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AGREEMENT AND CLITIC DOUBLING IN ARABIC

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ABSTRACT

This dissertation investigates the difference between ϕ-agreement and clitic doubling using Tunisian (Maghrebi) and Palestinian (Levantine) Arabic as an empirical ground: I look at the same series of morphophonological clitics in both dialects, in four different contexts, and show that we can distinguish two syntactic types: *Doubling* clitics and *agreement* clitics.

Following Saab (2024), I defend a tripartite taxonomy of clitics, where doubling clitics are neither pronouns nor agreement, but at a discrete stage on the grammaticalization path between the former and the latter. I analyze doubling clitics as heads that are part of the extended projection of the verb (Sportiche 1996; Saab 2024), with the clitic head CL as a μ-binder (Büring 2004), requiring an element in its specifier binding a trace or a pronoun (Hewett 2023c). By contrast, pronominal clitics are Ds with an elided NP complement (Elbourne 2005), and agreement clitics are the realization of a ϕ-probe in T.

The first part of the dissertation is dedicated to the coordination diagnostic (Ostrove 2018; Paparounas and Salzmann 2023b), which predicts that only first conjunct agreement should obtain, not first conjunct clitic doubling, as the latter would involve a type of movement violating the Coordinate Structure Constraint. In Arabic, clitic doubling of a first conjunct lexical DP is impossible, but that of a first conjunct pronoun is acceptable. This follows from the nature of CL°: As a μ-binder, it either requires movement of an element to its specifier to bind a trace, or it can bind a resumptive pronoun. Thus, with lexical DPs, the entire &P must move to the specifier of CL°, whereas a pronominal first conjunct can remain in-situ and be bound by an element base-generated in that specifier.

In the second part of the dissertation, I apply other diagnostics from the literature, in addition to exploring internal evidence from Arabic, showing that doubling clitics and agreement clitics consistently pattern differently: Doubling clitics obey semantic/pragmatic restrictions, are sensitive to the features of the argument they cross-reference, don't have a default re-

alization, etc. Agreement clitics have none of these restrictions, they act like subject-verb agreement and are even in complementary distribution with verbs. I explain some properties of doubling clitics synchronically, by the nature of CL°, while others (like its pragmatic restrictions) follow from the diachronic development of this construction, which I propose is the result of grammaticalization of right dislocation. As for agreement clitics, I propose that they are the result of the grammaticalization of subject pronouns as agreement markers becoming the surface realization of T° when no verb has moved to that head.

Thus, I show that the same clitic series is actually the surface result of two different syntactic processes. I explain the difference between the two syntactic processes as the outcome of different diachronic developments which are both on the same general grammaticalization path from pronouns to agreement.

CHAPTER 1

INTRODUCTION

1.1 The scope of the investigation

This dissertation uses Tunisian and Palestinian Arabic data as a case study for the investigation of clitic doubling and ϕ-agreement, focusing on the difference between these two phenomena. While cross-linguistically both pronominal clitics and agreement morphemes are ϕ-bearing elements, it is commonly accepted in generative linguistics that they serve different functions and behave differently as far as their syntax is concerned. That being said, distinguishing between the two is difficult (Fuss 2005:130; Baker and Kramer 2018:1036; Ostrove 2018:47), and this difficulty has led to a prolific literature on the topic in recent years[1] with many authors providing diagnostic tests in order to reliably differentiate the two phenomena.

Despite a rich tradition of syntactic literature on agreement in Arabic,[2] the issue has not, to my knowledge, been investigated in a systematic way for this language family. Yet this dialect continuum offers an ideal empirical ground to gain a better understanding of clitic doubling and ϕ-agreement, as it has a rich verbal agreement system in addition to a series of **clitic exponents** used in a wide variety of contexts to cross-reference objects (1.1) as well as subjects ((1.2)–(1.4)). This series of clitic exponents is the main focus of this dissertation.

1. *E.g.,* Spanish (Suñer 1988; Bleam 2000), Bantu languages (Henderson 2006; Sikuku, Diercks, and Marlo 2018), Basque (Arregi and Nevins 2008, 2012; Preminger 2009, 2019), Amharic (Kramer 2014; Baker and Kramer 2018), Mixtec (Ostrove 2018), Kurdish (Akkuş, Salih, and Embick 2019), Dutch (van Alem 2020), Inuit languages (Yuan 2021), etc.

2. In fact, this tradition is so rich that it would be virtually impossible to cite all of the relevant contributions. See however Fassi Fehri (1993), Mohammad (2000), Benmamoun (2000), Soltan (2007b), and Sahawneh (2017) for monographs dedicating most, if not all of their contents to agreement in Arabic.

(1.1) *Object clitic*

ʃof-t-**ha**$_{i}$ [Ra:nia$_{i}$] lbe:raħ
see.PFV-1SG-**3FSG.CL** R.F yesterday

I saw Rania yesterday. Tunisian

(1.2) *Complementizer clitic*

ħaka ʔinn-**ha**$_{i}$ [tˤ-tˤa:lb-e$_{i}$] xallasˤ-at l-imtiħa:n
say.PFV.3MSG COMP-**3FSG.CL** DEF-student-F finish-PFV.3FSG DEF-exam

He said that the student finished the exam. Palestinian

(1.3) Wh-*clitic*

we:n-**ha**$_{i}$ [tˤ-tˤa:lb-e$_{i}$]
where-**3FSG.CL** DEF-student-F

Where is the student? Palestinian

(1.4) *Negation clitic*

[t-təlmi:ð-a$_{i}$] ma-**ha:**$_{i}$-ʃ f-l-qasm
DEF-student-F NEG-**3FSG.CL**-NEG in-DEF-class

The student is not in the class. Tunisian

In (1.1)–(1.4) the same 3rd person feminine singular clitic appears on four different hosts: A verb (1.1), a complementizer (1.2), a *wh*-word (1.3), and negation (1.4). Broadly, the goal of this dissertation is to offer a description and an analysis of the behavior of this clitic series, seeking to answer the following overarching question: Is this clitic series the result of the same syntactic operation in all four of these contexts?

I show throughout the dissertation that there are two types of clitics in (1.1)–(1.4): Object clitics and complementizer clitics are *doubling* clitics, while *wh*-clitics and negation clitics are *agreement* clitics. Crucially, I do not rely on morphophonological tests to make these claims: The same series of morphemes is used in all of the contexts investigated in the dissertation, and they exhibit characteristics of clitics rather than affixes following Zwicky and Pullum's (1983) criteria (low degree of selectivity with regards to the host, no morphophonological idiosyncrasies, ability to attach to material already containing clitics, etc., see Camilleri (2011:137)). Yet, by focusing on distributional and morphosyntactic properties of these clitics, I find that despite being the same set of morphemes synchronically, they are

doubling clitics in some contexts and *agreement* clitics in other contexts. I further explain this synchronic distribution through different diachronic paths for each type of clitic.

1.2 A central claim: three types of clitics

I analyze doubling clitics as a distinct category from pronominal clitics and agreement clitics/morphemes, arguing for the tripartite taxonomy of weak ϕ-elements proposed by Saab (2024). This is a departure from the previous literature on clitic doubling and agreement because it considers doubling clitics as their own discrete category, neither pronouns (*e.g.,* Fuss 2005; Preminger 2009; Baker and Kramer 2018) nor agreement (*e.g.,* Sportiche 1996; Angelopoulos and Sportiche 2021; Paparounas and Salzmann 2023b). The aim is to not only understand what makes doubling clitics different from pronouns and agreement, but it is also to capture more granular steps within the well documented change from pronouns to agreement (see Givón 1976; Fuss 2005; van Gelderen 2011, among many others). Thus, the tripartite taxonomy as presented in table 1.1 not only refers to three possible synchronic stages in a given grammar that may or may not co-occur,[3] but also correspond to diachronic stages on the grammaticalization cline from pronouns to agreement.

Properties	**I. Pronominal Clitics**	**II. Doubling clitics**	**III. Agreement Clitics**
Makeup	D° with (elided) NP complement	CL° in the extended projection of the verb	The realization of T°
Syntax	Merged as arguments	Merged as non-arguments	Merged as non-arguments
Semantic import	Variable interpreted via assignment function	Ability to trigger predicate abstraction	No semantic import

Table 1.1: Three types of clitics

3. Saab (2024:23) claims that Spanish object clitics are pronominal clitics and doubling clitics depending on the context, while agreement is instantiated by subject agreement morphemes in this language. I contend that in Tunisian and Palestinian Arabic as documented in this dissertation there are doubling clitics and agreement clitics which are historically derived from pronominal clitics. However there are no pronominal clitics synchronically.

Pronominal clitics, as their name suggests, are pronouns. Following Elbourne (2013) and Hewett (2023c), they are D°s whose complement is an elided NP. Doubling clitics, I argue, are of category CL°. While much of the literature describes doubling clitics as D°s—just like pronominal clitics (*e.g.,* Fontana 1993; Uriagereka 1995; Kramer 2014; Fischer, Navarro, and Vega Vilanova 2019, a.o)—I defend the view that in the change from pronominal (argumental) clitic to doubling (non-argumental) clitic, there is a change in category from an element that is in the nominal projection to an element that is in the verbal projection, such that the label D is not appropriate for doubling clitics in this particular analysis. As for agreement clitics, they are the surface realization of a ϕ-probe in T°: Just like agreement morphemes on the verb, they are a contextual realization of T°.

1.3 The insights we gain from investigating clitics

Investigation of the clitic series in (1.1)–(1.4) leads to broad insights beyond the synchronic analysis of clitics per se. These insights include: How the coordination diagnostic informs us about agreement and doubling in a much more nuanced way than previously documented (§1.3.1), how looking at clitics gives us a better understanding of the Arabic clause structure (§1.3.2), and how this detailed investigation of clitics documents possible stages on the grammaticalization path from pronouns to agreement (§1.3.3).

1.3.1 Coordination as a diagnostic test for agreement and doubling

The coordination diagnostic (Ostrove 2018; Paparounas and Salzmann 2023b) relies on the difference between the syntax of agreement (feature valuation) and clitic doubling (movement of a pronominal element) to make a prediction: First conjunct agreement is expected to be possible, while first conjunct clitic doubling is not, as the latter would entail movement out of a conjunct, violating the Coordinate Structure Constraint. This diagnostic test has a central role in the dissertation, leading to two contributions.

First, I show that in Tunisian and Palestinian Arabic, the difference between agreement and doubling is that only the former is possible with first conjunct lexical DPs. Clitic doubling of a first conjunct element is only possible if that conjunct is pronominal. This is a novel empirical contribution to the landscape of clitic doubling within coordinate structures.

Second, I show that clitic doubling of a first conjunct pronoun is illusory. Rather, it is the doubling of a DP binding that pronoun. I also argue that what looks like agreement with a first conjunct pronoun is agreement with a DP binding that pronoun. In particular, I propose that that DP is a BROAD SUBJECT (Doron and Heycock 1999; Heycock and Doron 2003) base-generated in the specifier of T° or Asp°, defending the claim that BROAD SUBJECTS are subjects of predication different from left dislocated DPs. I further extend this idea to objects, by proposing the new category of BROAD OBJECTS, which are base-generated in [Spec, CLP] in clitic doubling configurations. This is a theoretical contribution, especially within the field of Arabic syntax, where BROAD SUBJECTS are a contested category (see *e.g.,* Alqarni and Alanazi 2023).

1.3.2 Arabic clause structure

In investigating agreement clitics, I find that one of their particular properties is their complementary distribution with verbs. Although this fact has been noticed before, particularly in the literature on Arabic negation (by *e.g.,* Aoun, Benmamoun, and Choueiri 2010:107f.), I propose a novel analysis of these clitics as being the realization of T°. Not only that, I argue that the ability of an agreement clitic to surface depends on whether a verbal element has moved to T° or not. This leads me to look into verb movement in Arabic, the position of negation in the clause, and the loci of ϕ-probes within the extended projection of the verb, three topics that have been central to the literature on Arabic syntax since the 1990's. Contrary to much of the literature, I argue that V-to-T movement in Arabic is always possible if not impeded, and not dependent on the tense-aspect of the verb (*contra* Aoun, Benmamoun,

and Choueiri 2010; Soltan 2011). I provide evidence for NegP being merged below TP in Arabic, and argue that each tense-aspect head has a ϕ-probe in this language. All of these claims are the result of looking at the interaction between what I argue are agreement clitics and other elements in the clause, allowing us to better understand key pieces of Arabic syntax.

1.3.3 The grammaticalization path from pronouns to agreement

By defending the tripartite taxonomy of clitics, I argue that doubling clitics are at a discrete stage on the grammaticalization path between pronouns and agreement. Although this path is well documented, I make explicit in this dissertation the steps involved in the grammaticalization of clitic doubling in Arabic. I argue that two successive grammaticalization paths must have happened in order to get the distribution of clitic doubling that I document. First, pronominal clitics were reinterpreted as doubling clitics (as modeled in Saab 2024), and second, a right dislocation structure was reanalyzed as a doubling structure (following similar proposals for Spanish (Gabriel and Rinke 2010) and Greek (de Boel 2008)).

I also show how the development of agreement clitics, although it is part of the same grammaticalization cline, proceeds differently due to the origin of these clitics. Agreement clitics are historically (strong) subject pronouns reanalyzed as pronominal clitics through syntactic change and paradigmatic leveling, unlike doubling clitics which are object clitics that were already weak elements when the grammaticalization process starts.

Thus, I capture "competing grammars" (Heggie and Ordóñez 2005:3) at different stages of a change happening in different contexts, showing how multiple distinct processes come together, leading to the distribution of clitics we see in (1.1)–(1.4).

1.4 Preliminaries on Tunisian and Palestinian Arabic

Tunisian and Palestinian Arabic are part of two distinct subgroups of Arabic dialects: Tunisian belongs to the Maghrebi subgroup and Palestinian to the Levantine one (see Watson 2011). Each of these subgroups is the result of different histories of arabization, population settlement,[4] language contact and shift, etc. The two dialects are thus different in terms of phonology, morphology, syntax and lexicon, yet have enough features in common in order to explore syntactic variation within Arabic. Both dialects have object clitic doubling, although only Palestinian has the accompanying Differential Object Marking, both have complementizer clitics but they attach to different complementizers in each dialect, and both have *wh*-clitics. Note, however, that within the two dialects documented in this dissertation, only Tunisian has negation clitics (other Palestinian varieties have negation clitics (Hoyt 2005, 2007), just not the one reported here).

