

## Marking Mirativity in Syntax: Minimalist Mechanisms

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### ABSTRACT

This paper offers a generative minimalist investigation to the derivation and interpretation of mirativity information in Central Najdi Arabic (CNA), arguing that grammar of CNA morphologically marks mirativity in syntax by means of the discourse particle *wara*. Implementing minimalist mechanisms (Chomsky 2001), it is shown that *wara* instantiates a functional, discursal projection *MrvP* in the left periphery of the sentence, articulating the feature [*Mrv*] at the PF-interface. LF-interface analyses demonstrate that [*Mrv*] on *wara* is interpretable/valued, while the counterpart on the subject DP that *wara* marks is uninterpretable/unvalued. Agree between *wara* and the subject DP creates a PF-chain *wara*>SubjectClitic>SubjectDP that results in the subject DP being marked with and interpreted mirativity at LF-interface. Further explorations show that movement of the subject DP across *wara* is only legitimised if the subject DP has a discourse, information structural feature beyond [*Mrv*]. Evidence for this claim comes from the fact that when *wara* marks the subject DP with mirativity, the subject DP remains in situ. Thus, on minimalist empirical groundings, movement is argued to be motivated by interpretive reasons beyond mirativity. Further analyses show that Agree between *wara* and subject is of mutual manner; *wara* u-[ $\phi$ ]-probes the subject goal, while the goal seeks valuation of u-[*Mrv*] on it (Alshamari 2017).

### INTRODUCTION

#### Cross-linguistic, Minimalist Background on Discourse Particles

Characteristics of the pragmatic distribution and the semantic scope of discourse particles have motivated significant minimalist research with respect to their syntactic position (Zimmermann 2011; Biberauer et al. 2014; Bayer & Trotzke 2015; Bayer 1996; Bayer & Struckmeier 2017). This line of research has since focused on the interaction of discourse particles with the clause internal syntactic items, giving rise to the widely held assumption that discourse particles carry information structural values that affect the interpretation of the sentence as well as its internal constituents. This can be wide scope, in which case a particle scopes over the whole proposition expressed by the clause, or narrow scope, in which case a particle scopes over certain parts of the proposition expressed by the clause. Hence, discourse particles contribute to the interpretation of the propositional content of the utterance (Biberauer & Sheehan 2011; Biberauer et al. 2014; Bayer & Struckmeier 2017).

Within minimalist practice, this view has given insights to mapping syntax to semantic/pragmatic interface system,

initiating a new view on the nature of discourse particles. Discourse particles start life in the CP domain, the locus of discourse information. They are articulated in the spine of CP domain, scoping and carrying discourse values which trigger syntactic operations like agreement and movement that affect, for instance, word order (Cruschina 2009; Miyagawa 2010; Alshamari 2017a,b; Alshamari & Holmberg 2019a,b; Jarrah 2017, 2019).

Having recently been developed within the minimalist practice, research adopting cartographic approach (Rizzi 1997) has been fruitful in detecting the position of discourse particles and mapping the left periphery of a huge range of language cross linguistically, investigating information structural values like topic, focus, modality which are encoded in syntax as overt functional heads in the C domain (Thumair 1989; Haegeman 1993 1994; Ouhalla 1997; Aikhenvald 2004; Zimmermann 2009; Paul 2009; Cruschina 2009; Coniglio & Zegrean 2010; Bayer & Obenauer 2011; Zimmermann 2011; Biberauer & Sheehan 2011; Biberauer et al. 2014; Struckmeier 2014; Hack 2014; Bayer & Trotzke 2015; Bayer & Struckmeier 2017; Alshamari 2017; Jarrah & Alshamari 2017; Alshamari 2021).

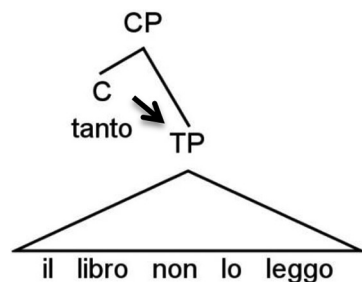
Research in minimalist practice has abstracted away from descriptive, semantic-pragmatic accounts to explaining the syntax of discourse particles. Hence, a discourse particle instantiates a syntactic category on its own spelling out a discourse feature of a certain discourse value it carries at the interface system (Bayer & Trotzke 2015) and heading a functional, discursial projection of various articulated types of C-features that express information structural values like Focus and Topic (Thumair 1989; Ouhalla 1992, 1994, 1997, 1999; Bayer 1996; Miyagawa 2010; Zimmermann 2009; Paul 2009; Coniglio & Zegrean 2010; Bayer & Obenauer 2011; Zimmermann 2011; Biberauer & Sheehan 2011; Biberauer et al. 2014; Bayer & Struckmeier 2017).<sup>1</sup>

Having provided fairly reasonable minimalist-based background on discourse particles in a cross-linguistic view, let us move to some theoretical assumptions and practice on the syntax of discourse particles in recent minimalist studies. Consider the following Italian clause containing a discourse particle, from (Coniglio & Zegrean 2010: 15)<sup>2,3</sup>:

- (1) **Tanto** il libro non lo leggo  
 PRT the book Neg it I.read  
 ‘I won’t read the book in any case.’

In (1), the discourse particle *tanto* takes wide scope over the whole clause expressing the proposition, coloring the clause with a value of structural information- expressing the speaker’s attitude towards the content of the proposition with kind of *confirmation*. This can be represented in (2) below (the notational arrow indicates wide semantic scope of *tanto*):

(2)



The discourse particle *tanto* is argued to be merged in the C head of CP, which in (2) is the syntactic position that hosts (encodes/expresses) extra-sentential information value and discourse packaging *confirmation* (Biberauer et al. 2014).

