# Grammaticalisation of Raħ in Dialectal Arabic: Generative Phases

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Abstract—The lexical item  $ra\hbar$  has undergone two phases of grammaticalisation, from a lexical item used as a lexical verb to a temporal-functional particle T- $ra\hbar$ , and further to a discourse-functional particle D- $ra\hbar$ . Syntactic diagnostics show that both T- $ra\hbar$  and D- $ra\hbar$  have developed properties of head status, adopting conventional Minimalist and Cartographic principles (Chomsky, 2000; Rizzi, 1997; Frascarelli & Hinterh dzl, 2007), where evidence is deduced from the fact that movement of a head is sensitive to intervention effects in the course of the derivation (Rizzi, 2006). The novelty about  $ra\hbar$  is that, in its first phase of grammaticalised T- $ra\hbar$ , while it has lost its  $\varphi$ -features input, in the sense that it doesn't spell out any agreeing suffix with the DP it marks, in its second phase of grammaticalised D- $ra\hbar$ , it has retained its  $\varphi$ -features, hence, an agreeing head. Further, this agreeing characteristic of D- $ra\hbar$ , with investigations of more articulated data, brings insight to the current research on discourse particles in that it goes against the widely-adopted characterization of discourse particles that postulates a non-agreeing property of discourse particles; discourse particles do not inflect for agreement. The syntactic properties shown by the grammaticalised  $ra\hbar$  propose, on empirical groundings by movement considerations, that discourse particles externally merge in the course of the derivation, giving credence to the theory that the syntax of discourse particles has changed from Move to Merge (Hack, 2014).

Index Terms—grammaticalisation, discourse particles, φ-features, agreement, movement

## I. Introduction

Grammaticalisation is a linguistic process by which a syntactic item loses its lexical meaning, getting its semantics bleached, and, instead, develops a functional property, including grammatical relations and discourse marking (Biberauer et al., 2014; Bayer & Trotzke, 2015; Bayer & Struckmeier, 2017; Jarrah & Alshamari, 2017a,b; Jarrah et al., 2020; Trotzke & Mayol, 2021). Under this view, grammaticalisation results in decrease in lexical meaning and increase in grammatical meaning of a syntactic item, where the consequence is that the syntactic item be re-endowered with functional information, in which case the grammaticalised item expresses functional information like Tense, or discourse information, in which case the grammaticalised item encodes discourse-marking like Focus, Topic and Modality (Coniglio, 2008; Struckmeier, 2014; Biberauer et al., 2014; Bayer & Struckmeier, 2017).

In association to this linguistically-theoretical consideration, it is widely argued in the literature that what is referred to as *particle*, a category that has functional or discourse information as its semantic import, is a produce of grammaticalisation (Biberauer et al., 2014; Zimmermann, 2011; Biberauer & Sheehan, 2011; Biberauer et al., 2014; Hack, 2014; Bayer & Struckmeier, 2017). One seminal study on the phenomenon of a *grammaticalised particle* is Hack's (2014) analysis of the Italian particle *po*. Investigating the use of *po* in a number of varieties of Dolomitic Ladin, Hack (2014) argues that *po* functions as an adverb (1a), having grammaticalised to a T-marker of futurity as used in (1b), and as a wh-question Focus marker as (1c) shows. Consider the data in (1) from Hack (2014, p.55-57).

```
(1) a. Amor se
                    fesh
                              pa na berta
     Amor himself make.3SG PA a
    'Then, Amor plays a trick on us.'
   b. Al vegn
                    pa
     he come.3SG
     'He will come.'
   c. Can
           compr-i
                        *(pa) n liber?
     when buy.3pl-SCL
                         PA a
                                  book
     'When are they going to buy a book?'
```

The cases in (1) establish the fact that po has evolved from an adverb (1a) into a functional, Tense marker (1b) or a discourse marker (1c), providing empirical evidence for instantiating a particle in syntax. From a semantic perspective, the case of grammaticalisation in (1) demonstrates that syntactic items with lexical meaning can go through phases of semantic bleaching. From a generative, syntactic perspective, the conclusion reached in Hack's (2014) analysis, in

addition to other works (cf. Bayer & Trotzke, 2015), goes in line with the widely held assumption in the grammaticalisation literature that syntactic, lexical elements that undergo grammaticalisation are turned into syntactic heads (Roberts & Roussou, 1999; Hack, 2014). In more technical terms, the categorial structure of a grammaticalised syntactic, lexical item is turned from a phrasal category into a head category of a syntactic category on its own, being extra-linguistic and having contribution to the interpretation of the sentence (Bayer & Trotzke, 2015; Bayer & Struckmeier, 2017).

Consider the following German data from Bayer and Trotzke (2015, p.1), showing that a grammaticalised item cooccurs with its lexical, pre-grammaticalised counterpart (the adverb occurrence of *vielleicht* is italicised while the discourse particle occurrence is in boldface).

(2) a. Der ist vielleicht SÜSS.

this.MASC is perhaps sweet

'This one (e.g. coffee) is perhaps sweet.'

b. Vielleicht ist der SÜSS!

'Perhaps, this one is sweet.'

(3) a. Der ist **vielleicht** süß

This.one (e.g. a cute little dog) is PRT sweet

'My God, how sweet it is!'

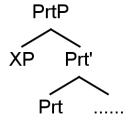
b. \*Vielleicht ist DER süß!

Intended meaning: 'My God, how sweet it is!'