The variety of Tunisian investigated here is the one spoken in the capital city of Tunis (see Gibson 2011). The data that I report comes from my personal corpus, elicitation from native speakers conducted between 2019 and 2022, and online corpora: TuniCo (TuniCo) and Tunisiya, which is divided into a primary corpus (abbreviated as TC), and an SMS/Facebook corpus (abbreviated as TCI). Data from the latter two are not limited to Tunis Arabic, but examples from these corpora included in the dissertation are acceptable to speakers of this variety.

The Palestinian dialect documented in this dissertation is a variety of Urban Palestinian spoken in Jerusalem (see Rosenhouse 2011). I gathered most of the data reported here during elicitation sessions with a native speaker of this variety between 2022 and 2023. In addition, I include data from the online corpus Curras (Jarrar et al. 2016). Just like for Tunisian, online corpora include more than one variety, so I only report examples that were

4. On which, see Magidow (2013:Chap. 4).

judged as fully acceptable to my consultant.

Unless otherwise noted, I use the terms Tunisian and Palestinian as a shorthand when referring to these two particular dialects, though the reader should keep in mind that any claims I make are restricted to the dialects spoken by the speakers that I have consulted, and thus may not apply in all particulars to Tunisian and Palestinian Arabic as a whole.

1.5 Summary of Chapters

The remainder of this dissertation is structured as follows.

Chapter 2 sets the stage for the dissertation, showing how subject-verb agreement and object clitic doubling in Tunisian and Palestinian can be regarded as two gold standards for agreement and doubling, respectively. I provide my analysis of agreement and doubling in this chapter, important background on Tunisian and Palestinian agreement and clitic doubling, and show how these two phenomena differ with respect to five properties: Tense variance, obligatoriness, sensitivity to the controller, possibility of a default, and pragmatic restrictions.

Chapter 3 is the first of two chapters on the coordination diagnostic. In this chapter, I explore patterns of agreement and doubling with coordinate structures whose first conjunct is a lexical DP. I show that neither dialect allows first conjunct clitic doubling of a lexical DP, and analyze this restriction as the result of movement in clitic doubling. In particular, I argue that in object clitic doubling, the entire &P object must move to the specifier of the clitic head, resulting in obligatory resolved doubling of &P objects. Leading to this analysis is an investigation of first conjunct agreement patterns in both dialects, documenting restrictions that have not been reported so far, and explaining them in terms of feature calculus at the phrasal level.

Chapter 4 is the second chapter dedicated to the coordination diagnostic, in which I focus

on a similarity between agreement and doubling: Here, I show that first conjunct pronouns not only void restrictions we find in first conjunct agreement with lexical DPs, they also make first conjunct clitic doubling possible. I explain the ability of pronouns to flout these restrictions by the fact that pronouns are able to be interpreted as variables and thus are able to be bound. I analyze apparent agreement with a first conjunct pronoun as underlyingly agreement with a covert DP binding that pronoun: A BROAD SUBJECT (Doron and Heycock 1999). I then extend the concept of BROAD SUBJECT and propose that clitic doubling of a pronominal first conjunct is underlyingly doubling of a covert DP binding that pronoun: A BROAD OBJECT. BROAD OBJECTS are a mirror category to BROAD SUBJECTS that I introduce in this chapter.

Chapter 5 expands the empirical and analytical ground. In it, I incorporate the data from complementizer clitics, negation clitics, and *wh*-clitics and provide additional diagnostics for the difference between agreement and doubling. I show that object and complementizer clitics consistently behave the same with regards to sensitivity to the controller, semantic and pragmatic restrictions, presence of a default, and distribution of deflected agreement. In this sense, they are *doubling* clitics. Conversely, negation and *wh*-clitics are *agreement* clitics. They pattern together (and differently from doubling clitics) with regards to all of these properties, in addition to another characteristic: They are in complementary distribution with verbs.

Chapter 6 focuses on the analysis of clitic doubling from a synchronic and diachronic perspective. I analyze clitic doubling as the surface realization of a clitic head, which is not only a ϕ-probe but also μ-binder, heading a projection right above VP. In it, I propose that the synchronic distribution of clitic doubling is the result of two successive grammaticalization paths: The first is one in which pronominal clitics are reinterpreted as doubling clitics, which are limited to doubling pronouns after this change. The second path is one in which a right dislocation structure is reanalyzed as a doubling structure, with a peripheral element reinter-

preted as an argument and a resumptive dependency simplified into a doubling dependency. I argue that many of the documented properties of clitic doubling (*e.g.,* sensitivity to the controller, semantic and pragmatic restrictions) are due to this diachronic development. In addition, I discuss an important property of clitic doubling in Palestinian, which cannot be due to grammaticalization of right dislocation: The presence of Differential Object Marking. Finally, this chapter also extends the analysis of object clitics to complementizer clitics, arguing for a high CLP projection.

Chapter 7 provides an analysis of agreement clitics as the surface realization of T° when no verb has moved to that head. In it, I show how V-to-T movement is always possible no matter the tense/aspect of the verb, but that certain tense/aspect heads cannot move to negation due to independent properties, which in turn blocks their movement to T (Neg° being merged below T°, but above all other aspectual heads). It is in these cases that agreement clitics surface. I also provide a diachronic analysis of agreement clitics in this chapter, arguing that they are historically strong pronouns that were reinterpreted as pronominal clitics through a gradual paradigmatic shift that precipitated a syntactic change, leading to their current distribution.

Chapter 8 puts all the pieces of the analysis together, showing how we obtain the same surface morpheme from two different syntactic operations. The goal of this chapter is to show that different arguments made in different chapters lead to a coherent result, with the right exponents in the right place. In this chapter, I expand on the vocabulary entries for clitics, and on how different post-syntactic rules ought to be ordered so as to derive the two types of clitics where we see them.

Chapter 9 concludes the dissertation by summarizing its main contributions and considering some open questions requiring further research.

CHAPTER 2

SETTING THE STAGE: SUBJECT-VERB AGREEMENT AND OBJECT CLITIC DOUBLING AS TWO GOLD STANDARDS

2.1 Introduction

In this chapter, I review some of the properties of subject-verb agreement (2.1) and those of object clitic doubling (2.2) in Arabic, showing that they differ in a variety of ways which are typical from a cross-linguistic perspective.

(2.1) *Subject-verb agreement in Tunisian*
Ra:nia ʒe:-**t** lbe:raħ
R. come.pfv-**3FSG** yesterday
Rania came yesterday.

(2.2) *Object clitic doubling in Tunisian*
ʃof-t-**ha**$_i$ Ra:nia$_i$ lbe:raħ
see.PFV-1SG-**3FSG.CL** R. yesterday
I saw Rania yesterday.

The goal of this chapter is to set these two phenomena as the gold standards of agreement on the one hand and clitic doubling on the other, against which all other instances of cliticization—that is (1.2)–(1.4), repeated here as (2.3a)–(2.3c)—will be tested throughout the dissertation (in particular in Part II).

(2.3) a. *Complementizer clitic*
ħaka ʔinn-**ha**$_i$ t^ʕ-t^{ʕ}a:lb-e$_i$ xallas^ʕ-at l-imtiħa:n
say.PFV.3MSG COMP-**3FSG.CL** DEF-student-F finish-PFV.3FSG DEF-exam
He said that the student finished the exam. Palestinian

b. Wh-*clitic*
we:n-**ha**$_i$ t^ʕ-t^{ʕ}a:lb-e$_i$
where-**3FSG.CL** DEF-student-F
Where is the student? Palestinian

c. *Negation clitic*
[t-təlmiːð-a$_i$] ma-**haː$_i$**-ʃ f-l-qasm
DEF-student-F NEG-**3FSG.CL**-NEG in-DEF-class
The student is not in the class. Tunisian

Based on these two gold standards to be established in this chapter, I show in subsequent chapters that complementizer clitics (2.3a) act like object clitics (2.2) while *wh*-clitics (2.3b) and negation clitics (2.3c) act like subject-verb agreement (2.1), leading to two categories of clitics that are of concern in the dissertation: Doubling clitics, and agreement clitics.

This chapter is not meant to give an exhaustive view of the properties of clitic doubling and agreement, as I will continue to build that slowly throughout the dissertation, culminating in a full list in Chapter 5. The goal is rather to have a starting point of what sets these two phenomena apart: Subject-verb agreement and object clitic doubling are shown here to systematically differ with regards to the following properties: Obligatoriness, tense-variance, possibility of a default (when agreement fails), sensitivity to the type of controller, and pragmatic restrictions. These results are summarized in table 2.1 below.

Property	Subject-Verb agreement	Object clitic doubling
Obligatory	✓	✗
Tense-variant	✓	✗
Possibility of default	✓	✗
Sensitive to controller	✗	✓
Pragmatic restrictions	✗	✓

Table 2.1: Properties of subject-verb agreement and object clitic doubling in Tunisian and Palestinian

In this chapter, I show that these five properties are naturally accounted for within the analyses of clitic doubling and agreement that I adopt in the dissertation. I take subject-verb agreement to be the reflex of the operation AGREE (Chomsky 2000, 2001) between a

ϕ-probe located in T/Asp and the subject goal. Thus, the location of the ϕ-probe explains the property of tense-variance, the necessity of merging a TP (Aoun, Benmamoun, and Choueiri 2010) explains the property of obligatoriness, and the fact that the operation AGREE is clause-bound explains the possibility of default agreement when agreement fails (Preminger 2009).

By contrast, I take clitic doubling to be the result of a discourse-regulated optional projection, CLP (Sportiche 1996; Saab 2024), whose head—the clitic—is special: It is not only a ϕ-probe but also a μ-binder (Büring 2004, 2005; Hewett 2023c). Thus, the optionality of clitic doubling and its pragmatic restrictions are explained by CLP being an optional projection and its tense invariance by the fact that CL$^{\circ}$ is not dependent on T or Asp.

After laying out my analytical proposal in §2.2, I review the properties shown in table 2.1, setting subject-verb agreement and object clitic doubling apart in §2.3. §2.4 concludes.

2.2 The difference between clitic doubling and agreement

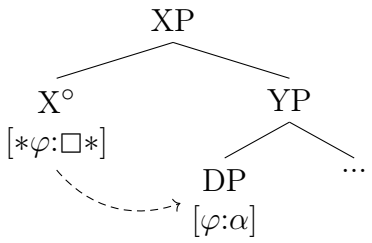
In this section, I review the ways in which the difference between agreement and clitic doubling is generally modeled in the literature and lay out my proposal against this backdrop.

Agreement morphology is usually analyzed as the reflex of the operation AGREE (Chomsky 2000, 2001) between a head (probe) and a goal (2.4a), with the ϕ-features of the goal being realized on the probing head (2.4b).[1]

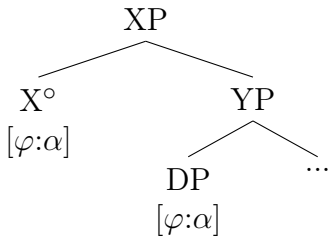
1. Chomsky's AGREE, whereby the probe c-commands the goal, has been particularly influential since its conception, as it easily accommodates cases of long-distance agreement (Bejar 2003:13; Schütze 2020:215). Although AGREE could be understood as being mutually exclusive with Spec-Head agreement (Chomsky 2008:146; Schütze 2020:217)—arguably its most popular predecessor (see Hornstein 2009:127)— it is not necessarily so. Spec-Head agreement will play an important role in this dissertation, though it is limited to one particular configuration: When the probing head carries a binder (see (2.11) below, and Chapters 3 and 4 for the relevance of this configuration). So, in general, agreement in this dissertation obtains *via* standard Chomskian AGREE, as described in (2.4), but (2.4) should not be taken to be the only way agreement obtains.

(2.4) *The mechanics of agreement*

a. *Agree*



b. *Valuation*

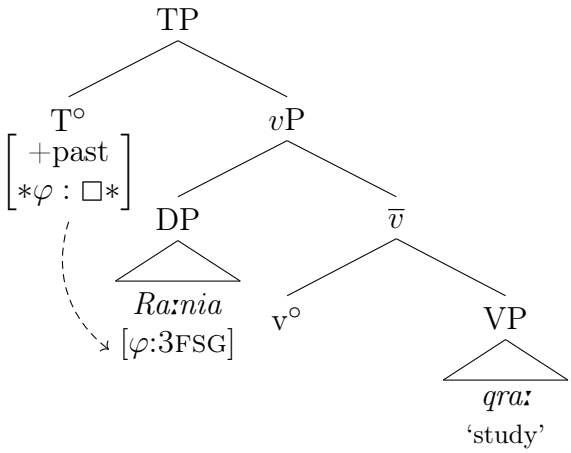


In this dissertation, I assume that cases of agreement like subject-verb agreement in (2.1) above arise through the reflex of the operation AGREE as sketched in (2.4), with a mechanism of feature valuation from the (valued) goal to the (unvalued) probe. Thus, ignoring V-to-T movement and subject movement to [Spec, TP],[2] in a sentence like (2.5a), T° probes down for the DP subject, and the features of that DP are copied onto T°.

(2.5) *Subject Verb agreement as the reflex of Agree*

a. Raːnia qraː**-t**
R. study-**PFV.3FSG**
Rania studied.

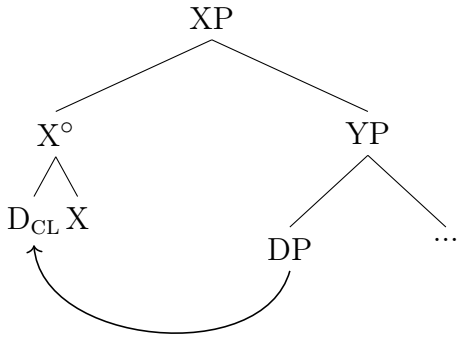
b.



As for clitic doubling, it is generally argued to involve a D head co-occurring with an associate DP through a movement dependency (Uriagereka 1995; Kramer 2014; Harizanov 2014; Ostrove 2018; Yuan 2021, among many others) as sketched in (2.6).

