A *wh* discourse particle: Dutch *hoezo*

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Abstract. This paper provides an analysis of a special kind of *why*-questions in Dutch, formed with the *wh*-word *hoezo* (lit. 'how so'). We propose that *hoezo* signals the speaker's resistance to updating the discourse model, by asking the interlocutor to provide a reason for their preceding discourse move. *Hoezo* shares properties with both discourse particles (its not-at-issue content expresses the speaker's attitude towards the current state of the discourse), and question words (it asks the interlocutor to provide a reason). Unlike *waarom* (the regular word for 'why'), *hoezo* is not subject to *wh*-movement and does not bind a variable.

Keywords. *why*-questions; *wh*-questions; content questions; discourse particles; *because*-clauses; reasons; Dutch

1. Introduction. *Why*-questions are typically used to ask the interlocutor for a reason, explanation, or cause (for instance, *Why was the train delayed?*).[1] But reasons, causes, and explanations come in many different varieties, so it's maybe not surprising that languages often have more than one expression for 'why'.[2] This paper focuses on the Dutch *wh*-word *hoezo* (lit. 'how so'). Although *hoezo* is usually translated in English as 'why', it differs in important ways from the most common Dutch word for 'why', *waarom* (lit. 'where for'). As a rough first characterization, we can say that the main function of *hoezo* is a pragmatic one. It can often be paraphrased as something like 'What do you mean?'. This is illustrated by the attested example in (1) taken from the *Corpus Hedendaags Nederlands* [Corpus of Contemporary Dutch] (2021):

(1) We beginnen onze optredens het liefst met Waterloo. Dan zie je de zaal exploderen. Iedereen danst en zingt mee. In de kleedkamer warmen we ons op met Arrival. Dat is instrumentaal, ja, maar we zingen mee met de doedelzakken. Hoezo, een afschuwelijk nummer? Het is prachtig. Alles van Abba is prachtig.
"We like to start our performance with Waterloo. Then you see the room explode. Everybody is dancing and singing. In the dressing room we warm up with Arrival. That's an instrumental track, yes, but we sing along with the bagpipes. What do you mean, a terrible song? It is beautiful. Everything by Abba is beautiful."

As far as we have been able to determine, *hoezo* has not previously been discussed in any detail in the literature.[3] The goal of this paper is to provide the first detailed description and the-

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[1] There are many linguistic and philosophical studies of *why*-questions, including Collins (1991); Schwarz & Simonenko (2018); Cheng (2021); Corver (2021); Cox (2021); Egler (2021); and Sandoval & Morzycki (2023), among many others.

[2] See for instance Zwicky & Zwicky (1973), for an early investigation of English *why*, *how come*, and *what for*.

[3] Apart from the occasional brief side remark about *hoezo* (e.g., Corver 2023), the only publication specifically dealing with *hoezo* that we have been able to find is a short note in an online advice column called *Taalloket* (lit.

oretical analysis of *hoezo*, contrasting its syntactic, semantic and pragmatic properties with those of *waarom*.

The core idea underlying the analysis developed in this paper is that the (not-at-issue) contribution of *hoezo* is at the level of the discourse rather than at that of the truth-conditional sentence semantics. *Hoezo* challenges the interlocutor to provide a reason for their discourse move ("Why did you say that?"). Even though *hoezo* is a *wh*-word just like *why* and *waarom*, at the same time it shares some of the properties of discourse particles. We thus propose the recognition of a novel lexical category, namely that of what we call a *wh* discourse particle. Because *hoezo*'s main function is a pragmatic one, its syntax and semantics are "impoverished" compared to that of *waarom*/*why*. In contrast to *waarom*/*why*, *hoezo* is not a variable-binding operator. In the syntax this is reflected in the fact that *hoezo* does not undergo *wh*-movement but is base-generated in the left-periphery of the clause, more specifically in Spec-CP. This is in line with the common assumption in the literature that functional projections above the IP level are the locus of pragmatic and illocutionary operators, and hence the natural home for discourse particles (Grosz 2020; Wiltschko 2021). These syntactic and semantic differences between *hoezo* and *waarom*/*why* will be demonstrated through a battery of empirical tests.

Here we should mention from the outset that we do not exclude the possibility that *waarom* and *why* may have a pragmatic use that is similar (or identical) to that of *hoezo*, in addition to their 'regular' use as sentence-level variable-binding operators. In many, if not all, of the example with *hoezo* in this paper, it could felicitously be replaced by *waarom*. However, crucially, *hoezo* cannot function as a variable-binding operator and does not undergo *wh*-movement, as we will show in Section 5. Thus, whereas *waarom*/*why* may be ambiguous between being a sentence-level variable-binding *wh*-operator or a pragmatic *wh* discourse particle, *hoezo* only has the latter interpretation. In fact, Ginzburg (2012) argues for such an ambiguity of English *why*, in his analysis of what he calls its 'metacommunicative' use (p. 308-316). Our analysis of *hoezo* is similar in spirit to his, but we will not make a detailed comparison in this paper.

