

Discourse Particles in Questions

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Abstract: Discourse particles play an important role in the formation of utterances. They signal the relation of speaker and hearer with respect to the propositional content at issue. For linguists who want to attain a deeper understanding of the syntax to discourse mapping and clausal architecture in general, the study of discourse particles can provide a new window. The present article covers some ground in the limited domain of wh-questions in German.

1. Introduction¹

Discourse particles are elements which play a role when sentence types (declaratives, interrogatives, imperatives, optatives etc.) connect to discourse. They make a noticeable semantic contribution which, however, concerns “expressive” rather than “propositional” meaning (cf. Potts, 2005), as already noticed by Georg von der Gabelentz (1891): *When I insert [these particles, JB] into my speech, the reason for doing so cannot be immediately found in the subject matter of my speech but rather in an emotional need of the speaker.*

German abounds with discourse particles (a.k.a. “modal” particles) but they can be found in many other languages or language families as well, e.g. in Chinese (Paul, 2008) and in Indo-Aryan languages (Dasgupta, 1984; 1987).

Here we concentrate on some discourse particles in German questions and what can be derived from their properties about clausal architecture and syntactic processes. The article is organized as follows: Section 2 provides some general background on the nature of discourse particles. Section 3 contains an analysis of discourse particles in German wh-questions which will start with semantics and then go over to various syntactic issues of word order and phrase structure. The core proposal is a structure in which the particle is a functional head which selects VP. Section 4 turns to a more marked construction in which the particle forms a constituent with the wh-phrase. This leads to reconsidering the categorial nature of particles in section 5. Section 6 shows how the two constructions interact. Section 7 contains a conclusion.

2. Some general background

Without trying to go into any details I would like to present here a list of properties that have been found to apply to discourse particles in German. Some of these properties are rigid across all vocabulary items, others are subject to some variation. According to what can be found in the literature, discourse particles ...

- i. mostly have a counterpart to which they are historically related
- ii. are the result of grammaticalization

¹ A fuller version of this article has been prepared in Bayer & Obenauer (submitted).

- iii. are often adverbial in nature but are distinct from adverbs
- iv. are immobile
- v. can usually not bear stress
- vi. cannot be coordinated
- vii. cannot be used in isolation, e.g. as answers
- viii. are in their typical occurrences mono-syllabic
- ix. are modificational, i.e. are mostly optional
 - x. can to a certain extent appear simultaneously in the clause
 - xi. appear in fixed order (comparable to the order of adverbs)
- xii. are sensitive to sentences types (assertive, \pm wh interrogative, imperative etc.)
- xiii. belong to „expressive“ rather than „propositional“ meaning
- xiv. appear – due to xiii – generally in root-clauses
- xv. can arise in non-root clauses only under special conditions

Here we will concentrate on four particles which appear in wh-questions: *denn* (“then”), *nur* (“only”) – and its near-equivalent *bloß* (“barely”) – and *schon* (“already”). The translations in brackets are literal and should not suggest that this meaning enters semantic composition in the formation of utterances with discourse particles necessarily. Section 3.1. will turn to this question.

3. Discourse particles in German questions

Independent of the particular language, the pertinent questions are the following: (i) What is the function of discourse particles in clause structure? (ii) How can their role in the shaping of the illocutionary force of an utterance be accounted for?

3.1 Semantic contribution

In each case, the particle adds a certain so-called “expressive” meaning to the question. Researchers of all kinds of persuasions agree that these particles affect the level of utterance (illocutionary force) rather than the propositional level (including “at-issue entailments”, Potts, 2005: 156). Semantic features have been proposed by Thurmair (1989), most of which induce a special context dependence (to previous discourse or to the state of knowledge of the interlocutors). In (1)-(3) the semantic contribution of the particles *denn* (obviously connected to Engl. *then*), *nur/bloß* (“only”) and *schon* (“already”) is indicated in brackets:

- (1) Wo habe ich **denn** meine Schlüssel hingelegt?
where have I DENN my keys put-down
 “Where did I put my keys (I’m wondering)?”
- (2) Wo habe ich **nur** / **bloß** meine Schlüssel hingelegt?
where have I NUR / BLOSS my keys put-down
 “Where did I put my keys (I have already looked everywhere)?”
- (3) Wo ist er **schon** gewesen?
where is he SCHON been
 „Where has he been?” (meaning: He hasn’t been in important or desirable places)

In each case, deletion of the particle would turn the utterance into a straight information seeking question without the special semantic twists indicated in braces.

