Non-Exhaustivity Marker = Modal Particle?
The Case of Middle-Field *so* in Colloquial German

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Abstract

This paper addresses a discourse particle that typically appears in conceptually oral / colloquial interaction and instantiates one of many different functions of the lexical element so *(lit. 'so, this way') in Present-Day German. In contrast to the modal adverb* so *and just as some of its other polysemous counterparts, this element appears to be utterly desemanticized and non-referential, thereby modifying the meaning of the sentence at a very abstract level. On the basis of its distributional properties, its semantic contribution to the host utterance, as well as of independent assumptions on the notion of modality, it is contended that this* so *is to be categorized as an interrogative modal particle whose primary role lies in managing the Common Ground in non-monologic contexts such that the speaker requires the addressee to fill a gap in their knowledge of a given situation with the additional implication that the relevant piece of information does not have to be exhaustive. The aim of this paper is not to provide a comprehensive analysis of the phenomenon, but rather to make a theoretical proposal regarding the status of this element and thereby stimulate the discussion on the defining features of modal particles.*

Keywords: *German,* so*, polyfunctionality, modal particles, interrogative clauses*

1 Introduction

In Present-Day German (henceforth: PDG), the lexical element *so* (lit. 'so', 'this way') may perform a number of different functions according to the syntactic context in which it surfaces. As an AP- or VP-internal modifier, it may express the intensity of an action (1a) or a quality (1b), which is typically combined with an exclamative interpretation of the sentence:

(1) a. Wir   haben   so   gelacht!
       we.NOM   AUX.PRS.1PL so   PTCP.laugh.PTCP
       'We laughed so much!'
   b. Dieses   Buch ist   so   langweilig!
       this.NOM.SG book be.PRS.3SG so   boring
       'This book is so boring!'

Within a DP, it is found as an indefinite article or demonstrative pronoun (cf. e.g. Hole & Klumpp 2000; Lenerz & Lohnstein 2004) in spoken usage, in which case it is often (but in the plural, not obligatorily) merged with a reduced *n(e)*-morpheme retaining the deictic value of the expression and associated with a generalized reference to the entity that it identifies (2a-b). For ease of illustration, this element is glossed as "*so*" + the corresponding morphosyntactic features in the following examples:

(2) a. Ich   verstehe   so(ne)   Leute nicht.
       I.NOM   understand.PRS.1SG so.ACC.PL people NEG

'I don't get such people.'

b. Vor   mir   stand   son   Typ   mit   Brille   und
   in-front-of I.DAT stand.PRT.3SG so.NOM.SG   guy   with glasses   and
   langen   Haaren.
   long.DAT.PL hair.DAT.PL
   'I had a guy with glasses and long hair standing in front of me.'

When it is not a determiner and does not serve as a verb or adjective intensifier, it may function, for instance, as a modal adverb referring to some quality or content that is (or becomes) part of the shared knowledge between speaker and hearer (3a), as an optional specialized resumptive for conditional or concessive clauses (3b), as a left-peripheral expletive with an explanatory / exemplifying function (3c), as a clause-external discourse particle expressing some sense of completion of a given task or activity performed prior to uttering the sentence (3d) (Catasso 2021a, 2021b), or as a focus marker that can optionally be doubled if the relevant context applies (3e) (Wiese 2010: 993):[1]

(3) a. So   sollte   eine   gute   Bewerbung   aussehen.
       so   shall.SBJ.3SG a.NOM.SG   good.NOM.SG   application   look.INF
       'This is what a good application should look like.'

    b. Wenn ich   die   Wahl   hätte,   (so)   würde
       if   I.NOM   the.ACC.SG choice have.SBJ.1SG so   AUX.SBJ.1SG
       ich   aufs   Land   ziehen.
       I.NOM to-the.ACC.SG   countryside   move.INF
       'If I could, I would move to the countryside.'

    c. Das   ist   nicht die   einzige   mögliche
       that.NOM   be.PRS.3SG   NEG   the.NOM.SG only.NOM.SG   possible.NOM.SG
       Konstellation.   So   kann   es   z.B.   passieren,   dass …
       configuration   so   can.PRS.3SG EXPL e.g.   happen.INF   that

    d. So,   ich   bin   fertig.
       so   I.NOM be.PRS.1SG   finished
       'Good – I'm done.'

    e. Die   ist   für   die   NACHT,   und   diese
       that.NOM   be.PRS.3SG   for   the.ACC.SG night   and   this.NOM
       so   für   TAGSüber   so.
       so   for   by-day   so
       'This one is for the night, that one instead for the day time.'

Assuming that a lexical item must be represented in syntax according to its function and status in the system, it is compelling to believe that the syntactic objects illustrated above all result from different operationalizations and possibly correspond to different lexical entries.[2]

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[1] The interested reader is referred to the cited literature for the details of each of the exemplified categorizations, which result from a careful analysis of the contexts in which *so* can appear, as well as of the corresponding functions performed by this item.

