance in the example in (82) the determiner is in the scope of the adverbial *sometimes* and the DP *an ant* receives the graded quantificational interpretation *some ants*, instead of the generic interpretation *all ants*.

(82) Sometimes, when an ant falls into a water pit, it survives.

Now, consider the case of indefinite DPs with weak quantifiers other than *a.* Diesing (1992) points out that they receive a *presuppositional reading* (i.e. the existence of the set of elements denoted by the DP is presupposed), when preceding sentence adverbs, and a *cardinal reading* (i.e. the existence of the respective number or amount of denoted elements is asserted) when following them:

(83) a. *cardinal, existential*
...weil ja doch zwei Cellisten in diesem Hotel abgestiegen sind
since 'indeed' two cellists in this hotel have-taken-rooms

b. *presuppositional*
...weil zwei Cellisten ja doch in diesem Hotel abgestiegen sind
since two cellists 'indeed' in this hotel have-taken-rooms
(Diesing 1992:78,ex.42, glosses by Diesing)

In sum, we might expect for the case of *dn* that indefinite DPs with an *existential* or *cardinal* reading follow it while indefinite DPs with a *generic*, *quantificational* or *presuppositional* reading precede it. Again, this is not what we find. All DPs by default follow it. Consider first the case of the determiner *a*:

(84) *existential DPs*

a. ^{OK} Wieso steht-*n ein Pferd* im STALL?

b. * Wieso steht *ein Pferd-dn* im STALL?
why stands (*dn*) *a horse* (*dn*) in.the barn
'Why is there a horse in the barn?'

c. ^{OK} Wieso heult-*n ein Wolf* da draußen im WALD?

d. $*^{?}$ Wieso heult *ein Wolf-n* da draußen im WALD?
why howls (*dn*) *a wolf* (*dn*) there outside in.the forest
'Why is there a wolf howling in the forest out there?'

(85) *quantificational DPs*

a. ^{OK} Seit wann bringt-*dn eine Katze* UNglück?

b. $*^{?}$ Seit wann bringt *eine Katze-dn* UNglück?
since when brings (*dn*) *a cat* (*dn*) bad.luck
'Since when does a cat mean bad luck?'

c. $^{OK?}$ Wieso steht-*dn ein Pferd* normalerweise im STALL?

d. $*^{?}$ Wieso steht *ein Pferd-dn* normalerweise im STALL?
why stands (*dn*) *a horse* (*dn*) normally in.the barn
'Why is a horse usually kept in a barn?'

e. $^{OK?}$ Wieso überlebt-*n eine Katze* manchmal einen Sturz aus dem fünften STOCK?

f. $*^{?}$ Wieso überlebt *eine Katze-dn* manchmal einen Sturz aus dem fünften STOCK?
why survives (*dn*) *a cat* (*dn*) sometimes a fall from the fifth floor
'Why does a cat sometimes survive a fall from the fifth floor?'

Now, consider the case of numerals, such as *two* or *three*:

(86) *cardinal reading*

a. [OK] Wieso sind-*n drei Mönche* nach der Messe geGANGEN?

b. * Wieso sind *drei Mönche-dn* nach der Messe geGANGEN?

why are (*dn*) *three monks* (dn) after the mass gone

'Why did three monks leave after the mass?'

(87) *presuppositional reading*

a. [OK?] Seit wann wohnen-*dn zwei Mönche* bei uns im HOTEL?

b. [*?] Seit wann wohnen *zwei Mönche-dn* bei uns im HOTEL?

since when live (*dn*) *two monks* (*dn*) with us in.the hotel

'How long have two monks been living in our hotel?'

The following example of a DP under presuppositional reading shows that other discourse particles like *eigentlich* in fact behave as would have been predicted from the above considerations:

(88) [OK] Seit wann wohnen *zwei Mönche eigentlich* bei uns im HOTEL?

since when live *two monks eigentlich*$_{D.PRT}$ with us in.the hotel

'How long have two monks been living in our hotel?'

It can also be stated that no difference can be observed for the case of individual versus stage level predicates:

(89) *individual level predicate*

a. [OK] Warum sind-*dn viele Biber* eigentlich so INTELLIGENT?

b. [*?] Warum sind *viele Biber-dn* eigentlich so INTELLIGENT?

why are (*dn*) *many beavers* (*dn*) eigentlich$_{D.PRT}$ so intelligent

'Why are many beavers so intelligent?'

(90) *stage level predicate*

a. [OK] Warum sind-*dn drei Biber* im BACH?

b. * Warum sind *drei Biber-dn* im BACH?

why are (*dn*) *three beavers* (*dn*) in.the brook

'Why are there three beavers in the brook?'

No stage-individual-level distinction can be observed for the case of *dn*, while it can be observed for other sentence adverbs and discourse particles (cf. Diesing 1992). Diesing observes that subjects of individual-level predicates can only surface at the IP level (i.e. to the left of sentence adverbs and discourse particles), while subjects of stage-level predicates can also remain within the VP (i.e. to their right):

(91) *individual level predicate*

...weil <Wildschweine> ja doch <*Wildschweine> intelligent sind.

since <wild boars> 'indeed' <*wild boars> intelligent are

'... since (in general) wild boars are intelligent.'

(adapted from Diesing 1992:38,ex.37, glosses by Diesing)

(92) *stage level predicate*

...weil <Professoren> ja doch <Professoren> verfügbar sind.

since <professors> 'indeed' <professors> available are

'... since there are professors available.'

(adapted from Diesing 1992:37-38,ex.35, glosses by Diesing)

DPs with *strong determiners* (such as *all*, *no*) can both precede and follow sentence adverbs without triggering different readings – they always receive a non-existential, quantificational reading, which can be accounted for assuming that strong determiners obligatorily undergo quantifier raising at LF and can thus never be interpreted within the VP space, i.e. within the *existential closure.* In the following example, both instances of *alle Wale* 'all whales' receive a generic, universal interpretation.

(93) dass <alle Wale> ja doch <alle Wale> sichtbar sind
that <all whales> $ja_{D.PRT}$ $doch_{D.PRT}$ <all whales> visible are
'... that all whales are visible.'

Nevertheless, indefinites with strong determiners exhibit the same behavior with respect to *dn* as any other DP, i.e. they follow it:

(94) *strong determiners*
a. $^{OK?}$ Warum ham-*dn alle Pferde* vier BEINE?
b. * Warum ham *alle Pferde-dn* vier BEINE?
why have (*dn*) *all horses* (*dn*) four legs
'Why do all horses have four legs?'

Finally, *bare plural* subjects can also be shown to receive an *existential reading* when they occur in their base position within the VP space and a *generic reading* when they are located in the IP space (cf. Diesing 1992, cf. also Cinque 1999:113-114 for a recent discussion):

(95) a. *existential*
...dass ja doch Wale sichtbar sind.
that $ja_{D.PRT}$ $doch_{D.PRT}$ whales visible are
'...that there are whales visible.'
b. *generic*
...dass Wale ja doch sichtbar sind.
that whales $ja_{D.PRT}$ $doch_{D.PRT}$ visible are
'...that (in general) whales are visible.'

The following examples illustrate that bare plural DPs also obligatorily follow *dn*.

(96) *existential reading*

a. ^{OK} Wieso sind-*n Pferde* im HOF?

b. * Wieso sind *Pferde-dn* im HOF?
why are (*dn*) *horses* (*dn*) in.the yard
'Why are there horses in the yard?'

c. ^{OK} Seit wann sind-*n Wale* unter unserem BOOT?

d. $*^{?}$ Seit wann sind *Wale-dn* unter unserem BOOT?
since when are (*dn*) *whales* (*dn*) beneath our boat
'How long have there been whales beneath our boat?'

(97) *generic reading*

a. ^{OK} Seit wann sind-*dn Geister* FREUNDlich?

b. ## Seit wann sind *Geister-dn* FREUNDlich?
since when are (*dn*) *ghosts* (*dn*) friendly
'Since when is it the case that ghosts (in general) are friendly?'

c. $^{OK?}$ Wieso kommen-*dn Wale* so nahe an den STRAND?

d. $*^{?}$ Wieso kommen *Wale-dn* so nahe an den STRAND?
why come (*dn*) *whales* (*dn*) so close to the beach
'Why do whales (in general) come so close to the beach?'

e. $^{OK?}$ Wieso sind-*n Wale* SICHTBAR?

f. ## Wieso sind *Wale-dn* SICHTBAR?
why are (*dn*) *whales* (*dn*) visible
'Why are whales (in general) visible?'

g. $^{OK?}$ Auf welcher Seite fahren-*dn Busse* in ENGLAND?

h. $*^{?}$ Auf welcher Seite fahren *Busse-dn* in ENGLAND?
on which side go (*dn*) *busses* (*dn*) in England
'On which side do busses (in general) go in England?'

3.2.4 Definiteness effects

In German, definiteness and specificity effects can be observed. While the unmarked ordering of (indefinite) arguments is NOM > DAT > ACC,

definite DPs always precede indefinite ones. It has often been observed that definite DPs generally precede sentence adverbs while indefinite ones by default follow them (cf. also Grewendorf and Sternefeld 1990). This phenomenon derives straight forward from the fact that it is more natural for definite DPs to move out of the VP in order to receive a presuppositional reading, while indefinite DPs more naturally remain inside of the VP to receive an existential interpretation (cf. Haiden 1995).

(98) a. dass (tatsächlich) ein Vogel einer Katze ein Lied vorsingt
that (really) a_{NOM} bird a_{DAT} cat a_{ACC} song sings.to

b. dass (#tatsächlich) der Katze (tatsächlich) ein Vogel ein Lied vorsingt
that (#really) the_{DAT} cat (really) a_{NOM} bird a_{ACC} song sings.to

c. dass (#tatsächlich) das Lied (tatsächlich) ein Vogel einer Katze vorsingt
that (#really) the_{ACC} song (really) a_{NOM} bird a_{DAT} cat sings.to

d. dass (#tatsächlich) der Katze das Lied (tatsächlich) ein Vogel vorsingt
that (#really) the_{DAT} cat the_{ACC} song (really) a_{NOM} bird sings.to
'...that the/a bird really sings the/a song to the/a cat.'

As it has been shown in the preceding two sub-chapters that all different types of DPs obligatorily follow VG *dn*, it is evident that the surface behavior of *dn* does not exhibit any definiteness effects.

3.3 The origin of discourse particles

It is uncontroversial that there is a diachronic link between discourse particles and their non-particle variants. It is commonly assumed that discourse particles have arisen from their non-particle counterparts by means of *grammaticalization* (cf. Abraham 2000, Zimmermann 2004a). A more controversial issue is that of the exact nature of this link and of their

synchronic relation. There are several possible analyses for the synchronic relation between discourse particles and their non- or pre-particle counterparts. In the following sub-sections, both issues will be briefly discussed. In this section only a brief discussion is made of some approaches which might shed light on this rather complex phenomenon.

3.3.1 The diachronic development of discourse particles

It is commonly assumed that discourse particles are diachronically linked to their non-particle counterparts (cf. Weydt 1969, Thurmair 1991, Abraham 2000, Zimmermann 2004a). Recently, it has been proposed that they even synchronically derive from these counterparts (cf. Abraham 1991, 2000). Such an assumption is supported by the fact that many scholars have observed a clear correlation between the linearization constraints on discourse particles and the hierarchic orderings of their respective non-particle counterparts (cf. Thurmair 1991, Abraham 2000, for German; de Vriendt et al. 1991, for Dutch).

Discourse particles are generally considered to be the results of grammaticalization processes, i.e. the development of morphemes from concrete to abstract meaning. Abraham (1988:443) even considers them an instance of *grammaticalization in statu nascendi* based on their co-existence with the non-particle variants that are commonly assumed to be their historic sources. *Grammaticalization* is generally characterized by the following processes (cf. Heine and Reh 1984): loss of semantic complexity and content (*semantic bleaching*), loss of distributional freedom, loss of phonetic substance and loss of pragmatic meaning. Furthermore, an increment of syntactic restrictions and a change in category. In the literature, another aspect of grammaticalization is often pointed out, namely that an abstract rest of the original lexical meaning is often retained. However, this cannot be claimed to be the default case as the original lexical meaning fully disappears in many cases during the process

of grammaticalization[30]. While the "input" to grammaticalization processes often consists of lexical elements (as in the case of discourse particles the adverbs *ruhig* 'quietly' or *einfach* 'simply'), grammaticalization which results in discourse particles often feeds on grammatical function words – irrespective of their category (e.g. sentence equivalents such as *ja* 'yes', and coordinators such as *denn* 'for') (cf. Stechow and Wunderlich 1991, König and Requardt 1991:63).