- *Denn* is most general. In an information seeking question it demands that the expected true answer *p* updates the common knowledge of speaker and addressee in such a way that *p* is relevant to the knowledge of the speaker. *Denn* is notoriously infelicitous in out-of-the-blue questions. If I meet a stranger for the first time I can hardly ask him/her *Wie spät ist es denn?* (“How late is it then?”) because *denn* does not make reference to any piece of common ground of speaker and hearer.
- *Nur* (also *bloß*) is more special. It functions as an eliminative operator like in their function as a focus particle (e.g. *He drinks only TEA*, $\forall x$ [he drinks *x* \rightarrow *x* = tea]). In wh-questions, it yields an interpretation according to which all constants which have so far been considered in the actual speech situation as being able to replace the wh-bound variable return the truth value false. The implicature is that the speaker has unsuccessfully tried to find the right value (cf. Obenauer, 2004 where wh-questions with this particle are called *I can’t find the value questions*).
- *Schon* (“already”) seems to be coined in analogy to its temporal use. Temporal “already” requires a scale on which *already p* denotes a state after $\neg p$ (*not-yet p* / *still* $\neg p$). In wh-questions, *schon* may induce a similar scale by which the entities *e* that can replace the variable are ranked according to their plausibility of yielding a true answer, the implicature being that there are few or no *e* which are high enough on the scale to make the answer true. Wh-questions with *schon* are usually understood as rhetorical questions. In my view the interpretation in braces in (3) is not the semantic interpretation of the question but rather the implicated meaning.

3.2 Position relative to higher adverbs

German root clauses showing the Verb-Second (V2) property, discourse particles occupy a high position below the landing site of the finite verb *Fin*^o (related to *C*^o in comp-clauses) and the higher (speech act, evaluative, evidential, epistemic etc.) adverbs. Reversal of the order yields a deviant result.

- (4) Wo hat er **denn** vermutlich seine Schlüssel hingelegt?
where has he DENN presumably his keys put-down
 “Where did he presumably put his keys (I’m wondering)?”

vermutlich* < **denn

- (5) Wo habe ich **nur** / **bloß** dummerweise meine Schlüssel hingelegt?
where have I NUR / BLOSS stupidly my keys put-down
 “Where did I stupidly put my keys (I have already looked everywhere)?”

dummerweise* < **nur / **dummerweise* < **bloß**

Particles are obligatorily preceded by weak and clitic pronouns (cf. (6), (7)), and optionally preceded by topical elements (definite DPs, generic indefinites, stage setting adverbs and PPs etc.; cf. ((8) – (13)). These topical elements can also include contrastive topics.

- (6) Hat {mich/MICH} **denn** {*mich/MICH} jemand sprechen wollen?
has me DENN me someone speak wanted
 "Did someone want to talk to me/ME?"
- (7) Hat {es / 's } **denn** {*es / *'s } jemanden interessiert?
has it DENN it someone interested
 "Did someone take an interest in it?"
- (8) Wann könnte **nur** Otto den Brief ins Büro mitgenommen haben?
when could NUR Otto the letter to office along-taken have
 "When could Otto have taken the letter to the office?"
- (9) Wann könnte Otto **nur** ~~Otto~~ den Brief ins Büro mitgenommen haben?
- (10) Wann könnte Otto den Brief **nur** ~~Otto~~ ~~den Brief~~ ins Büro mitgenommen haben?
- (11) ?Wann könnte Otto den Brief ins Büro **nur** ~~Otto~~ ~~den Brief ins Büro~~ mitgenommen haben?
- (12) Wo kann ich **nur** einen Kaugummi kaufen?
where can I NUR a chewing-gum buy
 Where can I buy chewing gum?
- (13) *Wo kann ich einen Kaugummi **nur** ~~einen Kaugummi~~ kaufen?

In (12)/(13) we see that an indefinite cannot normally precede the particle. It must remain in VP where it is existentially interpreted. In those cases where it raises up, the indefinite receives a generic interpretation as in *Wo kann in dieser Welt ein Tiger nur ein-Tiger überleben?* "Where on earth in this world could a tiger survive?"