The rest of the paper is organized as follows. In Section 2, we distinguish three types of utterances with *hoezo* based on formal criteria. Section 3 discusses its pragmatic uses, and Section 4 presents the core of our theoretical analysis. The consequences for the syntactic behaviour of *hoezo* are discussed in Section 5. The systematic differences with *waarom* observed there lend strong empirical support to our analysis. In Section 6 we further motivate our proposal to classify *hoezo* as a *wh* discourse particle, based on general characteristics of discourse particles commonly discussed in the literature. In Section 7 we summarize our analysis, and suggest some promising avenues for further research.

2. Syntactic configurations for *hoezo*. Using purely syntactic criteria, we can distinguish three types of *hoezo*-utterances, namely (a) *hoezo* occurring by itself (isolated *hoezo*), (b) *hoezo* plus a single word or phrase (*hoezo + X*),[4] and (c) *hoezo* as the initial question word in an interrogative

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'Language window') of the popular monthly language magazine *Onze Taal* (n.d). Although this blog post is couched in prescriptive terms, it accords with our own native-speaker intuitions, pointing out that *hoezo* is less neutral than *waarom* ('why') and that it expresses 'surprise' or even 'indignation'. We will see that this claim is supported by our analysis, although we regard this aspect of *hoezo* as a more superficial pragmatic side-effect of its core meaning. There is no mention of *hoezo* in *ANS* (2021), the most comprehensive and up-to-date descriptive grammar of Dutch.

[4] The analogous construction with *why* is known in the literature as '*why*-Stripping'. Corver (2021) is a detailed discussion of the syntax of this construction in Dutch with *waarom* (but not *hoezo*). We'll have to leave a comparison between '*waarom*-Stripping' and '*hoezo*-Stripping' for another occasion.

clause (CP) immediately followed by the inflected verb in the second position (*hoezo* + V2). In response to the assertion in (2), any of these constructions can be used, as illustrated in (3).

(2)   Speaker A: Ons plan is totaal   mislukt
                      our   plan is totally failed
                      'Our plan has totally failed.'

(3)   Speaker B:

    a.   *Hoezo*?   **isolated *hoezo***
       HOEZO
       'What do you mean?'

    b.   *Hoezo*, totaal   mislukt?   ***hoezo* + X**
       HOEZO totally failed
       'What do you mean, totally failed?'

    c.   *Hoezo* is ons plan totaal   mislukt?   ***hoezo* + V2**
       HOEZO is our plan totally failed
       'What do you mean, our plan has totally failed?'

In the *hoezo* + X construction, X can be a word or constituent of any syntactic category, as shown in (4):

(4)   a.   *Hoezo* mislukt?
    b.   *Hoezo* totaal mislukt?
    c.   *Hoezo* totaal?
    d.   *Hoezo* plan?
    e.   *Hoezo* ons plan?

In the *hoezo* + V2 construction, *hoezo* is syntactically integrated in the sentence in a way that is superficially parallel to other *wh*-words like *wie* ('who'), *wat* ('what'), and *waarom* ('why'), which have undergone *wh*-movement to the initial sentence position. Due to the well-known Verb Second (V2) constraint of Dutch syntax, the inflected finite verb then has to appear immediately following the *wh*-word. The standard analysis is that Dutch is underlyingly SOV, and that in finite main clauses the inflected verb moves to the C(omplementizer) position. The constituent preceding it (such as *hoezo* in (3c)) is in the Specifier of CP (Spec-CP).

In addition, there are *hoezo*-questions where the verb appears to be in the third position in the sentence, as in (5). It might be tempting to regard these as a fourth type of construction ("*hoezo* + V3"); however, we take it that these are actually instances of the *hoezo* + X construction, where X happens to be a full declarative main clause (CP) with V2 word order.

(5)   *Hoezo*, ons plan is totaal   mislukt?
    HOEZO our plan is totally failed
    'What do you mean, our plan has totally failed?'