With the background alluded to above, in the next sub-section, we highlight some key facts about the discourse particle *wara* and show, while discussing the relevant data on descriptive basis, how *wara* interacts with the associate clause and the clause internal syntactic item, the subject DP.<sup>4</sup>

### Descriptive Facts about the Discourse Particle *Wara*: Pragmatic Distribution and Syntactic and Morphosyntactic Properties

Consider the sentences in (3).<sup>5</sup>

- (3) a. **wara** ?al-katib j-anfir qis<sup>u</sup>s<sup>u</sup>  
 PRT DEF-writer.M 3SG.M-publish.PRS story.PL  
 ‘The writer publishes stories (I’m wondering why!).’

b. **wara-h** ?al-katib j-anfir qis<sup>u</sup>s<sup>u</sup>  
 PRT-3SG.M DEF-writer.M 3SG.M-publish.PRS  
 story.PL

‘The writer, he publishes stories (I’m wondering why he does so!).’

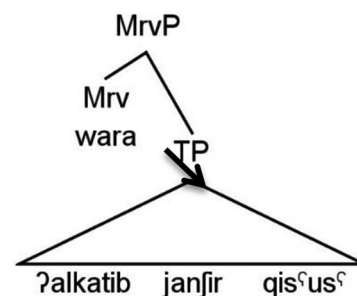
c. ?al-katib **wara-h** j-anfir qis<sup>u</sup>s<sup>u</sup>  
 DEF-writer.M PRT-3SG.M 3SG.M-publish.PRS  
 story.PL

‘The writer, it is him who publishes stories (I’m wondering why he does so!).’

In (3a), *wara* surfaces clause-initially, scoping over the clause and functioning as a syntactic-pragmatic device expressing speaker’s *mirativity*, following Aikenvald (2004), expressing the state of affairs that the speaker is surprised by the proposition that ‘the writer be expected to publish some other sort of work, possibly, novels or books, but not stories’. In (3b), *wara* also surfaces clause-initially but displays some morphosyntactic properties; *wara* is suffixed with a clitic agreeing in  $\phi$ -features with the subject DP that appears to the right of *wara*. In (3c), *wara* maintains this morphosyntactic behavior but is preceded by the subject DP. The cases in (3b,c) involve what seems to be  $\phi$ -agreement (Alshamari 2017) with different positions of the subject DP that *wara* seems to in an agreement relation with.

We follow the consensus that discourse particles are first merged in CP domain, the topmost syntactic position projected when discourse is activated in the course of the derivation of the relevant sentence. we will therefore obey the assumption that *wara* is merged at C, hosts the *mirativity* information and is spelled out as *wara* at PF interface while at LF interface it signals the presence of a constituent with *mirativity* value. Following this line of logic, given (3a), we propose that *wara* is first merged in C and takes wide scope over the clause, marking the whole proposition expressed by the clause with *mirativity* (we assume that the lexical verb incorporates in T due to the fact that Arabic maintains rich morphology (Ouhalla, 1988, 1994, 1997)).<sup>6</sup> The structure in (3a) can be schematized in (4). We propose that the functional, discursial projection that *wara* heads is MrvP.<sup>7,8</sup>

(4)



Information of *mirativity* is expressed on the whole clause due to a feature on *wara* we term [Mrv], being involved in numeration and processed in the computation of the sentence. This feature is spelled out at the PF-interface as *wara* while at the LF-interface it conveys the speaker’s being mirative towards the proposition (we will turn to the characteristics of

the [Mrv] feature and the feature valuation when discussion reaches data involving more articulated structure).

The scenario, though, becomes more challenging when observing that *wara* has an expressive property associated to it; *wara* seems to interact with clause internal syntactic items that have nominal categorical nature, rather than propositional, sentential nature, as in (3b), in which *wara* is attached with an agreement marker *h* agreeing in  $\phi$ -features with the subject DP, in what seems to be  $\phi$ -content spell out operation (Alshamari 2017). Furthermore, we observe that *wara*, while still hosting the subject-agreeing clitic, is preceded by the subject DP, as in (3c), in which the subject DP appears to the left of *wara*, indicating that it does not show up in Spec TP since it c-commands *wara*, which in syntax is explained by means of movement of the subject DP across *wara*, to the Spec position of a functional, discursal projection.

As we have seen in (3b), the subject is marked by *wara* without undergoing any movement. Given this logic, at the interface system, in theory, there is no reason to license movement of the subject DP in (3c), unless there is motivation associated to the discourse interpretive properties of the subject DP itself (Ouhalla 1997; Chomsky 1995, 2001; Boskovic 2007; Holmberg et al. 2017). Within minimalist considerations, agreement is a strategy that normally overtly exists. In the spine of minimalism, movement is treated as an operation that occurs in syntax for reasons related to expressiveness of language, too, like agreement.<sup>9</sup> However, movement is activated in case overt agreement is not available (Alshamari 2017). That is, movement is a last resort strategy used to satisfy an interface requirement in case no overt agreement is possible (Chomsky 1995, 2001). Using the logic of Miyagawa (2010), movement is activated in syntax in order to leave a record for the LF-interface system that there has been an agreement relation in the derivation of the sentence that could not be overt. With this background, this research will tackle the inquiry stated in the next sub-section.

### Research Inquiry

Within formal minimalist assumptions, including economy conditions and interface requirements (Chomsky 1995, 2001; Ouhalla 1997; Rizzi 1997; Bošković 2007; Holmberg et al. 2017) and given the syntactic and morphosyntactic facts that *wara* displays, the emerging inquiry is: (i) what is the LF-interface account for the spell out of the clitic on *wara* in (3b) and (3c) and, (ii) what motivates and authorizes movement of the subject DP across *wara* in (3c), given that *wara* marks the subject DP while in situ in (3b), where no movement takes place?

The rest of the paper will be structured as follows. Section 2 touches on the logic of determining the featural grid of *wara*, providing evidence from syntax and interface requirements that [Mrv] on *wara* is valued. Additionally, it highlights on basic principles of the minimalist approach, including mechanisms of Agree and Move (Chomsky 1995, 2001). Section 3 provides a minimalist investigation to the syntax and morphosyntax of *wara*, reflecting on its interpretive properties as mirativity marker with respect to the clause internal syntactic items marked as mirative. Section 4 shows some key impli-

cations the findings of the analyses impose to the minimalist approach, including the assumption that *wara* marks the subject DP with mirativity while the subject is in situ, while movement of the subject DP is only triggered by the existence of other discourse features, including [CF], [A-Top] and [S-Top] on the subject DP. Section 5 concludes the paper.