3.3 Stacking of particles and ordering

Discourse particles can be stacked, and if so they are stacked in fixed order (cf. Thurmair, 1987; Cogniglio, 2005). This is reminiscent of the ordering of adverbs studied in Cinque (1999). In wh-questions, *denn* – being the highest particle - precedes *nur/bloß* or *schon*.

- (14) Wo bist du **denn nur** / **bloß** den ganzen Tag gewesen?
where are you DENN NUR / BLOSS the whole day been
 "Where on earth have you been the entire day (I am wondering)?"
- *nur < denn / *nur < bloß
- (15) Wo wird er **denn schon** gewesen sein?
where will he DENN SCHON been be
 "Where will he have been?"

(meaning: He can't have been in important or desirable places")

*schon < denn

The following examples from the internet show combinations of *denn*, *wohl* (well) and *nur*.

- (16) Er verstehe das ganze Schicksal überhaupt nicht, was er **denn wohl nur**
he understand_{subj} the whole fate absolutely not what he DENNN WOHL NUR
verbrochen habe, ...
committed had_{subj}
"He would not understand this fate at all, (it being unclear) what kind of crime he should
have committed"

*wohl < denn / *nur < wohl

- (17) Wen kann er **denn wohl nur** mit „ganz schön dicht“ gemeint haben?
who can he DENN WOHL NUR with quite beautifully intoxicated meant have
"Who can he have had in mind when he said "quite intoxicated"?"

Notice that *denn+nur*, *denn+bloß*, *denn+schon*, *denn+wohl+nur* etc. cannot be analyzed as a "super particle". They also appear in non-adjacent positions, e.g. (14) could also be (18):

- (18) Wo bist du **denn** den ganzen Tag **nur/bloß** ~~den ganzen Tag~~ gewesen?

3.4 Phrase structure

A number of properties suggest that discourse particles are functional heads which precede VP/vP: Immobility, semantic bleaching, grammaticalization, phonological shape, and new evidence that will be given in §4 below. Discourse particles can be stacked, and discourse topics may move to a designated topic field to the left of the particle(s). The particles under closer consideration here, *denn*, *nur*, *bloß*, *schon*, arise in questions; they must be in the scope of an interrogative (Q- or wh-) feature in Fin°.

We assume here that in the German root clause, Fin° hosts the finite verb, and that in doing so it activates force. Thus, we assume here that V2-FinP = ForceP. Question-sensitive particles, abbreviated here as Prt₁ through Prt_n, appear as heads of phrases (PrtP) in the closest c-command domain of interrogative Fin° as shown in (19).

- (19) [_{FinP} (Wh) Fin° [_{TOPP} ... [_{PrtP1} Prt₁° [_{PrtP2} Prt₂° ... [_{PrtPn} Prt_n° [ADV* [_{VP/vP} ...]]]]]] ...]]

3.5 Connecting to force

The discourse particles (Prt) under consideration must occur in questions, and the questions must be root questions (i.e. questions with illocutionary force). This suggests roughly two options:

- (i) Prt is automatically part of the force system when merged to VP/vP.
OR

- (ii) Prt accesses the force system via some operation: covert raising, move-F, or probe / goal agreement)

For reasons which follow shortly, we will argue in favor of (ii). Assume a subfeature of force on Prt, <Prt Force>, by which agreement with interrogative force is established.

(20) [_{FinP} (Wh) Fin^o <Interr> [_{TopP} ... [_{PrtP1} Prt^o <PrtForce> [_{VP/vP} ...]]]]

With the force feature deleting in the base, agreement returns (20) as (21).

(21) [_{FinP} (Wh) Fin^o <Interr, PrtForce> [_{TopP} ... [_{PrtP1} Prt^o <PrtForce> [_{VP/vP} ...]]]]

Probe/goal agreement permits interrogative Fin to acquire the additional force value of a discourse particle. For reasons which cannot be laid out completely in this context, I assume that <PrtForce> establishes the link to the force system of the root clause while the lexical part of the particle stays behind and takes scope right where it has been merged.²

3.6 Discourse particles in dependent clauses

In the majority of the data, discourse particles occur immediately in the root clause. Infinitival clauses do not seem to host particles at all, cf. (22) versus the ungrammatical (23). (24) does not count because it is monoclausal structure (signaled by { }) due to clause union.

(22) Wohin hast du **denn** versucht [diesen Brief ~~wohin~~ zu schicken]?
where have you DENN tried this letter to send
 “Where did you try to send this letter (I am wondering)?”