Research on particles had concluded that particles fit into other syntactic categories like adverbs on the groundings that particles seemed to have derived from and developed properties of adverbs (Cardinaletti, 2011). With rise of generative practice, reconsidering particles using syntactic movement as a criterion (Biberauer & Sheehan, 2011; Bayer & Struckmeier, 2017; Biberauer et al., 2014; Hack, 2014), it was observed that particles seemed to be merged in various syntactic positions and seemed to vacate their syntactic positions in some cases but remain unmoved in other cases. With movement considerations, particles have been assigned their own category, instantiating the own projections in syntax, PrtP (Bayer & Trotzke, 2015).

In this respect, data in (2-3) establish the argument that the syntax of adverbs is less constrained with respect to movement than discourse particles. When functioning as an adverb, *vielleicht* is free to occur clause-medially and clause-initially (2), while it is only legitimized in one position, in the middle field of the German sentence, when functioning as a discourse particle (3). This phenomenon tackled by Bayer and Trotzke (2015) has initiated the generalisation that grammaticalised items are functional, having developed entirely different semantics, which can be detected by the different syntactic peripeties they have developed, i.e., immobility in syntax (Struckmeier, 2014). Additionally, this generative conclusion has led to the argument that 'grammaticalised' discourse particles, unlike the adverbs from which they derive, are heads, an assumption evidenced by that fact that while adverbs move across the clause boundary, discourse particles are immobile, being frozen in their first merge position. In generative practice, the syntactic internal structure of a particle is recently is represented in (4) below.

(4)



This, in generative practice, has given ride to the assumption that grammaticalisation of a lexical item has impact on its syntax; while a lexical item can internally move, a grammaticalised item, i.e., a particle, has only one option: external Merge (Struckmeier, 2014).

This logic of immobility of discourse particles has been elaborated on by Struckmeier (2014). Taking into consideration the widely held assumption that particles are the output of grammaticalisation (Roberts & Roussou, 1999, 2003; Lucas & Willis, 2012; Hack, 2014), Struckmeier (2014) explains the issue of the immobility of discourse particles by saying that they need not move in syntax on minimalist groundings; i.e., discourse particles, once merged into the syntactic derivation, they accomplish their semantic scope, syntactically hosting, phonological spelling out and morphologically realizing discourse related features and information like Topic, Focus and evidentiality (Cruschina, 2009).

Holding the assumptions that: (i) grammaticalised items become particles, (ii) particles don't move and have rigid order in syntax, (iii) particles develop heads status in syntax and encode functional and discoursal functions at the

<sup>&</sup>lt;sup>1</sup> Cardinaletti's (2011) view that discourse markers are not head category is based on the argument they don't show any intervention effects when verb moves to C across a discourse marker in German.

semantic-interface, the paper will examine the syntax of the NA lexical item  $ra\hbar$ , exploring the phases of its grammaticalisation. It will argue that the lexical  $ra\hbar$  grammaticalises into (i) a functional, T-marker and (ii) a discourse marker, which both derive from the lexical verb of the form  $ra\hbar$ . Further, the analysis will explicate the fact that unlike the T-marker occurrence of  $ra\hbar$ , the discourse occurrence of  $ra\hbar$  develops an additional expressiveness property (Miyagawa, 2010), namely, showing overt agreement with DPs.

In the following sections, generative assumptions (Chomsky, 2000; Holmberg & Roberts, 2018) and cartographic assumptions (Rizzi, 1997), as models of grammar, will be reconciled to describe and explains, on theoretical groundings, the two phases of grammaticalisation process that  $ra\hbar$  grammaticalisation has undergone. This involves the variable changes that have arisen to the morphosyntax of  $ra\hbar$ , which have impact on its semantics and pragmatics, including the argument that grammaticalised particles don't internally move but externally merge (Hack, 2014). What is more, in addition to the rigid syntactic order the grammaticalised forms of  $ra\hbar$  maintain, the investigation will advance an explanation to the phenomenon that the discourse occurrence of  $ra\hbar$  shows overt agreement with DPs, in case it marks DPs.

#### II. SYNTACTIC POSITION AND SEMANTIC CONTRIBUTION OF RAH

Before we launch our exploration to the syntax of  $ra\hbar$ , let us highlight on its variable occurrences of  $ra\hbar$ , shedding light on its lexical, functional/Temporal and discoursal uses. Consider the DA data in (5-7) (functional-discoursal occurrences of  $ra\hbar$  are in boldface while the lexical occurrence of  $ra\hbar$  is neutral).

(5) Firas **rah** li-l-dikan
Firas go.PST.3SG.M to-DEF-supermarket
'Firas went to the supermarket.'

(6) a. Firas rah j-ru:h li-l-dikan
Firas FUT 3SG.M-go.PRS to-DEF-supermarket
'Firas will go to the supermarket.'
b.\* Firas rah rah li-l-dikan
Firas FUT go.PST.3SG.M to-DEF-supermarket
'Firas will go to the supermarket.'

(7) a. Firas rah rah li-l-dikan

(7) a. Firas rah rah li-l-dikan
Firas PRT go.PST.3SG.M to-DEF-supermarket
'Firas went to the supermarket (I'm surprised).'
b. \*Firas rah rah li-l-dikan
Firas go.PST.3SG.M PRT to-DEF-supermarket

Intended meaning: 'Firas went to the supermarket (I'm surprised).'