[2] This is in line with the findings of recent comparative and historical studies (cf., e.g., König 2012, 2015; Schleburg 2002; Raymond 2004; Jäger 2010; Umbach & Gust 2014; König & Umbach 2018; König & Vezzosi 2022), which have established not only that *so* typically serves as the basis for the grammaticalization of a

This short paper examines a further function of PDG *so* which, notwithstanding sporadic mentions (e.g. in Reich 1997: 86; Scharten, 1997; Beck & Rullmann 1996, 1999: 286; d'Avis 2001: 43; Roguska 2007: 155), has been hitherto neglected in the existing literature. In some types of interrogative clauses, this item may surface as an optional discourse particle that contributes to the semantic interpretation of the sentence in that it seems to relativize the degree of intensity of the illocutionary act performed by the sentence in which it occurs. This function is exemplified in (4), in which *so* verbalizes the speaker's stance that the information gap in their knowledge to be filled by the expected answer need not be remedied exhaustively:

(4)　Was　　machst　　　du　　so?
　　　what　do.PRS.2SG　you　so
　　　'What do you do / are you doing?'

Relying on the distribution and the semantic properties of this element, as well as on independent assumptions on modality in PDG, it will be proposed that *so* – as it is illustrated in (4) – is a modal particle that has the function of regulating the Common Ground such that it specifies the quality of the expected answer to the question. In a rather neutral way – but with the aim of differentiating this item from the ones shown in (1)-(3) –, I will label it "so_{wh}" in what follows, in light of its typical occurrence in *wh*-introduced contexts.

The paper is structured as follows: in Sect. 2, the distributional and semantic properties of so_{wh} are considered; Sect. 3 is concerned with the formal categorization of this element; the Summary briefly recapitulates the main points made in the paper.

2 Syntactic distribution and semantics of so_{wh}
2.1 Distributional aspects

So_{wh} generally occurs in colloquial spoken and conceptually oral written interaction and is typically found in *wh*-questions. It may surface in interrogative clauses introduced by a wide range of pronouns (*wer* 'who', *was* 'what', etc.) or adverbs (*wann* 'when', *wo* 'where', etc.) whose expected reaction on the hearer's side either consists of a set of multiple possible answers or whose expected answer is supposed or tolerated to be non-exhaustive and/or vague (5).[3] Similarly, so_{wh} can be inserted – especially in youth language – to weaken the

number of functional words in different language systems, but also that this development often follows a similar pattern cross-linguistically. This element generally emerges as an exophoric manner demonstrative, develops different endophoric (e.g. ana- and cataphoric) uses and is then grammaticalized as a variety of grammatical markers, all or many of the items attested in these different stages co-existing in the present-day languages.

[3] Of course, the notions of non-exhaustivity and of vagueness do not (necessarily) refer to the same semantic entity. In this paper, I intend non-exhaustivity as the encoding of a missing or incomplete explicitation of all items of a set and therefore as a quantitative category. Vagueness, on the other hand, is understood as a qualitative notion: a vague expression may be exhaustive with respect to the set implied by the context, but point to informationally imprecise referents. If we consider the question in (4), for instance, the required answer could be non-exhaustive as in (i) (assuming that the person answering the question does not enumerate all activities that they are currently concerned with) or vague as in (ii) (in which the speaker formally answers the question, but the information provided, which may be assumed to be quantitatively exhaustive, is kept nebulous):

(i)　Ich　　　gehe　　　　oft　　ins　　　　　　Fitnessstudio　und　　lese.
　　 I.NOM　go.PRS.1SG　often　in-the.ACC.SG　gym　　　　　and　　read.PRS.1SG
(ii)　Einiges.
　　 a-lot.ACC.SG

perceived force of a request or directive in cases in which it would normally seem to contradict the sense of a *wh*-interrogative (6). Especially examples like (5e) and (6) show that *so* cannot qualify as a regular adverb with an approximating meaning of the 'more-or-less'-type or as a simple so-called "exemplifying adverb(ial)" (e.g. *zum Beispiel* 'for instance', cf. Breindl et al. 2014: 1062f.), differently from what one would probably expect by only considering contexts such as (5f):

(5) a. Wer   war   so   auf   der   Party?
       who.NOM   be.PRT.3SG   so   at   the.DAT.SG   party
       'Who was at the party?'
       (Roguska 2007, 155)

    b. Wo   geht   ihr   so   zum   Friseur?
       where   go.PRS.2PL   you.NOM.PL   so   to-the.DAT.SG   hairdresser
       'What hairdresser do you usually go to?'
       (fsi.cs.fau.de)

    c. Wann   hättest   du   so   Zeit?
       when   have.SBJ.2SG   you.NOM.SG   so   time
       'When are you free (to meet me)?'
       (trophies.de)

    d. Womit   hast   du   dich   so   beschäftigt?
       what-with   AUX.PRS.2SG   you.NOM.SG   REFL.ACC.SG   so   occupy.PTCP
       'What have you been working on?'
       (musikding)

    e. Wie   geht's   dir   so?
       how   go.PRS.3SG-EXPL   you.DAT.SG   so
       'How are you?'
       (S. Black 2015, 16)

    f. Bis   wann   kann   man   so   mit   den   ersten
       until   when   can.PRS.3SG   one.NOM   so   with   the.DAT.PL   first.DAT.PL
       Entscheidungen   rechnen?
       decision.DAT.PL   expect.INF
       'When can we expect the first decisions to be made (public)?'
       (facebook.com)