(23) *Wohin hast du versucht [diesen Brief **denn** ~~wohin~~ zu schicken]?
where have you tried this letter DENN to send

(24) Wohin hast du diesen Brief **denn** ~~wohin~~ {zu schicken versucht}?
where have you this letter DENN to send tried

The reason could be that infinitives have a truncated functional structure which lacks PrtP.

Finite complements do allow discourse particles under conditions which are revealed in the derivations below.

(25) a. Wie denkst du, dass es **denn** weitergehen soll mit euch?
how think you that it DENN go-on should with you
 “How do you think that the two of you should carry on?”
 [datum from the internet]

b. Wie denkst du [_{CP} ~~wie~~ dass es [_{PrtP} **denn** ~~wie~~ weitergehen soll mit euch]]?

(26) a. Wie denkst du dass seine Mutter **denn** meint, dass es weitergehen soll
how think you that his mother DENN thinks that it go-on should

² For details see Bayer and Obenauer (submitted).

mit euch?
with you

- b. Wie denkst du [_{CP} ~~wie~~ dass seine Mutter [_{PrtP} **denn** meint [_{CP} ~~wie~~ dass es ~~wie~~ weitergehen soll mit euch]]]?

If wh does not pass the particle, the particle is not licensed in the embedded clause:

- (27) a. *Wem hast du erzählt dass Karl **denn** recht hat?
whom have you told that Karl DENN right has
“Who did you tell that Karl was right?”

- b. *Wem hast du ~~wem~~ erzählt [_{CP} dass Karl [_{PrtP} **denn** recht hat]]?

Approach (ii) of § 3.5 allows a natural explanation which is in harmony with cyclic wh-movement as well as with the idea of derivation by phase. Informally speaking, once a CP is built, Fin^o_{<Interr>} can probe the locally available PrtP and acquire its <PrtForce> feature. Cyclic wh-movement will transport this feature outward to the locus of interpretable illocutionary force. As expected, occurrences of different particles are also possible in different CP-cycles while the relative order, e.g. *denn* < *nur*, must be retained. Here is a possible and an impossible version of (25)

- (28) a. Wie denkst du **denn**, dass es **nur** weitergehen soll mit euch?
how think you DENN that it NUR go-on should with you
“How do you think that the two of you should carry on?”

- b. *Wie denkst du **nur**, dass es **denn** weitergehen soll mit euch?
how think you NUR that it DENN go-on should with you
“How do you think that the two of you should carry on?”

PrtP can in principle be at an arbitrary distance from the root’s force projection as long as it can make contact which it via derivation in phases.

4. Discourse particles and constituency

So far we have seen discourse particles in rigidly fixed pre-VP/vP position. Property iv. in § 2 says they are immobile. While this remains to be true, an important qualification must be added: The particles under consideration can also appear as a co-constituent of the wh-phrase and then move together with it, cf. (29) or the sluicing case in (30), – both data found on the internet.

- (29) [Warum **bloß**] ist ein Rauschenberg so teuer?
why BLOSS is a Rauschenberg so expensive
“Why the hell is a (painting by) Rauschenberg so expensive?”

- (30) Fran ist lustig und erfolgreich ... und schwanger, aber [von wem **bloß**]!
Fran is humorous and successful and pregnant but from who BLOSS
“Fran is nice and successful .. and pregnant. But from who?”

Given the architecture in (19), how can we account for these cases? We exclude the possibility that wh moves and on its way “decapitates” the PrtP taking its head along. Notice there is no independently motivated process such as cliticization to the wh-phrase etc. Let us therefore assume that wh can separately be merged with Prt and project a “Small PrtP” which is then merged like any other constituent, e.g. as a +wh DP, a wh PP, a wh AdvP etc. A wh-phrase that is merged with Prt bears extra heavy stress. After being merged with Prt, this wh-phrase moves to the left of Prt. The distinctive feature of the construction is the extra strong accent which signals emphasis.³ We propose an implementation by which the relevant feature (emp) is an unvalued feature on the particle which attracts the emphatically accented wh for valuation.

(31) $\text{Prt}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle} \Rightarrow [\text{wh}_{\langle \text{Emp} \rangle} [\text{Prt}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle}]]$ “Small PrtP”

The resulting Small PrtP is marked for emphasis; due to the fact that Prt has attracted a wh-phrase it is, of course, also +wh and undergoes the usual wh-movement.