Such cases differ from the *hoezo* + V2 construction in that *hoezo* is not syntactically and prosodically integrated with the rest of the sentence, requiring an obligatory pause after *hoezo* (indicated by the comma in (5)). There is no such pause in the *hoezo* + V2 construction.[5]

Another construction that should be carefully distinguished from *hoezo* + V2 is one in which *hoezo* is followed by a polar question. Because main-clause polar questions in Dutch have the inflected verb in clause-initial position (i.e., in C with Spec-CP being empty), such sentences superficially appear to involve V2. We might call this the "pseudo *hoezo* + V2" construction, but actually we take this to be another instance of *hoezo* + *X*, where *X* happens to be a V1 polar question:

(6) *Hoezo*, ben je   onze afspraak   soms vergeten?
     HOEZO   are you our   appointment may   forgotten
     'Why? Did you forget our appointment?'

Again, this is indicated by the lack of syntactic and prosodic integration of *hoezo* with the rest of the sentence, signalled by an obligatory pause. In this paper, we set aside the constructions in (5) and (6), leaving their further analysis for future research.

In corpus data, the isolated *hoezo* and *hoezo* + *X* constructions seem to be by far the most frequent. However, in this paper we will argue for a unified semantics and pragmatics of all three types of *hoezo*-questions. Since the *hoezo* + V2 construction is the closest parallel to regular *why*-questions with *waarom* and is therefore the most interesting and challenging to analyze, many of the examples in the rest of the paper will be of that type. In the next section we focus on the pragmatics of *hoezo*-questions, but in Section 5 we will come back to syntactic issues, providing a more detailed analysis. The syntactic facts we discuss there provide important additional support for our analysis of *hoezo* and its contrast with *waarom*.

3. Pragmatic uses of *hoezo*. *Hoezo* can be used in conversation in a variety of ways. Perhaps most prominent is its use in response to the assertion of a proposition *p* in a preceding utterance by another interlocutor, as in (2)-(3).[6] However, *hoezo* can also be used to challenge speech acts other than assertions, such as questions (7) or commands (8).

(7) a. Speaker A: b. Speaker B:
         Ben je   ziek?   *Hoezo*?
         Are you sick   HOEZO
         'Are you sick?'   'Why?'; 'Why do you ask?'

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[5] Another difference may be that in (5) the CP following *hoezo* has to be interpreted as a quotation, which is not the case for (3c).

[6] The utterance that *hoezo* responds to does not necessarily have to be the immediately preceding one, but can be earlier in the discourse, a point that Ginzburg (2012) makes for 'metacommunicative' *why* in English. In monologues like (1) the utterance that *hoezo* is responding to may even be absent altogether and merely inferred. Many of the examples found in corpus data are of this type, since these predominantly consist of prose texts rather than conversation. Examples collected from most text-based corpus collections are therefore likely to be somewhat unnatural and probably not representative of the use of *hoezo* in spoken and written dialogue (for instance, online chats).

(8) a. Speaker A: b. Speaker B:
         Doe je   jas aan!   *Hoezo* (ben jij   de baas soms?)
         Do   your coat on   HOEZO are   you the boss maybe
         'Put your coat on!'   'Why? Are you my boss?'

Hoezo can also target not-at-issue content, such as presuppositions and conversational implicatures, as illustrated in (9) and (10), respectively.

(9) a. Speaker A:
         Bob Dylan is geen goede zanger meer.
         Bob Dylan is no   good singer anymore
         'Bob Dylan is not a good singer anymore.'

     b. Speaker B:
         Hoezo geen goede zanger meer?   (Ik heb hem altijd   vreselijk gevonden!)
         HOEZO no   good singer anymore I   have him always terrible   found
         'What do you mean, not a good singer anymore? (I always found him terrible!)'

(10) a. Speaker A: b. Speaker B:
          Het water is warm   *Hoezo* warm? (Het is gloedheet!)
          The water is warm   HOEZO warm it   is scalding
          'The water is warm.'   'What do you mean, warm? (It's scalding!)'

   Hoezo can even be used metalinguistically, for instance in order to object to the pronunciation of a preceding utterance, as in (11a-b), where the issue is the location of the lexical stress, or to reject the interlocutor's choice of sociolinguistic register, as in (12a-b):[7]

(11) a. Speaker A:
          De spoorBOMEN waren dicht.
          The rail-beams   were   closed
          'The railway barriers were closed!'

     b. Speaker B:
         Hoezo spoorBOMEN? Het is SPOORbomen!
         HOEZO rail-BEAMS?   It   is RAIL-beams
         'What do you mean, railway barriers? It is railway barriers!'

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[7] The data in (9)-(12) demonstrate that *hoezo* meets all the standard criteria for being a metalinguistic operator, as given by Horn (1985) in his classic analysis of metalinguistic negation. However, we do not believe that all, or even most, instances of *hoezo* should be analyzed as being metalinguistic. This is supported by cases such as (24)-(25) below, where *hoezo* targets a non-linguistic event. Ginzburg's (2012) term 'metacommunicative' may be more apt.