Consider now the descriptive attempt of May (2000) to account for the origin of the Standard German discourse particle *denn.* May does not address the diachronic or synchronic relation between the discourse particle and its coordinator counterpart. Instead, she points out that there is a number of other variants, most of them idiosyncratic, and that all of them originated in the element *dann* 'then, than', which she considers to have been used originally as a temporal adverb, a temporal conjunction or a comparative particle respectively (Middle High German *dan(ne)*, *den(ne)*, Old High German *danna*, *danne*, *denne*, *than(n)e*, quoted from May 2000:125; cf. also Abraham 1988:444, Kluge 1995). The most important synchronic variant of *denn* is the coordinating causal conjunction *denn* 'for' which creates an asymmetric causal connection between two matrix clauses:

(99) Ich komme nicht, *denn* ich habe keine Zeit.
I come not, *for* I have no time
'I won't come, *for* I don't have time.'

Other variants are the comparative particle *denn* 'than' which is archaic and only used to avoid repetition of *als* 'than', the temporal adverb *denn* 'then', which is mainly restricted to the northern dialectal area of German and the concessive causal adverb *denn* 'unless, provided that' which synchronically mainly occurs in the frozen idiom *es sei denn* 'unless' (cf. May 2000:125-128). These variants are unproductive and mostly archaic

[30] I am grateful to Wolfgang U. Dressler for pointing this out to me.

or idiomatic and thus not relevant for the ongoing discussion. However, a short argument should be made against the claim (advocated, for instance, by Eckardt 2004) that the discourse particle *denn* is licensed in other sentence types than interrogatives. Eckardt (2004) proposes the following example (quoting Dieter Wunderlich) which she assumes to be an instance of the discourse particle *denn*:

(100) Ja, wenn Sie *denn* aus Bayern sind...
Yes, if you *denn* from Bavaria are...
'So, well, if you are from Bavaria...'
(Eckardt 2004:1)

According to May (2000), this is not an instance of the discourse particle *denn*, but a different (presumably adverbial) element of the heterogeneous set of its variants, referred to above. May distinguishes it from the discourse particle referring to Métrich et al. (1995:77) in considering it an element which marks a necessary condition for the utterance to have a meaning (i.e. a presupposition trigger). Its contribution is paraphrased by means of *at all* in the illustration below:

(101) Ich werde mit einem Stipendium nach Spanien gehen, wenn ich *denn* nach Spanien gehe.
I will with a stipend to Spain go, if I *denn* to Spain go.
'If I go to Spain *(at all)*, I will go there with a stipend.'
(May 2000:128,ex.256, glosses and translation added by the author)

An interesting, non trivial question which comes to mind at this point is whether the discourse particle *denn* can be analyzed to derive from the complementizer *denn* 'than, then' (as implied, for instance, by Thurmair 1991), or from the temporal adverb *dann* 'then' (as proposed by May 2000). This issue exceeds the scope of this thesis, but it has to be kept in mind as it illustrates that some rather uncontroversial claims are not as secure as they appear to be.

At this point, the issue of the diachronic status of VG *dn* can be addressed. Assuming that it corresponds to SG *denn*, as argued above, there are two possible approaches: Either, it has the same status and its different syntactic behavior is caused by other factors than that, or *dn* can be analyzed to be more grammaticalized than *denn*. The former claim obviously holds for the case of Bavarian *(a)n*/*(e)n* which have basically the same function and distribution as SG *denn*, but are syntactic clitics which always cliticize to C^0 following only pronominal clitics. In contrast, the latter claim might apply to *dn* as it is more constrained than *denn* with respect to its syntactic distribution. Namely it cannot occur in yes/no-questions. An open question at this point is what the final outcome of this presumptive ongoing grammaticalization process might be. As SG *denn* in yes/no-questions is assumed to basically express adversativity (cf. May 2000), while this function is optional in wh-questions, a possible proposal might be that VG *dn* cannot perform this function any longer. A more tentative claim might be that *dn* is grammaticalizing into a pure *question marker* (or *interrogative particle*), based on its frequent occurrence in wh-questions. However, it would be quite unnatural for a language to have a question marker in wh-interrogatives and not in yes/no-interrogatives. König and Siemund (2005) present cross-linguistic statistics which show that many languages have obligatory interrogative particles in yes/no-questions, but such particles are mostly optional in wh-questions in compliance with the functionalist assumption that question marking in wh-questions is sufficiently performed by the wh-element and additional marking by an interrogative particle would imply redundancy. However, this possibility will not be pursued any further as that would exceed the scope of this thesis. In this thesis, it is proposed that VG *dn* is a clitic version of SG and VG *denn* and the different syntactic behavior arises from its deficient structural status (in terms of Cardinaletti and Starke 1999). As such it can be argued to be more grammaticalized than *denn*, but it is still considered a discourse particle which can be shown to perform the same core function as *denn* (cf. chapter 4).

3.3.2 The synchronic connections

Three main competing approaches to the issue of the synchronic status of discourse particles can be traced in the literature. First, discourse particles and their non-particle counterparts can be considered to be completely detached from each other, assuming that they have undergone a severe change of meaning. Second, they might be assumed to be subject to a non-arbitrary semantic connection which is to be characterized and explained, or, third, discourse particles and their variants might be analyzed as one single element (e.g. a *lexical root*, in accordance with Pesetsky 1995), performing different functions in different contexts.

The first approach might be labeled the *null approach*, as it assumes that there is really nothing to be investigated about the relation between discourse particles and their non-particle variants. Although it appears to be implicit in many descriptive works on discourse particles, most scholars point out that a non-arbitrary semantic connection between discourse particles and their variants is undeniable (cf. Weydt 1969 and subsequent work). Therefore, the first approach does not appear to be very fruitful.

The second approach assumes a non-arbitrary semantic connection between discourse particles and their homophones. It has been proposed as early as Weydt (1969). He illustrates this claim for the case of *aber* (with the variant *aber* 'but'), which always expresses a contradiction between expected events and occurred ones. This approach fundamentally differs from the third one in that the respective elements are still considered to be separate lexical entries. However, Weydt in some instances proposes that discourse particles and their non-particle counterparts might be polysemes of one fundamental lexeme.

The third approach is advocated by Abraham (2000) who claims that discourse particles and their non-particle counterparts share one single lexical entry which he assumes to be basically that of the non-particle element. In other words, Abraham assumes that the lexicon only contains the pre-particle element and discourse particles are generated by placing these entries into the specific syntactic particle position within the middle

field. The discourse particles' meanings are assumed to be derived from their original meaning and triggered by their structural position within the *middle field* – which is the typical position in which discourse particles occur. Such an analysis is supported by the fact that discourse particles and their variants always have a mutually exclusive distribution (as has been shown in chapter 2.1.4). This approach corresponds to Pesetsky's (1995) framework who assumes that the lexicon only contains category neutral lexical roots which interact with different contexts to result in the respective functions. In the case of SG *denn* it might, accordingly, be assumed that the root *√DENN* receives its *strong lexical* interpretation (cf. Abraham 2000:322) as a coordinator when placed into the structural coordinator position (presumably within the CP space), while its discourse particle interpretation is triggered by placing it into a position within the middle field, either in one of the SpecFPs within Cinque's Hierarchy, or as an XP-adjunct. This analysis complies with approaches that assume that categories (or more explicitly *categorial information in the lexicon*) does not exist at all (cf. Lasnik et al. 2005:11). The main advantage of the third approach over the second one is that the necessity of postulating two separate unrelated lexical entries is avoided. In exchange, the task of determining the responsible derivative mechanism is introduced. Another conceptual problem for this approach has been pointed out to me by W. U. Dressler (p.c., September 2, 2005): It is commonly assumed that different syntactic potentials of elements have to be included in their lexical entries. Therefore an approach of this type must assume larger lexical entries for elements such as the discussed discourse particles.

3.4 The projectional status of *dn*

At this point, the issue of the projectional status of *dn* can be addressed again. VG *dn* is evidently a prosodically deficient element as it can be shown to attach to its predecessor and forms a prosodic word with it:

(102)a. Was macht+*dn* der Hansi am Wochenende? [machtn]
'What is Hansi going to do on the week end?'

b. Wieso hab+*dn* schon wieder ICH verloren? [habm]
'Why did I lose again?'

One observation which has often been made is that prosodically deficient elements can be classified in a first approximation into these which are clitics and those which only appear to be clitics. Terminology is rather heterogeneous in this respect. Common terms are *phonological clitics* (or *simple clitics*) for the elements which are merely prosodically weak, but syntactically behave on a par with prosodically strong elements, and *syntactic clitics* (or *special clitics*) for the elements that are subject to (clitic-)specific syntactic rules such as *clitic climbing* (cf. Zwicky 1977, Anderson 1992, 1993, Weiß 1998:96). Weiß (1998:97) observes that the Bavarian versions of Standard German discourse particles *ja* and *denn*, *o* and *(a)n*/*(e)n* respectively, can be treated as syntactic clitics as they follow pronominal clitics but precede all full pronouns. Other, non-clitic discourse particles are characterized by their ability of following full pronouns.

Again, further insights can be gained from Cardinaletti and Starke's (1999) analysis of the tripartition of pronouns into strong, weak and clitic ones. They claim that this tripartition expands beyond the class of nominal pronouns to all kinds of lexical elements and thus propose the generalized structures as follows (*L* denotes *lexical category*):

(103)a. strong elements: $[C_LP \dots [\Sigma_LP \dots [I_LP \dots [LP \dots]]]]$

b. weak elements: $[\Sigma_LP \dots [I_LP \dots [LP \dots]]]$

c. clitic elements: $[I_LP \dots [LP \dots]]$

(adapted from Cardinaletti and Starke 1999:195, ex.111)

As an example for the strong versus weak partition among adverbs they discuss the case of French *bien*, as illustrated in (104).

(104)a. Pierre [cuisine$_i$ bien t_i.

b. Pierre [a <bien> cuisiné <bien mais peu / *bien>.
Pierre has <well> cooked <well but little / well>
(adapted from Cardinaletti and Starke 1999:209, ex.137)

This example illustrates that *bien* has to precede the past participle unless it is coordinated, modified or focused. Cardinaletti and Starke point out that adverbs resemble pronouns in that deficient adverbs are allowed to be *rangeless* – if they are *rangeless* they allow for a discourse-particle meaning: Weak *bien* is ambiguous between the discourse-particle reading 'certainly / indeed' and the manner adverb reading 'well', while strong *bien* can only have the latter. Cardinaletti and Starke also show that *bien* can undergo *weak-climbing* in an appropriate context:

(105)Il a bien dû [parler t
he has well 'must' to.speak
'He certainly/indeed/etc. has been obliged to speak.'
(Cardinaletti and Starke 1999:209)

Therefore the criteria for distinguishing strong, weak and clitic elements can also be applied in the case of German adverbials and discourse particles and we come to the following results.

First, adverbials can be shown to be strong elements across the board, while discourse particles are weak elements. This follows from facts on modification and placement (recall that weak elements are restricted to derived positions)[31], as shown in the following examples.

[31] Note that there are empirical argument against treating discourse particles as inherent clitics across the board as was often the case in the traditional literature (cf. Abraham 1988 for a discussion): They can occur in the canonical adverb positions, lower in the structure than syntactic clitics.

(106)a. Hans ist *offensichtlich* nicht gekommen.
b. *Offensichtlich* ist Hans nicht gekommen.
c. Hans ist [*ganz offensichtlich*] nicht gekommen.
Hans is *all obviously* not come
'It is quite obvious that Hans did not come.'

(107)a. Hans ist *ja* nicht gekommen.
b. **Ja* ist Hans nicht gekommen.
c. * Hans ist [*ganz ja*] nicht gekommen.
Hans is *all* $ja_{D.PRT}$ not come
'Hans did not come.'

Second, it can be shown that VG *dn* is a clitic element in contrast to SG *denn*, as it is basically restricted to one particular position in the clause, namely the canonical clitic position adjoined to the finite verb in C^0:

(108)a. Wieso hat <denn> der Hans <denn> die Anna <denn> geküsst?
b. Wieso hat<-*dn*> der Hans<*[?]-*dn*> die Anna<*-*dn*> geküsst?
why has <dn> the_{NOM} Hans <dn > the_{ACC} Anna <dn > kissed
'Why did Hans kiss Anna?'

This analysis of *dn* as a syntactic clitic also complies with Kayne's (1975) tests for clitichood. Kayne proposed that clitic pronouns cannot be contrastively stressed, modified, conjoined or used in isolation. However, evidently, these tests apply to all types of German discourse particles, not only to *dn*. The relevant fact for treating *dn* as a "real", syntactic clitic is thus its restriction to that particular position in which it adjoins the preceding element (mainly the finite verb) to form a prosodic unit with it.