(6) Hallo, ich   heisse   Kevin.   Und   wie   heisst
    hi   I.NOM   be-called.PRS.1SG   Kevin   and   how   be-called.PRS.2SG
    du   so?
    you.NOM.SG   so
    'Hi, my name is Kevin. What is your name?'
    (luzernezeitung.ch)[4]

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[4] An anonymous reviewer points out that the function illustrated in (6) might represent a further step in the evolution of *so*ₜₕ, given that the set of items that could possibly be part of the answer must necessarily be limited to one in the case of an individual's name. I fully agree with that. This is also in line with the fact that this construction is common in youth language, but not in older speakers' language use. However, it is quite clear that the direct source for the grammaticalization / pragmaticalization of this possibly new construction must be the non-exhaustive *so* illustrated in the previous attestations.

The licensing of this element is not limited to main clauses. It can also appear in the corresponding embedded interrogatives (7). However, this is not the only possible subordinate context in which *so*wh can surface. It is also possible in object clauses introduced by a *wh*-element that are selected by non-explicitly interrogative predicates (8). In fact, its occurrence in contexts like (8), in which the selecting predicate does not have an inherent interrogative nature, can be ascribed to an indirect interrogative reading of the embedded structure, which is corroborated by the presence of the clause-initial *wh*-element:

(7) Ich   wollte   wissen, …
     I.NOM   want.PRT.1SG   know-INF
     'I wanted to know…'
  a. wer   so   auf   der   Party   war.
     who.NOM   so   at   the.DAT.SG   party   be.PRT.3SG
     '…who was at the party.'
  b. wo   er   so   zum   Feiern   hingeht.
     where   he.NOM   so   to-the.DAT.SG partying   V.PRT-go.PRS.3SG
     '…where he likes to party.'
  c. wann   sie   so   Zeit   hätte.
     when   she.NOM   so   time   have.SBJ.3SG
     '…when she is free (to meet me).'
  d. womit   sie   sich   so   beschäftigt   hat.
     what-with she.NOM   REFL.ACC.SG   so   occupy.PTCP   AUX.PRS.3SG
     '…what she has been working on.'
  e. wie's   ihm   so   geht.[5]
     how-EXPL he.DAT   so   go.PRS.3SG
     '…how he was.'

(8) In seinen   Liedern   singt   er   davon   /   erzählt
     in his.dat.pl song.dat.pl   sing.prs.3sg he.nom   there-of   tell.prs.3sg
     er,   wie's   ihm   so   geht.
     he.nom   how-expl   he.dat so   go.PRS.3SG
     'In his songs, he sings / tells about how he feels.'

Less felicitous (but not categorically ruled out) is the realization of *so*wh in negated questions (Beck & Rullmann 1999; 286, their grammaticality judgment):

(9) Hans   will   wissen,   wer   so   (?nicht) auf   dem
     Hans   want.PRS.3SG   know.INF   who.NOM   so   NEG   at   the.DAT.SG

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[5] Note that the distributional features illustrated in these examples differentiate *so*wh from the cases considered by Wiese (2010), in which *so* is convincingly argued to function as a pragmaticalized focus marker (cf. (3a)). This clarification is relevant here because in some cases, the contexts investigated by Wiese may shallowly resemble those in which *so*wh may appear, as in (i) (Wiese 2010: 1004):
(i)   Was   machen   wir   so   heute   so?
        what.ACC   do.PRS.1PL   we.NOM   so   today   so
        'What shall we do today?'
Here, *so* is doubled and binds the adverb *heute* ('today'), marking this constituent as a focus. Besides appearing only in *wh*-questions and not being reduplicable, *so*wh does not seem to be related to F-marking in any obvious way (in (5e) and (6), the middle field is even devoid of constituents that may be focused).

Fest   war.[6]
party   be.PRT.3SG
'Hans wants to know who was(n't) at the party.'

A further crucial point concerning the syntactic distribution of *so*wh is that its topological position is restricted to the middle field, i.e. to the area of the clause comprised between the left and the right sentence bracket. Base-generation in or extraposition into the postfield leads to ungrammaticality, as exemplarily illustrated in (10):

(10) a. Wann   hättest   du   {so}   Zeit {*so}?
        when   have.SBJ.2SG   you.NOM.SG   so   time so
        'When are you free (to meet me)?'
     b. Ich   habe   sie   gefragt,   wann sie   {so}
        I.NOM   AUX.PRS.1SG   she.ACC.SG   PTCP.ask.PTCP when she.NOM   so
        Zeit hätte   {*so}.
        time have.SBJ.PRS.3SG   so
        'I asked her when she was free (to meet me).'