(12) a. Speaker A:
Ik kan die gast niet uitstaan
I can that dude not stand
'I can't stand that dude.'

b. Speaker B:
Hoezo, die gast? Dat is de dominee!
HOEZO that dude that is the pastor
'What do you mean, that dude? That's the pastor!'

4. Core of the analysis. What ties all the different uses together that were surveyed in the preceding section? In each case, the speaker signals that they resist a discourse move on the part of the interlocutor by asking for a reason or motivation for that move. In what might be regarded as the prototypical cases, such as (2)-(3), the speaker refuses to add a proposition *p* to the Common Ground (CG; Stalnaker 1978), where *p* is the at-issue truth-conditional content expressed by a preceding assertion on the part of the interlocutor. But *p* may also belong to the not-at-issue content of the interlocutor's utterance, such as a presupposition in (9) or a conversational implicature in (10). Generalizing over at-issue and not-at-issue content, we can say that *hoezo* signals that the speaker resists updating the CG in accordance with the interlocutor's preceding discourse move. This does not necessarily mean that the speaker rejects the interlocutor's contribution outright. Rather the speaker challenges the interlocutor to come up with a reason for why they made their discourse move. Presumably, if the interlocutor is able to provide such a reason to the speaker's satisfaction, the speaker will accept the interlocutor's discourse move after all, and update the CG accordingly.

But, as we saw in (7)-(8), *hoezo* may also signal resistance to other illocutionary acts than assertions, such as questions or commands. Thus, in principle, *hoezo* can signal resistance to any type of discourse move by the interlocutor. We can capture this by saying that *hoezo* signals resistance to updating not just the CG, but also any other component of the discourse model, such as the QUD Stack for questions (Roberts 2012 [1996]), or the To-Do List for commands (Portner 2004). Without going into any details, and staying theoretically neutral as much as possible with respect to different proposals in the literature, we assume a general discourse model consisting of various components (including, at a minimum, the CG, the QUD Stack, and the To-Do List), each of which may be updated following a discourse move by one of the interlocutors, depending on the uptake or response by the other interlocutor(s), in the spirit of, for instance, Farkas & Bruce (2010).

If our analysis is correct, *hoezo*'s main pragmatic function therefore lies in "managing" the discourse, and, more specifically, whether and how the discourse model is updated (cf. Krifka's (2008) notion of Common-Ground Management). Of course, this function belongs to the domain of not-at-issue meaning. In this way, *hoezo* is very much like a discourse particle (Grosz (2020), among many others), in that its main function (as part of its not-at-issue content) is to relate the speaker's utterance to the current state of the discourse and to express the speaker's attitude as to whether and how the discourse model should be updated. At the same time, *hoezo* is a question word asking the interlocutor for a reason. In this respect it is similar to other *wh*-words, like Dutch *wie* ('who'), *wat* ('what'), and *waarom* ('why'), or their English counterparts. However, *hoezo* operates at the level of discourse rather than at that of the truth-conditional semantics of the sentence. In this way, *hoezo* differs from *waarom*. This has important implications for the syntactic behaviour of these two *wh*-words, as we will see in the next section.

5. Syntactic consequences: *hoezo* vs. *waarom*. When we consider occurrences of *hoezo* that are integrated syntactically in a full *wh*-clause (i.e., the *hoezo* + V2 construction) it appears at first glance to be syntactically analogous to other *wh*-words such as *waarom*. However, a closer look reveals that its syntactic properties differ substantially. Direct comparison between *hoezo* and *waarom* shows a number of syntactic differences that can be attributed to the pragmatic function of *hoezo*. We claim that *hoezo* is different from *waarom* in that *hoezo* is not subject to *wh*-movement and is base-generated in the left periphery (Spec-CP) of an interrogative main clause.[8] The deeper reason for this syntactic difference is that, semantically, *hoezo* is a pragmatic, discourse-oriented operator, and as such does not bind a variable in the semantic representation of the sentence, unlike its apparent near-synonym *waarom*.

Putting aside some of the semantic and pragmatic intricacies of *why*-questions, we can characterize the regular *wh*-word *waarom*/*why* as a semantic operator that binds a variable ranging over reasons (see, e.g., Shlonsky & Soare 2011; Cox 2021):

(13)   What is the reason x such that ... because of x ...?

In (13), the *wh*-morpheme binds the variable x, which syntactically corresponds to the trace left by *wh*-movement. *Hoezo*, however, is a pragmatic operator that acts at the discourse level and in that sense has more in common with discourse particles and illocutionary operators. Semantically, *hoezo* does not bind a variable and syntactically it does not participate in *wh*-movement but is base-generated in its surface position (Spec-CP).