The DA data in (5-7) show that DA employs three instances of the linguistic item  $ra\hbar$  in Najdi Arabic. In (5),  $ra\hbar$  expresses the core of the proposition, represented by the lexical verb  $ra\hbar$ , with the past form of morphological marking. In (6),  $ra\hbar$  functions as a Temporal, Futurity marker, being obligatorily in a position immediately preceding and adjacent to the present tense form of the lexical verb  $jru:\hbar$ . In (7), the scenario is entirely distinctive;  $ra\hbar$  expresses discourse value onto the proposition, SURPRISE value (Hack, 2014). In this case,  $ra\hbar$  is employed in the syntax of NA as a discourse particle, which must precede the past tense form of the lexical verb  $ra\hbar$ , as (7b) evidences.

With (7) in mind, it should be added that other constituents can intervene between the discourse particle occurrence of  $ra\hbar$  (discourse particle  $ra\hbar$ ) and the lexical occurrence of  $ra\hbar$  (the past tense form of the verb of  $ra\hbar$ ), with rigid order in syntax, as shown in (8) below.

```
(8) a. Firas
           raħ
                                   li-l-dikan
                    go.PST.3SG.M to-DEF-supermarket
     'Firas went to the supermarket (I'm surprised).'
   b. Firas
            raħ
                    Sad
                          raħ
                                          li-l-dikan
                    PRT go.PST.3SG.M to-DEF-supermarket
     Firas
            PRT
     'Firas went to the supermarket (I'm surprised that he did and upset that he did).'
   c.*Firas Sad rah
                         raħ
                                         li-l-dikan
             PRT PRT go.PST.3SG.M to-DEF-supermarket
```

Intended meaning: 'Firas went to the supermarket (I'm surprised that he did and upset that he did).'

It is clear from the scenario in (8) that other discourse-related items like the negative-speaker attitudinal particle  $\mathcal{E}ad$ , which expresses the speaker's negative attitude towards the propositional content of the state of affairs expressed by the clause (Alshamari, 2017), intervene between the discourse particle  $ra\hbar$  and the lexical verb  $ra\hbar$ , an observation which, as will be seen, calls for cartographic analysis and interface account, which will have contribution regarding the syntax of  $ra\hbar$ .

In the following sections, we elaborate on the syntax of  $ra\hbar$ , showing that it has undergone two phases of grammaticalisation, function (Temporal) and discoursal (SURPRISE). The paper will entertain generative and cartographic theoretical assumptions, taking derivational model of sentence structure into considerations (Chomsky,

2000), i.e., the structure of the sentence in natural language has three syntactic layers, one each associated to syntactic-semantic representation- vP, the lexical-structural argument domain, including the propositional content, dominated by TP, the tense domain where T-markers are merged and where tense information is expressed, dominated by CP vicinity, the discourse domain where discourse particles are merged and where discourse information is expressed. With this universal modelling of language, the next section will explicate how has grammaticalised, going through the three phases and how that can be associated to and explained by the rigidity of the syntactic layers as well as how each layer is constrained with respect to interface conditions.

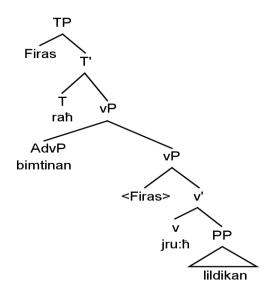
#### III. GRAMMATICALISATION OF RAH

## A. Temporal Use of Rah: T-rah

Let us first look into the case of T- $ra\hbar$ , with respect to its interaction with the clause internal material. In addition to the compelling evidence from the syntax of (6a), where the lexical verb follows the T-item  $ra\hbar$ , there is conceptual and empirical evidence to propose that T- $ra\hbar$ , encoding Futurity, is located at the head T of TP. We represent the structure of (9) in (10).

(9) Firas **rah** bimtinan j-ru:h li-l-dikan Firas **FUT** gladly 3SG.M-go.PRS to-DEF-supermarket 'Firas will gladly go to the supermarket.'

 $(10)^2$ 



As (9) shows, merger of  $ra\hbar$  at T has the consequence that the lexical occurrence of the present verb is stranded at v, not moving to T, which, in turn, is morphologically realised by the Temporal marker  $ra\hbar$ . Further syntactic evidence for this direction is provided by the syntax of the vP-adverb *bimtinan* 'gladly', which marks the boundary between T, being lexically satisfied with the T-marker  $ra\hbar$ , and the vP domain contain the vP remnant, the lexical verb and the object DP.

One issue to highlight here is that, as a consequence of  $ra\hbar$  having grammaticalised from the lexical verb  $ra\hbar$  to a T- $ra\hbar$ ,  $ra\hbar$  has lost not only the lexical-semantic import, its lexical meaning, but also a morphosyntactic property; its  $\varphi$ -features, in the sense that it doesn't spell out agreement with the DP it marks. This though is not in line with the morphosyntax of other T-markers like kan, which always spells out the  $\varphi$ -content of the DP it marks. Compare (11) and (12) below.

(11) a. Firas rah j-ru:ħ li-l-dikan Firas FUT 3SG.M-go.PRS to-DEF-supermarket 'Firas will go to the supermarket.' b. Dilara rah t-ru:ħ li-l-dikan 3SG.F-go.PRS to-DEF-supermarket Dilara **FUT** 'Dilara will go to the supermarket.' c. Firas w Dilara rah j-ru:ħu:n li-l-dikan Firas and Dilara **FUT** 3.PL-go.PRS to-DEF-supermarket 'Firas and Dilara will go to the supermarket.' (12) a. Firas kan-Ø j-ru:ħ li-l-dikan

<sup>&</sup>lt;sup>2</sup> Some internal structure is omitted.