However, given the relevant context, the relative linear location of this particle is not bound to a fixed middle-field position, since it can appear in the high (11a) or in the low (11b) portion of this domain, the boundary between these two areas being disambiguable through the surface position of the adjunct PP *während Corona* ('during the Corona pandemic') in the following corpus examples (which are also syntactic minimal pairs):[7]

(11) a. Und was   haben   Sie   so während Corona   gemacht?
        and what.ACC AUX.PRS.3PL they.NOM   so during   Corona   PTCP.do.PTCP
        (brachinaimagepress.de)
     b. Was hast   du   während Corona   so   gemacht?
        what.ACC AUX.PRS.2SG you.NOM.SG   during Corona   so   PTCP.do.PTCP

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[6] This does not seem to be due to inherent properties of negation, since the very same structure is acceptable in Dutch (Beck & Rullmann 1999: 286) (i):

(i) Jan   wil   weten   wie   er   zoal   (niet) op   het
     Jan   want.PRS.3SG   know.INF   who.NOM   EXPL   so   (NEG)   at   the
     feest waren.
     party be.PRT.3PL
     'John wants to know who was (not) at the party.'

As an anonymous reviewer notes, however, the item *zoal* might have a slightly different status than *so*wh. Given that *zoal* results from a combination of *zo* 'so' and *al*, the latter possibly being linked to the universal quantifier, it is reasonable to assume that this element might have a status halfway between the two German elements *so*wh and *alles*, lit. 'all' (as in *Wer war alles da?*, lit. 'Who was all there?' e.g. when asking for a more or less precise quantification of the invited guests at a party). This is an interesting point whose details will have to be left to future research. A further argument against an *a priori* exclusion of examples like (9) is that non-exhaustive *so* is also found in other contexts of colloquial PDG in which the entire predicate is negated (ii):

(ii) [U]nd   was   mögt   ihr   so   nicht?
     and   what   like.PRS.2PL you.NOM.PL   so   NEG
     'And what don't you like?'
     (tiktok.com, 2020)

[7] As is often the case with discourse particles, it cannot be established without further assumptions whether this is due to a different base-generation site of the particle itself or to optional scrambling of the adverbial constituent. For this reason, I will limit myself to this descriptive observation here.

(lav-tuebingen.de)
'And what did you (in (a.): polite form, in (b): regular 2nd-person form) do during the Corona pandemic?'

Thus, with respect to its syntactic distribution, *so*_{wh} seems to be specialized in (main or embedded) interrogative clauses and can only appear in the middle field.

2.2 Functional aspects

The function of *so*_{wh} is directly related to the qualification of the conditions under which the (direct or indirect) interrogative value of the clause is to be interpreted. In particular, the approximating semantics of "this" *so* variously mentioned in the literature (Scharten 1997; Reich 1997; Beck & Rullmann 1999; d'Avis 2001; Roguska 2007) appears to have been functionalized in the system such that this element, compositionally combined with the rest of the proposition, contributes to expressing that the speaker does not necessarily require the gap in their knowledge to be filled exhaustively or in a qualitatively precise way.

This implies that the occurrence of *so*_{wh} verbalizes the speaker's "relaxed" attitude towards the way in which they expect the information exchange to be handled in a given communicative act. In fact, a question containing *so*_{wh} is not compatible with a reading in which the speaker demands an exhaustive answer, irrespective of whether this interpretation is made linguistically explicit or not. The example in (12a) is taken from an online forum in which students swap experiences and impressions concerning their upcoming secondary school certificate (gutefrage.net). The additional request in brackets would make the utterance pragmatically infelicitous or nonsensical, given that the *wh*-question is obligatorily interpreted as asking for a rough estimation. Note that the *so*_{wh}-less counterpart of this sentence in (12b) is – in principle – also compatible with the reading in (12a), but this interpretation is not mandatory, wherefore an explicit request for a precise answer may possibly follow the *wh*-question. Similar observations hold for the utterance (13a), in which the speaker mitigates the directness of the question by means of the particle (while the preferred reading of (13b) is a neutral one):

(12) a. Ab   wann habt   ihr   so   angefangen   zu
        from when AUX.PRS.2PL you.NOM.PL so   V.PRT- PTCP.begin.PTCP   to
        lernen?   (#Bitte teilt   mir   den   genauen   Tag mit.)
        learn.INF   please tell.IMP.2PL I.DAT the.ACC.SG   exact.ACC.SG day V.PRT
     a. Ab   wann habt   ihr   angefangen   zu lernen?
        from when AUX.PRS.2PL you.NOM.PL V.PRT- PTCP.begin.PTCP   to learn.INF
        (Bitte   teilt   mir   den   genauen   Tag mit.)
        please   tell.IMP.2PL I.DAT the.ACC.SG   exact.ACC.SG day V.PRT
        'When did you start learning?' (^{#/ok}Please tell me exactly when you did)