### VALUE OF [Mrv] ON WARA AND ITS INTERFACE LEGITIMACY

Features play a crucial role in standard minimalist assumptions. A feature is the information carried by a syntactic item, be it lexical, functional or discursal. Interpretive properties of syntactic items, lexical or functional, overt or null, are characterized by features, like functional, expressiveness or discourse, information structural nature, for instance. Within the computational system and interface system, features such as Case-feature, Q-feature, Wh-feature and  $\phi$ -features or  $\delta$ -feature drive syntactic operations, including agreement and movement, which are motivated for interpretive reasons. We dedicate the following subsection to elaborating on features as a central notion in the minimalist practice.

#### Feature Distinction: Interpretability and Uninterpretability

Features in the minimalist theory come into types: interpretable and uninterpretable.

An interpretable feature enters the derivation with a specified, interface-interpreted value that is determined in Lexicon and whose value contributes to the interpretation of the expression with which it is associated. Thus, if a feature *F* is interpretable/valued, it is valued in lexicon and enters the derivation with a determined value. An example can be tense feature [T] on  $T^\circ$ . This means that the feature [T] is on the right syntactic position where it is fully interpreted and licensed at the interface system (Chomsky 1995, 2001). Another instance of interpretable/valued feature is the occurrence of  $\phi$ -features on a DP argument, where this is interpreted as the agreement relation *third singular person*. On the other hand, an uninterpretable/unvalued feature *F* doesn't have a value set in Lexicon. It doesn't contribute to the interpretation of the expression it is associated with and enters the derivation unvalued. This can be the instance of  $\phi$ -feature on  $T^\circ$ , where it is not interpreted at the interface system. Put differently, the interface system doesn't read uninterpretable/unvalued features.

Interpretability/uninterpretability distinction is motivated by requirements of the interface system, PF and LF, imposed on the computational system, syntax. If a feature *F* is interpretable at a given interface, it contains content that this interface can interpret. Thus, LF-interface interprets features that have semantic import like  $\phi$ -features and  $\delta$ -features like Focus. The PF-interface, on the other hand, interprets articulatory related features like stress and contour.<sup>10</sup> We will follow the convention used in Chomsky (2001) that interpretable feature is lexically valued while uninterpretable is lexically unvalued and that valued feature is notated  $v$ -[*F*] while unvalued feature is notated  $u$ -[*F*] throughout the paper.<sup>11</sup>

Let us now see how this can explain the nature of the featural grid of *wara* and their legitimacy at the interfaces.<sup>12</sup>

### Make up of [Mrv] on Wara

Let us assume that *wara* has a  $v$ -[Mrv] feature, which suffices to license *wara* at the LF interface as mirativity marker. On the grounds that *wara* hosts a clitic whose grammatical information expresses  $\phi$ -content of the subject DP, it is not a huge leap to assume that *wara* has a set of  $\phi$ -features, which we maintain are unvalued. On the other hand, the subject DP *ʔalkati*, by theory, has a set of  $v$ -[ $\phi$ ] features and an occurrence of  $u$ -[Mrv] feature. This can be summarized in the table below:

This account of the characterization of the features on *wara* and the subject DP is based on conceptual and empirical reasoning. It is held in the cartographic approach (Rizzi 1997, 2006) that an occurrence of a  $\delta$ -feature like [Foc] on a C-head is a discourse criterion, which triggers movement of a constituent that re-merges at the Spec position of the discourse criterial phrase, like  $Foc^{\circ}$ . This is taken in the minimalist approach to be an instance of unvalued feature, a property which motivates probing and, sometimes movement (Chomsky 2001). We though abstract away from this assumption and argue that [Mrv] on *wara* is an occurrence of a valued feature, basing our assumption on conceptual (semantic) and empirical (syntactic) evidence as follows. Firstly, *wara* is merged on  $C^{\circ}$ , which has discursal properties and is the habitat of  $\delta$ -feature, which directly suggests that [Mrv] on *wara* is valued. Secondly, this is directly captured and supported by the nature of [ $\phi$ ] on *wara*, being assumed unvalued because [ $\phi$ ] are not interpretable on functional, discursal heads (in analogy with the standard assumption that [ $\phi$ ] are unvalued on  $T^{\circ}$  (Chomsky 1995).

Further support of this contention comes from theoretical consequences. That is, if we obey the assumption that [Mrv] on *wara* is otherwise unvalued, we are at a risk of violating a crucial condition in the minimalist theory. That is, *wara* would end up with only intrinsically uninterpretable, unvalued features, hence,  $C^{\circ}$  which has *wara* on it, has no instance of interpretable valued feature, a situation that Chomsky (1995: 349-355), discussing Agr, concluded was unwanted, for theoretical and empirical reasons. In this respect, he argues that a head with only uninterpretable, unvalued features would crash at the interface system. Thus, the epiphenomenal generalization the theory provides now us with is that [Mrv] on *wara* is valued (we will thus see that *wara* probes, in the sense of Chomsky (2001), by virtue of the  $u$ -[ $\phi$ ] features it has).

Having formalized a reasonable generalization about the features on *wara*, and the associate arguments, it is now relevant to highlight on the minimalist mechanisms and strategies used in the investigation of the data at hand. This is discussed in the next sub-section.

### Theoretical, minimalist mechanisms and strategies

Current standard version of minimalism takes the syntactic operations Agree (agreement) and Move (movement), to be

triggered by features (Chomsky 2001). In the computational system, i.e. syntax, syntactic items enter the derivation of a linguistic object (phrase, clause or a sentence) with features associated to them for expressiveness properties, being lexical, functional or discursal which are, in a formal way, bundles of values to be interpreted at the LF-interface system. As discussed in sub-suction 2.1, there are two types of features, and it is the  $u$ -feature that triggers Agree and Move. In the derivation of a sentence, a  $u$ -feature needs to delete before the Transfer point of the derivation. To accomplish this, interface system imposes the condition that the  $u$ -feature receive a value during the derivation. Consequently, the  $u$ -feature becomes an active probe, which searches in the c-command domain for a syntactic item that has a matching but valued instance of the same feature. We list in (5) the conditions regulating Agree Operation, as developed in Chomsky (2001: 122).