Particles can be stacked in small PrtPs, in which case the particles retains exactly the same order as in pre-VP/vP position. The following examples are again taken from internet sources:

(32) [Warum **denn nur**] kann AMD ihre CPUs billiger anbieten als Intel?
why DENN NUR can AMD its CPUs cheaper offer than Intel
 „Why on earth can AMD offer their CPUs cheaper than Intel (I am wondering)“?

(33) [Wie **denn bloß**] kann ich sie fangen
how DENN BLOSS can I her catch
 „How on earth can I catch her (I am wondering)“?

(34) [Wer **denn schon**] würde es der Meinung eines Dritten verbieten wollen
who DENN SCHON would it the opinion_{dat} a third_{gen} prohibit want
die deine zu meiner zu machen?
the your to mine to make
 “Who would deny the opinion of a third person to make your opinion mine?”

These examples show that emp-valuation is recursively available in the sense that a single wh-phrase can value more than one emp-feature.

(35) a. $\text{Prt1}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle} \Rightarrow \text{Move wh}$
 b. $[\text{wh}_{\langle \text{Emp} \rangle} [\text{Prt1}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle}]] \Rightarrow \text{Merge Prt2}^{\circ}$
 c. $\text{Prt2}^{\circ}_{\langle u\text{Emp} \rangle} [\text{wh}_{\langle \text{Emp} \rangle} [\text{Prt1}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle}]] \Rightarrow \text{Move wh}$
 d. $[\text{wh}_{\langle \text{Emp} \rangle} [\text{Prt2}^{\circ}_{\langle u\text{Emp} \rangle} [\text{wh}_{\langle \text{Emp} \rangle} [\text{Prt1}^{\circ}_{\langle u\text{Emp} \rangle} \text{ wh}_{\langle \text{Emp} \rangle}]]]]$

Given that discourse particles affect the force of the sentence, which I assume presupposes propositional scope, the small PrtP seems to be notoriously unfit to meet this requirement. This problem can naturally be resolved if we assume that the small PrtP maps onto the “big” pre-VP/vP PrtP as suggested in (19) and following representations, and that this happens in analogy to wh-movement. According to this idea, the +wh small PrtP first moves to the left edge of VP/vP where it values a the feature $\langle u\text{Prt} \rangle$ of a silent Prt-head and activates the scope of Prt. In the next step the +wh small PrtP moves on to the left edge of FinP where it values

³ Although emphasis requires extra accent, it needs to be distinguished from semantic focus or any other notion that relates to information structure. Behaghel (1932) speaks of accented topicalization in German as motivated by the speaker’s affect or excitement. For further discussion cf. Bayer (2001).

the <uInterr> head associated with the Fin-head in V2 position. The derivation, in which the step of wh-movement is abbreviated for the sake of readability, runs as in (36).

- (36) a. [VP/vP ... [wh Prt] ...] ⇒ Merge a silent Prt
 b. [PrtP Prt[◦]<uPrt> [VP/vP ... [wh Prt] ...]] ⇒ Move [wh Prt]
 c. [PrtP [wh Prt] Prt[◦]<uPrt> [VP/vP ... [~~wh Prt~~] ...]] ⇒ Move [wh Prt]
 d. [FinP [wh Prt] Fin[◦]<uInterr> [PrtP [~~wh Prt~~] Prt[◦]<uPrt> [VP/vP ... [~~wh Prt~~] ...]]]

Speaking in terms of X-bar theory and Rizzi's criterion approach to functional heads, the small +wh PrtP runs through the specifier of a PrtP "identifying" Prt lexically, and then moves to SpecFinP (perhaps via other CP-cycles) "identifying" Fin[◦] as a wh interrogative.

Small PrtPs with stacked particles as seen in (32) through (34) can easily be integrated in this account because the small PrtP can pass through as many PrtPs as there may be built over VP/vP using the innermost Prt first. This reflects the parallel order of discourse particles that can be observed between the canonical architecture in (19) and the small PrtPs with stacked particles.

5. A note on the categorial nature of particles

The categorial status of discourse as well as focus particles is controversial. Bayer (1996; 1999) takes focus particles as heads which may select a non-propositional XP.⁴ In a V2-language like German this appears to be close to inevitable because the combination particle plus an arbitrary XP appears in pre-verbal position as can be seen in the following examples.