(13) a. Wie heißt   du   so? (#Ich   brauche   diese
        how be-called.PRS.2SG   you.NOM.SG so   I.NOM need.PRS.1SG this.ACC.SG

Information, um		ein	Formular	auszufüllen.)	
information in-order		a.ACC.SG	form	V.PRT-to-fill-in-INF	
b. Wie heißt		du?	(Ich	brauche	diese
how be-called.PRS.2SG		you.NOM.SG	I.NOM	need.PRS.1SG	this.ACC.SG

Information, um ein Formular auszufüllen.) [8]
information in-order a.ACC.SG form V.PRT-to-fill-up-INF
'What is your name? ([#/ok]I need this information to fill up a form)'

At this point, an important clarification concerning the function of *so*_wh in the contexts addressed above must be made. The polysemousness – combined with the high frequency in spoken usage – of *so* in PDG may exacerbate the functional distinction of the different counterparts of this lexical item surfacing in everyday language, since these all have one semantic-grammatical feature in common: they express some kind of *approximation* at some abstract level of interpretation. Nevertheless, the specific contribution of each of these elements (in particular, of the discourse-particle-like units) is slightly different from that of the others.

Indeed, a question in which *so*_wh is licensed can be answered by a sentence containing another occurrence of particle-like *so* that is functionally similar, but not identical to *so*_wh. This is exemplarily illustrated by means of the dialogic units in (14) and (15). Above each of the examples, the situational context is made explicit in order to facilitate the interpretation:

(14) [Speaker B offers Speaker A a job that is contextually inferred to be clearly illegal]
    A: Was müsste ich da so machen?
       what.ACC must.SBJ.1SG I.NOM there so do.INF
       'What are the tasks in this job?'
    B: Naja, so Dinge.
       well so things
       'Yeah, well, you know… stuff.'

(15) [Speaker B tells Speaker A about their experience as a seasonal waiter in Australia]
    A: Wie war das so in den vier Monaten?
       how be.PRT.3SG that.NOM so in the.DAT.PL four month.DAT.PL
       'What was it like in those four months?'
    B: Naja, ich habe so 2000 Dollar netto pro Monat verdient.
       well I.NOM AUX.PRS.1SG so 2000 dollar net per month earn.PTCP
       'Well, I earned approximately 2000 dollars net per month.'

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[8] Given these premises, one may wonder what the exact difference between the expected answer to (13a) and the answer to (the standard interpretation of the question in) (13b) could be, considering that the required information is not negotiable and cannot be expressed in a vague way in the same way as the time designation that is asked for in (12). In an everyday, spontaneous-speech situation in which (13a) is pronounced, the expected answer may, for instance, not correspond to the hearer's complete name (e.g., #*Hans Markus Heinz Egon Müller*) and is therefore incompatible with the supplementary request added in the examples above. This is why it is claimed that the presence of *so*_wh, which is only possible in colloquial contexts, makes the question less intrusive in such cases: the answer can be the speaker's first name only or (if the relevant conditions apply) a nickname, or something similar. In a context like (13), this can be considered a particular type of non-exhaustivity.

In (14), Speaker A's question (to be intended as 'What would my tasks be?') contains *so*$_{wh}$, which, as elucidated above, forces a reading corresponding to a request for a (possibly) non-exhaustive answer. Crucially, in Speaker B's utterance, another occurrence of *so* linearly precedes the actual answer (*Dinge* 'things'), which is *per se* not particularly informative (and therefore "non-exhaustive" at a very abstract level), but – embedded into the provided context – clearly refers to illegal actions. This answer can be imagined to be paralleled, for instance, by a facial expression and/or a tone that makes the interpretation more explicit. I assume this answer, which shallowly looks just like the *so* in Speaker A's question, to be an instantiation of the DP-internal occurrence illustrated in (2). Thus, the item *so* in Speaker B's sentence rather seems to function as an article/demonstrative pronoun expressing the generalized reference of the nominal element that it precedes and whose phrase it is therefore part of. As for (15), the two occurrences of *so* surfacing, respectively, in Speaker A's and in Speaker B's utterances look (formally, as well as functionally) identical at first sight. It seems, however, that Speaker A's question contain an instance of *so*$_{wh}$, whereas the *so* appearing in the answer must be a focus particle – in Wiese (2010)'s spirit – binding the complex constituent *2000 Dollar netto pro Monat* and meaning 'more or less, roughly'.[9] In Speaker A's question, the meaning of *so* cannot be easily rephrased as 'approximately', while this is exactly what *so* means in Speaker B's answer.