2. I assume subject movement occurs after AGREE in this configuration, yielding the word order observed in (2.5a).

(2.6) *Clitic Doubling*



There are two main of analyzing this movement dependency in the literature: Big-DP approaches (*e.g.*, Torrego 1988, 1992; Uriagereka 1995; van Craenenbroeck and van Koppen 2008; Arregi and Nevins 2012) propose that the doubled element and the clitic initially form a constituent, out of which the clitic moves during the derivation. Move-and-Reduce approaches (*e.g.*, Harizanov 2014; Kramer 2014; Ostrove 2018) propose that the doubled DP undergoes A-movement, and that the head of this movement chain is realized as the clitic while the foot is pronounced as the full DP (Anagnostopoulou 2017:48).

Besides movement analyses, there are base-generation approaches to clitic doubling (Borer 1984; Jaeggli 1986; Suñer 1988; Baker and Kramer 2018) which muddy the lines between this phenomenon and ϕ-agreement, making clitic doubling the surface realization of (object) agreement. For some scholars like Paparounas and Salzmann (2023a, 2023b), this is on purpose: They argue that clitic doubling in Greek is the reflex of AGREE (2.4) and not movement of a D° element (2.6), based on evidence against movement in Greek. Thus, Paparounas and Salzmann (2023b:49) locate the clitic probe as a second probe on T° (in addition to the probe targeting subjects). Others, like Baker and Kramer (2018:1048), maintain that the base-generation approach is compatible with the clitic being interpreted as a pronoun at LF, being of category D, not just the realization of another probing head. They propose that the clitic is a D° that can be base-generated adjoined to v°.

The last major approach to clitic doubling was pioneered by Sportiche (1996), and involves both base-generation (of the clitic) and movement (of the doubled DP). Sportiche proposes that clitics head their own projections (CLITIC VOICES), and that the doubled DP moves to the specifier of those projections. The view I adopt here is essentially a reconciliatory one *à la* Sportiche (1996) but with important modifications to the nature of the clitic head, following Saab (2024), and based on the Arabic data, which differs substantially from the French data for which this analysis was initially developed.

As mentioned in Chapter 1, this dissertation argues for a tripartite classification of weak elements: Pronominal clitics, doubling clitics, and agreement clitics (Saab 2024). For doubling clitics, I don't assume movement of a D element as in (2.6), though the clitic, being a head, does undergo head-movement. Instead, the proposal here is that clitics do head their own projections as pioneered by Sportiche (1996). In Chapter 6, I provide a detailed diachronic analysis showing how pronominal clitics, which are D heads in a nominal projection, become doubling clitics in the extended projection of the verb. For now, however, let's focus on the synchronic analysis of clitic doubling that I will be using and developing throughout the dissertation. The analysis has the following ingredients (2.7) and is illustrated in (2.8) below.

(2.7) **The ingredients of clitic doubling**

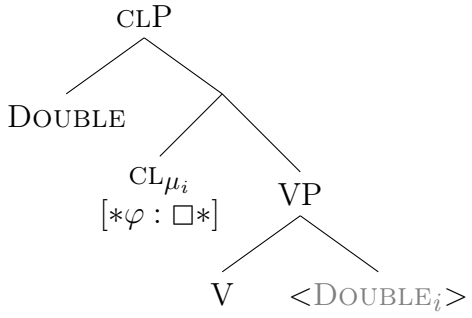
a. A clitic projection, CLP, headed by a CL$^\circ$ (Sportiche 1996; Angelopoulos and Sportiche 2021; Saab 2024). Doubling clitics are the surface realization of CL$^\circ$.

b. The CL$^\circ$ is a ϕ-probe: It comes unvalued and must agree with the element it doubles (Sportiche 1996; Saab 2024).

c. The CL$^\circ$ is a μ-binder (Büring 2004, 2005): It requires an element in its specifier which binds a pronoun or a trace.[3] By virtue of being a μ-binder, a doubling clitic triggers Predicate Abstraction (Heim and Kratzer 1998:198,(4)).

3. Though originally Büring (2005:164) uses the letter μ as a mnemonic for 'movement' and proposes μ as a trace-binding operator (Büring 2004:25), Hewett (2023c:400–2) argues that they bind base-generated resumptive pronouns as well. Hewett's contribution is crucial and I use the possibility of μ as a resumptive pronoun-binding operator at length in Chapter 4.

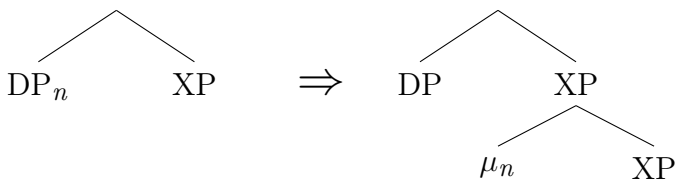
(2.8) *Analysis of Clitic Doubling*



Out of the three elements in (2.7), perhaps the most novel and crucial is (2.7c). It is a slight modification of Saab's (2024) proposal that doubling clitics are λ-abstractors: This is an important departure from analyses treat clitics as simple pronouns—interpreted as variables at LF—and those that treat them as agreement markers, which are uninterpretable. The latter position is the one taken by Sportiche (1996) and Angelopoulos and Sportiche (2021) within a Clitic Phrase analysis where the Clitic head is an agreement head, *i.e.,* a head with no semantic import. However, in the tripartite taxonomy of clitics advocated for here, the LF import of a doubling clitic is its ability to trigger Predicate Abstraction (see Aoun (1993, 1999) for an important precedent to this type of analysis).

μ-prefixes—like other binder prefixes—are generally inserted below a DP, where μ_n binds any free occurrence of the matching index "n" in its c-command domain (2.9) (Hewett 2023c:400).

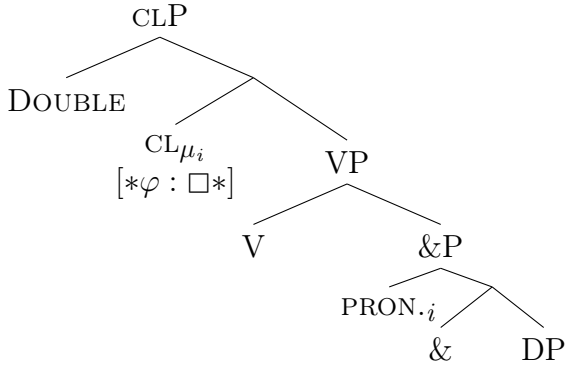
(2.9) *μ-adjunction* (Büring 2004:25,(3a))



Instead of saying that a clitic doubling structure involves the adjunction of a μ-prefix—say, just in the case that the doubled DP moves to the specifier of CL°—, I propose that doubling

clitics are basically lexical items that are themselves μ-binders.[4] This indirectly[5] imposes a requirement that a doubling clitic have an element in its c-command domain that can be bound by a μ-binder: A trace, or a pronoun. This in turn guarantees the movement of the doubled DP to the specifier of CLP, since the CL head itself is a μ-binder, which results in a clitic doubling structure (2.8) that is very similar to μ-adjunction post-movement (2.9) (Büring 2005:164). What's more, the analysis where doubling clitics are μ-binders naturally extends to account for cases of first conjunct clitic doubling with pronouns (see Chapter 4), where instead of binding the trace of a moved DP, a resumptive pronoun is in the c-command domain of the CL°, as illustrated in (2.10).

(2.10) *Analysis of first conjunct clitic doubling*



In (2.10), because there is a pronoun in the c-command domain of CL, namely the first conjunct of the complement of V, that pronoun is able to be bound in the same way as the trace in (2.8). Thus, the double is merged in the specifier of CL°, satisfying the requirement of the μ-binder. This analysis rests on Hewett's (2023c:401) insight that μ is a binder prefix for traces as well as resumptive pronouns.

4. I thank Karlos Arregi for suggesting this idea to me while I was working on this analysis, and for referring me to McKenzie (2012), who analyzes Switch-Reference as being introduced by a special head, SR°, which itself is a binder. Where McKenzie (2012:190) proposes that the sole purpose of this head is to introduce Switch-Reference, I propose that the sole purpose of CL° is to introduce a clitic in the structure. Of course, this is also the view of Sportiche (1996) and Angelopoulos and Sportiche (2021), for whom clitics surface only if Clitic Phrases are present. The twist here is the nature of the clitic head, which is not simply an agreement head but a binder.

5. More precisely, the independent ban on vacuous quantification forces the presence of a trace or a pronoun in the c-command domain of CL° in this configuration.

As for ingredient (2.7b) in the clitic doubling analysis, namely that CL is a ϕ-probe agreeing with the element it doubles, I propose that agreement obtains in a Spec-Head fashion here, *after* the movement of the doubled element to the specifier of CL as in (2.8), or after externally merging the double in that position as in (2.10). While I do not propose Spec-Head agreement across the board in this dissertation (cf. (2.5b)), I will show that it must obtain in one special circumstance, namely when a DP is in the specifier of a head carrying a μ-binder. Inspired by Kratzer's (2009:196,(19)) "Specifier-Head agreement under Binding" rule, I propose a modification suitable for our purposes here (2.11).[6]

(2.11) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

Rule (2.11) will end up being important not only for clitic doubling but also for agreement more generally (see Chapters 3 and 4), constituting a central analytical thread in the dissertation. Thus, I defend a version of BIDIRECTIONAL AGREE (Merchant 2006; Barker 2008; Himmelreich 2017) where both downward and upward AGREE are possible, with the former being the general way for AGREE to obtain, and the latter being the more specific manifestation of AGREE. In fact, I propose that upward AGREE is restricted in two ways: It only obtains when the probing head carries a binder, and it is specifically a Spec-Head relation, not a more general relation where the goal c-commands the probe (*e.g.,* Zeijlstra 2012). In particular, the relation between binding and Spec-Head agreement has the aim to capture the tight relation between movement and (certain types of) agreement in certain configurations (Koopman 2006; Kramer 2009; Georgi 2017), like (2.8). I further extend it to cases where no movement has taken place, but the same binding relation holds, like in (2.10).

6. The wording in Kratzer's (2009:196,(19)) rule is as follows:

(i) *Predication (Specifier-Head Agreement under Binding)*
When a DP occupies the specifier position of a head that carries a λ-operator, their ϕ-feature sets unify.

To summarize, the analytical difference I posit between agreement and clitic doubling is the following: Agreement arises as the result of feature valuation of an unvalued ϕ-probe by a valued goal, following standard assumptions on the matter. This probing usually occurs in a downward fashion, except when the probing head carries a binder, in which case it occurs in Spec-Head fashion (2.11). By contrast, clitic doubling involves merging a special head CL, which by virtue of being a μ-binder, requires a specific relationship between the element in its specifier and an element in its c-command, that is binding of a trace (of the moved double) or a pronoun. Though clitic doubling does involve a step of agreement, it also requires this binding relationship that is not necessary for ϕ-agreement more generally. In the next section, I show how this analytical difference can account for the different properties of subject-verb agreement and object clitic doubling in Tunisian and Palestinian.

2.3 Subject-Verb Agreement and Object Clitic Doubling as gold standards

The goal of this section is to set up Subject-Verb Agreement (2.12) (repeated from (2.1)) and Object Clitic Doubling (2.13) (repeated from (2.2)) as gold standards of agreement and clitic doubling as analyzed in the previous section.

(2.12) *Subject-verb agreement in Tunisian*

Ra:nia	ʒe:-**t**	lbe:raħ
R.	came-**3FSG**	yesterday

Rania came yesterday.

(2.13) *Object clitic doubling in Tunisian*

ʃoft-**ha**$_i$	Ra:nia$_i$	lbe:raħ
saw.1SG-**3FSG.CL**	R.	yesterday

I saw Rania yesterday.

I start by giving an overview of the paradigms of interest and providing some observations in §2.3.1. I then give a short but important background on clitic doubling in Tunisian and Palestinian in §2.3.2, before turning to the differences between subject-verb agreement and

object clitic doubling in §2.3.3.

2.3.1 The paradigms of interest

Arabic has two sets of agreement affixes that are relatively uncontroversially analyzed as such: One is for the suffix conjugation (≈ perfective) and one is for the prefix conjugation (≈ imperfective). The names of these categories refer to the placement of the agreement affixes depending on the tense/aspect: In the perfective, the affixes are entirely suffixal, while in the imperfective they are prefixal, with some members having so-called discontinuous agreement (both prefixes and suffixes). The Tunisian and Palestinian paradigms are in tables 2.2 and 2.3 respectively.

Person	Suffix Conj.	Prefix Conj.
1SG	VERB-t	n-VERB
2SG	VERB-t	t-VERB
3MSG	VERB	j-VERB
3FSG	VERB-ət	t-VERB
1PL	VERB-na	n-VERB-u
2PL	VERB-tu	t-VERB-u
3PL	VERB-u	j-VERB-u

Table 2.2: Agreement affixes in Tunisian

Person	Suffix Conj.	Prefix Conj.
1SG	VERB-ət	ʔ-VERB
2MSG	VERB-ət	t-VERB
2FSG	VERB-ti	t-VERB-i
3MSG	VERB	j-VERB
3FSG	VERB-at	t-VERB
1PL	VERB-na	n-VERB
2PL	VERB-tu	t-VERB-u
3PL	VERB-u	j-VERB-u

Table 2.3: Agreement affixes in Palestinian

While I take the claim that subject-verb agreement in Arabic is true ϕ-agreement to be relatively uncontroversial, I take the time in this chapter to give a few pieces of evidence supporting it for two main reasons: It has been argued that these affixes are incorporated pronouns by *e.g.,* Ayoub (1981), Fassi Fehri (1993:chap. 3),[7] and particularly for the suffix

7. It is also the mainstream view in traditional Arabic grammar that these affixes are bound pronouns (cf. the notion of *ðami:r muttasʕil* in *e.g.,* Ibn as-Sarraj (10th C.[1987])). This view makes sense given the agreement system of Classical and Standard Arabic, which differs in many ways from the system we find

conjugation, these affixes are historically pronominal clitics in earlier stages of Semitic (Givón 1976:7; Huehnergard 2019a:7). That being said, the agreement system in spoken Arabic synchronically displays properties typical of what Corbett (2006:9–27) describes as "canonical agreement," as we will see in §2.3.3.

The second set of paradigms that will be of interest here is that of the clitics, given in tables 2.4 and 2.5 with the corresponding strong pronominal forms.