- (5)
- A probe  $\alpha$  agrees with a goal  $\beta$  provided that:
    - a.  $\alpha$  has an unvalued feature.
    - b.  $\beta$  has a matching valued feature.
    - c.  $\beta$  is active by virtue of having an unvalued feature.
    - d.  $\alpha$  c-commands  $\beta$ .
    - e. There is no potential goal  $\gamma$  intervening between  $\alpha$  and  $\beta$ .
    - f. There is no phase-boundary between  $\alpha$  and  $\beta$ .

In case the matching goal is not visible, meaning that it is in a lower distant phase with respect to the probe, as (f) claims, or there is an intervening syntactic item that can serve as a potential goal, as (e) claims, the goal moves up in structure high enough to become visible.<sup>13</sup> The goal also moves when it has an occurrence of  $u$ -feature on it. It moves to escape its phase transfer and to find a potential probe to value its  $u$ -feature.

Having characterized an account of the featural grid on *wara* and highlighted the minimalist techniques activated in computation, let us now examine the derivation of the clauses involving *wara*, including Agree and Move operations held therein.

### ANALYSING WARA: MINIMALIST THEORY OF AGREEMENT

We arrive at this point of the argument to the inquiry as to how to legitimize the sentences in (3) above.

### Wara and the Clitic

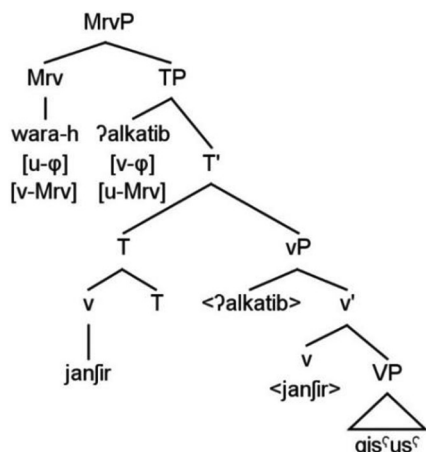
With the grip on the theoretical assumptions at hand, let us start with (3b), repeated below as (6), where *wara* surfaces clause-initially and is suffixed with a clitic agreeing in  $\phi$ -features with the right-adjacent subject DP.

- (6) **wara-h** ʔal-katib j-anʔir qis<sup>s</sup>us<sup>s</sup>  
 PRT-3SG.M DEF-writer.M 3SG.M-publish.PRS  
 story.PL  
 ‘The writer, he publishes stories (I’m wondering why he does so!).’

Activating Agree in (5), (6) shows the point of the derivation at which *wara*, having a set of  $u$ -[ $\phi$ ] features, oper-

ates as a probe and searches in its c-command domain for a syntactic item that has matching instance of  $v$ -[ $\phi$ ] features to agree with. The subject DP in this case operates as a goal that, additionally, seeks valuation for its  $u$ -[Mrv]. This is schematized in (7):

(7)



In standard formalisation of Agree (Chomsky 2001), *wara*  $u$ -[ $\phi$ ]-probes the subject DP.  $v$ -[ $\phi$ ] on the subject DP values the  $u$ -[ $\phi$ ] on *wara* and, simultaneously,  $v$ -[Mrv] on *wara* values  $u$ -[Mrv] on the subject DP. As a consequence of this Agree, a PF-chain is created, composed of *wara* cliticised by the  $\phi$ -content of the subject DP and c-commanding it and the subject DP. This PF-chain then functions as a detecting device to determine that *mirativity* is marked on the subject DP, by the use of the clitic. This conclusion suggests that the clitic is a PF-product derived in computation and PF-interface to allow LF-interface to read what *wara* has marked in computation as *mirative*.

At the end of the derivation, all the instances of  $u$ -features ( $u$ -[Mrv] on the subject DP and  $u$ -[ $\phi$ ] on *wara*) have now been valued and deleted at the Transfer point of the derivation and only the instances of  $v$ -features ( $v$ -[Mrv] on *wara* and  $v$ -[ $\phi$ ] on the subject DP) survive and are read, interpreted and legitimised at the interface system. It follows from this that deleting  $u$ -[Mrv] on the subject DP doesn't mean the subject DP is not involved in the interpretation of mirativity. Rather, mirativity interpretation is delivered by the chain which accommodates all the instances of features. We elaborate on this logic in the next sub-sub-section.

**u-Feature-cooperation: Expressiveness Characteristic of Wara**

The process we introduce as  $u$ -feature-maintenance revolves around the assumption that an instance of  $u$ -feature on a syntactic item, which gets deleted in syntax, is maintained at the LF-interface system by means of a PF-interface system operation. Witness the schemata in (8) below.

(8) [**wara**  $v$ -[Mrv]  $u$ -[ $\phi$ ] [Subject DP  $u$ -[Mrv]  $v$ -[ $\phi$ ]].

We see in (8) that the remaining, surviving features are those with valued nature-  $v$ -[Mrv] on *wara* and  $v$ -[ $\phi$ ] on the subject DP. What we are concerned with here is  $u$ -[Mrv] on the subject DP, which is deleted while the subject DP needs to

link up with an instance of a syntactic item carrying *mirativity* interpretation. What we propose takes place within the strategy of  $u$ -feature-cooperation is that a deleted feature can be maintained for interpretive, expressiveness purposes needed at the LF-interface system. This can be done by activating PF operations, creating PF-items like clitics or stress, for instance. In our case, the scenario is as follows.  $v$ -[Mrv] on *wara* values  $u$ -[Mrv] on the subject DP and the latter deletes, but identity of the subject DP as *mirative* at the LF-interface system is maintained. This occurs because, in turn,  $v$ -[ $\phi$ ] on the subject DP values  $u$ -[ $\phi$ ] on *wara*. This, in particular, makes a desired consequence. As we have seen, though  $u$ -[ $\phi$ ] on *wara* is deleted, it has PF content, the clitic. This clitic serves as a means of cooperation between *wara* and the subject DP, or, put differently, between the features on them. This clitic, being a by-product of a  $u$ -future on *wara*, turns the subject DP detected and recorded as *mirative* at LF-interface system. In other words, the instances of  $u$ -features,  $u$ -[Mrv] on the subject DP and  $u$ -[ $\phi$ ] on *wara*, cooperate at the LF-interface and maintain mirativity interpretation on the subject DP.