In sum, it is evident that there is a tripartition among adverbial elements in German into strong adverbials, weak discourse particles and clitic discourse particles. This analysis allows for additional conclusions. The fact that sentence adverbials, but not discourse particles can occur in sentence-initial position suggests that sentence adverbials can be moved

out of the SpecFP position within Cinque's Hierarchy in which they are base-generated, while discourse particles cannot. This observation allows for the conclusion that the C_LP of adverbials also contains a particular feature which has to be replaced in discourse particles and is provided by the clausal functional head F^0 with which they have to remain associated. This is what Cardinaletti and Starke (1999:212) propose in stating that the lack of the highest layer (C^0) in deficient adverbs entails the lack of a feature which has to be compensated by having the deficient adverb occur in this feature's checking position.

This observation allows for the conclusion that the discourse particle *dn* also has to have this feature replaced. In other words, it must be assumed to be base-generated within a SpecFP position within Cinque's Hierarchy as an XP projection lacking both the C_LP and the Σ_LP projection. From this position, it has its $I_L{}^0$ head, which contains the ϕ-features, i.e. the phonological realization *[dn]*, extracted and head adjoined to the C^0 position. Assuming that both *dn* and *denn* exist in Viennese German and perform the same function, again the law *minimize structure* applies which makes *dn* the default realization and *denn* the marked realization. The relevant question is then, what the appropriate context for *denn* is. As *dn* is not licensed in yes/no-questions and *denn* is, a possible answer might be that the weak discourse particle *denn* has to be chosen over the clitic one when it is used in yes/no-questions.

One interesting aspect of the analysis of discourse particles within Cardinaletti and Starke's (1999) framework is that they claim (cf. Cardinaletti and Starke 1999:228,note 83) their system predicts that all different kinds of clitics occur in the same position. This prediction is borne out in Viennese German, where *dn* adjoins to the same position as pronominal clitics, namely the C^0 or Fin^0 head hosting the finite verb in Verb Second constructions.

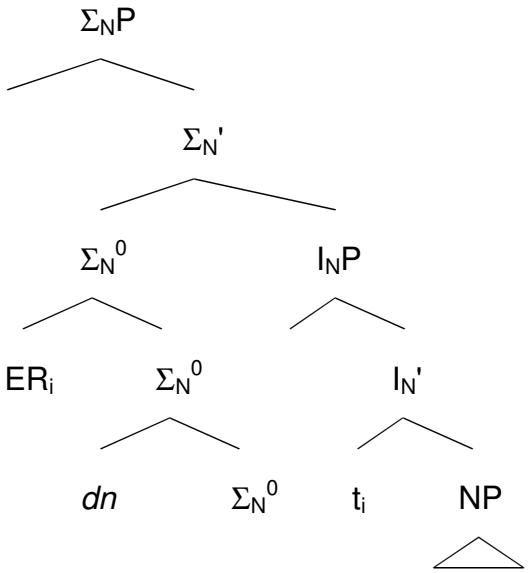
At this point, it is possible to further specify the above proposed analysis for the exceptional behavior of *dn* in cases where it follows stressed pronouns. Recall that the main issue is the question why *dn* in these cases evidently does not have to move up and cliticize to the C^0

head, if it is to be treated as a syntactic clitic. Recall that it has been proposed that *dn* is base-generated within the extended projection of the pronoun which it follows, taking narrow scope over the respective pronoun. As has been argued, clitic elements lack the $\Sigma_L{}^0$ head which contains relevant prosodic features and this lack has to be compensated for. Carinaletti and Starke argue that the typical clitic positions in clauses are such that they correspond to a clausal head which contains the relevant prosodic features. These are associated with the deficient (clitic) element by having it head adjoin to this position. If now clitic *dn* is base-generated within the extended pronominal projection of a stressed non-clitic pronoun, this pronoun does project an $\Sigma_N P$. Accordingly, the lack of prosodic features in *dn* can locally be satisified by having it head adjoin to the pronominal $\Sigma_N{}^0$ head. As the trigger for clitic movement is thus eliminated, they reside in this position and are not moved any further up in the structure.

Such an analysis is strongly supported by constraints on the locality of movement such as *Relativized Minimality* in the traditional Principles and Parameters framework which require movement always targets the nearest appropriate c-commanding position. As a side remark it has to be noted that the ϕ-features of the modified pronoun have to move across *dn* in order to precede it. If Kayne's antisymmetry framework is adopted and only left adjunction is assumed, these observations result in the following structure (109) for stressed pronouns in whose extended projection *dn* is base-generated. Note that the question of whether pronouns that can precede *dn* are weak or strong could not be answered yet which is expressed by use of the bracketed $C_N P$ projection. The question, where *dn* is base-generated is also left open for further research.

(109)a. $[(C_NP)\ [\Sigma_NP\ [_{\Sigma N'}\ [_{\Sigma N}\ [_{\Sigma N}\ ER_i\ [_{\Sigma N}\ \text{-}dn\ \Sigma_N{}^0]]]\ [I_NP\ t_i\ [NP\ ...]]]]]$.

b.



Such an approach receives conceptual support by comparing it to the only other possible explanation for the fact that *dn* is allowed to follow stressed pronouns in an analysis which treats *dn* as a syntactic clitic. It might be assumed that the movement of *dn* from its base position within the clausal functional projection to its clitic position as a head adjunct to C^0 (or Fin^0) is blocked by contrastively stressed pronouns. Assuming these processes take place in overt syntax, such an explanation is quite stipulative; there is no head within the extended pronominal projection which c-commands *dn* as long as it is located in a clausal functional projection's specifier or any intermediate position. Therefore, the proposed approach is conceptually much more favorable.

To sum up, the different structures of clauses in which *dn* precedes stressed pronouns and in which it follows them can be described as follows (slightly simplified – the term *DP* is used to refer to the extended projection of the pronoun which was described in more detail in (109)):

(110)a. ^{OK} Wann geht-*n ER* endlich? (cf. (24) in chapter 1)
When goes-*dn HE* finally?
'When does HE finally leave?'

b. $[_{CP}$ Wann $[_C$ geht-dn$_i]$ [ER $[_{F1P}$ $[_{SpecF1P}$ $t_i]$ $[_{F'}$ $F_1{}^0$ [... endlich... $[_{VP}$ ...

(111)a. $^{OK?}$ Wann geht *ER-dn* endlich? (cf. (29) in chapter 1)
When goes *HE-dn* finally?
'When does HE finally leave?'

b. [$_{CP}$ Wann [$_{C}$ geht] [$_{DP}$ *ER-dn*] [... endlich... [$_{VP}$ ...

Note that the F_1^0 head which bears the features that are associated with the discourse particles *denn* and *dn*, in cases where they have sentential scope, is *not projected* (or *licensed*) in (111), as *dn* never occupies this position during the syntactic derivation.

3.5 A concluding note on prosodic ill-formedness

VG *dn* has been shown to be a prosodically deficient element which adjoins to another element to form a prosodic unit with it. Therefore, it is tempting to correlate its occurrence restrictions with restrictions on the prosodic and phonological structure of the preceding element. For instance, it appears that the prosodic words which result from *dn* attaching to its predecessor are rather marked in the following examples:

(112)a. ## Was macht der *Mann-dn* da draußen? [mandn]
'What is that man doing out there?'

b. $*^{?}$ Was macht ein *Arbeiter-dn* am Wochenende? [a:baetadn]
'What does a worker (in general) do on weekends?'

c. $*^{?}$ Wieso ist euer *Balkon-dn* so verwahrlost? [balko:ndn]
'Why is your balcony so run down?'

d. $*^{?}$ Wieso ist das *Bett-n* so hart? [bettn]
'Why is this bed so hard?'

However, the following examples show that this cannot be the reason for their ungrammaticality as phonological words of the same type are perfectly acceptable when it is not a DP, but a verb to which *dn* attaches:

(113)a. ^{OK} Seit wann *wohnen-dn* die Herta und der Hugo getrennt? [wo:nendn]
'How long have Herta and Hugo been living apart?'

b. ^{OK} Seit wann arbeitet-dn der Hansi schon dort? [a:baetetn]
'How long has Hansi been working there?'

c. ^{OK} Wohin gehen-dn der Gustav und die Johanna? [ge:ndn]
'Where are Gustav and Johanna going?'

d. ^{OK} Wann hat-n der Hansi die Anna geküsst? [hattn]
'When did Hansi kiss Anna?'

In contrast, the following examples illustrate that full DPs which not at all lead to prosodically marked structures when combining with *dn* are unacceptable in the very same contexts.

(114)a. $*^{?}$ Wieso küsst der Otto-dn die Anna? [otodn]
'Why does Otto kiss Anna?'

b. ## Was macht die Frau-dn da draußen? [fraodn]
'What is this woman doing out there?'

It can hardly be argued that prosodic or phonologic constraints are sensitive to lexical categories (verb versus DP) or the structural position of the prosodically strong element.

3.6 Summary

In this chapter, possible interactions between sentential stress and information structure with the syntactic behavior of VG *dn* have been investigated. Furthermore, the behavior of *dn* with respect to different semantic and syntactic types of DPs has been discussed. These major sub-sections of this chapter were followed by a short discussion of the diachronic origins of SG (and VG) *denn* and VG *dn*, and their synchronic relations to their non-particle variants. Finally, the projectional status of VG

dn has been discussed, culminating in the proposal of an analysis of its overt syntactic behavior.

It has been pointed out that sentential stress and information structure have mainly been investigated with respect to declaratives in the previous literature. A tentative approach has been made to transfer earlier insights to the case of wh-interrogatives. It has been shown that VG *dn* is not sensitive to stress assignment and information structure. However, there are two exceptions: *dn* is not licensed in echo-questions, which might be explained to be a side-effect of their peculiar nature and it is licensed to appear lower in the structure when it co-occurs with focus stressed pronouns; namely following them. This phenomenon has been attributed to the deictic semantics of such pronouns which complies with an analysis which assumes *dn* to be base-generated within their extended projection, taking narrow scope over the pronominal elements.

Furthermore, it has been shown that VG *dn* behaves like a syntactic clitic following clitic pronouns and preceding all different semantic and syntactic types of full DPs. These observations suggest an analysis which assumes *dn* to be a syntactic clitic which cliticizes to the C^0 head except for the cases in which it is base-generated within the extended projection of a deictic focus stressed pronominal in order to take narrow scope over it and thus perform a contextualizing function. This analysis complies with the assumption that clitic elements have to adjoin to a head which contains the relevant prosodic features that they lack. All pronouns which are able to bear focus stress have to be assumed to contain such a head, thus having *dn* adjoin to this head and barring its further movement to the clausal C^0 head.

Chapter 4

The Semantics of Discourse Particles

In this chapter, the semantics of discourse particles is discussed, and how it can be implemented in the analysis that has so far been presented. In particular, the aim of this chapter is to provide an answer to the question how the discourse particles' semantics may determine their syntactic behavior, especially with respect to the syntax-semantics interface. In section 4.1, traditional descriptive attempts at determining the meaning of SG (and VG) *denn* and its counterpart VG *dn* are discussed. In sections 4.2 and 4.3, recent approaches within a formal generative framework of semantics are presented. At the end of each sub-section, an attempt will be made to apply these different approaches to the semantics of VG *dn*, and to its correspondent, SG (and VG) *denn*.

4.1 A traditional approach

The semantics of German discourse particles is difficult to determine as it is highly abstract and context-dependent, operating on the borderline of semantics and pragmatics (cf. Hartmann 1998). Weydt (1969) was the first to propose a technique to determine it, creating propositional frames that license discourse particles (e.g. *Wieviel Uhr ist es PRT?* 'What time is it?') and comparing the overall meaning and pragmatic content of the resulting utterances when different particles are inserted into the respective frames. These differences are subsequently attributed to the particles' meanings. The meaning of *denn* is particularly difficult to determine as it is relatively non-specific, as pointed out by Thurmair (1991). In this subsection, three core aspects of the meaning of *denn* are discussed which are commonly pointed out.

First, while *denn* does not determine a specific type of question, it marks the utterance unambiguously as an interrogative speech act. In other words, the question modified by *denn* can basically not be interpreted as an indirect request or order (cf. König 1977, Thurmair 1991), as illustrated in (1). The fact that *denn* is the most frequent discourse particle in interrogatives (it is inserted in the majority of wh-questions in everyday spoken language discourse – cf. May 2000:129) makes Thurmair (1989:169) even consider it a mere question marker.

(1) Könntest du *denn* die Türe zumachen?
could you *denn* the door close
'Could you *denn* close the door?'
≠ (Please) close the door.
= Would you be able to close the door(, if you had to)?

Secondly, *denn* denotes a connection of the modified utterance to the linguistic or non-linguistic context of the utterance situation. In other words, *denn* expresses the connection of the utterance to an immediately preceding utterance, to some recent events that took place in the utterance situation, or to other contextual aspects or background information that are available to the hearer (cf. König 1977, Thurmair 1991) – this aspect of the meaning of *denn* is considered to be its core function by May (2000). The example in (2) illustrates this property of *denn* (*%* denoting *unacceptability in the relevant context*).