Our claim that *hoezo* is unable to create a binding configuration predicts that *hoezo* will be illicit in several types of *wh*-questions that require movement and variable-binding, in which other *wh*-words are able to appear, including *waarom*. We give a number of examples that show that this prediction is confirmed, which provides strong empirical support for our analysis.

First of all, in contrast to other *wh*-words, because *hoezo* does not undergo *wh*-movement, it always has to be interpreted locally and cannot participate in long-distance relations (unbounded dependencies). As a result, in interrogative sentences that contain an embedded clause, *hoezo* can only receive a root-clause construal,[9] in contrast to *waarom*, which can also be interpreted as having originated in the embedded clause, and may therefore result in a structural ambiguity:

(14)   a.   Waarom zei de politie dat de verdachte gearresteerd is?
            Why   said the police that the suspect   arrested   is

            Root construal: 'What is the reason that the police said the suspect was arrested?'
            Embedded construal: 'What did the police say the reason is that the suspect was arrested?'
        b.   *Hoezo* zei de politie dat de verdachte gearresteerd is?
            HOEZO said the police that the suspect   arrested   is

            Root construal: 'What is the reason that the police said the suspect was arrested?'
            * Embedded construal: 'What did the police say the reason is that the suspect was arrested?'

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[8] Collins (1991) makes the same argument for English *how come*, based on data very similar to ours for *hoezo*.
[9] The same observation was made for English *how come* by Zwicky & Zwicky (1973) and Collins (1991).

Secondly, a regular *wh*-interrogative such as *waarom* can appear *in situ* in multiple *wh*-questions and echo questions. Under common assumptions, both constructions are interpreted by means of *wh*-movement operating at the level of LF.[10] If *hoezo* is base-generated in surface position and is not a variable-binding operator, we predict that it cannot appear *in situ* in multiple *wh*-questions or echo questions, and that is exactly what we find:[11,12]

(15) a. Wie heeft waarom op de VVD gestemd?
who has why on the VVD voted
'Who voted for the VVD why?'

b. *Wie heeft *hoezo* op de VVD gestemd?
who has HOEZO on the VVD voted
Intended: 'Who voted for the VVD why?'

(16) a. Zij heeft WAAROM op de VVD gestemd?
She has why on the VVD voted?
'She voted for the VVD WHY?'

b. *Zij heeft HOEZO op de VVD gestemd?
She has HOEZO on the VVD voted?
Intended: 'She voted for the VVD WHY?'

Thirdly, since *hoezo* is a pragmatic discourse-level operator, it is only expected to appear at the root-clause level.[13] This predicts that it cannot head an embedded CP. Again, this is borne out:

(17) a. Ik vraag me af waarom het regent? b. *Ik vraag me af hoezo het regent?
I ask me of why it rains I ask me of HOEZO it rains
'I wonder why it's raining?' Intended: 'I wonder why it's raining?'

Since *hoezo* cannot head an embedded CP, it follows that sluicing with *hoezo* is also impossible.

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[10] Alternatively, in theories that assume a semantic analogue of LF movement, the interpretation of *in situ* or multiple interrogatives will result in a variable-binding configuration, which will likewise be ruled out for *hoezo*.

[11] There may be an another (or additional) reason why *hoezo* cannot appear in an echo question. Interestingly, Csipak (2023) observes that *hoezo* cannot even be used in an echo question where the *wh*-word appears in Spec-CP, as shown in (i). She relates this observation to the exceptional stress on the first morpheme of compound *wh*-words in echo questions, and the fact that, unlike all other Dutch *wh*-words, *hoezo* lacks a demonstrative counterpart.

(i) a. Speaker A:
Hotze bought a yacht because *mumble*.

b. Speaker B:
WAARom / **HOEzo* heeft Hotze een jacht gekocht?
WHY / HOEZO has Hotze a yacht bought
Intended:'Why did Hotze buy a yacht?'

[12] The VVD is a right-wing party in the Netherlands.

[13] Corver (2023) remarks that *hoezo* "typically occurs in root (i.e. non-embedded) clauses."