Person	**Strong pronouns**	**Clitics**	
		C-	V-
1SG	*ʔeːna*	*-ni*	
		-i	*-ja*
2SG	*ʔənti*	*-ək*	*-k*
3MSG	*howwa*	*-u*	*-h(u)*
3FSG	*hijja*	*-ha*	*-ha*
		-i	*-hi*
1PL	*(n)aħna*	*-na*	
2PL	*ntuːma*	*-kom*	
3PL	*huːma*	*-hom*	

Table 2.4: Strong pronouns and clitics in Tunisian

Person	**Strong pronouns**	**Clitics**	
		C-	V-
1SG	*ʔana*	*-ni*	
		-i	*-j*
2MSG	*ʔinta*	*-ak*	*-k*
2FSG	*ʔinti*	*-ək*	*-ki*
3MSG	*huwwe*	*-o*	V**ː**
3FSG	*hijje*	*-ha*	
1PL	*ʔiħna*	*-na*	
2PL	*ʔintu*	*-kom*	
3PL	*humme*	*-hom*	

Table 2.5: Strong pronouns and clitics in Palestinian

in Spoken Arabic. In particular, in Classical and Standard Arabic, post-verbal lexical DPs trigger partial agreement on the verb (*i.e.,* they do not agree in number) while pronouns trigger full agreement, as shown in the contrast between (ia) and (ib).

(i) a. {qaraʔ-a / *qaraʔ-uː} l-ʔawlaːd-u d-dars-a
{read-3MSG.PFV / *read-3MPL.PFV} DEF-boys-NOM DEF-lesson-ACC
The boys read the lesson. (Soltan 2006:240,(1b))

b. {*qaraʔ-a / qaraʔ-uː} (humu) d-dars-a
{*read-3MSG.PFV / read-3MPL.PFV} (pron.3.PL) DEF-lesson-ACC
They read the lesson. (Soltan 2006:284,(17b))

Notes on the forms of the clitics

In both dialects, the form of the clitic is conditioned by the last segment of the host, *i.e.,* whether it is a C(onsonant) or a V(owel). In addition, there are two forms of the first person singular clitic: The *-ni* form and the *-i/-j(a)* form. In Standard Arabic, these two forms are case-conditioned: The former is accusative and the latter are genitive. This is largely true for Tunisian and Palestinian, where the former is used to cross-reference direct objects and the latter to cross-reference complements of nouns and prepositions. So, we could assume that there is a set of accusative and a set of genitive pronominal clitics with case syncretism in all persons except the first person singular.

However, the case distinction breaks down once we move to other hosts, such as complementizers (2.3a) and negation (2.3c). In Tunisian, the complementizer *ʕlaxaːtˤər* and negation take the *-ni* clitic while the complementizer *keːn* and the *wh*-word *wiːn* take the *-i* form. In addition, the clitics usually cross-reference subjects on these hosts, and subjects are expected to get nominative case, so the case distinction becomes even trickier to justify in these contexts.[8] As far as I know, this question has not been explicitly brought up in the literature: Some scholars like Aoun, Benmamoun, and Choueiri (2010) seem to assume that there is an accusative/genitive distinction[9] while others like Shlonsky (1997:chap. 9) assume that there

8. The complementizer *ʔinna* in Classical and Standard Arabic assigns accusative case to the subject of the embedded clause (see Ryding 2005:422–6), but it doesn't seem to be the case that complementizers assign accusative case synchronically in spoken Arabic. The only way to make this claim would be based on the use of oblique clitics on the complementizers since there is no visible accusative case on DPs in spoken Arabic. However, the distribution of clitics on the complementizer *ʔinn* in spoken Arabic is already quite different from the distribution we observe in Classical/Standard Arabic. For example, in the latter varieties, the complementizer clitic only surfaces in cases where the embedded subject is pro-dropped (Ryding 2005:423–4) or postverbal (Sahawneh 2017:65). In Palestinian Arabic, by contrast, the complementizer clitic can cross-reference an overt subject immediately following it (see relevant examples in §5.3.1 and §5.3.2). Note that Tunisian doesn't have a productive use of the *ʔinn(a)* complementizer, but complementizer clitics in this dialect are also not restricted like those of Classical/Standard Arabic. Overall, although there is a resemblance between complementizer clitics in Classical/Standard Arabic on one hand and those in Tunisian and Palestinian on the other hand, I think this resemblance is mostly formal and historical, and that there is no analytical advantage in hypothesizing that complementizers assign accusative case in Tunisian and Palestinian.

9. This seems to lead them to entertain the idea of negation assigning accusative case in Lebanese Arabic, because the *-ni* form is the one that surfaces on negation in this dialect. See Chapter 7 for my analysis

is no case distinction at all. It is hard to tell what is responsible for the form of the clitics synchronically, so while I recognize that there are different forms, I do not dwell on the case issue here. The other person that gets two clitic forms is the 3rd feminine singular with the allomorphs *ha* and *(h)i*. This allomorphy is exclusive to Tunisian and will be talked about in more detail in Chapter 5 (§5.4.1). Finally, note that Palestinian has a gender distinction in the 2nd person singular where Tunisian lacks one.

Before getting into the properties of agreement vs. doubling, the following section provides some background on object clitic doubling in Tunisian and Palestinian, in order to establish a clear description of the phenomenon in both dialects. This is especially important because the claim that Tunisian has clitic doubling is not trivial.

2.3.2 Background on object clitic doubling in Tunisian and Palestinian

Levantine Arabic—to which Palestinian belongs—is usually used as a hallmark example of clitic doubling in Arabic, and is very well described in the literature.[10] It obeys Kayne's generalization,[11] as shown in (2.14), where the doubled object *Karim* is obligatorily preceded by the preposition or, as I gloss it, the object marker *la*.

(2.14) *Object clitic doubling in Palestinian*

Ramzi za:r-**o**$_i$ *(**la-**)[Kari:m$_i$]

R. visit.PFV.3MSG-**3MSG.CL** *(**OM-**)K.

Ramzi visited Karim. (Jiries 2020:8)

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of negation clitics which does not involve them being assigned case as they are the surface realization of a probe, not a pronoun. See also Leddy-Cecere (2023) and the discussion in §7.6 for a diachronic explanation of historically accusative pronouns surfacing on negation.

10. See *e.g,* Levin (1987) for Galilean Palestinian, Aoun (1999, 2011) for Lebanese, and Brustad (2000:353–358) and Hallman and Al-Balushi (2022) for Syrian.

11. "Kayne's Generalization: An object NP may be doubled only if it is preceded by a preposition" (Jaeggli 1980:39). While this generalization holds for languages such as Spanish and Romanian, both of which have a preposition preceding doubled objects (*a* for Spanish and *pe* for Romanian), it does not extend to languages like Greek (Anagnostopoulou 2017:22) or Bulgarian (Harizanov 2014:1036), which lack such a marker for doubled objects.

By contrast, Tunisian clitic doubling as in (2.15) does not obey Kayne's generalization, the doubled object surfacing without any marker.

(2.15) *Object clitic doubling in Tunisian*
ʃof-t-**u$_i$** [Se:mi$_i$] lbe:raħ
see-PFV.1SG-**3MSG.CL** S. yesterday
I saw SAMI yesterday.

It is important to note that the claim that Tunisian has object clitic doubling and that (2.15) is an example of it is quite novel. The literature on Arabic seems to assume that Maghrebi dialects—to which Tunisian belongs—do not have this phenomenon (see Souag (2017) for a survey on the matter).[12] I argue in Sellami (2020) that examples like Tunisian (2.15) are indeed clitic doubling, even though they might look different from their counterparts in Levantine dialects. Indeed, I show how they differ from other phenomena where clitics surface, such as left and right dislocation. For instance, in examples such as (2.15), there is no intonational break between the clitic and the DP it doubles, whereas such a pause is characteristic of right dislocation cross-linguistically (Jaeggli 1986:35; Cecchetto 1999:56;

12. The very few reported instances of this phenomenon in Maghrebi are interestingly not of object clitic doubling. According to Souag (2017:57), the most common type of clitic doubling in the region is possessor doubling restricted to kinship relations, as in the following examples.

(i) baba-h$_i$ de-rˤ-rˤaʒel$_i$
father-3MSG.CL of-DEF-man
The father's man Moroccan (Harrell 1962:202)

(ii) xu-h$_i$ taʕ Kamal$_i$
brother-3MSG.CL of K.
Kamal's brother Algerian (Souag 2005:164)

Yet, this is exactly the type of example that I have not found in the Tunisian data (though possessor doubling in this dialect is acceptable without the genitive particle). Conversely, Souag (2017:58,(22)) reports the following example to be ungrammatical in Algerian.

(iii) * ʃəf-t-ha$_i$ xʷt$_i$-i lba:rəħ
see-PFV.1SG-3FSG.CL sister-1SG.CL yesterday
I saw my sister yesterday.

Examples like (iii) are not only grammatical in Tunis Arabic, they are part of the main focus of the dissertation.

Anagnostopoulou 2017:7).[13] Furthermore, the optional clitic in (2.15) is presumably the realization of a syntactic process that is different from its obligatory use as a resumptive pronoun in a clitic left dislocation example such as (2.16) and right dislocation as in (2.17).[14]

(2.16) *Left dislocation*

Se:mi$_i$	ʃof-t*(**-u$_i$**)	lbe:raħ
S.	see-PFV.1SG*(**-3MSG.CL**)	yesterday

SAMI, I saw him yesterday.

(2.17) *Right dislocation*

ʃof-t*(**-u$_i$**)	lbe:raħ	Se:mi$_i$
see-PFV.1SG*(**-3MSG.CL**)	yesterday	S.

I saw him YESTERDAY, Sami.

Not only is the doubling clitic optional in (2.15) while the resumptive clitic is obligatory in (2.17), but there is also a difference in word order between the two sentences: In the latter, the adjunct 'yesterday' intervenes between the clitic and the dislocated element while in the former, this adjunct is at the end of the sentence. Additionally, the prosody in these two examples is different: In (2.17), the dislocated element is unaccented, which is expected in right dislocation structures, but not in clitic doubling ones, where the doubled element is accented[15] (Lambrecht 2001). These differences correlate with another one, namely that the

13. It seems that non-Kayne complying object clitic doubling in Arabic has not been described in the literature and perhaps not recognized as clitic doubling because it looks different from the known cases of the phenomenon in this dialect continuum, which are Kayne-compliant. However, Hallman and Al-Balushi (2022:1320–1321) also show that object clitic doubling similar to Tunisian is productive in Omani Arabic, a dialect pertaining to a different subgroup and spoken in a completely different area. This leads me to suspect that clitic doubling is much more common in Arabic than previously reported.

14. There are many approaches assimilating dislocation structures containing a resumptive clitic to doubling structures derivationally, especially for Indo-European languages (*e.g.,* Cecchetto 1999; Angelopoulos and Sportiche 2021). In these approaches, resumptive clitics are initially merged as doubling clitics. Although Hewett (2023c:chap. 5) provides numerous differences between clitic doubling and (base-generated) resumption cross-linguistically and especially in Tunisian, Syrian, and Iraqi Arabic, I will propose in Chapter 6 that both doubling clitics and resumptive clitics are the realization of CL°, which doesn't prevent their surface differences like the ones noted by Hewett (2023c). More precisely, resumptive clitics are the realization of clitics that double (possibily null) resumptive strong pronouns. That being said, I keep using the terminology of "resumptive clitic" and "doubling clitic" to differentiate resumptive dependencies from doubling dependencies *on the surface*.

15. Accented elements are rendered with small caps in the translations of the examples. Note also that only in the right dislocation structure (2.17) does the element immediately preceding the right dislocate bear main prominence (Cecchetto 1999:57).

at-issue content for a sentence like (2.17) is simply not the same as the one for (2.15). While in (2.17), the question under discussion (QUD: Roberts, 1996[2012]) is *when* I saw Sami, the QUD in (2.15) is *whether* I saw Sami. Most crucially, in (2.17), Sami is *backgrounded* (Zwart 2001; Ott 2017). The two utterances are not relevant to the same QUD: They are different from an information structure standpoint[16] (see §6.3 for a more detailed discussion and analysis of right dislocation).

So, even in a dialect like Tunisian where Kayne's Generalization doesn't apply, we can distinguish between right dislocation and object clitic doubling and be confident that the language has both phenomena.

With this background in mind, we are now ready to explore the differences between subject-verb agreement and object clitic doubling.

2.3.3 Differences between subject-verb agreement and object clitic doubling

In this section, I show that subject-verb agreement and object clitic doubling differ alongside five properties: Tense variance, obligatoriness, sensitivity to the controller, possibility of default, and pragmatic restrictions.

Property #1: Tense Variance

As presented in tables 2.2 and 2.3 above, the subject-verb agreement morphemes of Arabic are tense/aspect sensitive: In (2.18), the form and the placement of the agreement affix depends on the verb being perfective or imperfective.

(2.18) *Agreement morphemes vary according to tense/aspect*

a. l-wleːd {xarʒ-**u** / **jo**-xrʒ-**u**}
DEF-boys {leave.PFV-**3PL** / **IFPV.3-**leave.IPFV-**PL**}

16. The difference in QUDs can also be diagnosed as follows: At-issue content can be directly assented or dissented with (Tonhauser 2012:241). Someone can respond to the utterance in (2.17) by saying "no, not yesterday", but it would be odd to say "no, you did not see Sami." The opposite is true for (2.15).

The boys {left / leave}. Tunisian

b. l-binət {tˤilʕ-**at** / b-**t**-itˤlaʕ}
DEF-girl {leave.PFV-**3FSG** / IND-**IPFV.3FSG**-leave.IPFV}
The girl {left / leaves}. Palestinian

Tense-variance is taken to be an indicator of true agreement morphology as opposed to pronominal incorporation by *e.g.,* Nevins (2011:960–961) and Arregi and Nevins (2012:51). Though this is not a decisive argument by any means (cf. Paparounas and Salzmann 2023b:53), it can work in tandem with the other properties described here, following the view that the power of these diagnostic tests lies in numbers (Kramer 2014:612).

By contrast, the clitics in Arabic are not tense-sensitive. The same clitic surfaces with both conjugations (2.19).