(2) Context: Speaker and hearer are in Frankfurt.
a. Wo ist *denn* hier der Bahnhof?
Where is *denn* here the train station?
'Where is *denn* the train station (here, in Frankfurt)?'
b. % Wo ist *denn* in Hamburg der Bahnhof?
where is *denn* in Hamburg the train station?
'Where is *denn* the train station in Hamburg?'
(König 1977:121)

Third, *denn* expresses the speaker's expectation that the hearer is able to answer the question (cf. König 1977). This is illustrated in the examples in (3) to (6). While the utterance in (3a) can be understood both as requesting the hearer to make a guess or to state her/his knowledge (illustrated in (3b)), its counterpart in (4a) which contains *denn* does not allow for an interpretation where the hearer is requested to make a guess as illustrated in (4b). This implication can be canceled by other context factors such as if the discourse particle *wohl* (which can be roughly translated as 'presumably' – cf. Zimmermann 2004a) co-occurs with *denn*, resulting in the utterance (5a) which is obligatorily interpreted as shown in (5b) – this will be explained in chapter 4.3:

(3) a. Wer wird gewinnen?
'Who will win?'
b. Who is such that you *assume* / *know* that he will win?

(4) a. Wer wird *denn* gewinnen?
'Who will *denn* win?'
b. Who is such that you *%assume* / *know* that he will win?

(5) a. Wer wird *denn wohl* gewinnen?
'Who will *denn* win?'
b. Who is such that you *assume* / *%know* that he will win?

Consider further (6) as another illustration of this property of *denn.* In the context (6a), (6b) would be perfectly felicitous, while (6c) would be unacceptable. Nevertheless, it is not clear whether this third property of the meaning of *denn* (to presuppose the hearer's knowledge of the answer) is really part of its proper semantics or merely a side-effect of its second property (i.e. to relate utterances to the context).

(6) a. Context: A wakes up B.
b. B to A: Wie spät ist es *denn*?
'How late is it *denn*?'
c. A to B: % Wie spät ist es *denn*?
'How late is it *denn*?'
(König 1977:119,ex.15)

In sum, the meaning of *denn* can be described as follows: *Denn* marks the speech act of an utterance as a *question*, links the utterance to aspects of its non-linguistic or linguistic context (i.e. preceding utterances, events or knowledge shared by the discourse participants) and triggers the presupposition that the hearer knows the correct answer to the question.

In addition to this basic meaning, *denn* is observed to optionally express the speaker's surprise about the basic facts that are questioned in yes/no-questions or to be specified in wh-questions. May (2000) points out that *denn* can furthermore perform a variety of different illocutionary functions, such as expressing reproach or requesting clarification of certain facts in the speech situation. In favor of a unitary account, it will be assumed, following Zimmermann (2004a), that additional meanings and functions of this kind are not part of the lexical entry of *denn*, but contributed by the utterance context (as proposed also by Weydt 1969 and Thurmair 1991). Presumably this is attained by means of conversational implicatures (cf. Grice 1975). The assumption that discourse particles semantically interact with other factors such as the utterance context, complies with the observation that the meanings of co-occurring discourse particles interact. This may lead to an entirely different meaning (cf. Weydt 1969:49).

At least with respect to its core meaning, VG *dn* can be shown to have the same semantic properties as SG *denn*. First, *dn* also unambiguously marks a modified utterance as a question. Second, *dn* also relates the utterance to facts from the utterance context and expresses the speaker's assumption that the hearer knows the answer, which is illustrated in the example in (7):

(7) Seit wann regnet-s-*n* schon?
Since when rains-it-*dn* already?
'How long has it *dn* already been raining?'

(7) can only be felicitously uttered if the hearer knows that it is raining (i.e. knows the relevant context fact to which the utterance refers) and if it is possible for the speaker to assume that the hearer knows the answer (i.e. when it started to rain). From these observations, it can be can concluded that *dn* has the same semantic properties as *denn*. This implies that there must be other reasons for their difference in syntactic behavior, particularly for the fact that *dn* is restricted to wh-questions, while *denn* can also occur in yes/no-questions.

4.2 Kratzer: Discourse particles as expressives

4.2.1 The formal semantics of discourse particles

Kratzer (1999) analyzes discourse particles such as German *ja* as *expressives*. In formal semantics within the generative framework, *expressives* are defined as elements whose function is *expressive* (i.e. *emotive, affective*) *modification* of an utterance (cf. Potts 2003a). A prototypical expressive is the element *damn* in the following example:

(8) Ed refuses to look after Sheila's *damn* dog.
(Potts 2003a:304,ex.1)

The *expressive content* (or *expressive meaning*) which is contributed by such elements conveys information about the speaker's emotions and attitudes. According to Potts (2003b), *expressives* share the following properties (cf. also Kaufmann 2004): Their interpretation is bound to the utterance situation (*nondisplaceability*). It is dependent on the speaker

(*indexicality* or *speaker-orientedness*). Expressive content does not interact with presupposed content of an utterance (*independence*). The intended speech act is achieved by uttering an expressive; it does not add any content to the common ground (*immediacy*). Expressive content can hardly be paraphrased in descriptive terms (*descriptive ineffability*).

Kratzer claims that discourse particles do not contribute to the descriptive content of the utterance they occur in (i.e. to the expressed proposition), but to its expressive content. The expressive content is considered a second level of meaning that contains the attitude of discourse participants towards the descriptive content (cf. Weydt 1969 for a similar approach). Kratzer proposes a first approximation of the meaning of *ja*:

(9) [[*ja(α)*]]:
ja α is appropriate in a context c if the proposition expressed by α in c is a fact of w_c which – for all the speaker knows – might already be known to the addressee.
(Kratzer 1999:1)

According to her, the overall meaning (*meaning*$^+$) of an utterance is calculated by adding all instances of expressive meaning that are contributed by expressives to the descriptive meaning. Consider the following sample computation:

(10) a. Webster schläft *ja*
Webster sleeps *ja*
'Webster is *ja* sleeping'
b. Descriptive meaning: $\lambda s(\text{sleep}(\text{Webster})(s)) = p$
c. Expressive meaning [= q_1] contributed by *ja* (roughly):
$\lambda s(p(w_s) \,\&\, \text{might}(s)(\lambda s'(\text{know}(s')(p)(\iota x(\text{addressee}(s)(x))))))$
(Kratzer 1999:4,ex.10a-c)
d. Meaning$^+$ of α: $\lambda s(p(s) \,\&\, q_1(s) \,\&\, \ldots \,\&\, q_n(s))$
(Kratzer 1999:4)

The expressive meaning contributed by *ja* becomes clear in the examples in (11) and (12). While the utterance in (11) is perfectly acceptable, the one in (12) is unacceptable as it is impossible for Spencer, from what he knows, to assume that Webster might already know the answer to his question.

(11) Webster runs into Spencer at the bus stop:
Webster: Du hast *ja* 'ne neue Frisur.
You have *ja* a new hairdo
(Kratzer 1999:2,ex.2)

(12) Webster asks Spencer: 'Who did Austin marry?'
Spencer: % Austin hat *ja* Ashley geheiratet.
Austin has *ja* Ashley married
'Austin married Ashley.'
(Kratzer 1999:2,ex.3)

An interesting detail of Kratzer's analysis is that it implies that the proposition which is expressed by the modified utterance holds true. This is the case for *ja*, but not for all discourse particles, as we will see in Zimmermann's (2004a, 2004b) analysis of *wohl*.

With respect to its syntactic distribution, Kratzer (1999:3) states that the modified proposition has to be in the semantic and syntactic scope of *ja*. She claims that this scope is determined in the same way as that of sentence adverbs (such as *möglicherweise* 'probably'). As sentence adverbs can be analyzed as quantifiers over possible worlds (cf. von Fintel and Heim 2002), they can be assumed to syntactically behave on a par with other quantifiers, their scope being equal to their c-command domain at LF (cf. Roberts 1997:179;262), c-command being defined as follows.

(13) *C-command:*
α c-commands β iff α does not dominate β and every category dominating α dominates β.
(Roberts 1997:27,ex.42)

The following examples show that *ja* syntactically appears to behave like the sentence adverb *probably*:

(14) ...da (**ja* / **möglicherweise*) er (*ja* / *möglicherweise*) schnarcht.
because (**ja* / **probably*) he (*ja* / *probably*) snores.
'because he *ja* / *probably* snores.'

(15) ...da (*ja* / *möglicherweise*) niemand (**ja* / **möglicherweise*) schnarcht.
because (*ja* / *probably*) nobody (**ja* / **probably*) snores.
'because *ja* / *probably* nobody snores.'

Kratzer attributes this pattern to the syntactic scope of the elements, *ja* and *möglicherweise* 'probably' obligatorily taking scope over *niemand* 'nobody' in (15), but not being able to take scope over *er* 'he' in (14).

While Kratzer (1999) does not provide an explanation for this difference in scope, some insights might be gained from investigations of scope ambiguities. Von Fintel and Heim (2002:31-34) show that modal operators which embed quantificational DPs (like *a woman*) often trigger the so-called *de re* - *de dicto* ambiguity. In the *de re* case the DP, for instance *a woman*, is analyzed to take scope over the modal operator and thus receive a *specific* interpretation in which it refers to an actual woman in the actual world. In contrast, the *de dicto* case in which the DP takes narrow scope under the modal operator results in the *non-specific* interpretation that for every world which is specified by the modal operator there is a woman – the referent being variable and not specified for the actual world. Von Fintel and Heim (2002:43) assume that modal predicates do not move, as co-occurring ones never interact scopally. Therefore they propose that the *de dicto* readings result from interpreting

the DPs in their base position within the complement of the modal predicate, while the *de re* readings are obtained by Quantifier Raising of the DPs to a position higher than the modal predicate. These observations allow for the conclusion that quantificational DPs such as *niemand* 'nobody' in (15), which inherently do not allow for a *de re* reading, but only for a *de dicto* reading (*niemand* 'nobody' asserting the non-existence of a referent), have to remain within the scope of the modal quantifier *möglicherweise* 'probably'.

This approach complies with the proposal discussed in chapter 3.2 that sentence adverbs like *möglicherweise* 'probably' and discourse particles such as *ja* mark the boundary of the VP layer, appearing to the left of elements which reside within the VP space and to the right of elements which have been moved out of it. We have seen in chapter 2 and 3 that there are reasons to assume that discourse particles are base-generated within Cinque's Hierarchy and spelled out in their base positions unless they are syntactic clitics. While unstressed pronouns such as *er* 'he' in Standard German obligatorily move out of the VP layer and to the left edge of the IP layer, certain strong quantifiers such as *niemand* 'nobody' can be argued to obligatorily remain within the VP layer. As has been shown in chapter 3.2, elements within the IP layer generally receive a presuppositional reading, i.e. the existence of a specific referent selected by the quantifier is presupposed. As *niemand* 'nobody' can only be used to assert the non-existence of a potential referent, such a presuppositional reading is excluded and it has to remain within the VP layer, in contrast to strong quantifiers such as *alle Wale* 'all whales':

(16) dass <alle Wale> ja doch <alle Wale> sichtbar sind
that <all whales> $ja_{D.PRT}$ $doch_{D.PRT}$ <all whales> visible are
'... that all whales are visible.'

While the parallels between *möglicherweise* 'probably' and *ja* look quite obvious at the first glimpse, one major difference has to be pointed out: As will be shown in chapter 4.3, Zimmermann (2004a) argues that *ja* takes

scope not only over the expressed proposition, but over the entire speech act and must for this reason be assumed to undergo covert quantifier raising at LF. In contrast to sentence adverbs which are in general assumed to be interpreted and take scope in their base position. These can be shown to contribute descriptive meaning to the expressed proposition (cf. also Cinque 1999, von Fintel and Heim 2002).

Concluding these observations, it can be stated that SG *denn* behaves like *ja* / *möglicherweise* 'probably' in (14) and (15):

(17) a. Schnarcht (**denn*) er (*denn*)?
snores (**denn*) he (*denn*)?
'Does he *denn* snore?'

b. Schnarcht (*denn*) niemand (**denn*)?
snores (*denn*) nobody (**denn*)?
'Does *denn* nobody snore?'

At this point, a first approach can be made to approximate the semantic content of *denn* and *dn* within an analysis such as that of Kratzer (1999).

4.2.2 The formal semantics of *denn* and *dn*

As mentioned above, the basic semantic content of SG (and VG) *denn* is to mark the speech act of the modified utterance as a *question*, to link it to aspects of the context (which can be formalized as a proposition *p* that is true in the utterance situation) and to express the speaker's assumption that the hearer knows the correct answer. The basic meaning of *denn α* could thus be drafted as follows (in the style of Kratzer 1999):

(18) [[*denn α*]] (first approximation):

denn α is appropriate in a context c if (1) α is a question, and (2) α refers back to a proposition p in c which is a fact of w_c that – for all the speaker knows – is known to the addressee, and (3) the correct answer q to α is – for all the speaker knows – known to the addressee.