Firas PST.3SG 3SG.M-go.PRS to-DEF-supermarket

'Firas was going to the supermarket.'

b. Dilara **kan-at** t-ru:ħ li-l-dikan

Dilara **PST-3SG.F** 3SG.F-go.PRS to-DEF-supermarket

'Dilara was going to the supermarket.'

c. Firas w Dilara kan-u j-ru:ħu:n li-l-dikan

Firas and Dilara PST-3.PL 3SG.M-go.PRS to-DEF-supermarket

'Firas and Dilara were going to the supermarket.'

As for syntax, one further syntactic characteristic the grammaticalised T-rah has developed is that it cannot occur clause-initially (13a) nor can the lexical verb precede it. Consider the following set of data in (13).

(13) a.\*raħ Firas j-ru:ħ li-l-dikan

FUT Firas 3SG.M-go.PRS to-DEF-supermarket

Intended meaning: 'Firas will go to the supermarket.'

b.\*j-ru:ħ raħ Firas li-l-dikan

3SG.M-go.PRS **FUT** Firas to-DEF-supermarket

Intended meaning: 'Firas will go to the supermarket.'

The structure in (13a) is ungrammatical because it has  $ra\hbar$  merged clause-initially. With more articulated DA structure involving movement of constituents across the clause, what seems to be the case is that, once overtly spelled out as  $ra\hbar$ , T requires that its Spec position be filled by some material. In other words, T has an occurrence of [EPP] feature on it (Chomsky, 1995).<sup>4</sup> This can all be supported by evidence from (14), where the object (14a) or an adjunct (14b) (re)-merges at Spec TP, rendering the structure grammatical.

(14) a. li-l-dikan rah j-ru:h Firas to-DEF-supermarket FUT 3SG.M-go.PRS Firas

'Firas will go to the supermarket/it is to the supermarket that Firas will go.'

b. bukra rah j-ru:h li-l-dikan Firas tomorrow FUT 3SG.M-go.PRS to-DEF-supermarket Firas

'Firas will go to the supermarket tomorrow/it is tomorrow that Firas will go to the supermarket.'

Deduced from (13b), on the other hand, is the assumption that DA interface has a Universal Grammar-constraint that the lexical verb be disallowed to move across T- $ra\hbar$ , given that, derivationally, the former is below, asymmetrically c-commanded- the latter. This, as we will see, is attributed to the fact that T- $ra\hbar$  is a head item that blocks movement of the lexical verb, which is a head category.

The generalisation we could now formulate about the outcomes of the grammaticalisation process of  $ra\hbar$  from lexical-V to functional-T that  $ra\hbar$  has undergone derives from three main observations. Morphologically,  $ra\hbar$  has grammaticalised from the lexical verb  $ra\hbar$  into a T-marker  $ra\hbar$ . Morphosyntactically,  $ra\hbar$  has lost its  $\varphi$ -features. This in turn, has the impact on the syntax of  $ra\hbar$ . Syntactically, as a result,  $ra\hbar$  has a feature added to its featural grid, an [EPP], requiring that an XP category of some value be merged/remerged at its Spec position, Spec TP.<sup>5</sup>

Having laid out facts about the semantic contribution, syntax and morphosyntax of T- $ra\hbar$ , and keeping in mind the generalisation we have just formulated about those facts, let us now move to the D- $ra\hbar$ .

## B. Discoursal Use of rah: D-rah

One property of D- $ra\hbar$  that makes it stand apart from T- $ra\hbar$  is that D- $ra\hbar$  spells out  $\varphi$ -features of the DPs it marks. Consider the data in (15), in which  $ra\hbar$  marks a DP whose  $\varphi$ -content are *third singular feminine*.

(15) a. Firas **rah-**Ø rah li-l-dikan

Firas PRT go.PST.3SG.M to-DEF-supermarket

'As for Firas, when did he go to the supermarket (I'm surprised).'

b. Dilara rah-at rah-at li-l-dikan

Dilara PRT-3SG.F go.PST-3SG.F to-DEF-supermarket

(x). [CP rah j-ru:h [TP Firas li-l-dikan FUT 3SG.M-go.PRS Firas to-DEF-supermarket

'It is going to the supermarket that Firas will do.'

 $<sup>^{3}</sup>$  (13) can be fixed in (x) below. However, we argue that the T-marker  $ra\hbar$  and the lexical verb  $jru:\hbar$  have both moved out of TP, to the left periphery, leaving the subject DP at Spec vP. Notice the Cleft-translation to (x).

This takes pace as follow. T-marker  $ra\hbar$  moves first from T to a C-head in the CP domain. This is followed by movement of the lexical verb to a lower C-head, since, the lexical verb cannot cross the T-marker  $ra\hbar$  in syntax. Notice that in (x), in most cases, one of the moved items can bear contrastive stress.

<sup>&</sup>lt;sup>4</sup> We though should stress that T, on theoretical groundings, doesn't have an EPP when it starts life, given that DA, like any Arabic variety, exhibits VSO word order. T, however, seems to get it from merger of material merged at T,  $ra\hbar$  in this case.

<sup>&</sup>lt;sup>5</sup> In current standard minimalist assumptions, movement is motivation only for some value that the moving item would eventually get, probably for discoursal-interpretive reasons (Boskovic, 2007; Holmberg et al., 2019). We, though, will not elaborate on this but the reader might consider a Topic or Focus interpretation for the moved item to the left of the T-*raħ*.