(2.19) *Clitics are tense-invariant*

a. {ʃeːf / j-ʃuːf}**-ha**
{see.PFV.3MSG / IPFV.3MSG-see}**-3FSG.CL**
He saw/sees her. Tunisian

b. {ʃaːf / b-i-ʃuːf}**-ni**
{see.PFV.3MSG / IND-IPFV.3MSG-see}**-1SG.CL**
He saw/sees me. Palestinian

This difference naturally follows from the analysis sketched in §2.2: Recall that I begin with the well-founded assumption that subject-verb agreement arises through the reflex of AGREE between an unvalued ϕ-probe and a valued goal. In addition, I propose that at least one of these ϕ-probes is located in T$^{\circ}$ (Soltan 2011; Hewett 2020). Thus, it makes sense that the agreement morphemes would be sensitive to tense: They are conditioned by it. This is in line with Hewett's (2020, 2023b) proposed vocabulary items for the agreement morphemes in different varieties of Arabic, and the application of his framework to Palestinian Arabic by Jiries (2022b). Abstracting away from the prefixal/suffixal nature of the agreement affixes, the vocabulary entries for the third person feminine singular in Palestinian (2.18b) would be

as follows.[17]

(2.20) *Third feminine singular Vocabulary Items in Palestinian*

a. *Perfective*
$$\begin{bmatrix} + \text{ singular} \\ + \text{ feminine} \\ + \textbf{ past} \end{bmatrix} \leftrightarrow \textit{-at}$$

b. *Imperfective*
$$\begin{bmatrix} + \text{ singular} \\ + \text{ feminine} \\ - \textbf{ past} \end{bmatrix} \leftrightarrow \textit{t-}$$

(slightly adapted from Jiries 2022b:10,(25))

The difference between the two entries in (2.20) is in the [±past] feature, *i.e.,* the tense.

Conversely, the ϕ-probe responsible for the realization of the clitic is not located on a head bearing tense information. Unlike T°, CL° in (2.8) above comes with unvalued ϕ-features but is not tied to a specific tense or aspect, hence the ability of the same clitic to surface on both a perfective and imperfective verb in (2.19). So, with regards to tense-variance, my analysis predicts the split between subject-verb agreement and object clitic doubling.

Property #2: Obligatoriness

Subject-verb agreement and object clitic doubling differ in optionality.

(2.21) *Subject-verb agreement is obligatory*

a. l-wle:d {xarʒ-**u** / **jo**-xrʒ-**u**}
DEF-boys {leave.PFV-**3PL** / **IFPV.3-**leave.IPFV-PL}
The boys {left / leave}.

b. {xarʒ-**u** / **jo**-xrʒ-**u**}
{leave.PFV-**3PL** / **IFPV.3-**leave.IPFV-PL}
They {left / leave}.

While the former is obligatory whether the subject is overt (2.21a) or not (2.21b), the latter is completely optional with an overt object (2.22a), and obligatory with a covert one (2.22b).

17. Note that I call the two forms Perfective and Imperfective, which are aspectual categories (presumably present on Asp° (Bjorkman 2011:63–8)), but the distinguishing feature I focus on is ±past, a common assumption in the literature on Arabic (see Benmamoun (2000), Aoun, Benmamoun, and Choueiri (2010), Soltan (2011), and Ouali (2017) and the discussion in §7.4, where I refine the analysis of ϕ-agreement).

(2.22) *Direct object clitics in Tunisian*

a. ʃof-t(**-u**) Se:mi
see-PFV.1SG(-3SG.CL) S.
I saw Sami.

b. ʃof-t*(**-u**)
see-PFV.1SG*(**-3MSG.CL**)
I saw him.

This difference also follows from the analysis advocated for in this dissertation: T° is not an optional head in Arabic, it is hypothesized to exist even in verbless clauses (Aoun, Benmamoun, and Choueiri 2010:19, 35–45), while the CLP projection that I posit is optional (Sportiche 1996).[18] Thus, it makes sense that agreement morphemes located on T° must be realized, no matter what type of subject they cross-reference, while an optional head like CL° may or may not be merged depending on the context: It is possible to think of (2.22a) as a context where CL° can optionally be merged. As for (2.22b), the the clitic may be derived in two ways: Either it is a clitic doubling structure where the double is silent *pro* (Sportiche 1996; Angelopoulos and Sportiche 2021),[19] or the clitic is not a doubling clitic but a plain pronoun merged as the complement of the verb (Estigarribia 2006:130; Saab 2024:22).[20] The difference between these two proposals is evaluated in Chapter 6, where I argue that bare cliticization involves clitic doubling of *pro* (§6.2). For now, the important point is the asymmetry between optionality and obligatoriness of agreement and cliticization depending on the overtness of the argument, which is accounted for by the optionality (in the case of CL°) and obligatoriness (in the case of T°) of the heads that lead to their realization.

18. "The simplest assumption is that clitics are present if and only if corresponding Clitic Phrases are." (Angelopoulos and Sportiche 2021:975)

19. To derive the obligatoriness of cliticization in this case, we can imagine a constraint on *pro* in object position, *i.e.,* a constraint against object *pro*-drop. For example, if a structure has *pro* as the complement of V and no CLP, the derivation ultimately crashes. But if there is a CLP, *pro* moves to [Spec, CLP], leading to the realization of the clitic and a grammatical result.

20. In this case, the fact that the object is obligatorily a clitic and not a strong pronoun can be modeled as the result of morphological blocking, whereby the strong pronoun and the clitic are in competition, and the latter wins the competition being the default form in object position (see Andrews 1990, Estigarribia 2006 and references therein).

Property #3: Sensitivity to controller

Related to the notion of obligatoriness is whether the ϕ-morpheme's presence is sensitive to the type of controller. Subject-verb agreement in Tunisian and Palestinian is canonical in this sense, conforming to Corbett's (2006:12) criterion that the controller's part of speech is irrelevant : There is no difference between a pronoun or a DP, so long as they have the same set of ϕ features, they will result in the same affix surfacing on a verb.

(2.23) *Subject-verb agreement is not sensitive to the controller*

a. {l-wleːd / huːma} {xarʒ-**u** / **jo**-xrʒ-**u**}
{DEF-boys / PRON.3PL} {leave.PFV-**3PL** / **IFPV.3-**leave.IPFV-**PL**}
{The boys / they} {left / leave}. Tunisian

b. {l-binət / hijje} {tˤilʕ-**at** / b-**t**-itˤlaʕ}
{DEF-girl / PRON.3FSG} {leave.PFV-**3FSG** / IND-**IPFV.3FSG**-leave.IPFV}
{The girl / she} {left / leaves}. Palestinian

This is the case in the Tunisian (2.23a) and Palestinian (2.23b) examples, where the same verb surfaces with a pronoun or a lexical DP.[21] Object clitic doubling contrasts with subject-verb agreement in this respect, being obligatory whenever the object is a pronoun (2.24),[22] but optional otherwise (2.22a).

(2.24) *Doubled object pronouns*[23]

a. ʃof-t*(**-u**) howwa
see-PFV.1SG(**-3MSG.CL**) PRON.3MSG
Tunisian

b. ʃuft*(**-o**) huwwe
see-PFV.1SG(**-3MSG.CL**) PRON.3MSG
I saw him. Palestinian

21. Note that this is one property for which spoken varieties of Arabic differ from Classical and Modern Standard Arabic, where pronouns and lexical DPs do exhibit different agreement patterns when they are in post-verbal position. While the former trigger full agreement on the verb (in person, number, gender), the latter only trigger partial agreement, remaining singular no matter the number of the lexical DP subject. See Soltan (2006) for a discussion of the Standard Arabic data.

22. This is a general property of clitic doubling in many languages such as Spanish (Andrews 1990:539; Suñer 1988:394; Arregi and Nevins 2012:57, among others) Romanian (Irimia 2023:7), Bulgarian (Harizanov 2014:1041), Somali (Hedding 2018:14) etc.

In this case, the controller's part of speech *is* relevant, and governs the distribution of clitic doubling. This relevance isn't only for pronouns vs. DPs: There is a wide range of DPs that cannot be clitic doubled but still must be agreed with. For instance, a quantified DP like "many clients" licenses subject-verb agreement (2.25a) but cannot be doubled by an object clitic (2.25b).

(2.25) *Agreement and doubling with quantifiers in Tunisian*

a. koll nhaːr **j-ʒiː-w**-ni barʃa kliyãn-eːt
every day **3.IPFV-come.IPFV-PL**-1SG.CL many client-PL
Every day, a lot of customers come to me.

b. koll nhaːr n-ʃuf(***-hom**) barʃa kliyãn-eːt
every day 1.IPFV-see(***-3PL.CL**) many client-PL
Every day, I see a lot of customers.

The impossibility of clitic doubling certain types of DPs is quite common cross-linguistically (Anagnostopoulou 2017). If these clitics were the realization of agreement, however, this sensitivity to the type of object DP would be unexpected, especially in light of subject-verb agreement not having it. This sensitivity to the type of controller can be made sense of in my analysis. I argue that CL° is a special kind of head that is not only optional but also cannot host all types of DPs in its specifier. In Chapter 5, I provide a more thorough description of what kinds of DPs may or may not be doubled, and in Chapter 6, I explain this restriction in terms of the diachronic evolution of clitic doubling from a right dislocation structure. By

23. While Tunisian and Palestinian differ with regards to Kayne's generalization in the clitic doubling of lexical DPs, they display the same behavior with regards to direct object pronouns, for which Palestinian does not obey Kayne's generalization as shown by the lack of object marker on the pronoun *huwwe* in (2.24b). Some dialects of Arabic like Iraqi (Erwin 1963:332–4) may obey Kayne's Generalization with pronouns as well, having a uniform behavior for clitic doubled objects. In Iraqi, both doubled lexical DPs (ia) and pronouns (ib) are preceded by the object marker *l-*.

(i) a. fallaʃoː-ha li-l-madrasa l-ʕatiːga
destroyed.3PL-3FSG.CL OM-DEF-school DEF-old
They tore down the old school.

b. raːdoː-ha il-ha
wanted.3PL-3FSG.CL OM-3FSG.CL
They wanted her.

contrast to CL°, the obligatory head T° does not impose these kinds of requirements, it must be present in the derivation regardless of what it may agree with.

Property #4: Possibility of default

As we've established above, subject-verb agreement is obligatory no matter what while object clitic doubling is only obligatory with strong pronouns. But what happens when there is nothing for the verb or the clitic to agree with? According to Preminger (2009), this is a context in which we can test the difference between agreement and clitic doubling. As an illustration, consider the following Spanish example.

(2.26) Parec{***-∅/-e/*-en**} [que los hombres estan durmiendo]
seem{***-∅/-3SG/*-3PL**} [that DEF men are.3PL sleeping]
It seems that the men are sleeping. (slightly adapted from Ostrove 2018:84,(28))

Starting with the assumption that the operation AGREE cannot operate across a finite clause, *i.e.,* that it is subject to the Phase Impenetrability Condition (PIC) (Chomsky 2000, 2008), we can understand why the 3rd plural agreement on the verb is ungrammatical in (2.26). The 3rd plural *los hombres* 'the men' is not a suitable goal as it is in another finite clause and thus inaccessible given the PIC. The verb cannot surface without agreement morphemes in Spanish, and so to salvage this sentence, default agreement which is 3rd singular, surfaces on the verb.

This is also true for Tunisian,[24] where the configuration in (2.27) leads to the same result we find in Spanish.

(2.27) {***∅/jo-/*to-**}ðˤhor-li [əlli l-muˤallm-a
{***∅/3MSG.IPFV-/*3FSG.IPFV-**}seem-1SG.DAT [that DEF-teacher-F
bʃ-t-ɣiːb]
FUT-3FSG.IPFV-be_absent]
It seems that the teacher will be absent.

24. See also Soltan (2007b:112–3) for similar insights on this type of data in Standard Arabic.

Crucially, there is no 3rd masculine singular goal for the verb in the matrix clause to agree with in either (2.26) or (2.27). Agreement on the verb is obligatory, and in order for the sentence to be grammatical, some agreement morphology must surface. Given the lack of suitable goal, the default ϕ-features become the optimal candidate. The possibility of default agreement in such cases is taken by Preminger (2009) to be a diagnostic of true ϕ-agreement. The logic behind this is the following: ϕ-agreement is a feature valuation operation, and non-valuation of unvalued features results in ungrammaticality (Ostrove 2018:66). Conversely, clitic doubling is not a process of feature valuation but a process of *creation* of a pronominal element whose features match those of an existing DP, and as such, we would not expect a default clitic to surface in cases where clitic doubling is impossible: Repair of failed clitic doubling is the disappearance of the clitic (Preminger 2009:623).[25]

Though I do not consider clitic doubling as the creation of a pronominal element so to speak, as doubling clitics form their own category separate from pronouns and agreement in my analysis, the logic of Preminger's diagnostic still holds here: The CLP projection is mostly optional, and may or may not be merged depending on the type of DP in object position and other factors (see Property #5 below and Chapter 6). Thus, if there is no suitable goal for the clitic to agree with, there is a perfectly grammatical derivation that does not contain a CLP projection, which subsequently does not contain a clitic. In the case of (2.25b), the absence of a suitable goal for the clitic to agree with leads to its disappearance as shown in (2.28), and not to a default 3rd masculine singular clitic, as we have seen happen for subject-verb agreement in (2.27).

25. There is perhaps an alternative to the "default agreement due to failure" analysis of (2.26) and (2.27), in which 3rd masculine singular features here are the result cross-referencing the entire clause (see Iatridou and Embick (1997) and Angelopoulos and Sportiche (2021:961–2, 979)). Whether this alternative is the correct way to describe this particular diagnostic or not is irrelevant to the argument. In either case, an agreement morpheme can (and must) surface as a 3rd masculine singular in this context but a doubling clitic cannot. If we reformulate the test as whether a ϕ-morpheme can cross-reference a clause, we obtain the same result: Agreement on the verb can, while a doubling clitic cannot. See §5.4.2 for a more detailed discussion of this diagnostic.

(2.28) *No default clitic in Tunisian*
koll nhaːr n-ʃuf(***-u**/∅) barʃa kliyãn-eːt
every day 1.IPFV-see(***-3MSG.CL**/∅) many client-PL
Every day, I see a lot of customers.

By contrast, following our analysis of subject-verb agreement, there is no grammatical derivation that does not contain a TP projection, hence the insertion of a default. It seems then, following Preminger's (2009) diagnostic, that object clitic doubling is not assimilable to ϕ-agreement (see §5.4.2 for a more complete discussion of this diagnostic).

