From Modal Particle to Interrogative Marker: A Study of German denn

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1. INTRODUCTION

The German particle denn (from Old High German temporal thanne, "then," and related to Engl. then and German dann, "then") is either a conjunctive or a so-called "modal particle" (MP), also known as "discourse particle." Only the latter use will be of interest here. Denn as an MP is in its core occurrences confined to root V1-questions and V2 wh-questions. Its occurrence in clauses of that type is optional. It signals that the speaker is in a particular way concerned about the answer that his or her question will elicit. An analysis will be offered according to which denn is a functional head that heads a particle phrase that is in construction with the CP's layer of illocutionary force. The Bavarian dialect that will be in the focus of the final part of this article does not employ the lexical element denn but rather the clitic form -n (which appears to be related to denn). This clitic element is interesting as it combines two remarkable properties that distinguish it from denn. The article is organized as follows: Section 1 explains the discourse function of denn. Section 2 develops the syntax of denn. Section 3 turns to the role of denn in Bavarian where it has turned into a clitic element. A conclusion is given in section 4.
2. THE DISCOURSE RELEVANCE OF GERMAN DENN

In its function as an MP, the German particle denn occurs in root questions as in (1) and (2) where it gives rise to an attitude of wondering and being concerned on the side of the speaker.

(1) Disjunctive question (V1)
  Hat dich denn Dr. Schreck angerufen?
  has you PRT Dr. Schreck called
  'Did Dr. Schreck call you? (I am wondering)'

(2) Constituent question (V2)
  Wer hat dich denn angerufen?
  who has you PRT telephoned
  'Who called you? (I am wondering)'

 MPs like denn have "expressive" rather than "descriptive" meaning. König (1977), Wegener (2002) and Grosz (2005) emphasize the addressee's knowledge to which denn signals a relation. According to König and Wegener, denn is inappropriate if the question opens a discourse out of the blue. The deeper reason for this may, however, be that there is no common knowledge background to which a true answer could relate. For instance, an administration officer whose sole job is to write down a citizen's address can hardly felicitously ask Wo wohnen Sie denn? ("Where do you live, I am wondering?"). The officer is not concerned as there is no (or perhaps too weak a) common ground that could be updated by a true answer to these questions. Let me propose the pragmatic condition in (3).

(3) [denn p] is appropriate in a context c if (i) p is a question and (ii) the expected true answer p updates the common knowledge K̂ of speaker and addressee in such a way that p is relevant to the knowledge K̂ of the speaker.

The relevance requirement implies that the speaker is CONCERNED about the answer as it relates to his/her contextually given knowledge in a way that matters for him/her in one way or another. In the syntactic account of denn to follow in section 2, I will encode the anaphoric link that denn supplies a question with by means of the feature [Conc] for "concern". (3) predicts that denn is confined to root clauses because only root clauses make indexical reference to the speaker via the highest layer of the split-CP domain that is known as the force projection. We shall see whether this prediction has to be modified or not.

The context dependency of denn which is captured in (3) agrees well with Behaghel's (1923–1928) observation — referred to by Dittmann (1980) and Wegener (2002) — that denn has an anaphoric meaning due to its origin from OHG thanne. Thanne refers to previously mentioned or situationally recovered circumstances as seen in the following example.

(4) Ther pizz ist infla diorer, war nimist thu thanne uhar thiz
  the well is much deeper where take you then over
  water running
  'The well is very deep, so where will you than take running water?'

Although the current use of denn does in many cases not allow an anaphoric interpretation as concrete as thanne, there seems to be an abstract residue of this usage by which the speaker signals that the question is situationally anchored in what he/she takes to be the situationally given common ground.

As the contrast between (5a) and (5b) shows, denn may arise in an embedded clause with root-interpretation due to a selecting verbum dicendi but not in a propositional attitude context as in (5b).

(5) a. Christine fragte, warum der Klaus dann so blass ist
   Christine asked why the Klaus PRT so pale is
   b. "Christine weist, warum der Klaus dann so blass is
   Christine knows why the Klaus PRT so pale is

(i) Bist du denn wahnsmiiig?
   are you DENN crazy
   'You are crazy!'