<sup>&</sup>lt;sup>6</sup> Note that the subject DP is interpreted as an information-structural notion, Topic or Focus, given that it occurs to the left of a discourse marker *raħ* (and *Sad*), in the left periphery, hence, the phrase *As for* in the translation line.

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'As for Firas, when did he go to the supermarket (I'm surprised).'
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c. Firas w Dilara rah-u rah-u li-l-dikan

Dilara and Dilara PRT-3.PL go.PST-3.PL to-DEF-supermarket

'As for Firas and Dilara, went to the supermarket (I'm surprised).'

We take this set of  $\varphi$ -features, spelled out on  $ra\hbar$  in the manner of standard verb-subject agreement in Arabic (Ouhalla, 1997) as a consequence of an Agree relation (Chomsky, 2000) established between the D- $ra\hbar$  and the subject DP. Consider (8b), above, repeated below as (16).

```
(16) Firas rah Gad rah li-l-dikan Firas PRT PRT go.PST.3SG.M to-DEF-supermarket
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'As for Firas, he went to the supermarket (I'm surprised and upset).'

D-raħ is positioned to the left of the discourse particle \$\int ad\$, a phenomenon mirrored by the assumption that D-raħ is in fact in the left periphery of the sentence, the CP domain (Rizzi, 1997), where information structure is expressed.

## IV. HEADEDNESS STATUS AND MERGE ACCOUNT OF RAH

Whether a functional item has the status of a phrase or a head and whether its syntax accounts for its real syntactic status is a long-disputed question in the literature (Coniglio, 2008). In what follows, we adopt a head analysis to  $ra\hbar$ , arguing that its grammaticalised variants,  $T-ra\hbar$  and  $D-ra\hbar$ , are both heads, where our argument is based on generative considerations. In generative practice there are two main criteria that could on empirical grounds determine that a functional item is a head or a phrase.

## A. Headedness of T-raħ

From a semantic view,  $ra\hbar$  carries Futurity, Temporal information, so it is uncontroversial to assume that  $ra\hbar$  is located on T. Two pieces of evidence support this direction, and this evidence derives from standard assumptions in the syntax of Arabic; the assumption that lexical verb moves to T since Arabic is rich in morphology (Ouhalla, 1988, 1991, 1992, 1994a). In structure involving past continuous tense, in which case PAST information is morphologically realised by the marker kan, and in structure involving futurity, in which case FUTURE is morphologically realised by the marker sawfa, Benmamoun (1999) argues that Tense in both cases is marked on the T-markers, kan and sawfa, and not on the lexical verb. As a consequence, he argues, the lexical verb remains in v, in which case its v-to-T movement is disallowed. We explicate these facts below.

#### 1. The Case of T-kan

Consider the case of kan below (T-marker kan is in boldface while the adverb bsjrfah is in italics font).

```
(17) a. l-walad kan j-elseb bi-l-bait
DEF-boy PST.3SG.M 3SG.M-play.PRS in-DEF-house
```

'The boy was playing in the house.'

b. l-walad **kan** <u>bsjrSah</u> j-elSeb bi-l-bait
DEF-boy **PST**.3SG.M <u>quickly</u> 3SG.M-play.PRS in-DEF-house
'The boy was quickly playing in the house.'

c. l-walad laSab <u>bsjrSah</u> fi-l-bait DEF-boy play.PST.3SG <u>quickly</u> in-DEF-house

'The boy quickly played in the house.'

Some theoretical assumptions need to be laid here. It should first be noted that when the clause contains a T-marker preceding the lexical imperfective verb in the structure, the latter remains in v, not moving to T (cf. Jarrah & Alshamari, 2017). This is explained by the scenario in (17a), where *kan* precedes the lexical imperfective verb. Though, this still is not good evidence that T contains only *kan*; T might contain the lexical imperfective verb, too, on the basis that it has adjoined T later in the derivation, after merger of *kan* at T. The scenario, though, becomes clearer in (17b), where the vP-Adverb *bsjrSah* intervenes between *kan* the lexical imperfective verb, suggesting that the former is indeed in T while the latter is in v. Empirical evidence for this direction is provided in (17c), in which case the clause contains an instance of perfective verb, which is the only syntactic item that has tense marked on it, and which must move to T in syntax (Ouhalla, 1994a, b, 1997). Having the vP-Adverb surfacing to the right of the perfective verb is strong evidence the perfective verb has indeed moved to T, and this is because T is void, not having a T-marker merged at it.

Given this, the generalisation we formulate at this point is that lack of movement of the lexical imperfective verb in the presence of *kan* in the derivation of (17a,b) is attributed to merger of *kan* at T. Upon these facts and observations, we conclude that *kan* is a T-category and is in T, and that v-to-T movement of the lexical verb that would have occurred, had T been void, is actually blocked because T is satisfied by merger of *kan*. From this, it follows that the verb moves as far as v, a restriction on v-to-T movement which is explained by the observation that T is filled with the T-marker

kan, formulating the assumption that kan is a head item that merges at a head position. We extend this logic to  $ra\hbar$  below.

## 2. T-raħ Is a Head Category

Needless to say, from the facts raised in 4.1.1 about the syntax of kan,  $ra\hbar$  works in analogy of the syntax of kan. We propose that  $ra\hbar$  is a head category. Consider (18).

```
(18) a. l-walad rah j-elseb bi-l-bait
DEF-boy FUT 3SG.M-play.PRS in-DEF-house
'The boy will play in the house.'
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b. l-walad **rah** <u>bsjrSah</u> j-elSeb bi-l-bait
DEF-boy **FUR** <u>quickly</u> 3SG.M-play.PRS in-DEF-house

'The boy will play quickly in the house.'