For example, *Wo ist denn hier der Bahnhof?* 'Where is *denn* the train station?' is felicitous, if the following conditions hold. First, the utterance is principally meant as a question (i.e. not as an indirect request to do something other than to provide information)[32]. Second, the hearer knows that *p = there is a train station nearby*. Third, the hearer knows that *q = the train station is in x (such that x is the actual location of the train station)*. Having thus presented a first approach to the implementation of the discourse particles *denn* and *dn* within a generative framework of formal semantics, one main observation of Kratzer (1999) has to be briefly discussed, namely that of intervention effects triggered by discourse particles in embedded clauses. It is shown that this claim is problematic and does not shed much light on the behavior of *denn* and *dn* in embedded clauses.

4.2.3 Intervention effects in embedded clauses

One highly controversial and disputed observation of Kratzer (1999) is that no variables that are bound by a quantifier from the outside may occur within the scope of *ja*. On this phenomenon she bases her hypothesis that discourse particles cannot intervene between bound variable pronouns

[32] The fact that *denn* in such utterances triggers a politeness effect, making them *polite questions*, is no counter argument to the claim that the expressed speech act is primarily that of a question. It can be argued that the politeness effect is a side-effect which arises from the semantic contribution of *denn*, but is not part of its core semantic content (cf. Zimmermann 2004a:26 for an analogous claim for *wohl*).

and their binders. Witness first, for illustration purposes, the contrast between the acceptable clause in (19) and the clause in (20), in which Kratzer claims *ja* to be unacceptable (as denoted by the '*').

(19) Stacie hat ihren Job verloren, weil sie *ja* in der Gewerkschaft war.
Stacie has her job lost, because she *ja* in the union was
'Stacie has lost her job, because she was *ja* in the union.'
(Kratzer 1999:5,ex.11d)

(20) Jeder von diesen Arbeitern hat seinen Job verloren, weil er (**ja*) in der Gewerkschaft war.
Each of these workers has his job lost, because he (**ja*) in the union was
'Each of these workers has lost his job, because he was (**ja*) in the union.'
(Kratzer 1999:5,ex.11e)

In these prototypical cases of the claimed intervention effect, *ja* evidently takes scope over the variable *er* 'he' which is bound from the outside by the quantifier *jeder von diesen Arbeitern* 'each of these workers'. However, it can be shown that the assumption of such intervention effects is highly problematic on empirical grounds. (20) is in fact grammatical and acceptable, if the presupposition holds that each of the workers was in the union (cf. Kaufmann 2004).

However, there are no possible readings under which Kratzer's example of intervention with respect to a wh-element in (22) (in contrast to (21)) can be judged grammatical. This phenomenon has to be discussed briefly, as it is relevant for the case of *denn* and *dn* which are restricted to interrogatives and therefore may only appear in embedded questions, if they are licensed in embedded clauses at all. Consider first Kratzer's examples:

(21) Ich weiß, dass sie *ja* Stacie eingeladen hat.
I know, that she *ja* Stacie invited has
'I know that she *ja* invited Stacie.'
(Kratzer 1999:5,ex.11f)

(22) Ich weiß, wen sie (**ja*) eingeladen hat.
I know, who she (**ja*) invited has
'I know who she (**ja*) invited.'
(Kratzer 1999:6,ex.11g)

Kratzer claims that the ungrammaticality of *ja* in (22) is due to the fact that embedded wh-clauses generally display an intervention effect of the above type as the wh-element binds its trace within the scope of *ja*. This assumption is inherently problematic as Kratzer's analysis of *ja φ* (in (9)) entails that *ja* has to take scope over the entire proposition, including both the quantifier and the variable in (22). It is therefore not possible to argue that the ungrammaticality of (22) is due to such an intervention effect. The possible objection that the wh-element might in turn rise across *ja* at LF will be invalidated in chapter 4.3, in which it will be shown that *ja* in fact must be assumed to take scope not only over the proposition, but also over the interrogative speech act operator which in turn must have the wh-element in its scope at LF.

Evidently, the ungrammaticality of *ja* in (22) cannot be due to intervention effects. Furthermore, the discourse particle *denn* which behaves similar in many regards is perfectly licensed in analogous constructions, as exemplified in (23).

(23) Paul fragte Maria, wo_i sie *denn* $[_{VP}\ t_i$ wohne].
Paul asked Maria, where she *denn* lives
'Paul asked Maria, where she *denn* lives.'
(adapted from May 2000:130,ex.267)

The observation that *denn* is licensed suggests that the difference is due to selection restrictions on sentence types, as *denn* in matrix clauses is only licensed for interrogatives while *ja* is restricted to declaratives. One possible hypothesis is to assume that either the embedded wh-element or one of the functional heads in the left periphery of the embedded clause in (22) bears an interrogative speech act or sentence type feature which is incompatible with the semantic features of *ja*.

An interesting observation at this point is that VG *dn* which is only marginally licensed in embedded (wh-)clauses is judged grammatical in (24), where the wh-element is moved from an adjunct position, but ungrammatical in (25), where it is moved from an argument position. This observation would comply with Kratzer's hypothesis of intervention effects, as it could be argued that arguments, but not adjuncts bind a trace within the scope of the discourse particle *dn*. Having shown that Kratzer's hypothesis cannot be maintained both on empirical grounds (in the case of embedded declarative clauses) and on conceptual grounds (in the case of embedded interrogatives), a different solution must be found for this phenomenon.

(24) $^{OK?}$ Ich frag mich, wann-a-s-*(d)n* braucht. (cf. (65) in chapter 1)
I ask myself, when-he$_{CL.NOM}$-it$_{CL.ACC}$-*(d)n* needs
'I wonder when he will need it.'

(25) $^{*?}$ Ich frag mich, wo sie-*dn* wohnt. (cf. (73) in chapter 1)
I ask myself, where she-*dn* lives.
'I wonder where she lives.'

Obviously, there are other factors involved as well, as (26a) and (26b) display a tendency to be judged ungrammatical, in contrast to (24). The latter only differs from the former by having the DP *der Peter* 'Peter' replaced by a clitic pronoun.

(26) a. ## Ich frag mich, wann-s der Peter-*dn* braucht.
b. ## Ich frag mich, wann-s-*(d)n* der Peter braucht.
I ask myself, when-it$_{ACC}$ (*dn*) the Peter (*dn*) needs.
'I wonder when Peter will need it.'
(cf. (69) and (70) in chapter 1)

Assuming that the contribution of *dn* is to contextualize the modified proposition, as proposed for *denn*, the reason for the difference might be linked to the difference between clitic pronouns which have been shown to require a referential antecedent and definite DPs which have reference on their own.

Concluding this sub-section, it must be noted that the following important fundamental observation can be made for clauses in which *denn* and *dn* are acceptably embedded. The semantic content of the discourse particle in these examples cannot apply to the utterance situation, the speaker and the addressee, but has to be predicated of the reported situation and the respective speaker and hearer (cf. also May 2000:148). This observation complies with the fact that the discourse particle *denn* can basically only be embedded in indirect wh- or y/n-questions and only when embedded under a *verbum dicendi* (cf. May 2000:130). The observation that the particle's semantic content is predicated of the reported situation and not of the utterance situation can be carried over to the case of *wohl* and *ja* when embedded under *verba dicendi* (cf. Zimmermann 2004a, Kratzer 1999). For now, nothing more can be said about embedded *denn* and *dn.* The next sub-section deals with Zimmermann's (2004a, 2004b) theory and how it can be adopted for the analysis of *denn* and *dn*.

4.3 Zimmermann: Discourse particles as speech act modifiers

As we have seen in chapter 2 and 3, there are reasons to assume that discourse particles are base-generated within the IP layer – more

precisely within Cinque's Hierarchy. They are spelled out in their base positions, unless they are syntactic clitics and undergo head movement to the canonical clitic landing position. In this sub-section, it is shown that they have to be assumed to covertly move at LF to take scope over the proposition or the entire speech act, as there are reasons to assume that they are speech act and sentence type modifiers.

While Kratzer (1999) and von Fintel and Iatridou (2002) treat discourse particles as expressives and Kaufmann (2004) as presupposition triggers, the idea that they can explicitly be treated as modifiers of the speech act operator is already implied by von Fintel and Iatridou (2002) who propose that the expressive *ja* is to be considered a speech act marker and as such to have *procedural meaning* (i.e. non-truthconditional meaning which is not descriptive). Analogous approaches are that of Zeevat (2003) and Eckardt (2004). A recent, formal account of discourse particles as speech act modifiers which allows for an implementation of this approach into the presented framework, has been proposed by Zimmermann (2004a) and is discussed in this sub-section.

4.3.1 The basics of the analysis

Zimmermann (2004a) in essence proposes a sub-classification of discourse particles into those which modify speech acts and those which modify sentence types. He analyzes the discourse particle *wohl* 'presumably' as an element of the latter type. He assumes that it is covertly moved to the highest position within the left periphery of a sentence, i.e. SpecForceP, to modify the sentence-type indicator (*declarative* or *interrogative*, in this case) which is located in Force^0 (according to Rizzi 1997). This analysis accounts for the observation that *wohl* neither contributes to the descriptive meaning of a sentence (i.e. its propositional content), nor triggers an implicature or presupposition, according to Zimmermann.

Wohl is analyzed as modifying the sentence with respect to a discourse participant's commitment to the expressed proposition. In declaratives it results in a weaker commitment of the speaker. In interrogatives it weakens the degree of commitment to a proposition which is requested by the uttered question. More formally, the semantics of *wohl* can be approximated as expressing epistemic insecurity with respect to an expressed proposition. This means that this particle operates on the epistemic basis of an utterance which explains that it is restricted to sentences that are interpreted at indices which are epistemically accessible; to declaratives and interrogatives. Accordingly, *wohl* cannot occur in imperatives and assertions that explicitly express wishes such as *Käme er (*wohl) doch!* 'If only he (**wohl*) came!'.

Zimmermann proposes that the difference in meaning that arises between *wohl* in declaratives and *wohl* in interrogatives is exclusively due to the sentence type. He introduces the concept of *epistemic reference point* (Ger. *epistemische Verankerung*) which is defined as *reference to the knowledge of different participants in discourse*. In declaratives, *wohl* refers to the speaker's knowledge, i.e. its epistemic reference point is the speaker, on part of whom it expresses epistemic insecurity. In interrogatives, it refers to the hearer's knowledge and optionally also to the speaker's knowledge. Questions modified by *wohl* request the hearer's opinions / assumptions and not the hearer's knowledge. This different epistemic reference point is analyzed to be exclusively due to the sentence type as it correlates with Doherty's (1985) observation that the defining difference between declaratives and interrogatives is that declaratives refer to the speaker's knowledge and interrogatives to the hearer's knowledge (cf. also Zeevat 2003 for a similar proposal). From this correlation between *wohl* and the sentence type with respect to their epistemic reference point, Zimmermann concludes that *wohl* inherits its epistemic reference point from the sentence type, i.e. it is not included in its proper semantics. Together with the assumption that grammatical information has to be passed down from one element to another in local structural syntactic configurations, this insight allows for the conclusion

that *wohl* and the sentence type indicators *decl(arative)* and *int(errogative)* have to be in a close structural relation at least once during the derivation.

Zimmermann points out that discourse particles like *wohl* differ from propositional modifiers like epistemic modals (e.g. *must*, *can*) or modal adverbs (e.g. *probably*) in that *wohl* doesn't contribute to the propositional content of an utterance. He bases this assumption on two observations: intervention effects in variable binding constructions and the behavior of *wohl* in yes/no-questions. While the assumption of such intervention effects is highly problematic, as has been shown in chapter 4.2.3, Zimmermann's observations on yes/no-questions provide strong arguments for his claim. He points out that *wohl* cannot be asked for, in other words, it is not part of the *proto question* (cf. Karttunen 1977) in a yes/no question, which is the set of alternative propositions denoted by a question. This is extensively discussed in the following sub-section

4.3.2 The scope of discourse particles

In formal semantics, questions are considered sets of alternative propositions that are derived from the proposition which is expressed in the question (cf. Hamblin 1973, von Stechow 1991, Bäuerle and Zimmermann 1991). These sets are considered to constitute the *proto question* from which the real question is derived by applying an illocutionary question operator *?* to it:

(27) a. Is it raining? (yes/no-question)
b. p = it is raining (expressed proposition)
c. {p, ¬p} = {it is raining, it is not raining} (proto question)
d. ?{p, ¬p} = ?{it is raining, it is not raining} (real question)
≈ Tell me which is correct: It is raining or it is not raining.
(cf. Zimmermann 2004a:10,ex.21)

Zimmermann shows that *wohl* takes wide scope over the proto question operator which in turn takes propositions as its arguments. Consider his example in (28):

(28) Ist Hein *wohl* auf See? 'Is Hein *wohl* at sea?'
(Zimmermann 2004a:11, ex.22a)

If *wohl* was part of the proposition expressed by the question, it would be in the scope of the proto question operator, thus resulting in the following interpretation (*wohl(φ)* being interpreted as *ASSUME(hearer, φ)*):

(29) ?{ASSUME(hearer, Hein is at sea), ¬ASSUME(hearer, Hein is at sea}
≈ Tell me which is correct: You assume that Hein is at sea, or it is not the case that you assume that Hein is at sea.
(cf. Zimmermann 2004a:10,ex.22c)

This is not the correct interpretation of (28). The correct interpretation results from *wohl* taking obligatory wide scope over the proto question operator and the embedded proposition:

(30) ?(ASSUME(hearer, {Hein is at sea, Hein is not at sea}))
≈ Tell me your assumption on which is correct: Hein is at sea or Hein is not at sea.
(cf. Zimmermann 2004a:10,ex.23)

Evidently, the set of alternative propositions is the same in the question with *wohl* and the question without it. From these empiric facts, Zimmermann concludes that *wohl* takes the proto question as its argument and does not contribute to the proposition. In contrast, epistemic modals are interpreted within the scope of negation and proto question operators.