We now move to the last issue this paper tackles, movement of the subject DP across *wara*. But before we do, let us elaborate more on the logic of marking the subject DP in situ. In this regard, witness what happens when the subject DP marked as *mirative* expresses third plural feminine, as in (9).

(9) **wara-hin** ?al-katib-at j-anfir-i qis'us'  
**PRT-3PL.F** DEF-writer-3PL.F 3PL.F-publish.  
 PRS-3P.F story.PL  
 'The writers, they publish stories (I'm wondering why they do so!).'

Recapitulating the argument in section 2, LF-interface doesn't read  $\phi$ -content on a functional head, since it makes no sense, following Miyagawa (2010). The sentence in (9) shows that the PF operation of spelling out of the value of  $\phi$ -content of a DP on a functional head, like *wara*, depends on the value of the content of [ $\phi$ ] of the syntactic item *wara* marks. The consequence is that the relevant syntactic item is read in situ but need not move to hold a Spec Head configuration to agreement with *wara* but rather is marked in situ and is identified on *wara* by the clitic. This assures that linguistic operations in the derivation are subject to economy conditions (Chomsky 2001, 2008, 2013), involving a minimal number of syntactic operations (Collins 2001). Under this view, the PF-interface interprets (spells out) this  $\phi$ -content (the clitic) as a record for LF-interface to read the subject DP as the *mirativity* without activating movement, which is only motivated for additional interpretive reasons, as will be investigated and discussed in the following sub-section.

**Movement of the Subject DP Across Wara to the Left Periphery**

Consider (3c) above, repeated below as (10):

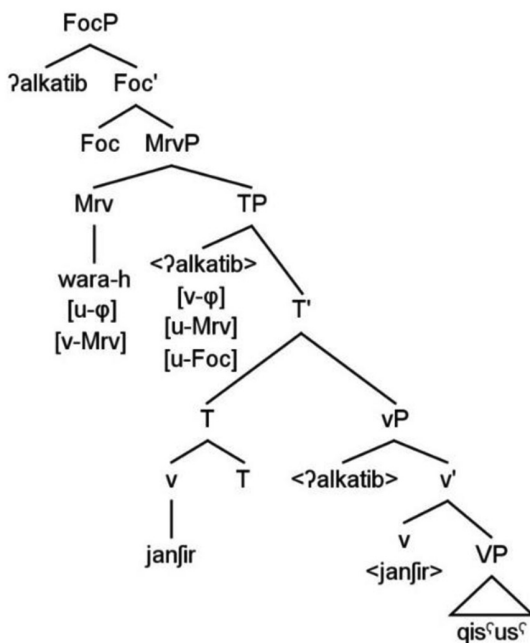
(10) ?al-katib **wara-h** j-anfir qis'us'  
 DEF-writer.M **PRT-3SG.M** 3SG.M-publish.PRS  
 story.PL  
 'The writer, it is him who publishes stories (I'm wondering why he does so!).'

Recall that we follow the theory that in Arabic the lexical verb re-merged at T° (Ouhalla 1988, 2014, 1997). Holding that *wara* is located to the left of the subject DP in (3a) and (3b), it follows that the subject DP moves as high as Spec TP but never to the left periphery across *wara*. In the spirit of the minimalist practice, movement is triggered by discourse interpretive reasons (Chomsky 2001). This makes the scenario in (10) quite challenging because it involves apparent movement of the subject DP, which needs a good theory to explain, since the subject DP doesn't need to move there given that CAN grammar allows marking the subject DP by *wara* while it is in situ.

Having concluded that the subject DP is marked with *mirativity* without movement across *wara* to Spec MrvP, we expect that movement of the subject in (10) is not triggered by mirativity interpretation. We therefore follow the logic of Miyagawa (2010) who argues that movement is conceptually conceived of as a functional relation established between two syntactic items in the structure. For Miyagawa (2010), in absence of overt agreement movement (i.e. Spec-Head relation of agreement) is required by the computational system to be held in syntax as a record for the interfaces (for semantic and information-structure interpretation) that there has been a functional relation taking place in computation.

Following this line of logic, in (10), and all the cases at hand in fact, the subject was merged at Spec TP, whence it values *u*-[φ] on *wara*, in case *wara* *u*-[φ] the subject DP. The subject DP is then expected to have moved further because it has a *u*-feature on it. We therefore propose that the subject DP has a focus feature [Foc], interpreting the subject DP as an entity expressing new, non-presupposed information in the sense of Holmberg & Nikanne (2002). This [Foc] on the subject DP is the power that triggers movement of the subject DP and this movement is to Spec FocP in the left periphery of the clause, motivated because the head Foc° of FocP is null at the PF-interface, in the manner of Ouhalla (1997). We represent this in (11) below.<sup>14</sup>

(11)

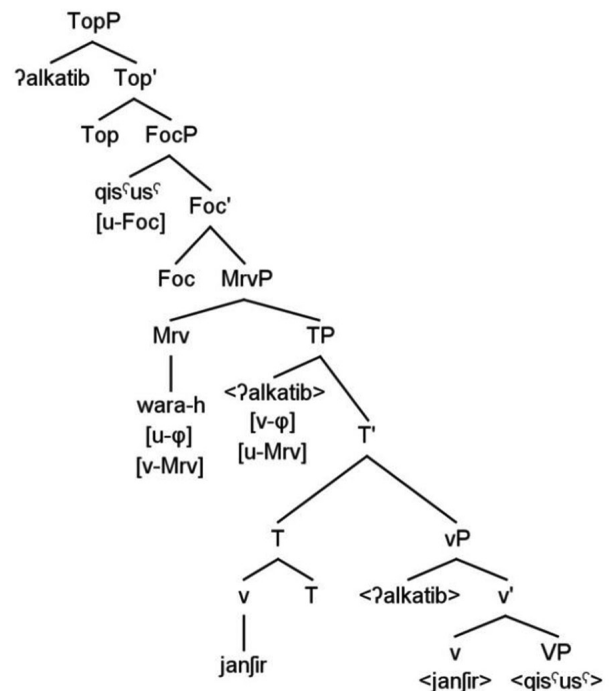


Consider now (12) below, which has more moved structure.