Up to now, diagnostics have shown that the lexical verb moves as least to T, but this movement is blocked when T is morphologically realised with  $ra\hbar$ , which can be explained by the fact that  $ra\hbar$  causes intervention effects to movement of the lexical verb to T or C (Rizzi, 2006). Consider now the syntax of  $ra\hbar$  in a clause containing a wh-phrase.<sup>8</sup>

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(19) rah wi:n l-walad j-elseb w j-xalus kalam FUT where 3SG.M-play.PRS DEF-boy RES 3SG.M-stop talking 'Where will the boy play and so stop asking?'
```

Recall that we have already argued in (13) above that  $ra\hbar$  doesn't occur clause-initially, when  $ra\hbar$  is in TP domain. However, this restriction seems to be loosened when  $ra\hbar$  occurs clause-initially within the CP domain, hence, moving to a C-layer head in the CP vicinity is allowed while movement within TP domain is disallowed. With this in mind, the context of (19) can be a response-felicitous inquiry to a statement like (20) below.

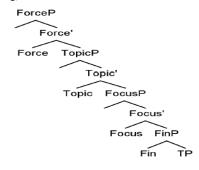
```
(20) ?xiran l-walad rah j-elSeb bi-l-bait eventually DEF-boy FUT 3SG.M-play.PRS in-DEF-house 'The boy will eventually play in the house.'
```

At the utterance time of (20), the propositional content of (19) would have already been discourse-given: argument-structural components like clause arguments, the subject and the object, Temporal components like Futurity expressed by  $ra\hbar$ , and other peripheral components like the locative PP. In (19), then,  $ra\hbar$ , appears clause-initially, preceding all the components of the propositional content of the utterance, in the construction. This, within generative, cartographic mechanisms (Rizzi, 1997, 2006), is a syntactic strategy achieved by movement of the item that has a discourse-related value.

Given that futurity is part of the discourse-given components of the proposition of (20), we take  $ra\hbar$  in the context of (19) to be discourse-given, a topic of the sentence (Reinhart, 1981), or one of the topics of the sentence (Frascarelli & Hinterhölzl, 2007) because it is already familiar to the conversation interlocutors, hence, it is information that is part of the common ground (Stalnaker, 2002). Thus, it moves and this movement results in its being clause-initial. The rest of the clause, including the wh-phrase wi:n, represents the new, non-discourse-given, non-presupposed information (Holmberg & Nikanne, 2002).

In the syntax of (19), this means that  $ra\hbar$  moves from T head of TP to ToP head of TopP, in a head-to-head manner, crossing FocP whose head has wi:n re-remerged at it. We represent this scenario in the schemata in (21).

<sup>&</sup>lt;sup>9</sup> The moved lexical verb *rah* in (19) can well be interpreted as Shifting Topic (Frascarelli & Hinterhölzl, 2007), translated along the line of 'As for his going,......'.



We adopt Rizzi's (1997) Split CP model on of the domain of natural language. Represented by the notation mark \*, the upper Top is recursive; it can have multiple occurrences per clause.

<sup>&</sup>lt;sup>7</sup> See Boskovic (2007) for the argument that movement of the subject DP to Spec TP to is discourse motivated, and not simply triggered by EPP. EPP for Boskovic (2007) is a discourse device on its own.

<sup>&</sup>lt;sup>8</sup> The discourse particle w, glossed as 'RES', functions as a resultative marker.

[TopP Top rah [FocP wi:n Foc [ TP T x....vP...]]].

raħ moves crossing the wh-phrase wi:n 'where', which, entertain the Split CP model of Rizzi (1997), is evidence that raħ is now in the left periphery of the clause, re-merging at Top head of TopP, vacating the TP domain. Raħ, then, is a head category.

### B. Headedness of D-rah

We mentioned earlier that other discourse particles occur in the way between the lexical verb  $ra\hbar$  and the discourse particle  $ra\hbar$ . Consider (8) above, repeated as (22) below.

(22). a. Firas rah rah li-l-dikan

Firas PRT go.PST.3SG.M to-DEF-supermarket

'Firas went to the supermarket (I'm surprised that he did so).'

b. Firas **rah Sad** raħ li-l-dikan

Firas PRT PRT go.PST.3SG.M to-DEF-supermarket

'Firas went to the supermarket (I'm surprised and upset that he did so).'

c.\*Firas **Sad rah** rah li-l-dikan

Firas PRT PRT go.PST.3SG.M to-DEF-supermarket

Intended meaning: 'Firas went to the supermarket (I'm surprised and upset that he did so).'

The data in (22) show that discourse particles maintain fixed, rigid order in syntax in multi-discourse particles constructions. This fact about discourse particles is widely adopted: discourse particles don't move in syntax (Struckmeier, 2014). This has since become a criterion, in the generative practice, for instance, to distinguish categories functioning as discourse particles from their homonymous counterparts that function as adverbs form which they drive. That is, while adverbs change their positions within the clause, particles have fixed relative order. Therefore, Struckmeier (2014) locates those particles in what he calls *emergent functional heads* in the CP domain. Consider now (23)

(23) Firas mar rah fad rah li-l-dikan Firas PRT PRT PRT go.PST.3SG.M to-DEF-supermarket

'As for Firas, he went to the supermarket (I'm surprised and upset that he did so).'