Property #5: Pragmatic restrictions

The final difference between subject-verb agreement and object clitic doubling that I discuss in this chapter is the discourse-related restrictions on the latter. It is rare in the literature on clitic doubling not to find a discussion on the interpretive effects of clitic doubling, though explicit analyses of them are not very common. These effects are described as "emphasis" by *e.g.,* Gutiérrez-Rexach (1999) and Kramer (2014).[26] Directly related to these pragmatic effects are the notions of animateness, definiteness, and specificity (among other things) that have been observed to be conditions on doubled nominals. For instance, in Amharic, the doubled DP must be specific even if it is indefinite (Kramer 2014:601), while in Rioplatense Spanish it must be animate (Anagnostopoulou 2017:15), and in Romanian, human (Anagnostopoulou 2017:25). We have seen such a restriction in Arabic above with a quantificational DP (2.25b). The restrictions for Arabic are not only on the type of controller, but also whether the discourse conditions allow for clitic doubling in the first place. One such restriction in both Tunisian and Palestinian is for the the doubled DP to be familiar to all discourse participants, *i.e.,* it must be in the common ground (see Stalnaker 1999). For instance, in the Palestinian example (2.29), clitic doubling is infelicitous if the hearer does not know who Rania is, and remains infelicitous even when the speaker elaborates on that

26. My consultants also mention that clitic doubling constructions are appropriate when "insisting" on the doubled argument.

in the second half of the utterance, in order to update the common ground.

(2.29) ʃuf-t(#**-ha** **la-**)Raːnia, binət b-**t**-udros maʕ-i
see-PFV.1SG(#**-3FSG.CL** **OM**)-R. girl IND-**3FSG.IPFV**-study with-1SG.CL
bi-ʒ-ʒaːmʕa
at-DEF-university
I saw Rania, she's a girl who goes to college with me.

This type of interaction with discourse conditions is not found for subject-verb agreement, which remains obligatory with unfamiliar entities including in (2.29). This last property follows from our analysis: CLP is a special projection that is regulated by discourse conditions. In Chapter 6, I explain that these conditions are the result of the diachronic origins of clitic doubling: I posit that clitic doubling originates historically from a right dislocation structure in which the dislocated element ends up being reinterpreted as a doubled DP (*i.e.,* merged in argument position, not in a peripheral projection). In right dislocation, the dislocated DP is backgrounded (Zwart 2001; Ott 2017), *i.e.,* assumed to be discourse-familiar. It naturally follows then, that the doubled DP in clitic doubling must be part of the common ground of the discourse participants. Subject-verb agreement is not subject to such a requirement.

Summary

Overall, we see that object clitic doubling differs substantially from subject-verb agreement, which we are able to account for with two different analyses: Agreement morphemes are the realization of an obligatorily present probe (T°), while doubling clitics are the realization of an optional probe that has special properties (CL°). The differences between the two phenomena that I have discussed so far are summarized in table 2.6 below. The properties shown in the table will be explored more thoroughly at different points in the remainder of the dissertation, in addition to other properties, thus expanding the table as we go.

Property	Subject-Verb agreement	Object clitic doubling
Obligatory	✓	✗
Tense-variant	✓	✗
Possibility of default	✓	✗
Sensitive to controller	✗	✓
Pragmatic restrictions	✗	✓

Table 2.6: Properties of subject-verb agreement and object clitic doubling in Tunisian and Palestinian

2.4 Conclusion

The goal of this chapter was to set the stage in two ways: First, I provided a preview of my analysis of agreement and clitic doubling. I proposed that clitic doubling is a complex operation where the doubling clitic—a head CL that is a μ-binder—forces the movement of the double to its specifier and agrees with it. Agreement, following the consensus in the literature, is understood as the reflex of the operation AGREE between a probing head (T° here) and a goal (the subject here). Second, I used this analysis to set up Subject-Verb Agreement and Object Clitic Doubling as the two gold standards against which instances of cliticization will be evaluated in the remainder of the dissertation. I evaluated five properties along which agreement and doubling differed and showed how the analysis predicts those properties: Obligatoriness, tense-variance, possibility of a default, sensitivity to the controller, and pragmatic restrictions were all understood to to follow from the view that subject-verb agreement is the realization of ϕ-probe on the obligatory head T, while clitic doubling is the realization of the optional and discourse-regulated head CL.

Part I

Coordination as a diagnostic test for clitic doubling and agreement

OVERVIEW

Part I of the dissertation is a discussion of coordination as a diagnostic test for clitic doubling and agreement. The Arabic data uncovered here is novel and provides a nuanced perspective of this test, in addition to making empirical contributions to the landscape of first conjunct agreement patterns cross-linguistically. The discussion in the next two chapters revolves around one crucial element: First conjunct lexical DPs and first conjunct pronouns behave differently with regards to agreement and doubling. Thus, this first part is divided along those lines, with Chapter 3 tackling agreement and doubling with coordinate structures whose first conjunct is a lexical DP, and Chapter 4 those whose first conjunct is a pronoun.

Chapter 3 revolves around one main puzzle and two secondary puzzles related to it. The main puzzle is the difference between first conjunct agreement and first conjunct clitic doubling: The former is possible with lexical DPs while the latter is not. In addition to this new empirical observation, I bring to light previously unnoticed restrictions on first conjunct agreement with lexical DPs in Arabic, and propose an analysis of this phenomenon as the result of a feature calculus at the &P level that differentiates between semantic and morphological features. I extend Adamson and Anagnostopoulou's (accepted) proposal for resolution to cases of first conjunct agreement in Arabic. The last puzzle, which is well documented in the literature concerns agreement asymmetries between pre-verbal and post-verbal subjects, namely the requirement of resolved agreement with pre-verbal subjects.

In Chapter 4, I focus on agreement and doubling with first conjunct pronouns, explaining why pronouns void all restrictions on first conjunct agreement and why can they be targeted for first conjunct clitic doubling. I show that the same analytical tools can be used to account for agreement with and doubling of pronominal first conjuncts: In such cases, the pronominal first conjunct is a resumptive pronoun, and agreement/doubling is targeting the element binding that pronoun, not the pronoun itself. I appeal to the contested notion of BROAD SUBJECTS (Doron and Heycock 1999), and extend it to object clitic doubling, proposing the mirror category of BROAD OBJECTS.

CHAPTER 3

FIRST CONJUNCT DPS AND THE DIFFERENCE BETWEEN CLITIC DOUBLING AND AGREEMENT

3.1 Introduction

This chapter has two goals: The first is to justify the analytical difference between clitic doubling and agreement using the diagnostic test of agreement into coordinate structures (Ostrove 2018; Paparounas and Salzmann 2023a, 2023b). The second goal is to refine the analyses of agreement and clitic doubling based on the behavior of these two phenomena in the context of coordination.

3.1.1 Why coordination is important

The main aspect that makes coordination an important diagnostic test in the literature on agreement and doubling is the coordinate structure constraint or the CSC (3.1).

(3.1) *The Coordinate Structure Constraint* (Ross 1967:161)
In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

Because the CSC is an island constraint, Ostrove (2018:93–97) argues that it is a good diagnostic test for agreement vs. clitic doubling (see also Harizanov 2014:1061,fn.29). If clitic doubling involves movement, and if extraction out of coordinate structures is impossible (3.1), then first conjunct clitic doubling is predicted to be impossible. On the other hand, first conjunct agreement should be possible as ϕ-agreement does not involve movement. This view is consistent with the analysis of clitic doubling advocated for in this dissertation.

That being said, first conjunct clitic doubling does occur independently in Dutch (van Craenenbroeck and van Koppen 2008), Greek (Paparounas and Salzmann 2023a, 2023b) and

multiple dialects of Arabic (Akkuş 2022; Sellami 2022a). In all of these languages, the CSC is otherwise active. The empirical landscape of Greek leads Paparounas and Salzmann (2023b) to argue in favor of AGREE-based approaches to clitic doubling, which do not posit movement and thus can include first conjunct clitic doubling. As I show in this chapter and the following one, the Tunisian and Palestinian Arabic data is more complex than either the Dutch or Greek patterns. It is not a matter of clitic doubling being possible or impossible with a conjunct, rather, the main difference between agreement and doubling in this context is the following: First conjunct agreement is possible with lexical DPs, while first conjunct clitic doubling is not. However, both are possible with pronouns (Chapter 4 is dedicated to agreement and doubling with pronominal conjuncts). In other words, the difference between the two is in the type of first conjunct: If it is a pronoun, then it can be the target of agreement and doubling, but if it is a lexical DP, it can only be the target of agreement. As we can see, coordination remains a crucial test for Arabic as it allows us to differentiate between agreement and doubling. In this chapter and the following one, I show that my analysis of clitic doubling is able to capture this difference, and argue that movement is a key component explaining the ban on first conjunct doubling of lexical DPs.

3.1.2 A central puzzle: The difference between agreement and doubling

This chapter revolves around the following central puzzle.

Puzzle #1 When the first conjunct of an &P is a lexical DP,[1] first conjunct agreement is possible (3.2), but first conjunct clitic doubling is not (3.3).

(3.2) *Agreement with post-verbal &P subject in Tunisian*
{ʒeː-t / ʒeː-w} Raːnia w-ʕAzza mabʕað-hom
{come.PFV-3FSG / come.PFV-3PL} R.F and-A.F together-3PL.CL
Rania and Azza came together.

1. I use the term 'lexical DP' here in contrast with pronouns. Chapter 4 is dedicated to first conjunct agreement and doubling with pronouns, which behave differently from lexical DPs in this context.

(3.3) *Clitic doubling with &P object in Tunisian*
ʃof-t-{***ha**$_i$/**hom**$_{i+j}$} [Ra:nia$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL**} R.F and-A.F
I saw Rania and Azza.

In both (3.2) and (3.3), the order is the same: ϕ-morpheme (agreement or clitic), followed by the conjunction phrase, but only for agreement is the cross-referencing of the first conjunct possible. In order to understand the central puzzle, we must investigate the properties of agreement with coordinate structures, which brings us to two secondary puzzles.

3.1.3 Two secondary puzzles

Puzzle #2 In Tunisian Arabic, first conjunct agreement is only possible if the two conjuncts match in gender (3.2), otherwise resolved agreement is obligatory (3.4).

(3.4) *First conjunct agreement is unacceptable when conjuncts mismatch in genders*
{*ʒe:-t / ʒe:-w} Rania w-Se:mi mabʕað-hom
{*come.PFV-3FSG / come.PFV-3PL} R.F and-S.M together-3PL.CL
Rania and Sami came together.

Puzzle #2 is novel, and leads me to argue that first conjunct agreement is illusory in Tunisian. What seems like agreement with the first conjunct is actually agreement with the entire &P, whose features are determined by percolation and conversion of the features of the individual conjuncts. I extend Adamson and Anagnostopoulou's (to appear, accepted) proposal for resolved agreement to illusory first conjunct agreement in Tunisian. Furthermore, there are two types of features percolating to the phrasal level: *interpretable* and *uninterpretable* features (Smith 2015). The former are semantic and lead to resolution, the latter are morphological and do not resolve. Thus, the gender matching requirement is accounted for in terms of a PF clash of uninterpretable features (or lack thereof when the features match), while resolved agreement is the result of agreement with semantic features.

Puzzle #3: Preverbal &P subjects always require resolved agreement on the verb (3.5).[2]

(3.5) *Agreement with pre-verbal &P subject in Tunisian*
Raːnia w-ʕAzza {*ʒeː-t / ʒeː-w}
R.F and-A.F {*come.PFV-3FSG / come.PFV-3PL}
Rania and Azza came.

Puzzle #3 is a recurrent theme in studies of first conjunct agreement.[3] In this chapter, I argue that this agreement asymmetry is due to the configuration resulting in the movement of a subject to a preverbal position (plausibly [Spec, TP]: Benmamoun 2000; Mohammad 2000), as shown in (3.7) below. Such movement leads to μ-adjunction (Büring 2005:245), which means that the head with the ϕ-probe, T, carries a binder. This forces the application of the Spec-Head agreement under Binding rule in (3.6) (repeated from (2.11)).

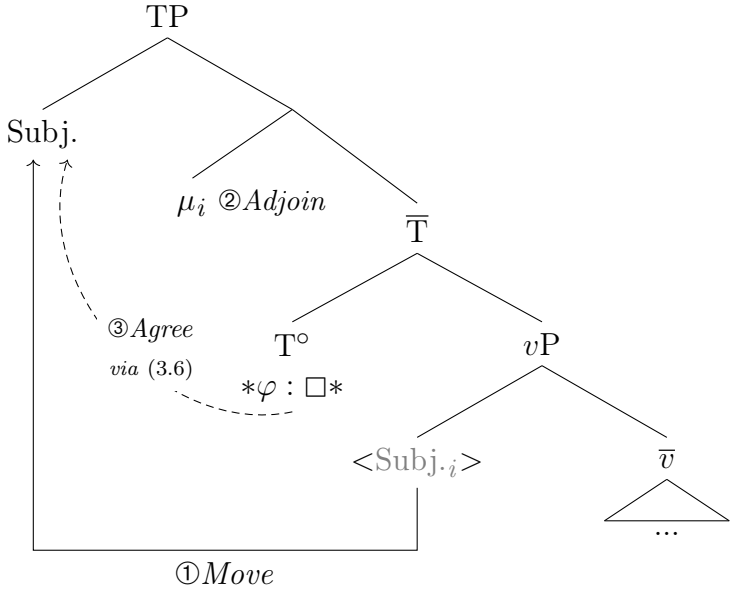
(3.6) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

In this chapter, I argue that in Spec-Head agreement configurations, there is a requirement that agreement obtains with the *interpretable* features of the &P, *i.e.,* the semantic features. This requirement is based on the intuition that in this type of configuration, the probe is semantic in nature.

2. There is no such thing as Last Conjunct Agreement in the data that I've collected, though Al Khalaf (2022) reports the pattern to be marginally present in Jordanian Arabic.