(18) a. Hij is boos maar ik weet niet waarom.
           he is angry but   I know not why
           'He's angry but I don't know why.'

      b. *Hij is boos maar ik weet niet *hoezo*.
            he is angry but   I know not HOEZO
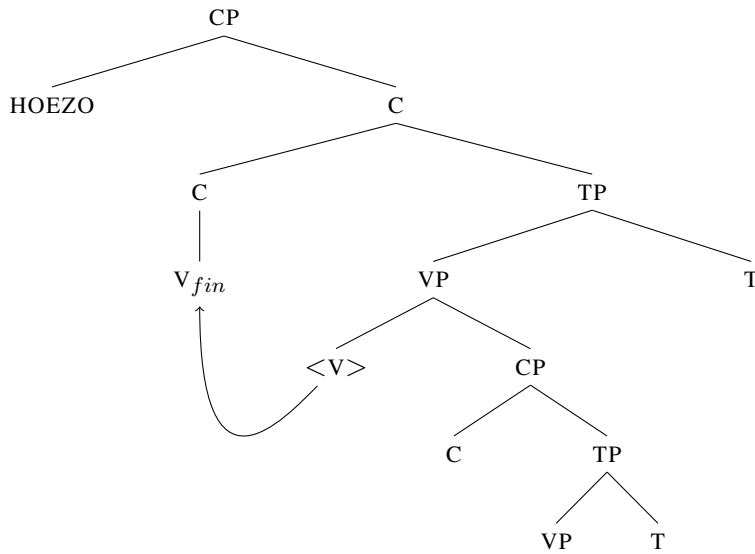   Intended: 'He's angry but I don't know why.'

To sum up, while *hoezo* acts as a (pragmatic) question word, we have seen that in its syntactic distribution and semantic interpretation, it differs markedly from regular *wh*-words such as *waarom*. Specifically, the data in this section show that *hoezo* is restricted to a position at the left edge of the root clause. Since this is the only position in which *hoezo* appears, we conclude that *hoezo* is base-generated in Spec-CP (or another projection within the left-periphery, cf. Rizzi 1997; Wiltschko 2021), which is a natural location for discourse operators. We illustrate this syntactic difference with the schematic trees in (19)-(20):[14]

(19) *Waarom*

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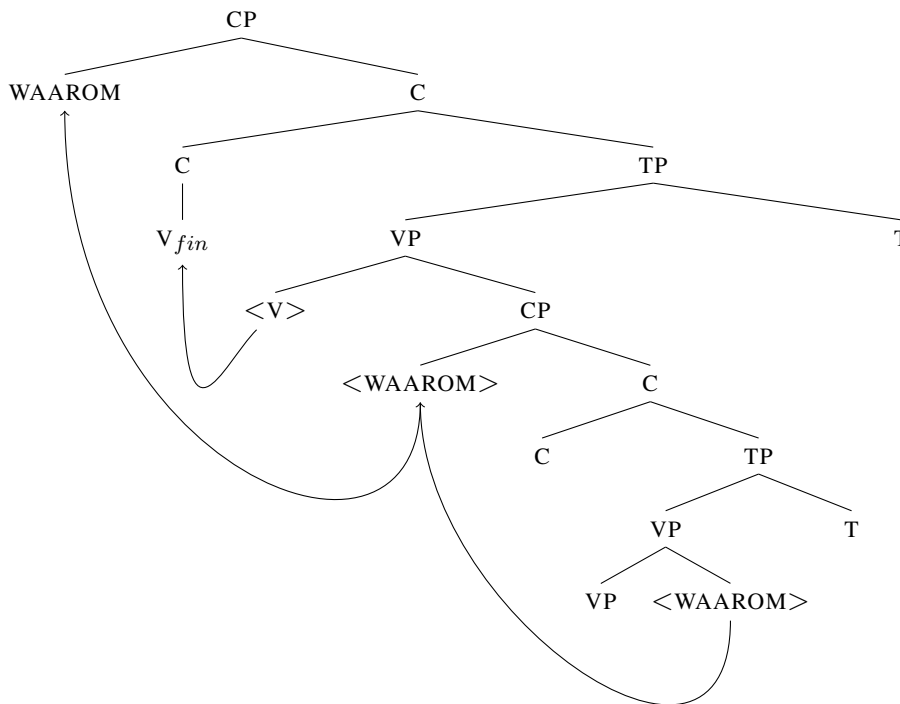
[14] While Dutch is an OV language, in which complement clauses are right-dislocated (Koster 1994; Ott & de Vries 2016), our structures show a simplified version in which the embedded clause appears as a complement to the left of the verb.

(20) *Hoezo*

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                    CP
           ┌─────────┴─────────┐
        HOEZO                   C
                        ┌───────┴───────┐
                        C               TP
                        │          ┌─────┴─────┐
                      V_fin        VP          T
                        ↑     ┌─────┴─────┐
                        └─── <V>          CP
                                      ┌────┴────┐
                                      C         TP
                                             ┌───┴───┐
                                             VP      T
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6. *Hoezo* as a discourse particle. Taking stock of the syntactic patterning and pragmatic behaviour of *hoezo*, we have seen that *hoezo* is certainly not like regular *wh*-words in Dutch. By questioning a preceding discourse move by the interlocutor, and by signalling resistance to updating the Common Ground or other components of the discourse model, *hoezo* contributes to Common Ground Management in the sense of Krifka (2008). More specifically, we argue that *hoezo* acts like a discourse particle.