(ii) Wie siehts denn aus?
    how look you DENN out
    'You look weird!'

What is special here is the question, however, not the contribution of denn. While the speaker implies that the addressee is crazy or looks weird he/she nevertheless expects an update — typically some explanation — which matters for his/her contextually determined knowledge.

4. Thurmar (1988: 200) suggests a somewhat similar feature, <konnex>, to characterize the clause-linking function of denn. To be sure, features of this kind should not be mistaken as a semantic analysis. They are mnemonic to describe in a most general form the core contribution of an individual particle.
In (5a), the attitude of wondering/being concerned is, of course, ascribed to Christine and not to the speaker.\(^5\)

3. THE SYNTAX OF DENN

In this section it will be shown that denn precedes high discourse oriented adverbs and also occupies the highest position in the hierarchy of MPs. We will then provide arguments for the place of denn in clause structure. Finally cases will be considered in which denn, contrary to expectation, does appear in embedded clauses in the scope of a propositional attitude verb.

3.1 Hierarchy

Following the lead of Cinque (1999) for the ordering of adverbs, one can show that denn precedes the adverbs which figure as the highest in Cinque's hierarchy.\(^6\) For instance, schließlich (finally), zum Glück (fortunately), and schlauerweise (intelligently), dummerweise (stupidly) belong to the higher adverbs. As the following examples show, they can never precede denn.

(6) a. Bist du denn schließlich ans Ziel gekommen?
   *are you PRT finally at-the goal come*
   'Did you finally reach the goal? (I am wondering)'
   b. Bist du schließlich denn ans Ziel gekommen?
   *bist du: 'already reached the goal? (I am wondering)'*
   'Did you finally reach the goal? (I am wondering)'
   c. 'Hat der Hans denn schlauerweise die Heizung zurückgeschaltet?'
   *has the Hans PRT cleverly the heating back-switched*
   'Did Hans cleverly reduce the heating? (I am wondering)'
   d. 'Hat der Hans schlauerweise denn die Heizung zurückgeschaltet?'
   *hat der Hans: 'who has PRT to-the back switched'*
   'Who has the heating cleverly reduced? (I am wondering)'
   e. Wer ist denn schließlich ans Ziel gekommen?
   *wer ist: 'who has PRT finally at-the goal come'*
   'Who reached the goal finally? (I am wondering)'
   f. Wer ist schließlich denn ans Ziel gekommen?
   *wer ist: 'who has PRT finally at-the goal come'*
   'Who reached the goal finally? (I am wondering)'
   g. Wer hat sich denn zum Glück gemeldet?
   *who has REF PRT to-the back answered* 
   'Who has already responded? (I am wondering)'
   h. Wer hat sich zum Glück denn gemeldet?
   *wer hat sich: 'who has PRT finally at-the back answered'*
   'Who has already responded? (I am wondering)'

5. Cf. Doherty (1985: 76ff.). Doherty argues that denn cannot be used in self-directed questions because it relates to the attitude of an interlocutor. I disagree with her intuition. Monological questions such as

(i) Wo habe ich denn meine Brille hingelag?
   *where have I PRT my glasses put* 
   'Where did I put my glasses (I am wondering)'

are perfectly normal. (3) is compatible with such a case because speaker and addressee may happen to be identical.


An exception to which we will turn shortly seem to be adverbs of time and space such as gestern (yesterday), heute (today), damals (in those days), hier (here), dort (there) etc.

(10) Hast du denn (gestern) jemand anrufen wollen?
   *name have you (yesterday) someone call wanted*
   'Did someone want to call me yesterday (I am wondering)'

As Thurmaier (1989), Abraham (2000), Coniglio (2005; 2009) and Gross (2005) show, MPs are hierarchically ordered, similarly to the order of adverbs that has been studied by Cinque. In (11) I confine myself to disjunctive questions.