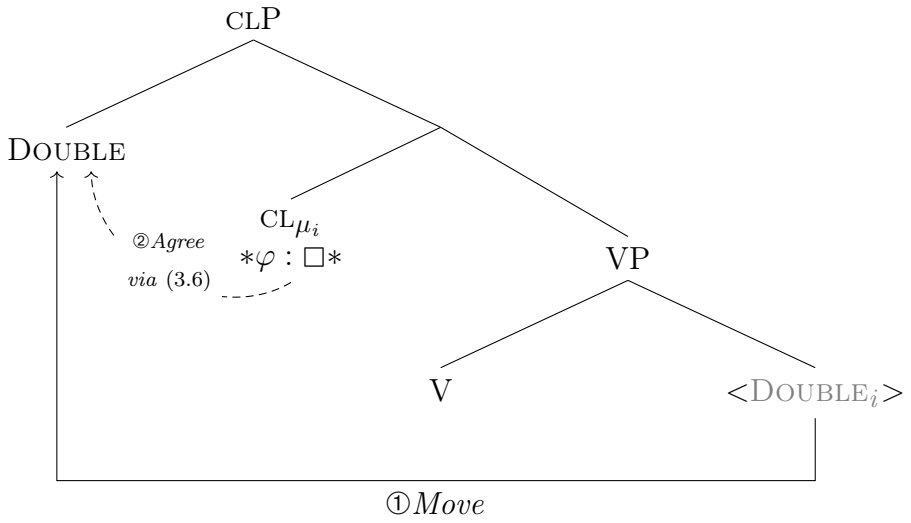
3. It has long been noticed for many (head-initial) languages that FCA is only possible for post-verbal subjects (Johannessen 1996; Citko 2004; Crone 2016; van Koppen 2007; Munn 1999), and it is expectedly the case in Tunisian and Palestinian, where pre-verbal subjects automatically trigger resolved agreement. More generally, post-verbal/pre-verbal asymmetries are widely attested, not just in the domain of coordination: There is a very robust cross-linguistic generalization whereby if bidirectional AGREE is possible in a given language, upward (or Spec-Head) agreement tends to be "richer" than downward agreement (Samek-Lodovici 2002; Zeijlstra 2012), the latter being often "defective" (Bjorkman and Zeijlstra 2019).

(3.7) *Spec-Head agreement after subject movement*



This leads us to a preview of the solution to Puzzle #1. In a nutshell, first conjunct clitic doubling of a lexical DP is impossible because clitic doubling (3.8) involves movement of the double to the specifier of the clitic—a μ-binder—followed by AGREE between the clitic and the double, in application of (3.6).

(3.8) *Analysis of clitic doubling*



Thus, the double must be the entire &P in this configuration, otherwise movement of only

the first conjunct would violate the Coordinate Structure Constraint (Ross 1967). Because Spec-Head agreement targets the interpretable features of the &P, doubling of an &P must always be resolved.

The remainder of this chapter is organized as follows: In §3.2 I discuss the difference between first conjunct agreement and doubling in Tunisian and Palestinian. Then, I dedicate §3.3—§3.5 to analyzing first conjunct agreement with DPs and deriving the restrictions on it, including the gender matching requirement in Tunisian (Puzzle #2). In §3.6, I tackle the obligatoriness of resolved agreement with preverbal subjects (Puzzle #3), and in §3.7, I explain the ban on first conjunct clitic doubling of lexical DPs (Puzzle #1). §3.8 concludes.

3.2 First Conjunct Agreement and Doubling in Tunisian and Palestinian

In this section, I provide some background on first conjunct agreement and doubling in Arabic (§3.2.1), followed by a discussion of Puzzle #1 in terms of diagnosing the difference between agreement and clitic doubling (§3.2.2).

3.2.1 Background on first conjunct agreement and doubling in Arabic

First conjunct agreement—henceforth FCA—refers to an agreement target agreeing with only the first member of a coordinated controller, as in (3.9a), where the verb bears 3rd feminine singular features. FCA exists alongside resolved agreement, where the verb agrees with the entire coordination as in (3.9b).

(3.9) *Agreement with Post-Verbal Subjects in Tunisian*

a. ʒeː-t Rania w-ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL

b. ʒeː-w Rania w-ʕAzza mabʕað-hom
come.PFV-3PL R.F and-A.F together-3PL.CL
Rania and Azza came together.

FCA is quite common cross-linguistically, being found in most varieties of Arabic (Aoun, Benmamoun, and Sportiche 1994; Harbert and Bahloul 2002), Greek (Paparounas and Salzmann 2023b), Welsh (Sadler 1999; Borsley 2009), Spanish (Bošković 2009:486; Camacho 2003; Demonte and Pérez-Jiménez 2012) Hindi (Benmamoun, Bhatia, and Polinsky 2009; Bhatt and Walkow 2013), South Slavic (Bosnian-Croatian-Serbian (Bošković 2009), Slovenian (Marušič, Nevins, and Badecker 2015)), Dutch (van Koppen 2005), etc.[4] It is an important phenomenon for linguistic theory that has garnered a lot of attention in the literature (see Nevins and Weisser 2019 for a review), as it informs our understanding of agreement operations and their locus (whether syntactic (Chomsky 2001) or post-syntactic (Bobaljik 2008) or both (Arregi and Nevins 2012; Bhatt and Walkow 2013)), the structure of coordination, and the place of both hierarchical structure and linear order to derive all the attested agreement patterns with coordinate structures (Marušič and Nevins 2020; Shen 2023).

FCA in Arabic in particular has been discussed in depth over the past three decades: In their seminal work on the topic, Aoun, Benmamoun, and Sportiche (1994, 1999) propose a clausal coordination analysis for Moroccan and Lebanese Arabic, whereby FCA is the result of conjunction reduction, that is clausal coordination followed by ellipsis. Munn (1999) extensively argued against the clausal coordination proposal.[5] Later proposals on Arabic FCA rely on specific types and orders of syntactic operations in order to capture the first conjunct being the sole agreement controller, as opposed to the entire &P. For example, both Soltan's (2006) and Larson's (2013) analyses rely on the adjunction hypothesis of second conjuncts (Munn 1993) in different ways. Soltan (2006) proposes that FCA is the result of postcyclic Merge of the second conjunct (after AGREE has been established with the first conjunct). Larson (2013) proposes that FCA is the result of the 1st and 2nd conjunct being "concatenated" but not "labeled";[6] that is the 2nd conjunct is merged as an adjunct but

4. See also Corbett (2006:170) for a list of languages with FCA.

5. Arsenijević et al. (2020) also provide experimental evidence against this approach for Slovenian and Bosnian-Croatian-Serbian.

6. *Concatenate* and *Label* are the two sub-operations of Hornstein's (2009) Decomposed Merge: *Concate-*

does not yet form a constituent with the 1st conjunct, which prevents the &P from bearing features that could be targeted by AGREE. Thus, unlabeled &Ps lead to FCA and labeled &Ps to resolved agreement, as only a labeled &P can be agreed with as a whole.

Although the discussion on Arabic FCA is rich, to my knowledge, it has always been done with the assumption that it is freely available for most Arabic speakers.[7] In this chapter, I show that FCA in both Tunisian and Palestinian have certain restrictions that are hard to explain with the approaches we find in the literature.

As for first conjunct clitic doubling, it is discussed at length for *e.g.,* Greek (Paparounas and Salzmann 2023a, 2023b) and Dutch (van Craenenbroeck and van Koppen 2008). However, to my knowledge, no in-depth investigation of the matter in Arabic has been done, although it has been reported to exist in some varieties of Arabic (Akkuş 2022). Thus, in the next subsection, I discuss the main difference between agreement and doubling with coordinate structures as a diagnostic test in order to add its result to our properties of ϕ-agreement vs. doubling we started in Chapter 2.

3.2.2 The difference between first conjunct agreement and first conjunct clitic doubling

The crucial difference between the behavior of agreement and clitic doubling with coordinate structures is the following: Agreement with first conjunct DPs is possible while doubling of first conjunct DPs is impossible. In both Tunisian (3.10a) and Palestinian (3.10b), FCA is possible with post-verbal subjects, alongside resolved agreement.

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nate combines two atomic syntactic units X and Y together into a more complex one (X^Y), while *Label* turns the complex into a new complex atomic unit whose name is given by one of the concatenates ([$_X$X^Y]) (Hornstein and Nunes 2008:65–67). When adjuncts are merged, concatenation happens but labeling isn't necessary, a possibility on which Larson's (2013) analysis of FCA rests.

7. Though Aoun, Benmamoun, and Sportiche (1994:208) report that speakers of Lebanese Arabic prefer resolved agreement if possible, they do not pursue this issue further.

(3.10) *Agreement with &P subject*

a. {ʒeː-t / ʒeː-w} Raːnia w-ʕAzza
{come.PFV-3FSG / come.PFV-3PL} R.F and-A.F
Rania and Azza came. Tunisian

b. {ʔaʒa / ʔaʒ-u} Saːmi w-Mħammad
{come.PFV.3MSG / came.PFV-3PL} S.M and-M.M
Sami and Mhammad came. Palestinian

In both (3.10a) and (3.10b), the verb is seemingly able to agree with only the first conjunct, bearing 3rd *singular* features. However, only resolved object clitic doubling is possible in (3.11): The singular clitic is unacceptable in both Tunisian (3.11a) and Palestinian (3.11b).

(3.11) *Clitic doubling of &P object*

a. ʃof-t-{***ha*$_{i}$/hom$_{i+j}$**} [Raːnia$_{i}$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL***} R.F and-A.F
I saw Rania and Azza. Tunisian

b. ʃuf-t-{***o*$_{i}$/hom$_{i+j}$**} la-[Saːmi$_{i}$ w-Mħammad]$_{i+j}$
see-PFV.1SG-{***3MSG.CL/3PL.CL***} OM-S.M and-M.M
I saw Sami and Mhammad. Palestinian

Interestingly, this unacceptability disappears if the first conjunct is a pronoun (3.12).

(3.12) *Clitic doubling of &P object with a first conjunct pronoun*

a. ʃof-t-{**ha$_{i}$/hom$_{i+j}$**} [hijja$_{i}$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL***} PRON.3FSG and-A.F
I saw her and Azza. Tunisian

b. ʃuf-t-{**o$_{i}$/hom$_{i+j}$**} [huwwe$_{i}$ w-Mħammad]$_{i+j}$
see-PFV.1SG-{3MSG.CL/3PL.CL} PRON.3MSG and-M.M
I saw him and Mhammad. Palestinian

Abstracting away from what makes pronominal conjuncts special with regards to clitic doubling—a complex discussion that I leave for Chapter 4—, the point here is that there is a minimal difference between first conjunct agreement and first conjunct clitic doubling, namely that only the former is possible with lexical DPs. At this point, we can add 'cross-referencing of a first conjunct lexical DP' as another diagnostic to our table 2.6 comparing

the properties of subject-verb agreement and object clitic doubling, updated here as table 3.1.

Property	Subject-Verb Agreement	Object Clitic Doubling
Obligatory	✓	✗
Tense-variant	✓	✗
Possibility of default	✓	✗
Sensitive to controller	✗	✓
Pragmatic restrictions	✗	✓
Cross-referencing of a 1st conjunct lexical DP	✓	✗

Table 3.1: Properties of subject-verb agreement and object clitic doubling in Tunisian and Palestinian

In the rest of the chapter, I focus on the reason why FCA with lexical DPs is possible (3.10), whereas first conjunct clitic doubling isn't (3.11). The discussion is further complicated by the fact that while possible, FCA with DPs has certain restrictions, like the gender matching requirement discussed above, such that an analysis in terms of direct AGREE between the probe and the first conjunct runs into significant problems. Because of this, I dedicate §3.3 to a deeper investigation of FCA with DPs and its restrictions, followed by two analytical sections: §3.4 for FCA in Tunisian and §3.5 for FCA in Palestinian. I leave the discussion of resolved agreement with pre-verbal &P subjects for §3.6 and the analysis of clitic doubling of conjoined objects for §3.7.

3.3 FCA with DPs and its restrictions

Although FCA with a lexical DP is possible in Tunisian and Palestinian, there are certain restrictions on it in both dialects. In Tunisian, FCA with DPs requires the two conjuncts to match in gender (Puzzle #2): While the verb can seemingly agree with just the first conjunct

in (3.13a), such a pattern becomes unacceptable if the second conjunct is a different gender as in (3.13b).

(3.13) *Agreement with conjoined DPs in Tunisian*

a. {ʒeːt / ʒeːw} Raːnia w-ʕAzza mabʕaðʕhom
{COME.PFV-3FSG / come.PFV-3PL} R.F and-A.F together-3PL.CL
Rania and Azza came together.

b. {*ʒeːt / ʒeːw} Raːnia w-Seːmi mabʕaðʕhom
{*COME.PFV-3FSG / come.PFV-3PL} R.F and-S.M together-3PL.CL
Rania and Sami came together.

To my knowledge, this is a puzzling restriction that hasn't been discussed in the literature on Arabic, despite having been noticed in passing by *e.g.,* Aoun, Benmamoun, and Sportiche (1994:208,fn.14).

In Palestinian, while the mismatch in gender does not seem to pose a problem (3.14a), FCA with DPs is incompatible with the plural-sensitive adverb *together* (3.14b).[8]

(3.14) *Agreement with conjoined DPs in Palestinian*

a. {ʔtmaʃʃa / tmaʃʃu} MuʕtazwRaːnia
{ʔwalk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F
Mutaz and Rania walked around.

b. {??/*tmaʃʃa / tmaʃʃu} MuʕtazwRaːniamaʕbaʕdʕ
{??/*walk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F together
Mutaz and Rania walked around together.

Though these restrictions differ, they both show that FCA with DPs is not freely available in either dialect, and an adequate analysis of FCA must be able to derive the patterns in (3.13) and (3.14). I take a moment here to show that the FCA patterns we have are due to DP coordination, and not a comitative parse (§3.3.1) or a clausal coordination parse

8. I use *together* as one among many other possible plural seeking elements that are incompatible with FCA in Palestinian. For instance, my consultant rates as degraded FCA with expressions such as *fi nafs əl-waʔət* 'at the same time'. I have found that adding these types of adjuncts degrades FCA and make the use of resolved agreement obligatory, but as I discuss in §3.3.2, other plural seeking elements like the verb *meet* do not exhibit the same behavior.

where the verb and other identical material in the 2nd clausal conjunct are elided (§3.3.2). On the one hand, agreeing with the first conjunct to the exclusion of the second would be natural in a comitative parse (Stassen 2000:7, 18; Haspelmath 2004:18), though the Tunisian gender-matching requirement would be mysterious under such a view. On the other hand, we might be able to explain the gender matching requirement in a clausal coordination analysis, whereby there is a strict identity requirement between the remnant and the elided content such that both verbs must have the same ϕ-features. However, the evidence to that effect is lacking as we will see below.