This test can also be applied to instances of *denn*. Reconsider the first approximation of a lexicon entry in (18), repeated as (31).

(31) [[*denn α*]] (first approximation):

denn α is appropriate in a context c if (1) α is a question, and (2) α refers back to a proposition p in c which is a fact of w_c that – for all the speaker knows – is known to the addressee, and (3) the correct answer q to α is – for all the speaker knows – known to the addressee.

Analogous to Zimmermann's analysis of *wohl*, the question in (32) might be analyzed either as in (33), *denn* being assumed to be part of the proposition, or as in (34), *denn* being interpreted higher than the proposition and proto question, but lower than the question operator *?*[33]:

(32) Ist Hein *denn* auf See? 'Is Hein *denn* at sea?'

(33) *?*{([[*denn*]] & Hein is at sea), ¬([[*denn*]] & Hein is at sea)}

≈ Tell me which is correct: (a) Hein is at sea and this is a question, and you know the contextually provided proposition to which I refer with this utterance, and whether it is true that Hein is at sea or not, or (b) Hein is not at sea and this is not a question, and you do not know the contextual fact to which I refer with this utterance, and whether it is true that Hein is at sea or not.

(33) cannot be the right interpretation of (32), as the speaker neither questions the hearer's knowledge of the contextual fact to which the question refers, nor the hearer's knowledge of the correct answer, nor the utterance's property of being a question. However, interpreting *denn* in analogy to *wohl* is not felicitous either:

(34) ?([[*denn*]] & {Hein is at sea, ¬Hein is at sea})

[33] Note that the modification of an entity (or constituent) *φ* by *denn* is informally written as '[[*denn*]] & φ'. The question of the exact formalization of this modification is not relevant for the ongoing discussion and exceeds the scope of this thesis.

The question operator *?* is defined as operating on sets of at least two alternative propositions. The interpretation in (30) is perfectly felicitous as the respective set is merely modified by *wohl* with respect to propositional commitment, but it still remains a set of propositions. In (34) this is not the case. *?* would have to apply to both the proto question *and* to the semantic contributions of *denn*. This is obviously not the case, as the correct interpretation is in any case one in which the hearer is requested to select one of the two propositions provided by the proto question – either Hein is at sea, or Hein is not at sea. The difference between *wohl* and *denn* is evident. *Denn* has to operate on a level which is higher than the question operator, resulting in (35) which in fact yields the right interpretation for (32):

(35) [[*denn*]] & (?{Hein is at sea, ¬Hein is at sea})

≈ This is a question and you know the contextual fact to which I refer with this utterance, and you know which is the correct answer to the question, and I request that you tell me which is correct: (a) Hein is at sea or (b) Hein is not at sea.

Zimmermann makes an analogous observation for *ja* in declarative clauses. From these observations it can be concluded that *denn* does not only take scope over the proposition denoted by an utterance (cf. (33)), but that it further operates on the speech act operator (i.e. on the question operator *?*) and not on the sentence type (denoted by the proto question; cf. (34)). Zimmermann takes this difference between *ja* (or *denn*) and *wohl* as basis for his proposal of a sub-classification of discourse particles. To implement the presented observations into a framework of generative syntax, Zimmermann proposes an analysis as outlined in the following sub-section.

4.3.3 Discourse particles and the left periphery

In accordance with Rizzi (1997) Zimmerman assumes that the sentence type (declarative, interrogative, exclamative, etc.) is specified in the highest functional projection of the left periphery, i.e. ForceP. It is determined by an abstract sentence type feature (*decl*, *int*, *imp*, etc.) located in Force^0. This feature determines three parameters: the semantic type of the denotation (e.g. proposition (*decl*) versus set of alternative propositions (*int*)), the modal base of a sentence (e.g. epistemic, in case of *decl* and *int*) and the epistemic reference point of the utterance (e.g. reference to the speaker (*decl*) or reference to the hearer (*int*) of the expressed proposition). These sentence type indicators can be operated on by sentence-type modifiers such as the discourse particle *wohl*. Speech act operators like *ASSERT* and the question operator *?* operate on a higher level and take scope over both sentence-type indicators (e.g. *decl*, *int*) and sentence-type modifiers (e.g. *wohl*). These speech act operators determine the usage of an utterance, while the sentence-type modifiers for instance modify the strength of commitment to an expressed proposition. Obviously, sentence-type modifiers can be asymmetrically embedded under speech act operators: *ASSERT(wohl(p))*.

To adapt Rizzi's theory to account for the semantic behavior of *wohl*, Zimmermann states that one additional assumption suffices. This new assumption is that ForceP also encodes the strength of commitment to the expressed proposition, by means of operators like *wohl* that are moved to SpecForceP. The following analysis is straightforward. *Wohl* being assumed to be base-generated and spelled out within the IP layer, it is analyzed to covertly move to the CP layer at LF. Consider the overt syntactic structure of the sentence in (36), as proposed by Zimmermann[34]:

[34] Note that Zimmermann (2004a) adopts a VP-adjunction approach for discourse particles and sentence adverbials, while it is argued for an approach within Cinque's (1999) framework in this thesis.

(36) Hein ist *wohl* in See gestochen
Hein is *wohl* in sea stabbed
'Hein has *wohl* set sail.'
(Zimmermann 2004a:21)

(37) [$_{ForceP}$ decl$_{speaker}$ [$_{TopP}$ Hein [$_{FinP}$ ist [$_{VP}$ *wohl* [$_{VP}$ in See gestochen]]]]]
(Zimmermann 2004a:21,ex.46a)

The empirical data that were discussed earlier in this thesis suggest that SG *ja*, *denn* and VG *dn* are base-generated within the same area of the clause as *wohl* (cf. in particular chapters 2.3, 2.4 and 3.4).

Zimmermann proceeds with his analysis in proposing that *wohl* has to rise to SpecForceP covertly at LF in order to take scope over the sentence type indicator:

(38) [$_{ForceP}$ *wohl*$_i$ decl$_{speaker}$ [$_{TopP}$ Hein [$_{FinP}$ ist [$_{VP}$ t$_i$ [$_{VP}$ in See gestochen]]]]]
(Zimmermann 2004a:21,ex.46b)

In this constellation, *wohl* receives its epistemic reference point from *decl* by means of Specifier-Head-Agreement. On the other hand, it operates on Force^0 to modify the strength of propositional commitment. Both processes are illustrated in (39a) - ∅ denotes the default value of absolute (epistemic) security which applies in absence of overt operators. (39b) shows that speech act operators like *ASSERT* or *?* can operate on the outcome of modifying the epistemic security by inserting *wohl*:

(39) a. ∅(p) → ASSUME(speaker, p)
b. ASSERT(ASSUME(speaker, p)
(Zimmermann 2004a:21,ex.47a+b)

The analysis of *wohl* in interrogatives like (40) is analogous: The overt structure in (41a), i.e. the input for PF, is derived by moving the finite verb

to Force^0 to license the abstract feature *int*[35]. As in the case of declaratives, the discourse particle *wohl* covertly rises to SpecForceP to receive its semantic interpretation (illustrated in (41b)). The latter step is also supported by the need to account for *wohl* taking scope over the proto question operator.

(40) Hat Hania *wohl* (auch) ihre Chefin eingeladen?
Has Hania *wohl* (also) her chef invited?
'Has Hania *wohl* (also) invited her chef?'
(Zimmermann 2004a:21,ex.48)

(41) a. $[_{ForceP}$ int_{hearer} + hat Hania $[_{VP}$ *wohl* $[_{VP}$ auch ihre Chefin eingeladen]]]?
b. $[_{ForceP}$ $wohl_i$ int_{hearer} + hat Hania $[_{VP}$ t_i $[_{VP}$ auch ihre Chefin eingeladen]]]?
(Zimmermann 2004a:21,ex.49a+b)

The respective operations can again be described as in (42):

(42) a. $\varnothing(\{p,\neg p\}) \rightarrow$ ASSUME(hearer, $\{p,\neg p\}$)
b. ?(ASSUME(hearer, $\{p,\neg p\}$)
(Zimmermann 2004a:22,ex.49c+d)

This semantic representation can be derived compositionally in three steps as illustrated in (43) and (44).

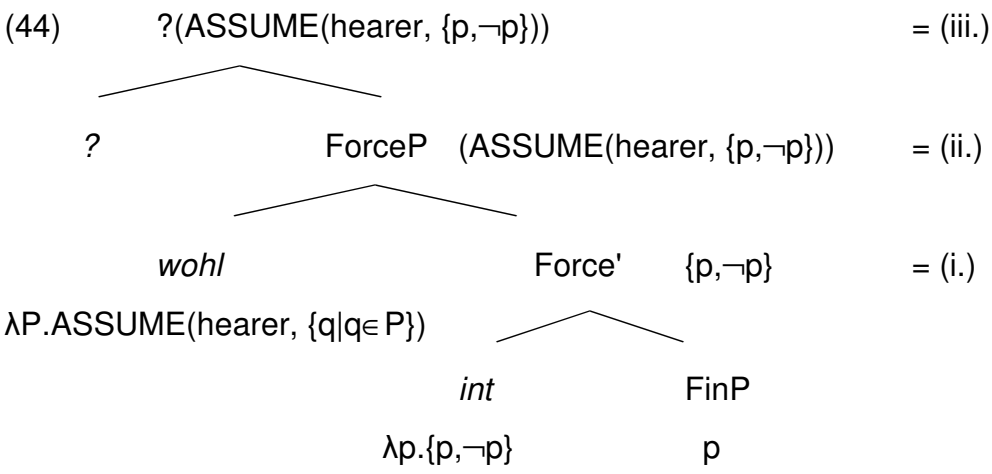
[35] Note that this is a different analysis than that which has been proposed in this thesis, namely that the finite verb in Verb Second Position in root clauses always resides within the Fin^0 (resp. C^0) head.

(43) i. formation of the proto question in Force^0(*int*): λp.{p,¬p}

ii. functional application of [[wohl]] in SpecForceP:
[[wohl]] = λP.ASSUME(hearer, {q|q∈ P})

iii. application of the speech act operator *?*

(44)



(43) and (44) illustrate that *wohl* takes syntactic and semantic scope over the proto question operator. This derivation can also be adopted for declaratives if the propositions denoted by declaratives are considered *unit sets* (i.e. they only contain one element). Zimmermann concludes that the proposal of LF-movement of *wohl* allows for a correct compositional derivation of the meaning of sentences that are modified by *wohl*.

He finally addresses the problem of *wohl* in wh-questions. The assumption that *wohl* is moved to SpecForceP implies that this position cannot host wh-elements. This observation corresponds to Grewendorf's (2002:240) analysis that wh-elements are marked for focus and thus moved into SpecFoc(us)P. Therefore a *wh-interrogative* like (45a) would have the LF structure in (45b):

(45) a. Wen hat Hania wohl eingeladen?
Whom has Hania *wohl* invited?
'Whom has Hania *wohl* invited?'

b. [$_{\text{ForceP}}$ wohl$_i$ int [$_{\text{FocP}}$ wen [$_{\text{FinP}}$ hat Hania t$_i$ eingeladen]]]?
(Zimmermann 2004a:27,ex.61a+b)

Zimmermann notes that this assumption implies the rejection of Rizzi's (1990) *wh-criterion* that an abstract question feature in the highest functional head (in this case, Force^0) has to be licensed by a wh-expression in its specifier position. Furthermore, Zimmermann assumes a different position for the finite verb in wh-questions such as (45b) than in yes/no-questions (cf. (41b)). Zimmermann proposes that the configuration of Force^0 and SpecFocP might be considered local enough to check the question features of the sentence type indicator *int* and the wh-element *wen* 'whom'. Alternatively, the abstract question feature might be analyzed as not being located in Force^0, but in a lower head, for instance, T^0 or Fin^0, where it is picked up by the verb during the derivation. The proposal that the finite verb is not moved to Force^0, but to Fin^0 could be extended to other sentence types and thus provide a unitary account for wh-questions and yes/no-questions. In fact, this is what has been implicitly claimed in this thesis by assuming that the finite verb in German root clauses always moves to the Fin^0 head (or traditionally C^0).