- (12) ?al-*katib*    *qis'us'*    **wara-h**    *janfir*  
 DEF-writer.M story.PL PRT-3SG.M 3SG.M-pub-  
 lish.PRS  
 'The writer, it is stories that he publishes (I'm wondering why he does so!).'

Notice that the object DP *qis'us'* intervenes between the subject DP and the cliticised *wara*. Merger of the object DP *qis'us'*, which functions as focus here, provides syntactic empirical evidence that the subject DP is distant from *wara*, at which it functions as a topic in the sense of Reinhart (1981), hence, the conclusion that the subject DP is not re-merged at the Spec MrvP but further above in the structure at the Spec of TopP. On derivational groundings, again, the syntax of (12) evidences the fact that the subject DP has already entered Agree with *wara* at an earlier step of the derivation, as (13) illustrates.

(13)



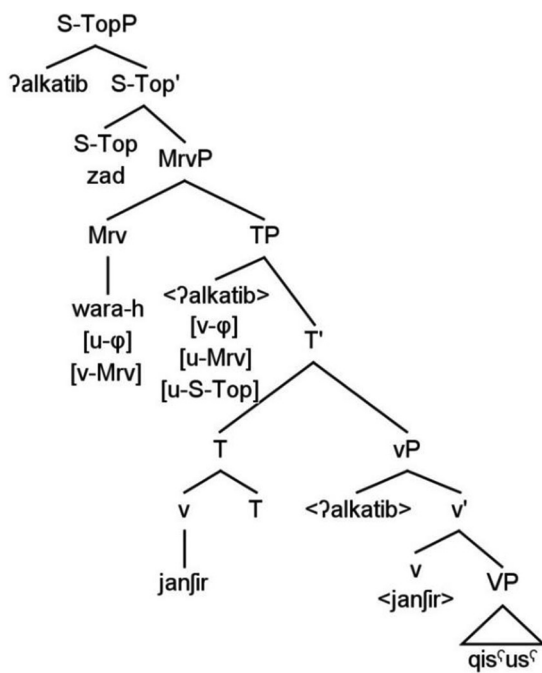
Following Ouhalla (1997), in his analysis of focus particles in Arabic, the generalization we can formulate for (12) is that the object DP *qis'us'* moves to the Spec of the Foc°, whose head CF° is not morphologically realized, i.e. null. This behaviour is supported by principles of phase theory (Chomsky 2001), the assumption that a syntactic item moves out of its phase only if it has an unvalued (Bošković 2007; Holmberg et al. 2017). We therefore propose that the subject DP has also moved out of its phase, to Spec TopP to value the *u*-[Top] on it.

The same conclusion holds true in cases involving more articulated structure in the left periphery, providing evidence that the subject showing up across *wara* is re-merged at the Spec position of a discourse, information structural projection higher than MrvP. Consider (14).

- (14) *ʔal-katib zad wara-h j-anʔir qisʔusʔ*  
 DEF-writer S-Top PRT-3SG.M 3SG.M-publish.  
 PRS story.PL  
 ‘As for the writer, he publishes stories (I’m wondering why he does so?).’

*Zad* is a Shifting topic marker in the sense of Frascarelli & Hinterhölzl (2007), marking a topic constituent that is interpreted as being shifted to in the ongoing discourse. In (13), the subject DP maintains shifting topic interpretation via movement in syntax to the Spec position of S-TopP, headed by the marker *zad*, holding a Spec Head relation of agreement with *zad*. With the clitic on *wara*, and within derivational considerations, we propose that the subject DP had been into Agree relation with *wara* prior its movement, the point at which hit had the interpretation mirativity, and then to re-merged at Spec S-TopP for shifting topic interpretation. (14) is represented in (15) below.

(15)



The theory we have developed here, then, is that the subject DP is marked by *wara* at Spec TP, where it is visible to *wara* in syntax. In cases where the subject DP shows up across *wara*, the subject DP is at the Spec position of a functional projection, assigned a discourse value beyond *mirativity*, depending on the value the head has, for instance, [Foc], [Top] or [S-Top].

Having formulated the generalization that when *wara* is cliticised and marks the subject DP, it follows that in cases of bare, non-cliticised *wara*, in (3a) above repeated below as (16), it is the whole proposition expressed by the TP that is marked with *mirativity*.

- (16) *wara ʔal-katib j-anʔir qisʔusʔ*  
 PRT DEF-writer 3SG.M-publish.PRS story.PL  
 ‘The writer publishes stories (I’m wondering why?).’

Syntactic evidence for this claim can be provided by comparing (14) with (17) below.

**Table 1.** distribution of the featural grid of *wara* and the subject DP

Syntactic item	Feature	(un)valuedness
<i>wara</i>	Mrv	v
	φ	u
Subject DP	Mrv	u
	φ	v

- (17) *ʔal-katib zad wara j-anʔir qisʔusʔ*  
 DEF-writer S-Top PRT 3SG.M-publish.PRS story.  
 PL  
 ‘As for the writer, he publishes stories (I’m wondering why?).’

Following our theory so far, derivationally, we expect the subject DP to value *u*-[φ] on *wara*. We though see that *wara* is not cliticised, indicating that it was not into an Agree relation with the subject DP. What is more, the subject DP has moved to Spec S-TopP, being now interpreted as S-Topic. If *wara* had *u*-[φ]-probed the subject DP, the theory expects *wara* to be cliticised. Being bare, then, it follows that what *wara* probes the TP in syntax, being the whole proposition at the pragmatic interface, which is explained because TP does not have φ-content inherently.