Thus, the two occurrences of *so*, although both being associated with a very general approximating flavor, are not exactly equivalent from a functional perspective.[10] Note that the

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[9] Interestingly, focus-particle *so* can not only optionally co-occur with further focus particles (i) (with which it possibly forms a complex focus particle), but also exhibits the same syntactic distribution as run-of-the mill focus particles, being positioned either to the left of or internal to the corresponding phrase (ii)-(iii) (in assuming this, I follow e.g. Bouma et al. 2007):

(i)	Ich	habe		mit	so ca. /	so ungefähr		35-40	Küken
	I.NOM	AUX.PRS.1SG		with	so ca.	so approximately		35-40	chicks
	gerechnet	und		habe		jetzt	neun.		
	PTCP.expect.PTCP			and	have.PRS.1SG	now	nine		

(ii)	Ich	habe	{so}	mit	{so}	35-40	Küken	gerechnet		und
	I.NOM	AUX.PRS.1SG	so	with	so	35-40	chicks	PTCP.expect.PTCP		and
	habe	jetzt	neun.							
	have.PRS.1SG	now	nine							

(iii)	Ich	habe	{ ungefähr}		mit	{ungefähr}	35-40	Küken
	I.NOM	AUX.PRS.1SG	approximately		with	approximately	35-40	chicks
	gerechnet	und	habe	jetzt	neun.			
	PTCP.expect.PTCP		have.PRS.1SG	now	nine			

'I expected 35-40 chicks, but have nine now.'

[10] Additional evidence in favor of a distinction between *so*$_{wh}$ and DP-internal *so* is that the latter cannot appear independently of the DP it accompanies. If the nominal expression is, for instance, topicalized into the left periphery of the clause, *so* must be moved into the same position together with the DP, since it is part of it just as any other determiner. In (i), the same situational context is assumed as above:

(i)	A: Was	müsste	ich	da	so	machen?
	what.ACC	must.SBJ.1SG	I.NOM	there	so	do.INF

'What are the tasks in this job?'

	B: Naja,	{so}	Dinge	müsstest	du		da	{* so}	machen.
	well	so	things	must.SBJ.2SG	you.NOM.SG		there	so	do.INF

'Well, you know, you should do… stuff.'

With respect to focus-particle *so*, instead, it must be said that this element is relatively independent of the phrase it F-marks and may therefore – optionally and given the appropriate conditions – remain in the middle field even when the focused XP has been dislocated. The capitalization of the syllable <*net*> signals (mirative) focus accent in that position:

generalizing interpretations that *so* evokes in the answers in (14) and (15) may of course be related to the approximating tone of the corresponding questions, but they do not *depend on* (or are directly *forced by*) them. In any case, it is claimed here that the functions illustrated in the two examples must be kept distinct from that of *so*_{wh} because: (i) in Speaker A's question in (14), *so* does not bind any focused constituent in any obvious way; (ii) in Speaker A's question in (15), *so* is clearly not a DP-internal element. In sum, these functions, which are evidently similar to each other, need to be treated differently with respect to their formal categorization in the system by adopting a strict approach focusing on the very functions performed by the single elements in different contexts. In the next section, it must be established how *so*_{wh} can be classified in consideration of the syntactic and semantic-grammatical features outlined so far.

3 Another modal particle?

If one accepts that *so*_{wh} is to be distinguished from other occurrences of the same lexical item that also have – *mutatis mutandis* – some kind of approximating flavor, it seems that the distributional and semantic facts concerning this element discussed so far are compatible with the assumption that it can be classified as a so-called "modal particle". Modal particles, a long-burning issue in studies of the syntax-semantics-pragmatics interface (among the most recent studies on German, cf. e.g. Repp 2013; Gutzmann 2017; Grosz 2020; Coniglio 2022), are uninflected and often originally adverbial grammatical elements which typically occur in spoken interaction and contribute to expressing the grammatical category of modality (Thurmair 1989; Abraham 1991, 1995; Kwon 2005; Coniglio 2007, 2011; Müller 2017). To be sure, the notion of modality has been variously characterized in the literature, especially in the last three decades. In general, it is defined as a grammatical category associated with (and relating to the language-specific devices expressing) the degree of probability, possibility, likelihood, prohibition, etc. of an utterance. In other words, it has traditionally been conceived of as "the linguistic phenomenon whereby grammar allows one to say things about, or on the basis of, situations which need not be real" (Portner 2009: 1). In recent years, this definition has been broadened to refer, more generally, to self-initiated modification of speech acts aiming to optimize the operations regulating the Common Ground between speaker and addressee in a communication situation (cf., among many others, Abraham & Leiss 2012), thereby linking modality to the expression of the speaker's stance with respect to what is uttered (Cresti 2001; Mello & Raso 2011: 5) and how this overtly or covertly modifies the flow of information exchange. Modal particles do exactly this job. In *wh*-questions, particles like *denn*, *halt* and *schon* modify the speech act such that the speaker may, for instance, verbalize his/her particular interest in the content of the answer (or, more generally and depending on the context, ask for an explanation) (16a), his/her resentfulness and the expectation that the other speaker should come up with a good excuse