- (37) a. **Nur** HELENE hat mit Klaus telefoniert
only Helene has with Klaus telephoned
 "Only Helene talked over the phone with Klaus"
- b. **Nur** MIT KLAUS hat Helene telefoniert
only with Klaus has Helene telephoned
 "Helene talked over the phone only with Klaus"
- c. **Nur** TELEFONIERT hat Helene mit Klaus
only telephoned has Helene with Klaus
 "Helene only telephoned with Klaus" (she didn't to anything else with him)

Jacobs (1983) and more recently Buring & Hartmann (2001) nevertheless argue that focus particles are adverbs, and that as such they do not form a constituent with XP. According to their theory, German is not a regular V2-language. V2 must be suspended in favor of V3 just in the context of these particles/adverbs. The core reason for this step is a semantic one, namely that focus particles must have sentential scope. [Prt NP], [Prt PP] etc. are believed to

⁴ Rothstein (1991) suggests next to lexical and functional heads *minor functional heads* for functional elements that do not project categorial features. In this case, the category of the non-head is retained. Rothstein has certain degree words, particles like English *too* and conjunctions in mind. If focus and discourse particles are minor functional heads, they appear as syncategorematically introduced. This may be one of the reasons why many linguists have difficulty attributing head status to them and prefer to speak of adverbs.

be incompatible with this semantic requirement because Prt scopes over XP while XP fails to be a proposition.

The account of discourse particles in small PrtPs that was given in section 4 shows how difficulties with scope can be overcome in a more elaborate syntactic theory. The small PrtP is only the visible part of a richer structure in which Prt takes scope in a lower position than where it ultimately appears phonetically. One can be almost sure that a similar account is available for focus particles.⁵ In the present context it may suffice to see that just like discourse particles focus particles can also attract an emphatically marked XP to their left. This gives rise to a surface structure by which the particle does not overtly c-command the associated focus. In German, examples abound in which focused XPs raise to the specifier of a focus particle for extra emphasis. The following are from standard newspapers to which I have added relevant focus information by using capitals.

(38) [SELTEN **nur**] hat er Antworten anzubieten
rarely only has he answers to-offer
“Only rarely can he offer answers”

(39) [EINE SEKUNDE **nur**] hat den monatelangen Kampf mit dem Deutschen
one second only has the month-long fight with the German
Tennis-Bund ... zunichte gemacht
tennis-league functionless made
„Only one second wrecked the month-long fight with the German tennis league”

How the bracketed phrases before the finite verb could be analyzed as non-constituents as suggested by Büring & Hartmann, 2001 is unclear.

This brief detour to focus particles bears on the controversy about the categorial status of discourse particles. If discourse particles were adverbs as argued by Cardinaletti (2007), they would presumably not be able to play the role in the formation of small PrtPs that we have examined in the previous section.⁶ The constituency that we have observed there strongly suggests that the discourse particles under consideration are heads. How could they otherwise merge with XPs? Notice that merger with *bona fide* adverbs rarely leads to acceptable results.

(40) *[WEN gestern] hat Karl getroffen?
who yesterday has Karl met
intended: “Who did Karl meet yesterday”

(41) *[DEN ANTON vermutlich] hat Karl gestern getroffen?
the Anton perhaps has Karl yesterday met
intended: “Perhaps Karl met Anton yesterday”.

Thus, I consider the data in connection with small PrtP in section 4 as well as the often ignored data in (38) and (39) concerning focus particles as strong evidence for the head status

⁵ It would be conceptually odd to have no connections between focus particles and discourse particles as many of them have a life in both domains and are historically closely affiliated with each other.

⁶ Cardinaletti is, of course, aware of the properties of discourse particles listed in section 2. She attributes a special status of “weak adverbs” to them. Of course, a theory which can do without such assumptions would have more credibility.

of discourse particles, - at least of those that have been considered so far.⁷ The following section will corroborate the analysis that has emerged so far.

6. Mixed constituency

Recall that Prt° can be merged with VP/vP. This leads to the standard case which we may refer to as the *big PrtP*. A particle that occurs in the context of a wh-question may, however, also be merged with an emphatically accented wh-phrase. This process leads to what we have called a *small PrtP*. The expectation is then that the two processes can combine. The German data verify this expectation.