(11) a. Hast du denn eigentlich schon was gegessen?
   *hast du: 'have you PRT really already something eaten'*
   'Did you really already eat something? (I am wondering)'
   b. Könnte der denn vielleicht in Rom sein?
   *können: 'can he PRT perhaps in Rome be'*
   'Could he perhaps be in Rome? (I am wondering)'
   c. Hast du denn etwa wieder Kopfschmerzen?
   *hast du: 'have you PRT perhaps again headache'*
   'Did you perhaps have a headache again? (I am wondering)'
   d. Soll ihr denn auch so nach Caorle gefahren?
   *soll ihr: 'will she PRT perhaps so to Caorle drive'*
   'Should she perhaps drive to Caorle? (I am wondering)'

The MPs which figure in constituent questions are partially different but it is equally true that denn precedes all of them. As Coniglio (2005: 110ff.) points out, the lower MPs can precede high adverbs such as vermutlich (presumably) but can also appear in interspersed position as long as their intrinsic order is retained. With respect to denn, this yields roughly the hierarchy in (12), where we refer to the complementary class of MPs with the ad hoc feature [denn].

(12) The position of denn in the hierarchy of MPs and adverbs

\[ (ADV_{\text{question}}) > \text{denn } > \text{MP}_{\text{adv}} > \text{ADV} > \text{MP}_{\text{adv}} \]

3.2 Clause structure

There is controversy about the X'-status of MPs to which I cannot do justice here for reasons of space.\(^8\) Tests of leftward/rightward movement, (non-) projection, coordination, focusing etc. suggest that MPs are functional heads. Various researchers nevertheless

7. Cf. Gross (2005: 2.4.3) for further discussion. For the positioning of strong and weak pronouns, cf. section 2.2 below.

argue that MPs are XPs in the specifier of an empty head, albeit "degenerate" XPs. A complicating factor is that MPs do not have totally homogeneous syntactic properties. For instance, denn, unlike other MPs, can turn into a clitic (see section 3). It has also been argued that MPs cannot be heads because these heads would inhibit V-movement to the C/Fin-"position due to the Head Movement Constraint. This argument, which applies equally to negation is, of course, theory-dependent. Empirically it appears to be problematic to deny head status to the standard negator nicht which in dialects with negative concord appears to be a head into whose specifier a negative quantifier has to move in order to check off its neg-feature. Negation does not interfere with V-to-C movement. It seems to be feasible to modify Relativized Minimality in such a way that the verb (or rather, its fin-feature) will slip certain medial head positions. On the basis of novel data that cannot be reproduced here, Bayer and Obenauer (in press) argue that denn and other MPs in questions must be analyzed as functional heads which projects a particle phrase (PrtP) by taking VP or its "extension" (VP*) where VP* may be MoodP, ModP, AspP in Cinque's sense, or another PrtP.

(13) \[ \text{has} \text{DENN} \text{the} \text{Hans} \text{dog fed} \]

The space between denn and the raised finite verb (which I take to head a FinP) can remain empty or can be filled by topical constituents which embrace the sentence topic (what the sentence is "about") but also discourse referents which have been established by previous discourse.

(14) a. Hat denn der Hans den Hund gefüttert?
   'Did Hans feed the dog?'
b. Hat der Hans denn der Hans den Hund gefüttert?
c. Hat der Hans den Hund denn der Hans den Hund gefüttert?

Since adverbs of time and space, so-called "stage setting" adverbs, are potential topics, while mood-, mod-, asp-adverbs are generally not, we understand the distribution of the data in (10) and (11). MPs and DPs which do not qualify as topics - r...
The particle denn introduces next to [uQForce] the lexical feature [iConc]. Consider the simplest case (18) in which the force head probes denn.\(^\text{14}\)

(18) a. \[\text{Fin}'/\text{Force}'_{\text{iConc}} \text{denn} \text{\textunderscore iConc,Conc.} \ldots \] Agree ⊝

b. \[\text{Fin}'/\text{Force}'_{\text{iConc}} \text{denn} \text{\textunderscore iConc,Conc.} \ldots \] Agree ⊝

Although [iConc] enters a chain headed by [Force], it is not moved to [Force] as has been suggested in previous accounts.\(^\text{15}\) As argued in Bayer and Obenauer (in press), a pre-VF MP does not change its surface scope in the course of the derivation. The MP becomes part of the left clausal periphery by virtue of being in a probe goal relation with [Force]. The mechanism does not move the particle. We will see in section 5 that such movement would yield an undesirable result.