### THEORETICAL IMPLICATIONS OF THE RESEARCH

The generalizations formulated and the analyses made above lay the groundwork for showing that CNA marks mirativity in a minimalist, economical way, in which the discourse particle *wara* and marks the subject DP in situ, without recourse to movement. The output of this research also adds that natural language can achieve kinds of discourse marking via the morphologically realizing discourse features, like [Mrv], spelling it out as the discourse particle, like *wara*, which functions as a discourse detector signaling the presence of discourse marked syntactic item. In this regard, one insight the syntax of *wara* provides us with is the fact that *wara* is an expressiveness-device, which has φ-content that can be spelled out to detect the mirative syntactic item in narrow syntax (in case this syntactic item has φ-content), a process which results in banning movement of the relevant mirative syntactic item to the left periphery. This characteristic of *wara* indicates that discourse particles seem to have developed the property of agreement rather than being functional heads that trigger movement of some kind syntactic item that they agree with/mark. This directly leads us to the idea that discourse particles can be good evidence to the more intricate view of the minimalist practice, in particular, the economy property of human language, being optimal, in that movement is only triggered if there is no way to make agreement overt in syntax. What this research significantly raises is that a DP, once valued an instance of *u*-feature on a head, it must still move as long as it has a *u*-feature on it, suggesting that movement is restricted to and triggered by the existence of unvalued features.

## CONCLUSION

This paper sets an investigation to the syntactic operation of morphologically marking the information structural notion mirativity in CNA by means of the discourse particle *wara*, using minimalist mechanism and strategies (Chomsky 2001). Analyses advanced show that mirativity marking is carried out in a minimalist, economical manner, where a constituent is marked with mirativity without moving to the Spec position of MrvP headed by the mirativity marker *wara*, the locus of mirativity information. Discourse properties of *wara* have led to the assumption that the discourse feature [Mrv] on *wara* is valued. The expressiveness property of *wara*, i.e. cliticisation, adds up a set of [ $\phi$ ], which by theory are unvalued, via which *wara* operates a probe,  $\phi$ -probing the subject DP. Agree between *wara* and the subject DP results in deriving a PF-chain, in which the subject DP is detected at the LF interface as the constituent marked with and expressing mirativity. With examinations to structures with more articulated discourse heads and involving movement of the subject DP across *wara* to the left periphery, it is shown that such movement is not triggered by [Mrv] on *wara* but by other discourse features, including [CF] and [S-Top]. Hence, *wara* serves as economical discourse device that marks and detects mirative constituents in syntax.

## ABBREVIATIONS

3	Third person
[ $\Phi$ ]	Agreement features
DEF	Definite
F	Feminine gender marker
M	Masculine gender marker
NEG	Negative marker
PL	Plural
PRS	Present tense
PRT	Particle
SG	Singular
T $^\circ$	Tense head
TP	Tense projection
v $^\circ$	Head of little verb phrase
vP	Little verb projection
VP	Lexical verb phrase
Foc $^\circ$	Head of Focus phrase
FocP	Focus Projection
Top $^\circ$	head of topic phrase
TopP	Topic Projection
S-Top $^\circ$	Head of Shifting topic phrase
S-TopP	Shifting topic projection
Mrv $^\circ$	head of Mirative phrase
MrvP	mirative projection
[Mrv]	mirative feature
[T]	Tense feature
T.PRT	Tense particle
u-	unvalued instance of a feature
v-	valued instance of a feature

## END NOTES

1. See Bayer & Trotzke (2015) for the argument that a discourse particle instantiates the projection PrtP, standing for Particle Phrase.
2. Interlinear glossing for all data in this paper is in accordance with Leipzig Glossing Rules available at <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules>.
3. Data from other sources are stated as they are in the original work, with respect to glossing.
4. Agreement content like *third person singular* and pragmatic interpretive values like *confirmation* and *mirativity* are notated in italicised font throughout the paper.
5. All occurrences of *wara*, and other instances of discourse particles in cross-linguistic contexts, are in bold font.
6. We use the convention of italicising the term *mirative* when it refers to the information structural value.
7. We assume that *wara* instantiates a functional projection with the information mirativity in the left periphery, labelled as MrvP, where *wara* spells out the feature [Mrv] on the head Mrv $^\circ$ .
8. The notation ‘ $^\circ$ ’ refers to the head category. Thus, T head of TP projection is notated as T $^\circ$  and C head of CP projection is notated as C $^\circ$ .
9. There is indeed LF movement but we are dealing with overt, syntax movement here.
10. We follow Chomsky (2001) view on the characterisation of features. Thus, interpretable features are lexically valued while uninterpretable features are lexically unvalued and therefore need to receive a value in syntax.
11. Throughout the paper, interpretable/valued feature is notated as u-F while uninterpretable/unvalued feature is notated as v-F.
12. Q = question feature, Wh = Wh-feature,  $\phi$  = agreement features,  $\delta$  = discourse feature.
13. We will not explicate phase theory here, for reasons related to space. We therefore refer the reader to Citko (2014).
14. The convention < x > indicates the extraction position of moved x.

## REFERENCES

- Aikhenvald, A. (2004). *Evidentiality*. Oxford: Oxford University Press.
- Alshamari, M. (2017). *Topic particles in the North Hail dialect of Najdi Arabic*. PhD Thesis: Newcastle University.
- Alshamari, M. (2017). A feature-based analysis of the syntax of the clause-initial particle *bedi* in North Hail Arabic. *Poznan Studies in Contemporary Linguistics*, 53(3), pp.305-344.
- Alshamari, M. & Holmberg, A. (2019). Topic particles, agreement and movement in an Arabic dialect. In 42<sup>nd</sup> GLOW (Generative Linguistics in the Old World) Conference. Newcastle University.
- Alshamari, M. & Holmberg, A. (2019). Topic particles, agreement and movement. In LAGB (Linguistics Association of Great Britain). Queen Mary University of London.