- (42) [Warum **denn**] hätte er das [**nur** [~~warum denn~~ sagen sollen]]?
why DENN had_{SUBJ} he this NUR say should
 “Why on earth should he have said that (I am wondering)?“

Here the small PrtP *warum denn* will activate a PrtP above the big PrtP headed by *nur*. The proper derivation is indicated in (43).

- (43) [Warum **denn**] hätte er das [PrtP1 ~~warum denn~~ [PrtP2 **nur** [~~warum denn~~ sagen sollen]]]?

Nur heads the big PrtP (PrtP2), while the small PrtP headed by *denn* passes through the left edge of a big PrtP (PrtP1) in which *denn* is activated and takes scope. This confirms the attested unique order *denn* < *nur*.

Interestingly, wh-movement may also lead to a linear reversal of the ordering which discourse particles strictly follow. (44) is grammatical although the linear order is now the reverse of the expected order: *nur* < *denn*.

- (44) [Warum **nur**] hätte er das [**denn** sagen sollen]]?
why NUR had_{SUBJ} he this DENN say should
 “Why on earth should he have said that (I am wondering)?“
 (semantically hardly distinguishable from (42)/(43))

⁷ Bare phrase structure (BPS) has formalized a message that has been known for quite a while, namely that categories may occasionally oscillate between heads and phrases. Consider here the German particle *schon* which must be a head in (i) but – due to the V2 constraint – an XP in (ii).

- (i) [WO **schon**] wird er sein?!
where SCHON will he be
 „Where will he be after all? (we all know!)“
- (ii) [**Schon**] hat er das Tor erreicht
SCHON has he the gate reached
 “He has already reached the gate”

One response to this apparent non-uniformity could be that head status should nevertheless be seen as rigidly determined. This necessitates the assumption of empty projections. In (ii) there should be an empty temporal XP which is selected by the particle *schon*. The answer of BPS is (or should in my view be) that head status is a consequence of Merge. According to this theory the categorial status of an item is contextually determined. For various reasons which I cannot discuss here, I tend to accept the latter theory. For further discussion cf. Bayer (2002) and Bayer & Brandner (2008).

The present account accomodates this puzzling phenomenon straightforwardly as a case of reconstruction. In the representation in (45), the small PrtP *warum nur* has left a copy in PrtP2 which is properly ordered below PrtP1:

(45) [Warum **nur**] hätte er das [_{PrtP1} **denn** [_{PrtP2} ~~warum nur~~ [_{vP} ~~warum nur~~ sagen sollen]]]?

7. Conclusion

The present investigation of discourse particles in questions of German has lead to a number of generalizations which may prove to be useful for a deeper understanding of the relation between clause structure, its functional organization and semantic/pragmatic interpretation. The grammar of discourse particles in German wh-questions has revealed the following features.

- ◆ Discourse particles seem to be rigorously ordered in a functional skeleton which can be interleaved with topic XPs. Arguably, each particle heads its own particle phrase (“big PrtP”).
- ◆ Next to this option, discourse particle can be merged with emphatically focused wh-phrases (“small PrtP”). This process can be applied recursively, the particles retaining the rigid ordering that has already been observed in the formation of “big PrtPs”.
- ◆ The “small PrtP”, which seems to be the result of emphasis marking, maps onto the “big PrtP” via reconstruction (copy movement).
- ◆ The interrogative force system is complemented by information from the particles via phase-based local agreement which is run in cycles on the basis of wh-movement. Contrary to mainstream assumptions, discourse particles can thus arise in embedded clauses which do not belong to the force projection but may nevertheless “communicate” with the force projection of the root clause.
- ◆ Force is not monolithically established in the left periphery but may in principle communicate with projections from unboundedly distant particle projections.

The grammar of discourse particles in German wh-questions shows a rather intricate design in which wh-movement plays a key role. This design appears to be far from universal. In various languages, discourse particles are confined to the matrix clause and may even be banned from non-peripheral positions (cf. Haegeman (2009) for West-Flemisch and Munaro & Poletto (2009) for Italian and Italian dialects). Bangla has agglutinative clause-final or clause-medial particles which appear to be positionally fixed like German discourse particles and have constituents move to their left (cf. Dasgupta (1984; 1987) who suggested the rather appropriate term “anchors” for them). Although nothing of this work could be presented here, it should be clear that the development of a syntactic typology of discourse particles could complement and modify our present understanding of clausal architecture at the syntax-semantics interface.

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