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(ii) A: Wie   war   das   so   in   den   vier   Monaten?
         how   be.PRT.3SG   that.NOM   so   in   the.DAT.PL   four   month.DAT.PL
         'What was it like in those four months?'
      B: Anstrengend,   aber   es   hat   sich   gelohnt:
         exhausting   but   EXPL   AUX.PRS.3SG   REFL.ACC   PTCP.pay-off.PTCP
         [2000 Euro NETto]ᵢ   habe   ich   [so [tᵢ]]   im   Monat   verdient!
         2000 euro net   AUX.PRS.SG   I.NOM   so   in-the.DAT.SG   month   earn.PTCP
         'Exhausting, but it was worth it: I earned approximately 2000 dollars per month!'

or just apologize (16b), his/her negative disposition towards the state of affairs under discussion and the corresponding presupposition that the implicit answer has to be a negated indefinite pronoun (16c) (*pace* Kwon 2005: 59), or the implication – sometimes similar to that of *halt* – that the uttered sentence is a rhetorical question and that the answer should be negative (16d). Reducing the different semantic contributions of these particles to a common denominator, what they all have in common is that they define the way the speaker finds that the addressee should react to the question: in (16a), the speaker expects a swift verbal reaction by the hearer, in (16b)-(16d), instead, (s)he does not need to fill a gap in his/her knowledge and rather requires a (verbal or non-verbal) confirmation by the interlocutor that the speaker's judgment put on the table has been received. For the examples in (16), it can be assumed that they refer to a problematic situation (triggered by the hearer or by someone else) in which a solution would be necessary:

(16) a. Was   willst   du   denn   machen?
         what.ACC   want.PRS.2SG you.NOM.SG   PRT   do.INF
         'What are you going to do?'
         (I am curious to know what you intend to do now.)
      b. Was   hast   du   nur   gemacht?
         what.ACC   AUX.PRS.2SG you.NOM.SG   PRT   PTCP.do.PTCP
         'What have you done?'
         (I cannot believe that you behaved like that: it is your fault!)
      c. Was   willst   du   halt   machen?
         what.ACC   want.PRS.2SG you.NOM.SG   PRT   do.INF
         'What do you want to do?'
         (I am convinced that this is a lost battle.)
      d. Was   willst   du   schon machen?
         what.ACC   want.PRS.2SG you.NOM.SG   PRT   do.INF
         'What do you want to do?'
         (There are possible solutions, but I exclude them all.)

At least in abstract terms, this is not different from what *so*_{wh} does. The qualitative and/or qualitative non-exhaustivity of the expected answer is a result of the speaker's disinterest in a completely informative filling of the gap in their knowledge. Also note that modal particles in German typically only occur in the middle field (Abraham 1991, 1995) and – although being preferentially located in specific positions, as extensively shown by Coniglio (2007, 2011) – may generally surface in a lower or higher middle-field position with respect to the constituents appearing in the same area of the clause (also cf. (11) above). In (17), the item *denn* is used to exemplarily illustrate the syntactic behavior of modal particles, but it goes without saying that the elements that fall into this category are partly subjected to different restrictions and/or exhibit a different distribution (*denn*, for instance, also surfaces in yes/no questions):

(17) Was   hast   du   {denn / so} heute   {denn / so}
      what.ACC   AUX.PRS.2SG   you.NOM.SG   PRT   so   today   PRT   so
      gemacht   {*denn / *so}?
      PTCP.do.PTCP   PRT   so
      'What did you do today?'

Moreover, modal particles like *denn* are licit in the corresponding embedded questions (18a) and – more marginally – even in embedded *wh*-clauses that are not selected by an inherently interrogative predicate (18b), as also shown in (7)-(8) above for *so*~wh~, and may co-occur with further modal particles in the same sentence (19a) that may also surface in different positions (19b) (for a detailed overview, see Müller 2017), which is also the case in *so*~wh~-clauses (20).

(18) a.

Hans	fragte,	was	ich	denn	als	Nächstes
Hans	ask.PRT.3SG	what.ACC	I.NOM	PRT	as	next.ACC.SG

backen	würde.
bake.INF	AUX.SBJ.3SG

'Hans asked what I would bake next.'

b.

Ich	hatte	Maria	ein	wenig	erzählt,	wie	es
I.NOM	AUX.PRT.1SG	Maria	a	little	tell.PTCP	how	EXPL

mir	denn	so	ergangen	war.
I.DAT	PRT	so	go.PTCP	AUX.PRT.3SG

'I had told Mary a little about how I had been.'

(19) a.

Was	hast	du	dir	{denn	nur}	dabei
what.ACC	AUX.PRS.2SG	you.NOM.SG	you.DAT.SG	PRT	PRT	thereby

{denn	nur}	gedacht?
PRT	PRT	PTCP.think.PTCP

b.

Was	hast	du	dir	denn	dabei	nur
what.ACC	AUX.PRS.2SG	you.NOM.SG	you.DAT.SG	PRT	thereby	PRT

gedacht?
PTCP.think.PTCP

'What were you thinking?!'

(20) a.

Was	hast	du	{denn	so}	heute	{denn	so}
what.ACC	AUX.PRS.2SG	you.NOM.SG	PRT	so	today	PRT	so

gemacht?
PTCP.do.PTCP

b.