The discourse particle *mar* marks the entity expressed by the subject DP as topic (or probably Shifting Topic, S-Top, in the sense of Frascarelli & Hinterhölzl (2007). The discourse particle *raħ* colours the proposition with SURPRISE value while *Gad* colours the proposition with UPSET value (Hack 2014). Given that Firas is a Topic, merged (or remerged) at Spec TopP, which is a projection on top of the CP skeleton (Rizzi, 1997), let us turn the PP into a wh-phrase, moving it to Spec FocP, since wh-phrase are inherently Focused (Ouhalla, 1997; Holmberg, 1999, 2018; Holmberg & Platzack, 1995; Rizzi 2006). Consider (24), bearing in mind that the topmost TopP is recursive.

(24) Firas mar wi:n rah Sad rah Firas PRT where PRT PRT go.PST.3SG.M

'As for Firas, where did he go (I'm surprised and upset that he did so).'

We have already established in 4.1.2 that  $T-ra\hbar$  can be Topicalised, in which case  $T-ra\hbar$  moves to adjoin the head Top of TopP in the CP-domain, as explicated in (19) and (20). With regards to grammaticalisation of  $D-ra\hbar$ , the scenario seems to be different. The  $D-ra\hbar$  seems to have developed further different syntactic and morphosyntactic characteristics and properties: syntactic immobility and retaining overt agreement. We explicate these two characteristics in the following sub-sections, which are dedicated to touching on some syntactic and morphosyntactic phenomena the grammaticalised  $ra\hbar$  displays, including immobility and overt agreement of  $D-ra\hbar$  but lack of overt agreement on  $T-ra\hbar$  on the one hand and proposing Merge account of the grammaticalised  $ra\hbar$  the syntax of on the other hand.

## V. GRAMMATICALISATION CHARACTERISTICS OF RAH

## A. Syntactic Immobility and Overt Agreement of D-rah

One characteristic that D-raħ has developed is that it never moves in syntax. Consider (25).

(25) Firas mar wi:n rah rah

<sup>&</sup>lt;sup>11</sup> See Struckmeier (2014) for work on German discourse particles and Alshamari (2017a,b), Jarrah and Alshamari (2017a,b) and recently (Alshamari, 2021) for contribution on Arabic discourse particles.

<sup>&</sup>lt;sup>12</sup> The subject DP Firas could be re-merged at the Spec position of TopP headed by mar (Alshamari & Holmberg, 2019a,b).

<sup>&</sup>lt;sup>13</sup> Whether sentence Topic in the sense of (Rizzi, 1997) or S-Topic in the sense of (Frascarelli & Hinterhölzl, 2007), in each case, the relevant instantiated TopP would be above FocP.

Firas PRT where PRT go.PST.3SG.M

'As for Firas, where did he go (I am surprised that he did so)?'

The subject DP is a topic, marked by mar, the scenario in which the subject DP Firas is at Spec TopP while mar is hosted by head Top of TopP, following Alshamari (2017a,b) and Alshamari & Holmberg (2019a,b). Being discourse-given in the common ground of the conversation, there is nothing in theory that bans  $ra\hbar$  from being topicalised, in a par with the T- $ra\hbar$  in (20). Hence, the case in which in which the D- $ra\hbar$  would have moved to the CP-field, as the case of head movement for information structural constituents, like v-focalisation (Holmberg, 1999; Rizzi, 2004; Jarrah 2017a, 2017b, 2019). However, this cannot be legitimised, as (26) shows.

(26) \*Firas mar rah wi:n rah Firas PRT PRT where go.PST.3SG.M

'As for Firas, and me being surprised that he did so, where did he go?'

As we can see, comparing (26) to (25), we can see that the first merge position of  $ra\hbar$  is to the immediate right of FocP, heading a discourse projection in a C-layer. But movement of  $ra\hbar$  to a dedicated Top above FocP is disallowed, which cannot be plausibly explained on logic-related grounded, given that this Top is recursive (Rizzi, 1997). The story, though, lies in the fact that, following an important insight of Struckmeier (2014), in the generative account to the syntax of discourse particles, a discourse particle is an immobile item in syntax. Discourse particles don't move in syntax simply because they accomplish their semantic scoping in that position, and, under minimalist considerations, they need not move again for any discourse value. The scenario of (26) is schematised in (27) below.

[TopP Firas Top mar [TopP Top...[FocP wi:n Foc [PrtP Prt rah [ TP T [vP...]]]]]].

This view on discourse particles is motivated by minimalist considerations (Struckmeier, 2014), on the basis that discourse particles are first merged in a syntactic position where they would semantically scope over a proposition (a clause) or parts of a proposition (certain constituents within a clause). They, then, would not need to move for another scope, hence, lack of movement, a restriction on syntactic operation that could be a constraint imposed by the interface for economy conditions (Chomsky, 2000). Under this view, discourse particles are merged in fixed positions in the structure, a property which provides evidence that discourse particles are heads that are merged at a certain head endowed with information-structural information in the spine of a functional structure (Bayer & Obenauer, 2011; Biberauer & Sheehan, 2011; Bayer, 2012; Biberauer et al., 2014; Struckmeier, 2014; Bayer & Trotzke, 2015). This is, why, in recent work on discourse particles, discourse particles are taken to be a signpost that maps syntax to discourse (Biberauer & Sheehan, 2011; Struckmeier, 2014). We now move on to the other, morphosyntactic characteristic the grammaticalised D-*raħ* maintains.