There is a huge and highly diverse literature on discourse particles, and there is no consensus by any means about their definition, or about a set of empirical criteria for identifying them (Thoma 2016). There are many different subtypes of discourse particles, and there is no generally agreed-upon classification scheme. And, of course, across different languages, discourse particles do not necessarily all behave the same way. Nevertheless, there are a number of common characteristics that are shared by most, if not all, lexical items that are usually classified as discourse particles. How does *hoezo* compare to standard discourse particles on such diagnostics?

On the one hand, several typical characteristics of regular (non-*wh*) discourse particles that are also shared by *hoezo* are listed in Table 1. These include the property of both *hoezo* and non-*wh* discourse particles that they do not contribute to truth conditions and do not express at-issue content (Kratzer 1999; Gutzmann 2015). They also situate a proposition p in the CG (Grosz 2020: see ex. (17)) and dispute the CG content, marking p as controversial/contradictory (Grosz 2010).

On the other hand, Table 2 outlines a few common characteristics of (non-wh) discourse particles for which it is more questionable whether they also apply to *hoezo*. Perhaps most striking is the fact that non-*wh* discourse particles cannot be used independently – i.e., they must be positioned within a clause or phrase (Grosz 2020). However, *hoezo* can obviously be free-standing, since it often occurs in isolation, as we saw in (3a). While this is the case, it should also be mentioned that some *bona fide* discourse particles have homophones (modulo stress) that can be used as free-standing utterances, such as German *ja* and *doch*. These are often treated as belonging to a different category than that of discourse particles (for instance, response particles), but this raises the question of whether this homophony is indeed completely accidental and a whether a

more unified analysis might be possible. In any case, not allowing a free-standing use may not be such a clear cut criterion as is sometimes thought.

Secondly, discourse particles are often observed to be sensitive to the sentence type they occur in (e.g., declarative vs. interrogative), yet they themselves are unable to introduce a question. (Zimmermann 2004). When *hoezo* occurs in a clause (in Spec-CP) that clause of course has to be an interrogative and cannot be declarative or imperative. Whether this should be described as sensitivity to sentence type is debatable, since it may be better to say that the presence of *hoezo* is what *makes* the sentence an interrogative. But this is a rather fine distinction to make. At the very least, the presence of *hoezo* is tightly connected to the interrogative sentence type.

Thirdly, it has been argued that while discourse particles can mark a proposition *p* as controversial or uncontroversial, they do not *directly* challenge *p* (Grosz 2020). But although *hoezo* may be said to challenge *p*, arguably this challenge is only an indirect one. What *hoezo* does is to challenge the *interlocutor* to provide a reason for why they asserted (or presupposed or implicated) *p*.

Finally, discourse particles have been characterized as *deficient adverbs*, i.e., as weak or clitic-like sentence adverbs (Grosz 2020). *Hoezo* does not seem to fall in such a category, given its independent use that was discussed above and is illustrated in (3a). However, as we just noted, several common discourse particles have homophonous, but stressed, counterparts, and it's not clear where to draw the line, or whether this should be regarded as a definitional property of all discourse particles.

Non-*wh* discourse particle	*Hoezo*
No truth-conditional contribution	✓
Not at-issue	✓
Situates *p* in the Common Ground	✓
Manages CG-content dispute	✓
Marks *p* as controversial	✓
Does not bind a variable	✓

Table 1: Some similarities between *hoezo* and discourse particles

Non-*wh* discourse particle	*Hoezo*
Cannot be independent	*?*
Cannot introduce a question	*?*
Cannot directly challenge *p*	*?*
Deficient adverb	*?*

Table 2: Some differences between *hoezo* and discourse particles

Note that the criteria listed in Table 1 center on *hoezo*'s pragmatic function, which we take to be at the heart of what makes something a discourse particle, whereas the criteria in Table 2, for which the evidence is more equivocal, mainly involve distribution and form. Given that several core pragmatic and semantic characteristics of (non-*wh*) discourse particles are shared by *hoezo*, we think that it is entirely plausible to categorize *hoezo* as a (*wh*) discourse particle, especially given the large variety among the recognized discourse particles in different languages and the lack of consensus in the literature about definitions. But clearly this is an issue that merits further investigation and debate. Our analysis of *hoezo* extends the typology of discourse particles with a new subcategory, that of *wh* discourse particles. In the final section of the paper we give some suggestions for other lexical items that are potential members of this new subcategory. We hope that our proposal to will contribute to the wider debate about the definition and empirical diagnostics for discourse particles.