- Alshamari, M. (2021). Contrastive Focus Particles, CF-chain interpretation and Multiple Agreement in North Hail Dialect of Arabic. In CamCoS 9 (Cambridge Comparative Syntax 9).
- Topic particles, agreement and movement in an Arabic dialect. In 42<sup>nd</sup> GLOW (Generative Linguistics in the Old World) Conference. Newcastle University.
- Bayer, J. (1996). Directionality & Logical Form: On the scope of focusing particles and wh-in-situ (Vol. 34). Springer Science and Business Media.]
- Bayer, J & Obenauer, H. (2011). Discourse particles, clause structure, and question types'. *The linguistic review* 28: 449-491.
- Bayer, J & Struckmeier, V. (2017). *Discourse Particles: Formal Approaches to their Syntax and Semantics. Linguistische Arbeiten 564* Berlin/Boston: De Gruyter.
- Bayer, J, & Trotzke, A. (2015). The derivation and interpretation of left peripheral discourse particles. In: Josef, B, Ronald, H and Trotzke, A, (eds) *Discourse-oriented syntax*. Amsterdam: John Benjamins Publishing Company. 226: 13-40.
- Biberauer, T & Sheehan, M. (2011). Introduction: particles through a modern syntactic lens'. *The Linguistic Review* 28: 387-410.
- Biberauer, T, Haegeman, L, & Kemenade, Ans. (2014). Putting our heads together: towards a syntax of particles. *Studia Linguistica* 68: 1-15.
- Bošković, Ž. (2007). On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic inquiry* 38: 589-644.
- Citko, B. (2014). *Phase Theory: An introduction*. Cambridge: Cambridge University Press.
- Chomsky, N. (1995). *The minimalist program*. Cambridge: MIT Press.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (ed) *Ken Hale. A Life in Language*. Cambridge: MIT Press. 1-52.
- Chomsky, N. (2008). On phases. In R. Freidin, C. P. Otero, M. L. Zubizarreta (eds) *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*. Cambridge: MIT Press. 291-321.
- Chomsky, N. (2013). Problems of projection. *Lingua*, 30: 33-49.
- Collins, C. (2001). Economy conditions in syntax. *The handbook of contemporary syntactic theory*, 45-61.
- Coniglio, M & Zegrean, I. (2010). Splitting up Force, evidence from discourse particles. *Linguistics* 20: 7-34.
- Cruschina, S. (2009). The syntactic role of discourse-related features. *Cambridge Occasional Papers in Linguistics*, 5, 15-30.
- Frascarelli, M. & Hinterhölzl, R. (2007). 'Types of Topics in German and Italian'. In S. Winkler and K. Schwabe (eds.) *On Information Structure, Meaning and Form*. Amsterdam: John Benjamins. 87-116.
- Hack, F. (2014). The Particle *Po* in the Varieties of Dolomitic Ladin—Grammaticalisation from a Temporal Adverb into an Interrogative Marker. *Studia Linguistica* 68: 49-76.
- Haegeman, L. (1993). The interpretation of the particle *da* in West Flemish. *Lingua*, 90(1-2), 111-128.
- Haegeman, L. (2014). West Flemish verb-based discourse markers and the articulation of the speech act layer. *Studia Linguistica* 68(1): 116-139.
- Holmberg, A & Nikanne, U. (2002). Expletives, subjects, and topics in Finnish. Subjects, expletives, and the EPP. In Svenonius, P. (ed.) *Subjects, Expletives and the EPP*. Oxford University Press
- Holmberg, A, Sheehan, M and van der Wal, J. (2017). Movement from the double object construction is not fully symmetrical. *Linguistic Inquiry*, 50(4), 677-722.
- Jarrah, M (2017). Subject extraction in Jordanian Arabic (Doctoral dissertation, Newcastle University).
- Jarrah, M. (2019). Record your Agree: A case study of the Arabic complementizer ?inn. *Journal of Linguistics*, 55(1), pp.83-122.
- Jarrah, M & Alshamari, M. (2017). The syntax of the evidential particle *šikil* in Jordanian Arabic. *Italian Journal of Linguistics*, 29, 29-56.
- Miyagawa, S. (2010). *Why agree? Why move? Unifying Agreement-Based and Discourse-Configurational Languages*. Cambridge: MIT Press.
- Ouhalla, J. (1988). *The syntax of head movement: A study of Berber*. PhD Thesis: University of London.
- Ouhalla, J. (1992). Focus in Standard Arabic: The identification requirement and the Principles of Economy. Ms., Queen Mary and Westfield College.
- Ouhalla, J. (1994). Focus in standard Arabic. *Linguistics in Potsdam* 1: 65-92.
- Ouhalla, J. (1997). Remarks on focus in Standard Arabic. In: Mushira, E & Robert, R, (eds). *Perspectives on Arabic linguistics X: papers from the Tenth Annual Symposium on Arabic Linguistics*. Amsterdam: John Benjamins. 9-45.
- Ouhalla, J. (1999). Focus in Arabic Clefts. In Georges, Rebuschi & Laurice, Tuller (eds) *The Grammar of Focus*. Amsterdam: John Benjamins. 335-359.
- Paul, W. (2009). Consistent disharmony: sentence-final particles in Chinese. *Cambridge Occasional Papers in Linguistics* 5: 1-24.
- Rizzi, L. (1997). The fine structure of the left periphery. In Haegeman, L. (ed). *Elements of Grammar*. Dordrecht: Kluwer Academic Publishers. 281-337.
- Rizzi, L. (2006). On the form of chains: Criterial positions and ECP effects. *Current Studies in Linguistics Series*, 42, p.97.
- Struckmeier, V. (2014). Ja doch wohl C? Modal Particles in German as C-related elements. *Studia Linguistica* 68: 16-48.
- Thurmair, M. (1989). Modalpartikeln und ihre Kombinationen. (Vol. 223). Germany: Walter de Gruyter.
- Zimmermann, M. (2009). Discourse particles in the left periphery. *ZAS Papers in Linguistics*, 35: 543-66.
- Zimmermann, M. (2011). Discourse particles. In: Claudia, M. (eds). *Semantics: An international handbook of natural language meaning*. Berlin: Mouton de Gruyter. 2011-2038.