As for the overt agreement phenomenon displayed by D- $ra\hbar$ , notice that in all the data containing instances of D- $ra\hbar$ , unlike the T- $ra\hbar$ , D- $ra\hbar$  shows agreement in  $\varphi$ -features with certain constituents, provided that the relevant constituent is a DP. We have seen in (15) above that D- $ra\hbar$  marks an entity in the given discourse that is represented by a certain DP. Consider now the following set of data evidencing this morphosyntactic property of D- $ra\hbar$ , in which D- $ra\hbar$  marks the subject DP (28a,b,c), object DP (28d) or even an adjunct (28e).

(28) a. Firas **rah**-Ø qara ?r-risalah w ?ana mħeðr-uh Firas **PRT** read.PST.3SG.M DEF-message while I warn.PST-3SG.M

'Firas read the message while I had warned him not to do (I'm surprised he did so).'

b. Dilara **rah**-at qar-at ?r-risalah w ?ana mħeðr-ah

Dilara **PRT-3SG.F** read.PST.3SG.M DEF-message while I warn.PST-3SG.F 'Dilara read the message while I had warned her not to do (I'm surprised she did so).'

c. Firas w Dilara **rah**-u qar-u ?r-risalah w ?ana mheŏr-uh

Dilara and Dilara PRT-3.PL read.PST.3.pl DEF-message while I warn.PST-3.PL

'Firas and Dilara read the message while I had warned them not to do (I'm surprised they did so).'

d. ?r-risalah **rah**-at qar-ah Firas w ?ana mħeðr-uh

DEF-message PRT-3SF.F read.PST-3SG.F Firas while I warn.PST-3SG.M

'The message, Firas read it while I had warned him not to do (I'm surprised he did so to it).'

e. bi-l-maktab rah Firas qara ?r-risalah in-DEF-office PRT Firas read.PST.3SG.M DEF-message

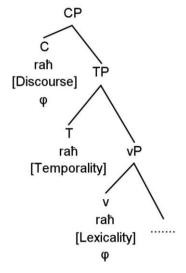
'In the office, Firas read the message (I'm surprised he did there).'

We can see that when the item marked by D- $ra\hbar$ , i.e, the item that has SURPRISE marked on it at the semantic-interpretive interface, is DP category, D- $ra\hbar$  agrees in  $\varphi$ -features with this DP; otherwise, D- $ra\hbar$  doesn't spell any agreeing suffix at its morphosyntactic form. We though have seen that this is not the case with respect to T- $ra\hbar$ , which consistently is void of any agreeing material. Within a semantic-interface view, this can be explained by the fact that

raħ in its discourse-grammaticalised form, D-raħ, has developed more expressiveness-related property, a property of agreement in natural language (Miyagawa, 2010). There is growing consensus in the literature of discourse particles that discourse particles don't inflect at the morphological level (Biberauer et al., 2014). The morphological import of D-raħ, though, with grammaticalisation as one of their properties, demonstrates that discourse particles can diachronically or synchronically develop more linguistic properties, which can be morphosyntactic, in the form of agreeing clitics (Alshamari, 2017a,b; Alshamari & Holmberg, 2019a,b) or as D-raħ displays, morphological suffixes.

#### B. Merge Account of Rah

We can now propose the following logic for the domains  $ra\hbar$  has been through during the grammaticalisation process it has undergone We represents this in the schemata in (29) below (Arrow indicates direct Merge from lexicon). (29)



The generative-based natural language representation in (29), then, shows the phases that were induced in the grammaticalisation process the lexical item  $ra\hbar$  has been through.  $ra\hbar$  stated life in v, where it functions as a lexica verb. Then,  $ra\hbar$  has grammaticalised into the T- $ra\hbar$ , the case in which it externally-merged (Chomsky, 2019) into T, being endowed with Futurity, Temporal information. Then,  $ra\hbar$  has grammaticalised into the D- $ra\hbar$ , developing a conventionalized use as a discourse particle that marks SURPRISE information-structural value, the case in which it also externally-merged at C being endowed with discourse information SURPRISE. This being so, we can say that has developed the two functionalities, the Temporal function in TP and the discourse function in CP.

Though we argue that T- $ra\hbar$  and D- $ra\hbar$  derive from the lexical verb  $ra\hbar$  and have grammaticalised from it, having, as consequence, an implications this research imposes on research of the theory of discourse particles is: what accounts for the existence of  $\varphi$ -features on D- $ra\hbar$  but lack thereof on T- $ra\hbar$ ?

#### VI. CONCLUSION

In this paper, we have argued that lexical item  $ra\hbar$ , functioning as a lexical verb, has undergone two phases of grammaticalisation: It first grammaticalised into a tense particle and then into a discourse particle. Entertaining Minimalist and Cartographic practices (Chomsky, 2000; Rizzi, 1997; Frascarelli & Hinterhölzl, 2007; Struckmeier, 2014), splitting the CP domain and holding movement and merger diagnostics, evidence is provided that the grammaticalised practices have developed properties of head status in syntax. One of the important insights this study shows is related to agreement; while both grammaticalised, T- $ra\hbar$  has lost the  $\varphi$ -features present on the lexical form of  $ra\hbar$ , D- $ra\hbar$  has retained the set of  $\varphi$ -features, contra current assumptions (Biberauer et al., 2014). Hence, a phenomenon that calls for further research on linguistic operations that are activated within a grammaticalisation process. The other issue the paper elaborates on is the observation that Merge is a plausible account to the syntax of discourse particles (Hack, 2014), with evidence form movement.

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