4.3.4 Discourse particles differ from implicature triggers

Having shown that discourse particles like *wohl* are interpreted higher than the proposition they occur in, Zimmermann shows that they differ from typical implicature triggering elements for two reasons: their inability of taking unlimited wide scope and the fact that they do not contribute to the expressive meaning of an utterance by triggering conventional implicatures. In particular, it would be false to analyze *wohl* in yes/no questions as suggested in (46):

(46) [[wohl p?]] = ?(p) $\wedge$ hearer is not sure with respect to p
(cf. Zimmermann 2004a:12,ex.25)

The first evidence for such a difference is that typical implicature triggering elements such as expressives, parentheses and certain particles can take

wide scope over a whole utterance from embedded contexts. Furthermore, they add an implied meaning (IMP) which has the same status as the asserted meaning (ASS); the overall meaning is formally described as an ordered pair <ASS, IMP>. (47) is an example of an implicature triggering expression which shows that they are not interpreted in the embedded clause, but take widest scope over the whole utterance on the level of overall meaning (cf. Zimmermann 2004a:13):

(47) a. Herbert sagt, dass sein *verdammter* Hund zweimal am Tag gefüttert werden sollte.
Herbert says that his *damned* dog twice a day fed be should
'Herbert says that his *damned* dog should be fed twice a day.'

b. <Herbert says that his _ dog should be fed twice a day; *the speaker does not like Herbert's dog*>

(48) a. Der Kapitän weiß, dass der Smutje *auch* betrunken war.
the captain knows that the cook *also* drunk was
'The captain knows that the cook was *also* drunk.'

b. <The captain knows that the cook was _ drunk; *somebody else was drunk*>
(Zimmermann 2004a:13,ex.28, translations added.)

In contrast, the following examples show that *wohl* cannot scope out of the embedded context but has to receive its interpretation within it. Therefore, *wohl* in embedded contexts cannot be interpreted except for cases where it is embedded under *attitude verbs* or *verba dicendi* (witness the difference between (49) and (50)):

(49) a. Schröder hat gesagt, dass die SPD *wohl* Unterstützung verdient.
Schröder has said that the SPD *wohl* support deserves
'Schröder said that the SPD *wohl* deserves support.'

b. ≠ <Schröder said that the SPD _ deserves support; *the speaker is unsure whether the SPD deserves support*>
(Zimmermann 2004a:13,ex.29, translation added)

(50) a. *? Die Deern weiß, dass der Hein *wohl* auf See ist.
the girl knows that Hein *wohl* at sea is
'The girl knows that Hein is *wohl* at sea.'

b. ≠ <The girl knows that Hein is _ at sea; *the speaker is unsure whether Hein is at sea*>
(Zimmermann 2004a:13,ex.31, translation added)

The second piece of evidence differentiating *wohl* and prototypical implicature triggering elements is that the latter add a second component of meaning (IMP) to the descriptive meaning (ASS) which is not changed. This is not the case for discourse particles of this type. *Wohl* does not contribute a surplus meaning to the descriptive meaning – Zimmermann points out that a felicitous utterance of (51a) does not allow for the conclusion that Hein is actually at sea. Instead, *wohl* modifies the overall meaning of the utterance such that the epistemic strength of the expressed proposition is weakened.

(51) a. Hein ist *wohl* auf See.
'Hein is *wohl* at sea.'

b. ≠ <Hein is _ at sea; [[wohl]]>
(Zimmermann 2004a:15,ex.38, translation added)

From these observations Zimmermann concludes that *wohl* is not interpreted at the independent semantic level of implicatures and presuppositions. He takes these observations as additional evidence for his proposal that *wohl* has to move to SpecForceP at LF. This analysis accounts for *wohl* taking scope over the proposition without being able to take unlimited scope as implicature triggers do.

These observations lead to a significant semantic difference between the *wohl*-type of discourse particles and the *denn*- and *ja*-type. As Zimmermann points out for *ja*, these can be described in the above notation, in contrast to *wohl*:

(52) a. Hein ist *ja* auf See.
'Hein is *ja* at sea'
b. = <ASSERT(Hein is _ at sea); [[ja]]>

(53) a. Ist Hein *denn* auf See?
'Is Hein *denn* at sea?'
b. = <?{Hein is _ at sea, ¬Hein is _ at sea}; [[denn]]>

Nevertheless, *denn* differs significantly from implicature triggering elements such as expressives, as it cannot take unlimited scope either, but has to receive an embedded interpretation. Reconsider the example in (23), repeated as (54a).

(54) a. Paul fragte Maria, wo sie *denn* wohne.
'Paul asked Maria, where she *denn* lives.'
(May 2000:130,ex.267)
b. ≠ <Paul asked Maria, where she _ lives; *the speaker wants to mark the utterance* where she _ lives *as a question and wants to express his/her assumption that the hearer knows to which contextual fact it refers and what the correct answer is*>

Interestingly, *ja* which in all previous investigations patterns exactly as *denn* (with the only syntactic difference of being licensed in exactly the converse sentence type, i.e. declarative), seems to behave differently in this regard, namely, like a prototypical expressive:

(55) a. Stacie hat ihren Job verloren, weil sie *ja* in der Gewerkschaft war.
Stacie has her job lost, because she *ja* in the union was
'Stacie has lost her job, because she was *ja* in the union.'
(Kratzer 1999:5,ex.11d)

b. ≈ <Stacie has lost her job, because she was _ in the union; *the speaker assumes that the hearer knows that Stacie was in the union*>

This difference between *ja* and *denn* is due to the type of the embedded sentence, as *ja* behaves exactly like *denn* when embedded under a *verbum dicendi*, the only case where *denn* can be embedded at all:

(56) a. Webster sagte, dass er *ja* niemanden gekannt habe.
Webster said that he *ja* nobody known had
'Webster said that he *ja* hadn't known anybody'
(Kratzer 1999:6,ex.12)

b. ≠ <Webster said that he _ hadn't known anybody; *the speaker assumes that the hearer knows that Webster hadn't known anybody*>

4.3.5 Zimmermann's analysis applied to *denn*, *dn* and *ja*

As stated above, Zimmermann (2004a) proposes that *ja* and *wohl* do not form a unitary class of particles. He points out that *ja* does not modify sentence types, like *wohl*, but that it modifies types of speech acts, i.e. it takes scope over the speech act operator (*ASSERT*). an analogous observation has also been made for the scope of *denn* (and the speech act operator *?*) earlier in this text. Further empirical evidence for such a difference might be gained from linearization facts. Zimmermann proposes that the fact that *ja* obligatorily precedes *wohl* in overt syntax mirrors their respective scope behavior at LF. Zimmermann shows that *ja* and *wohl*

never scopally interact in a declarative sentence where they co-occur; it is always *ja* that takes scope over *wohl* and never the other way round. Zimmermann provides the following example:

(57) Heute ist *ja wohl* Müllers letzter Arbeitstag
today is *ja wohl* Müllers last day.at.work
= Speaker assumes that today is Müller's last day at work and expresses his expectation that the hearer should entertain the same assumption on the base of evidence available to him.
(Zimmermann 2004b:565,ex.52)

The contribution of *wohl* in this case is to weaken the epistemic security of the expressed proposition (*today is Müller's last day at work*). The contribution of *ja* is to express the speakers assumption that the modified utterance might be accessible to the hearer. Therefore, *ja* taking scope over *wohl* can be interpreted such that the speaker expresses an assumption (i.e. a proposition modified by *wohl*) and further expresses the assumption that the hearer shares this assumption (i.e. that the proposition which is modified by *wohl* might also be accessible for the hearer). This analysis results in the correct interpretation. If *wohl* were to take scope over *ja*, the resulting utterance would be such that the speaker is epistemically insecure about both the facts that the expressed proposition holds and that it might be shared by the hearer. This would obviously not result in the right interpretation. The utterance in (57) can not be understood such that the speaker questions her/his own assumption that the expressed proposition might be available to the hearer (cf. Zimmermann 2004a)

Zimmermann takes these observations as further evidence for his claim that *ja* takes scope higher than the speech act operator (*ASSERT*) and thus higher than *wohl* in SpecForceP. According to Zimmermann, the sentence in (58a) can thus be described as (58b) with the denotation in (58c).

(58) a. Heute ist *ja wohl* Müllers letzter Arbeitstag.
today is *ja wohl* Müller's last day.at.work
'Today is *ja wohl* Müller's last working day.'
(Zimmermann 2004a:31,ex.67a)

b. [ja_i [*ASSERT* [$_{ForceP}$ $wohl_j$ $decl_{speaker}$ [$_{TopP}$ heute [$_{FinP}$ ist [$_{VP}$ t_i t_j ...]

c. *ja* + *ASSERT* [ASSUME (speaker, today is Müller's last working day)]
(Zimmermann 2004a:32,ex.72)

An analogous derivation can be attributed to *denn* in accordance with the observations in chapter 4.3.2. Recall that a framework has been adopted which analyzes questions as denoting sets of alternative propositions, to which the question operator *?* applies, resulting in requesting the hearer to select one of these propositions. While yes/no-questions denote binary sets, wh-questions denote sets which are determined as follows. They express a proposition which contains a variable denoted by the wh-element (cf. Bäuerle and Zimmermann 1991). The possible values that this variable can take are determined by the properties of the wh-element (cf. Eckardt 2004 who labels this set of possible values the *search space*). The set of propositions which is denoted by the question in (59) and from which the hearer is requested to select one can be formalized as in (60):

(59) Wo ist der Hans?
where is the Hans?
'Where is Hans?'

(60) $\lambda x.\ x \in D_{locations}$: Hans is in x

In conclusion, the interpretation of the wh-question in (61a) can be derived as sketched in (61b) and (61c).

(61) a. Wo ist *denn wohl* der Hans?
Where is *denn wohl* the Hans?
'Where is *denn wohl* Hans?'

b. [$denn_i$ [*?* [$_{ForceP}$ $wohl_j$ int_{hearer} [$_{FocP}$ wo_k [$_{FinP}$ *ist* [$_{VP}$ t_i t_j [$_{VP}$ der Hans]]]]]?

c. *denn* + *?* [ASSUME (hearer, {λx. x ∈ $D_{locations}$: Hans is in x})]

In other words, the semantic content of *denn* as sketched above is added to the speaker's request that the hearer commits herself/himself to one of the propositions that are included in the set denoted by the function in (60). The contribution of *wohl* is to weaken the degree of the requested commitment, i.e. the hearer is not expected to say what she/he knows to be the case, but to say what she/he assumes to be the case.

At this point, conclusions can be made on the syntactic behavior of *denn* and *dn* at the LF interface. Recall the syntactic analysis of SG (and VG) *denn* and VG *dn* within Cinque's (1999) framework, which has been proposed in chapter 2 and 3. Witness the sample derivation in (63) of the wh-question provided in (62).

(62) a. *SG* Wo ist *denn* Hans?

b. *VG* Wo is-*(d)n* der Hans?
where is-*denn*/*dn* the Hans?
'Where is Hans?'

It has been proposed that *denn* and *dn* are base-generated in the specifier of a functional projection within the highest area of Cinque's Hierarchy:

(63) a. *SG* [$_{CP}$ Wo [$_{C}$ ist] [$_{F1P}$ [$_{SpecF1P}$ *denn*] [$_{F'}$ F_1^0 [Hans [$_{VP}$ ...]]]]]?

b. *VG* [$_{CP}$ Wo [$_{C}$ is] [$_{F1P}$ [$_{SpecF1P}$ *dn*] [$_{F'}$ F_1^0 [der Hans [$_{VP}$ ...]]]]]?

Furthermore, it has been argued that VG *dn*, being a clitic element, has to move up and head-adjoin to the canonical clitic position, C^0, while SG

denn remains in its base position, the surface realization thus being as follows:

(64) a. *SG* [$_{CP}$ Wo [$_{C}$ ist] [$_{F1P}$ [$_{SpecF1P}$ *denn*] [$_{F'}$ F_1^0 [Hans [$_{VP}$ ...]]]]]?
b. *VG* [$_{CP}$ Wo [$_{C}$ is-*(d)n*$_i$] [$_{F1P}$ [$_{SpecF1P}$ *t*$_i$] [$_{F'}$ F_1^0 [der Hans [$_{VP}$ ...]]]]]?