3.3 Distant denn

We have so far assumed that denn appears exclusively in the root clause or in dependent quasi root clauses as in (5a). As the following data from the internet (to which structural information about wh-extraction has been added) show, this assumption must be modified.

(19) a. Wie denkst du, dass es denn wie weitergehen soll mit euch? (I'm wondering) [http://mein-kunnerkasten.de/148289/freundgehen.html]

b. Welches Bild glaubst du denn welches Bild von mir (whenever) [http://www.marvenus.de/search.php?search_author=Lolaandsid=0fe369fa60c5f8c76ee167638b5f1]

As the following equally grammatical examples show, neither depth of embedding nor the exact placement of denn seems to play a role as long as cyclic wh-movement passes denn.\(^\text{20}\)

(20) a. Wohin glaubst du denn, wohn dass der Hans wohn gefahren ist?

b. Wohin glaubst du, wohn dass der Hans wohn gefahren ist?

c. Wohin glaubst du, wohn dass Paula meint, wohn dass der Hans

where believe you that Paula thinks that the Hans
denn gefahren ist?

d. Wohin glaubst du, wohn dass Paula meint, wohn dass der Hans wohn gefahren ist?

Putting aside embedded interrogative clauses with quasi root properties such as (5a), denn is illicit in clauses from which the wh-phrase cannot have been raised.\(^\text{26}\) The following examples show that denn cannot raise from islands.

(21) Relative clause island

Wer kennt (denn) eine nette Frau, die dem Hans (denn) helfen könnte? who knows DENN a nice lady who the Hans DENN help could 'Who knows a nice lady who could help Hans?'

(22) Adjunct island

Warum ist (denn) der Hans, ohne (denn) einen Führerschein zu haben, why is DENN the Hans without DENN a driver's license to have Auto gefahren? car driven

'Why did Hans drive a car without having a driver's license?'

(23) Complex NP Constraint

Wer hat (denn) die Behauptung, dass Hans (denn) bankrott sei, aufgestellt? who has DENN the statement that Hans DENN bankrupt be made

'Who made the statement that Hans was bankrupt?'

One could argue that due to subjacency denn cannot undergo classical LF-style raising. However, dependent clauses from which movement is potentially possible are equally out as long as no wh-phrase passes through the minimal clause which hosts denn.

(24) a. Wer hat dir (denn) erzählt, dass der Hans (denn) weggefahren ist?

where believe you who has denn told that the Hans DENN left is 'Who told you that Hans has left?'

b. Habe ich dir (denn) schon erzählt, dass der Hans (denn) have I you DENN already told that the Hans DENN weggefahren ist?

left has

'Did I tell you already that Hans has left?'

16. To be precise, it is not wh movement as such but rather the general class of mechanisms by which the scope of the embedded clause can be extended to the root clause. The following example of partial movement yielded perfect acceptability in a judgment test with 20 speakers.

(25) Was glaubst du, wohn der Hans denn gefahren ist?

where believe you where the Hans DENN driven is 'Where do you believe that Hans went?'
Denn may physically remain in a domain lower than the one in which it can be interpreted by virtue of a wh-phrase that links its feature [Conc] to the force projection.15 Denn must enter a local agree relation with the C-head associated with the wh-phrase. This C may be [IQForce] as in (5a) but it may also be [uQForce] as in the examples above in which the dependent clause containing denn is in the scope of a verb that does not tolerate an interrogative complement. In the latter case, the features of denn, [uQForce], iConc, undergo partial agreement with the C-head's feature [uQForce].16 As a result, the MPs uninterpretable feature is valued. This process can continue until it is terminated by [IQForce], which is normally associated with the head Fin*/Force*. The derivation runs as shown in (25).