7. Conclusion and outlook. The main points of our analysis of *hoezo* are summarized in (21):

(21) a. *Hoezo* signals resistance on the part of the speaker to updating the discourse model (including the CG, the QUD Stack, and the To-Do List).

    b. It does so by asking the interlocutor to provide a reason for their earlier discourse move; in that sense, *hoezo* is a (pragmatic) question word.

    c. *Hoezo* functions as a discourse particle, because as (part of) its not-at-issue meaning it expresses the speaker's attitude towards the current state of the discourse model and whether and how it should be updated.

    d. Unlike canonical *wh*-words such as *waarom/why*, *hoezo* is not a variable-binding operator.

    e. Syntactically, *hoezo* is base-generated in Spec-CP, and does not undergo *wh*-movement.

There are several issues that would be worth exploring in future research. The first is identifying other members of the class of *wh* discourse particles, and comparing them to *hoezo*. Some plausible candidates include English *so what* and its Dutch equivalent *wat dan nog*. In contrast to *hoezo*, these seem to be asking not for a reason, but rather for the implications or consequences of the interlocutor's discourse move. In a very interesting recent paper, Wiltschko (2023) points out a certain use of plain English *what* (which is shared by Dutch *what*), in response to what she calls a "summons", in a way that seems very similar in spirit to our analysis of *hoezo* in this paper. Another interesting case study might be that of the English expression *what of it*. And what about *how so*, the literal translation of *hoezo*?

A second promising area for further research is the implications of our analysis for the typology of *why*-questions. We already mentioned that *waarom* and *why* may have pragmatic uses similar to *hoezo* (cf. Ginzburg 2012). The differences between *why* and *how come* could be explored further as well (cf. Zwicky & Zwicky 1973 and Collins 1991). Important questions could also be asked (and have been) about parallels between *why*-questions and *how*-questions (cf. Schwarz & Simonenko 2018 and Sandoval & Morzycki 2023). Can it be a coincidence that *hoezo* contains the morpheme *hoe* ('how')? (cf. Corver 2023).

A third issue for further research is the connection between *why* and the connective *because*. As is well-known, a *because*-clauses can be used pragmatically to express the reason why the speaker is making the discourse move that they do, as in (22):[15]

(22) When's dinner, because I'm starving.

Interestingly, Dutch has a special connective for this discourse-oriented function of *because*, namely *want* ('for, since'). *Want* contrasts with the usual Dutch counterpart of *because*, *omdat*, not only in that the latter lacks the pragmatic use illustrated in (22), but also syntactically: whereas *omdat* is a subordinating connnective, with the verb in clause-final position, *want* is coordinating, with V2 word order (*ANS* 2021):

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[15] This example is due to Jessica Rett, who used it in a recent presentation at UBC (March 2024).

(23)   a.   Hoe laat gaan we eten, want ik heb   honger.
            How late go   we eat, since I   have hunger.

            'At what time are we going to eat, because I'm hungry.'

       b. #Hoe laat gaan we eten, omdat   ik honger heb.
            How late go   we eat, because I   have   hunger

            Intended: 'At what time are we going to eat, because I'm hungry.'

We conjecture that *want* corresponds to *hoezo*, and *omdat* to *waarom*, in that the former two are both discourse-oriented, whereas the latter two operate at the level of the truth-conditional sentence semantics. This could potentially account for their syntactic properties as well, since *hoezo* and *want* both appear to be located high up in the syntactic spine, at or above the CP layer. But of course the details remain to be worked out.

To end this paper, we want to point out a final, intriguing fact about *hoezo*. It's possible to use *hoezo* in response, not to a discourse move, but to a surprising (and unpleasant) non-linguistic event, typically with an undertone of anger or frustration:

(24)   Context: Speaker opens the blinds and looks out the window.
       Hoezo regent het nu   alweer?
       HOEZO rains   it   now again

       'Why the heck is it raining again?'; 'I can't believe its raining again!'

(25)   *Hoezo* heb je   mijn postzegelverzameling weggegooid?
       HOEZO have you my   stamp-collection   away-thrown

       'Why did you throw out my stamp collection?'; 'I can't believe you threw out my stamp collection!'

It may be possible to extend our analysis to account for such cases, if we think of them as resistance on the part of the speaker to updating the CG not with a proposition that was linguistically expressed by an interlocutor, but with a new fact that the speaker just discovered or noticed. This resistance to updating the CG could account for the sense of incredulity associated with such examples. But we will leave it to a future occasion to try and work out that idea.

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