Finally, it has been shown in this chapter that covert LF movement of discourse particles to the CP layer has to be assumed, resulting in an LF structure which can be sketched as follows[36]:

(65) a. *SG* [$_{CP\text{-}layer}$ [*denn*$_i$ [*?* [$_{ForceP}$ int [$_{FocP}$ Wo [$_{FinP}$ ist] [$_{F1P}$ [$_{SpecF1P}$ *t*$_i$] [$_{F'}$ F_1^0 [Hans [$_{VP}$ ...]]]]]?
b. *VG* [$_{CP\text{-}layer}$ [*dn*$_i$ [*?* [$_{ForceP}$ int [$_{FocP}$ Wo [$_{FinP}$ is] [$_{F1P}$ [$_{SpecF1P}$ *t*$_i$] [$_{F'}$ F_1^0 [der Hans [$_{VP}$ ...]]]]]?

4.4 Summary

In this chapter, a first approximation of a semantic contribution of SG (and VG) *denn* and SG *dn* has been presented, based on traditional attempts at determining their semantic contribution. It has been shown that the meaning of SG *denn* can be expressed in terms of Kratzer (1999) and that Kratzer's observations on the behavior of *ja* can be carried over to the investigation of *denn*. It has further been shown that the intervention effects that Kratzer claims are both empirically and conceptually highly problematic. However, it has been shown that *dn* appears to be rather accepted in embedded wh-clauses when the wh-element is base-generated in an adjunct position than in an argument position.

Subsequently, it has been proposed to treat discourse particles as modifiers of speech act operators or sentence type indicators, as proposed by Zimmermann (2004a, 2004b). It has been shown that

[36] Note that it is controversial whether clitic movement takes place before Spell-Out or whether it involves movement at PF; therefore no trace is written in its clitic position.

Zimmermann's semantic tests for the scope behavior of discourse particles can also be applied to *denn*, showing that it obligatorily takes scope not only over the proposition and the sentence type indicator (as is the case for *wohl*), but also over the speech act operator '*?*'. It has thus been concluded that *denn* is of the same semantic type as *ja* and, in accordance with Zimmermann, proposed that they both move to the leftmost periphery of the clause. The most essential fact which can be concluded from these observations is that it has to be assumed that the discourse particles SG *denn* and VG *dn* are covertly moved up to the high end of the CP layer to allow for interpretability at the LF interface.

Chapter 5

Conclusion

5.1 Analysis

Concluding the discussion of the syntactic behavior and distribution of VG *dn*, the core analysis that has been proposed can be summed up as follows: VG *dn* can be analyzed to be a clitic version of SG and VG *denn*. As such it can be assumed to be base-generated in a SpecFP position at the upper end of Cinque's Hierarchy. Being a clitic element, VG *dn* has to move up to the canonical clitic position of German and Bavarian, namely the C^0 or Fin^0 head, to which it is adjoined in order to compensate for its lack of prosodic features. To allow for semantic interpretability, it can furthermore be assumed that VG *dn* and SG (and VG) *denn* covertly rise into the CP layer at LF to gain scope over the sentence type indicator and the speech act operator.

5.1.1 The base position of VG *dn*

It has been shown that Cinque's (1999) framework is more appropriate to explain the syntactic behavior of German discourse particles than the traditional adjunction analysis. These particles are subject to strict linearization rules which cannot be accounted for in a traditional analysis and Cinque's hypothesis furthermore allows for a more restrictive analysis in that it attributes one fixed position to each functional element, while an adjunction approach allows discourse particles to be arbitrarily adjoined to a number of different maximal projections. It follows directly from these considerations that *dn* has to be base-generated in a SpecFP position and is moved to its clitic position later in the derivation, as elements of this

category (i.e. *sentence adverbs* in a broad sense) have to license the corresponding functional head by merging in its specifier (cf. Poletto and Zanuttini 2003). As VG *dn* could be shown not to essentially differ from SG *denn* in its semantic contribution, it can be assumed to be base-generated within the same SpecFP position as *denn* at the high end of Cinque's Hierarchy.

5.1.2 The surface position of VG *dn*

It has been shown that VG *dn* can be analyzed as a *syntactic clitic*, i.e. as an element which is prosodically deficient and obligatorily moves to a specific clitic position. It could be shown to follow clitic pronouns (which are assumed to be head-adjoined to C^0 or Fin^0 in varieties of German and Bavarian) and to precede all non-clitic elements, except for stressed pronouns; for this exceptional case a different analysis has been proposed. To account for the clitic status of *dn*, Cardinaletti and Starke's (1999) approach has been adopted which proposes that clitic elements lack one functional layer of weak elements (i.e. two functional layers of strong elements). Accordingly, clitic elements need to be in a local relation to a position where they have the lacking features of their highest layer replaced (the appropriate surface position for *weak* elements) and to attach to a position where they have their lack of prosodic features compensated for (their *clitic* position – presumptively the C^0 or Fin^0 position in varieties of German). It has been shown that there are empiric and conceptual reasons to treat discourse particles as deficient, *weak* (*sentence*) *adverbials* in Cardinaletti and Starke's terminology, and to treat *dn* as a *clitic discourse particles* (i.e. as a *clitic* (*sentence*) *adverbial*). Consider the following typology of adverbials in varieties of German and Bavarian which is proposed in this thesis:

(1) *strong adverbials:*

a. *SG* (ganz) offensichtlich
(all) obviously

b. *SG* (sehr) WOHL
(very) well

(2) *weak adverbials* (i.e. *discourse particles*):

a. *SG* (*sehr) wohl
(*very) $wohl_{D.PRT.}$

b. *SG* (*ganz / *sehr / *ziemlich) ja
(*all / *very / *quite) $ja_{D.PRT.}$

c. *SG* (*ganz / *sehr / *ziemlich) denn
(*all / *very / *quite) $denn_{D.PRT.}$

(3) *clitic adverbials* (i.e. *clitic discourse particles*):

a. *Bav.* -o
$-o_{D.PRT.}$ (< /ja/)

b. *Bav.* -(a)n/-(e)n
$(a)n/(e)n_{D.PRT.}$ (< /denn/)

c. *VG* -dn
$dn_{D.PRT.}$ (< /denn/)

For the apparent counter-example of contrastively stressed full pronouns which may precede VG *dn*, the following has been proposed: As only pronouns which are directly linked to a reference in the utterance context license *dn* to follow them, it can be assumed that *dn* is base-generated within their extended projection, cliticizing to their Σ_N^0 head which contains the relevant prosodic features that *dn* needs to be associated with. This account is supported by the fact that the semantic contribution of *dn* consists of contextualizing the expression which it modifies and is therefore fully compatible with the semantics of such stressed pronouns.

In conclusion, the following two structures can be proposed, (4) being the "default" case in which *dn* is base-generated within a clausal functional

projection, taking scope over the whole utterance and head-adjoining to the canonical clitic position C^0 or Fin^0, (5) being the "exceptional" case in which *dn* is base-generated within an extended pronominal projection, taking narrow scope over the pronoun and head-adjoining to its $\Sigma_N{}^0$ head, containing the relevant prosodic features:

(4) a. Was macht-n_i ER [$_{FP1}$ t_i am Wochenende?
what makes-*dn* he on.the week.end
'What is he doing on the weekend?'

b. [$_{CP}$ Was [$_{C}$ macht-n_i] [$_{IP\text{-}Space}$ [$_{DP}$ ER] [$_{FP1}$ [$_{SpecFP1}$ t_i] [$_{FP1'}$ F_1 [am Wochenende [$_{VP}$ ...]]]]]]?

(5) a. Was macht [$_{\Sigma NP}$ ER-*dn*] am Wochenende?
what makes he-*dn* on.the week.end
'What is he doing on the weekend?'

b. [$_{CP}$ Was [$_{C}$ macht] [$_{IP\text{-}Space}$ [$_{\Sigma NP}$ [$_{\Sigma N}$ ER [$_{\Sigma N}$ -*dn* $\Sigma_N{}^0$]]] [am Wochenende [$_{VP}$ ...]]]]?

5.1.3 The LF position of VG *dn*

Following Zimmermann (2004a), it has been claimed that all discourse particles covertly move into the CP layer at LF to allow for interpretability as they have to take scope over specific positions within the CP space associated with sentence typing and speech act marking. Further empirical evidence for this analysis can be gained from the observation that all discourse particles are sentence type or speech act specific and therefore have to be in a local relation with the syntactic positions which are responsible for determining these factors and which are commonly assumed to be located within the CP-space (cf. Rizzi 1997 and subsequent work).

The issue that *dn* behaves differently with respect to its sentence type specificity than *denn* might be answered in three ways. First, it might

be proposed that the CP-internal LF-position of *dn* is different from that of *denn*, such that *dn* cannot be licensed in yes/no-questions anymore while *denn* still can. Second, it might be assumed that the lack of a specific semantic feature which is relevant for being licensed in yes/no-questions is entailed by the structural deficiency of the clitic VG *dn,* but not in the case of Bav. *(a)n/(e)n*. Third, it might be assumed that it is the proper semantics of VG *dn* which lacks certain properties of SG (and VG) *denn* which are necessary for its occurrence in yes/no-questions. At this point, it is not possible to decide for one of these three hypotheses.

5.1.4 Conclusion

In conclusion, for clauses containing VG *dn* with sentential scope the relevant part of the syntactic derivation can be sketched as follows.

(6) *Base-generation of* dn *within the SpecFP$_1$ position*
$[_{\text{CP-space}} \ldots [_{\text{FinP}} \ldots [_{\text{Fin}} V_{\text{fin}}] [_{\text{IP-space}} \ldots [_{\text{FP1}} [_{\text{SpecFP1}} \textit{dn}] [_{\text{FP1'}} F_1 [\ldots$

(7) *Clitic movement of* dn *to the C^0 or Fin^0 position*
$[_{\text{CP-space}} \ldots [_{\text{FinP}} \ldots [_{\text{Fin}} V_{\text{fin}}(\text{-}\ldots)\text{-}\textit{dn}_i] [_{\text{IP-space}} \ldots [_{\text{FP1}} [_{\text{SpecFP1}} t_i] [_{\text{FP1'}} F_1 [\ldots$

(8) *LF-Movement of* dn *into the CP-layer*[37]
$[_{\text{CP-space}} [\textit{dn}_i [\textit{?} [_{\text{ForceP}} \text{Force}^0_{[\text{int}]} [_{\text{FinP}} \ldots [_{\text{Fin}} V_{\text{fin}}] [_{\text{IP-space}} \ldots [_{\text{FP1}} [_{\text{SpecFP1}} t_i]$
$[_{\text{FP1'}} F_1 [\ldots$

Comparing the behavior of VG *dn*, SG *denn* and Bav. *(a)n/(e)n*, it is obvious that they can be treated on a par. As they share their core semantic content, all three can be assumed to be base-generated in the same position, SpecFP$_1$ (cf. (6)). As SG *denn* is a weak, but not a clitic element, it remains in this position, while VG *dn* and Bav. *(a)n/(e)n* have to

[37] *'?'* denotes the question speech act operator (cf. Zimmermann 2004a).

undergo clitic movement and head adjoin to the C^0 or Fin^0 head (cf. (7)). It can furthermore be assumed that all three varieties of *denn* covertly rise to the CP space at LF to take scope over the question speech act operator (cf. (8)).

5.2 Open questions

This thesis is conceived as a tentative, first approach at an explanation of the complex syntactic behavior of the discourse particle *denn* in Standard German and its counterpart *dn* in Colloquial Non-Standard Viennese German within the generative framework. At this point it is clear that more questions have been raised than answered and much is left open for further research on the topic. Some core issues which are left open in the proposed analysis are specified below.

Is it conceptually favorable to extend Cinque's Hierarchy to account for such a large number of additional functional projections? What might be the basic functional contribution of these respective functional projections? Is there further conceptual support for treating discourse particles as weak adverbials within Cardinaletti and Starke's analysis? Is it possible to state more precisely what the properties of stressed pronouns are that are essential for licensing VG *dn* to be base-generated within their extended projection? Are there further empirical or theoretical reasons to assume covert LF-movement of discourse particles to the CP-layer? What is the reason for VG *dn* being unable to occur in yes/no-questions? How can the sentence type and speech act specificity of discourse particles be implemented in a syntactic analysis within the generative framework? How many different sub-classes must be assumed for the descriptive *function class* of discourse particles? Is it appropriate to subsume German discourse particles under one overall label at all? How can the insights from this analysis be carried over to other Germanic languages whose lexicon also contains discourse particles of the German type? And finally, what is the exact nature of the factors that may cause variability in

grammaticality judgments as was observed and discussed for the case of VG *dn*. These and many other issues remain unresolved and open for further research, as they exceed the scope of this thesis.

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