(25) a. \[ ... wh C \_{wh} \ldots \] 1

AGREE
b. \[ ... wh C \_{wh} \ldots \] 1

AGREE

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(25) a. \[ ... wh C \_{wh} \ldots \] 1

AGREE
b. \[ ... wh C \_{wh} \ldots \] 1

AGREE

d. \[ ... wh C \_{wh} \ldots \] 1

AGREE

e. \[ ... wh C \_{wh} \ldots \] 1

AGREE

Thanks to its question-sensitive feature [uQForce] and cyclic wh-movement, the particle denn is able to contribute pragmatically to the illocutionary force of the utterance "long distance". Cases like (20d) - Wohin glaubst du, dass Paula denn meint, dass der Hans gefahren ist? - follow because wh can so to say "pick up" the feature [Conc] on its way in passing the particle with which it undergoes partial agreement. Although denn does not raise to the matrix Fin/Force, the effect is that Fin/Force associates with it at a distance. As a result, denn contributes compositionally to the illocutionary force of the matrix clause.

Although there is not enough space here to extend the range of related data, it should be noticed that German offers a more marked construction in which wh-movement pied-pipes the MP along. Given that German obeys the V2-constraint, denn in (26) must have formed a constituent with the focalized wh-phrase wohin which moves it "piggyback".17

(26) [WOHN] denn] glaubst du, dass der Hans gefahren ist?

where DENN believe you that the Hans driven has

There are good reasons not to derive such cases from the base seen in (17) in which MP takes a pre-VP scope position. Nevertheless, (26) provides an intuitive insight in the association of wh with MP.

17. An interesting earlier proposal in this direction can be found in Hasegawa’s (1999) work on exclamation.

18. While this is impossible in standard minimalist accounts, it is possible in the feature matching account which is assumed here following Pesetsky and Torrego (2007).

19. For detailed discussion and an account of this alternative derivation cf. Bayer and Obenauer (in press).

As already said in note 16, the question sensitive MP can also remain distant from the root clause in partial movement constructions as seen in (27).

(27) Was glaubst du, wohin der Hans denn gefahren ist?

what believe you where the Hans DENN driven has

"Where do you believe that Hans went?"

Probe/goal agreement in the lower CP-phase works as in (25a,b). The difference is that the lower wh-phrase does not move on but in an agreement/valuation relation with the neutral wh-element was. A natural extension of the movement analysis in (25) would be to say that was deletes the feature [uQForce] of the embedded CP but leaves the feature [iConc] of denn intact so as to make it contribute to the illocutionary force of the root clause.

After this sketch of the syntax of the German MP denn, let us in the final part consider its role in the Bavarian dialect.

4. DENN IN BAVARIAN

In the Bavarian variety to be discussed now, denn does not exist as a full form, but it exists as the enclitic element -n.18 Bavarian is a language with Wackernagel-style cliticization to Fin' or C'. In agreement with our analysis of Standard German in (17), topical pronouns cliticized to Fin’/C’ before -n cliticizes to the clitic complex.

(28) Wann hod-a-s-da-n zoagt?

when has he-it you N shown

"When did he show it to you?"

In spite of acceptable phonotactics, permutations as in "Wann hod-a-s-n-da zoagt?, *Wann hod-a-n-s-da zoagt?, etc. are ungrammatical. N-cliticization turns the particle into part of the Fin/Force-head. The wh-phrase that moves to its specifier can therefore be argued to appear in a spec-head configuration with the particle. The distant placement of denn that was discussed in 2.3 is absent in Bavarian; -n can target only Fin/Force. However -n is at variance with denn also in two other respects: (A) it is OBLIGATORY in wh-questions. Weiß (2002) provides the following example.

(29) Wos hodl’ *(n) g’sodl’?

What have you -N said

"What did you say?"