Was	hast	du	denn	heute	so	gemacht?[11]
what.ACC	AUX.PRS.2SG	you.NOM.SG	PRT	today	so	PTCP.do.PTCP

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[11] As confirmed by my informants, the preferred sequence in sentences in which *denn* and *so*~wh~ co-occur (and the middle field otherwise only contains an adverbial like *heute* 'today') is one in which *denn* occurs to the left of the adjunct and *so* to the right of it. The degree of acceptability of the different combinations seems to be as follows, the last one being marginal, but still possible:

(i)   Was hast du denn heute so gemacht? > Was hast du heute denn so gemacht? > Was hast du denn so heute gemacht?

This is in line with Coniglio's (2007: 24) observation that *denn* is base-generated in a high middle-field position (also cf. Thurmair 1989; Abraham 1995). Crucially, any inverted order of the two particles in which *so*~wh~ linearly precedes *denn* is ruled out. Sequential non-arbitrariness is, in fact, a well-known feature of modal particles that has been extensively addressed from a number of perspectives in the works cited above. When co-occurring in the same *wh*-question, *denn* and *so*~wh~ contribute to a semantic interpretation of the utterance in which the speaker is at the same time curious about the hearer's reaction, but not specifically interested in an exhaustive answer.

'What did you do today?'

On the basis of the facts sketched above, it is contended here that so_{wh} not only instantiates a different category from focus-particle and article/demonstrative *so*, but also that this element is a good candidate for being classified as a modal particle, just as *denn* or *halt* (but of course conveying a different semantic-grammatical content). The underlying assumption is that so_{wh} is not to be merely considered a weak adverb expressing some kind of approximation (which in fact, it also does at a very abstract level), but may be rather seen as a purely functional item that contributes to managing the Common Ground in that it adds to the content of the question a specification concerning the quality of the expected answer. In this sense, the insertion of *so* performs a function that is comparable to that of the other elements in this category.

As to the formal status of so_{wh}, I follow Coniglio (2007) in assuming that modal particles cannot be phrasal nodes with a fully-fledged functional structure (as, e.g., regular adverbs are), but must be classified as constitutively reduced items. Indeed, just as the elements that are generally ascribed to the class of modal particles, so_{wh} cannot, for instance, be coordinated with other particles (21a), used in isolation (21b) (assuming the modal-particle, not the modal-adverbial reading, which in this case would be suitable to answer the *wie*-question) or focalized (21c):[12]

(21) a. Was hast du denn (*und) so gemacht?
        what.ACC AUX.PRS.2SG you.NOM.SG PRT and so PTCP.do.PTCP
        'What did you do today?'
    b. A: Wie habt ihr euch kennengelernt?
          how AUX.PRS.2SG you.NOM.PL REFL.ACC know-PTCP.learn.PTCP
          'How did you (two) meet?'
       B: *So.
             so
    c. Wann habt ihr euch (*SO) kennengelernt?
       when AUX.PRS.2SG you.NOM.PL REFL.ACC so know-PTCP.learn.PTCP
       'When did you (two) meet?'

Thus, it seems that so_{wh} also shares with the other modal particles a particular structural status as a deficient phrase. It must be said, however, that this fact further confirms the categorial parallelism between so_{wh} and the other particles, but is not a *conditio sine qua non* with respect to the assimilation of this element into the class of modal particles, since it may admittedly also concern other types of (discourse) particles.

4 Summary

This paper addresses the formal classification of a discourse particle of colloquial German labeled "so_{wh}", which represents one of many polysemous items derived from the modal-adverbial lexical item *so*. It is claimed that this element is to be distinguished from other (homophonous) pragmaticalized counterparts like focus-particle *so* and DP-internal *so*

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[12] The same arguments, in combination with non-topicalizability and adverbial modification, are used by Coniglio (2007: 27-28) to show that another modal particle with a polysemous counterpart in the part of speech "adverb" (*ruhig*, lit. 'calmly') does exhibit the same behavior when surfacing as such.

(although it shares a common approximating function with them) and is a good candidate for the category of modal particles. In particular, so_{wh} seems to function as a device that helps regulate the Common Ground between speaker and addressee by signaling that the question need not be answered in a qualitatively/quantitatively exhaustive way. In this sense, the insertion of so_{wh} expresses the speaker's stance as to the expected negotiation of the information exchange initiated by means of the question. The syntax of so_{wh} confirms this hypothesis: as is the case with the other modal particles, so_{wh} is not available in all clause types, but is rather specialized in main and embedded *wh*-structures; its occurrence is limited to the middle field, where it can occupy different positions with respect to other constituents appearing in this area; it can co-occur with other modal particles; it has a reduced structural status (it cannot be modified, focalized, coordinated, etc.).

Given that modal particles result from a grammaticalization process and some of them might be more strongly grammaticalized than others in one and the same inventory, a possibility to explore is that so_{wh} could represent a younger development than that of more "established" modal particles of German such as *eben* or *halt*. If this assumption is correct, then this could be the reason why this item has not come into the picture of modal-particle research so far.

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