20. The dialect to be described here is my own, spoken in Dietfurt/Altmüh, a Middle to North-Eastern Bavarian variety. Native speakers linguists from more eastern varieties whose judgments I had access to - Hans Altmann, Agnes Kolmer and Helmut Weiß - largely agree with the judgments to follow.
(B) it does NOT YIELD THE CONCERN INTERPRETATION. (29) is a neutral wh-question. In order to express the concern interpretation, the variant of Bavarian which is in focus here uses the non-clitic element *nou* or *no*, derived from *nach(her)* ("after", "after all", "then") which corresponds to Standard German *denn*. According to my intuitions, this element competes with *-n*, as can be seen in the following examples where we use the contracted form *homma*- *n* which unambiguously involves *-n* and thus circumvents the phonetic problem of misanalysis due to homophonous nasal segments.21

(30) a. *Wou homm nou dái g'wohnt?*  
    where have NOU they lived
    'Where did they live (I am wondering)'

b.  *Wou homma-n nou dái g'wohnt?*  
    where have -N NOU they lived

Assume that like Standard German *denn, no(a)* has an unvalued feature [uQForce] as well as the feature [iConc]. The clitic *-n* lacks [iConc]. Arguably it has only [oQForce]. Due to its impoverished nature it has turned from an MP into a pure marker of root wh-questions; in the process of cliticization *-n* fuses with *Fin*/Force and imports this unvalued feature which must be valued by a wh-phrase.22 The question is then how to account for the competition between *-n* and *no(a)*. By their respective feature structures seen in (31), *-n* is the default case whereas no(a) is the special case.

(31) a. *n* [uQForce]  
    b. *no(a)* [oQForce]. [iConc]

This situation calls for an account in terms of the Elsewhere Condition proposed in Kiparsky (1973). This condition, which was originally designed as a metric for rule application in generative phonology, says that in a situation of rule competition, a rule R1 which applies to a domain D1, D1 being a proper subset of D2, prevents the more general rule R2 from applying to D1. In our case, this means that insertion of the item which includes the feature [iConc] takes precedence because it represents the special case in comparison with insertion of the item which lacks [iConc]. We derive the contrast in (30) because merger of no(a) bleeds the use of the clitic *-n*.

Interestingly, the diachronic process that has turned *-n* into a wh-question marker has not affected disjunctive questions. Disjunctive questions in the Bavarian variety described here allow but certainly do not require *-n*, and the semantic contribution of *-n*

is directly felt: (32a) is fully acceptable although *-n* is lacking, and (32b) is semantically distinct from (32a).23

(32) a. *Hom dái aa a Haus?*  
    have they also a house

    'Do they also have a house?'

b. *Homma-n dái aa a Haus?*  
    have -N they also a house

    'Do they also have a house? (I am wondering)'

Both the full form and the clitic form have the same features, a situation which, of course, gives again rise to redundancy if both are merged, but now for the trivial reason of repetition.

(33) *Homma-n nou dái aa a Haus?*  
    have -N NOU they also a house

5. CONCLUSION

The preceding study of the German MP *denn* has revealed a number of intricate syntactic properties which suggest that the study of MPs can enhance our understanding of clause structure. MPs are part of a highly articulated functional structure which systematically contributes to the illocutionary force of an utterance. In this architecture, *denn* projects a particle phrase that is in an agreement relation with an interrogative *Fin*/Force head of German V1/V2 clauses. We have made precise under which conditions *denn* may enter this functional structure even if it appears in a position below the root clause. Given that the complement of a *be[lieve]* type verb as in (19) and (20) does not project interrogative force (and perhaps lacks force altogether), distant *denn* must be in an agreement relation with the root which is established as a result of cyclic wh-movement.

In Bavarian, *denn* appears as the clitic element *-n* which in wh-clauses is deprived of its special MP-semantics and operates more or less like a pure wh-interrogative marker. Abraham (1991) identified in the history of German a grammaticalization path of *denn* as in (34).

...
The concomitant cline from XP to a lexical X, to a functional X and finally to a clitic element echoes a familiar diachronic process.

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