3.3.1 FCA is not the result of a comitative construction

Due to the widespread ambiguity between coordinate and comitative structures in the world's languages (Stassen 2000), it is desirable to make sure the Arabic examples we are dealing with do not have a comitative parse. A very common distinction between coordinate structures and comitative structures is that extraction from the latter is freely available, as opposed to the former (McNally 1993:354; Stassen 2000:18): While conjuncts generally obey the CSC (3.1), the different parts of a comitative phrase can move, stranding the rest. Given that the Arabic coordinator *w(a)* 'and' could in principle have a comitative use (Al Khalaf 2022:5–9), we need to show that it is not the case when there is FCA. Following Paparounas and Salzmann's (2023b:6) test on Greek, we can see that comitative PPs headed by *mʕa/maʕ* 'with' can be focus-fronted in Tunisian (3.15a) and Palestinian (3.15b), while the coordinator *w(a)-* followed by a second conjunct cannot in a FCA configuration (3.16).

(3.15) *Fronted comitative PPs*

a. [mʕa RANIA]$_1$ ʒeːt ʕAzza $\_\__1$
[with R.F] come.PFV-3FSG A.F $\_\__1$
Tunisian

b. [maʕ RANIA]$_1$ ʔaʒa-t ʕAzza $\_\__1$
[with R.F] come.PFV-3FSG A.F $\_\__1$
It's with Rania that Azza came. Palestinian

(3.16) *Fronted conjuncts*

a. * [w-RANIA]$_1$ ʒe-t ʕAzza $\_\_1$
[and-R.F] come.PFV-3FSG A.F
Tunisian

b. * [wa-RANIA]$_1$ ʔaʒa-t ʕAzza $\_\_1$
[and-R.F] come.PFV-3FSG A.F
Intended: 'It's with Rania that Azza came. Palestinian'

3.3.2 FCA is not the result of conjunction reduction

In their seminal work on the topic, Aoun, Benmamoun, and Sportiche (1994, 1999) propose a conjunction reduction analysis for Moroccan and Lebanese Arabic, whereby FCA in these dialects the result of clausal coordination followed by ellipsis. They argue that the underlying structure for FCA (3.17a) is (3.17b).

(3.17) *First Conjunct Agreement in Moroccan Arabic*

a. nʕas Kariːm w-Mərwaːn fə-l-biːt
slept.MSG K. and-M. in-DEF-room
Karim and Marwan slept in the bedroom.

b. [slept$_j$ [$_{IP}$ Karim ... t$_i$...]] and [e$_j$ [Marwan ... t$_i$...]] [in the room]$_i$
(Aoun, Benmamoun, and Sportiche 1994:217,(54)-(55))

They base this analysis primarily on the impossibility of items requiring plurality (*e.g.*, verbs like *meet* or adverbs like *together*) to co-occur with FCA. In Tunisian, the adverb *together* is not only perfectly acceptable with FCA (3.18) (repeated from (3.9a)), it also hosts a plural clitic which presumably agrees with the subject &P, which must be plural on some level, then.[9]

9. This conclusion may seem hasty: It is possible to analyze (3.18) as the result of ellipsis and the adverb *together* being the secondary predicate of a small clause whose subject is null, following Saab and Zdrojewski's (2021) description of asymmetric Differential Object Marking (DOM) in Spanish (ia) as an instance of TP ellipsis, based on the grammaticality of examples like (ib).

(i) *Asymmetric DOM in Spanish*

a. Vi una mujer y a María juntas en el parque
saw.1SG a woman and DOM Maria together.F.PL in the park

(3.18) ʒeːt Rania w-ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL
Rania and Azza came together. Tunisian

However, Aoun, Benmamoun, and Sportiche's (1994) insight could be extended to Palestinian, since examples like (3.19) are unacceptable in this dialect.

(3.19) ??/* ʔaʒa-t Raːnia w-ʕAzza maʕbaʕdˤ
come.PFV-3FSG R.F and-A.F together
Intended: 'Rania and Azza came together' Palestinian

Following their argument, (3.19) would have an underlying structure like that in (3.20), which is ungrammatical, hence the unacceptability of (3.19).[10]

(3.20) * ʔaʒa-t Raːnia maʕbaʕdˤ w-ʔaʒa-t ʕAzza maʕbaʕdˤ
come.PFV-3FSG R.F together and-come.PFV-3FSG A.F together
* Rania came together and Azza came together.

As argued by Munn (1999), while compatible with a clausal conjunction analysis, this kind of data does not completely rule out a DP coordination analysis. In particular, it is possible that 'together' in the relevant dialects requires both syntactic and semantic plurality, which

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I saw a woman and Maria together in the park. (Kalin and Weisser 2019:665,(6))

b. Vi una chica y vi a Ana juntas en el parque
saw.1SG a girl and saw.1SG DOM Ana together.F.PL in the park
I saw a girl and I saw Ana together in the park. (Saab and Zdrojewski 2021:854,(6a))

So, we could potentially analyze the underlying structure of (iia) as (iib).

(ii) a. ʒeːt Raːnia w-ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL
Rania and Azza came together.

b. ??/* ʒeːt Rania w-ʒeːt ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-come.PFV-3FSG A.F together-3PL.CL

However, (iib) is unacceptable in Tunisian, which casts doubt on such a possibility and makes it more plausible that the adverb *together* and its plural clitic are not part of a secondary predicate.

10. See also fn. 9 for a discussion of another possible ellipsis parse where *together* is not in each conjunct but is a secondary predicate whose subject would be a plural null pronoun cross-referencing the entire &P. In fn. 9, I show that such an analysis is not suitable for Tunisian, and it doesn't seem to be suitable for Palestinian either given that it wouldn't explain the ungrammaticality of (3.19).

is why it is incompatible with FCA: In such a case, the subject would be semantically plural but syntactically singular *via* agreement. I have found this to be true in Palestinian with hybrid nouns like *ʃille* 'group', which can only combine with 'together' in a sentence if it controls plural agreement on the verb. So while both plural (semantic) agreement and singular (morphological) agreement are possible for this noun (3.21a), the latter becomes ungrammatical in the presence of an adverb like 'together' (3.21b), in line with Munn's (1999:647) findings for Lebanese Arabic.

(3.21) *Agreement patterns with a hybrid noun in Palestinian*

a. əʃ-ʃille {ʔaʒa-t / ʔaʒ-u}
DEF-group.FSG {come.PFV-3FSG / come.PFV-3PL}
The group came.

b. əʃ-ʃille {*ʔaʒa-t / ʔaʒ-u} maʕbaʕdˤ
DEF-group.FSG {*come.PFV-3FSG / come.PFV-3PL} together
The group came together.

In Tunisian, singular agreement with this hybrid noun is compatible with the presence of *together*, and licenses a singular clitic on this adverb in this context (3.22).

(3.22) əʃ-ʃilla$_i$ ʒeː-t mabʕaðˤ-ha$_i$
DEF-group.FSG come.PFV-3FSG together-3FSG.CL
The group came together. Tunisian

Based on the evidence from hybrid nouns, it seems that the difference between Palestinian and Tunisian in this case is not so much whether Palestinian FCA is the result of conjunction reduction as Aoun, Benmamoun, and Sportiche (1994) would argue. Rather, the difference is likely the fact that the adverb 'together' has different licensing requirements in each dialect: In Tunisian, only semantic plurality is required, as shown by the compatibility of this adverb with morphologically singular hybrid nouns alongside FCA.[11] In Palestinian, both semantic and morphological plurality are required.

11. Singular agreement with this hybrid noun is also possible with the verb *lamm* 'gather' in Tunisian, as in the following corpus example (i), further showing the importance of distinguishing semantic vs. morphosyntactic plurality in these cases.

Furthermore, not all number-sensitive items are incompatible with FCA in Palestinian, which casts even more doubt on a conjunction reduction parse. For instance, the verb *ltaʔa* 'meet', is completely acceptable with both morphologically singular elements like *ʃille* (3.23a) and FCA (3.23b) in Palestinian, but crucially not with an item that is both syntactically and semantically singular (3.23c).

(3.23) a. əʃ-ʃille {ltaʔa-t / ltaʔ-u}
DEF-group.FSG {meet.PFV-3FSG / meet.PFV-3PL}
The group met.

b. {ltaʔa-t / ltaʔ-u} Raːnia w-ʕAzza
{meet.PFV-3FSG / meet.PFV-3PL} R.F and-A.F
Rania and Azza met.

c. * ltaʔat Raːnia
meet.PFV-3FSG R.
* Rania met.

While Aoun, Benmamoun, and Sportiche (1999) report FCA in examples like (3.23b) to be unacceptable in Lebanese and Moroccan, the verb *ltaʔa* 'meet' seems to require only semantic plurality in Palestinian, and is thus compatible with (syntactic) singular agreement.[12] The same facts obtain in Tunisian. It seems then that there is more to the incompatibility of FCA with certain plural-seeking elements than conjunction reduction.

Extraction facts (§3.3.1) and compatibility with number-sensitive items discussed in this subsection point to a DP coordination structure in cases of FCA. Thus, I will assume in the

(i) ʃillət l-ʔons əlli lamm-ət bʕaðˁ-ha [...]
group.FSG DEF-friendship that gather.PFV-3FSG each_other-3FSG.CL [...]
The friendship group that gathered themselves... (TC:3647)

Note also the singular clitic on the reciprocal/reflexive *bʕaðˁ* in (i), pointing to the fact that morphosyntactic plurality is not at stake here, but semantic plurality is.

12. Yassin (2022:282,(269)) provides similar data in Urban Palestinian.

(i) iltaʔa Kariːm w-Marwaːn
met.3MSG K. and-M.
Karim and Marwan met.

rest of this chapter that we are dealing with DP coordination, and that whatever restrictions we find on FCA must be explainable within those terms.

3.4 Puzzle #2: The gender matching requirement for DPs in Tunisian

This section is dedicated to Puzzle #2, namely the unacceptability of FCA in Tunisian when conjuncts mismatch in gender (4.3b).

(3.24) *The gender matching requirement in Tunisian*

a. * ʒeː-t Rania w-Seːmi mabʕað-hom
come.PFV-3FSG R.F and-S.M together-3PL.CL
Rania and Sami came together.

b. ʒeː-t Rania w-ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL
Rania and Sami came together.

The restriction on gender-matching DPs for FCA to be licensed in Tunisian is quite novel but not completely unheard of. As a matter of fact, Aoun, Benmamoun, and Sportiche (1994:208) report that speakers of Lebanese Arabic prefer resolved agreement and that the tendency in that dialect is to prefer gender parallelism between conjuncts. This tendency in Lebanese has further experimental data support: Lorimor (2007:179) finds that FCA is more common when conjuncts match in gender, being produced less when conjuncts mismatch in gender features in favor of plural agreement. This type of data is crucial for our understanding of First Conjunct Agreement and its cross-linguistic manifestations, as it adds another dimension to the debate on how it arises. In this case, neither linear proximity of the first conjunct nor its relative height can provide a straightforward explanation. We must consider a third ingredient: the 2nd conjunct.

Here, I argue that the gender matching requirement is due to the fact that Tunisian sentences like the ones in (3.24) do not directly involve agreement with the first conjunct, which is in-

accessible for probing. What looks like FCA in (3.24) is in reality agreement with the entire &P, whose feature specification is the result of percolation of features from *both* conjuncts. Extending Adamson and Anagnostopoulou's (to appear, accepted) analysis of resolved agreement to Tunisian *illusory* FCA, each conjunct percolates its set of semantic/interpretable and morphological/uninterpretable features to the &P level, and those are the ones that get copied on the probe. The probe may copy either set of features, but crucially only interpretable features can be resolved. Uninterpretable features remain as percolated. When the latter are copied, two possibilities emerge: If the two conjuncts differ in features, there is a clash at PF between conflicting feature sets on the probe, resulting in ineffability, hence the ungrammaticality of (3.24a). However, if the two conjuncts have matching features (3.24b), no such clash arises and vocabulary insertion is successful. As for resolved agreement, it is the result of copying interpretable features, which always undergo resolution.

Although I claim that there is no true First Conjunct Agreement in Tunisian, I will keep referring to sentences like those in (3.24) throughout this chapter as instances of FCA, differentiating them from resolved agreement (which is always plural). This is mostly for descriptive continuity with the rest of the literature on the matter and to have a shorthand way to refer to these examples.

The rest of this section is organized as follows: I start by introducing the dual-feature system—whereby DPs bear interpretable (semantic) and uninterpretable (morphological) features—in §3.4.1. Then, in §3.4.2, I show how its application to FCA in Tunisian can derive the gender-matching requirement.

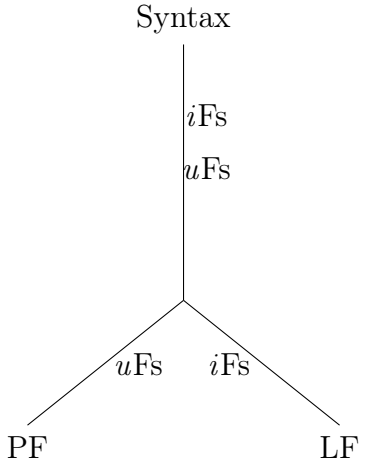
3.4.1 The dual-feature system

The dual-feature system is one where DPs can have two sets of features, in order to account for the fact that some DPs can trigger two types of agreement, dubbed syntactic and semantic

(Corbett 1979; Wechsler and Zlatić 2000, 2003).[13] In §3.3.2, I discussed the difference between syntactic and semantic plurality in the context of hybrid nouns, following Munn's (1999) terminology on this issue. Moving forward, I will use the term **morphological** in place of **syntactic**, in line with the terminology used by Smith (2015), Wurmbrand (2017), Adamson (accepted) and Adamson and Anagnostopoulou (accepted).

In the system proposed by Smith (2015), DPs have two sets of ϕ-features: Semantic features, which are *interpretable* (henceforth *i*Fs), and morphological features, which are *uninterpretable* (henceforth *u*Fs). These sets of *i*Fs and *u*Fs are present during the syntactic derivation, but each of them is sent to a different module at the point of transfer: *i*Fs are sent to LF and *u*Fs are sent to PF (Smith 2015; Wurmbrand 2017; Shen and Smith 2019), as shown in (3.25).

(3.25) *Interpretable and Uninterpretable features in the Y-model of grammar*



(Smith 2015:126)

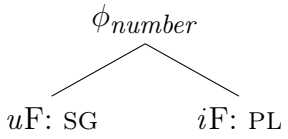
This system is meant to explain the behavior of hybrid nouns such as *committee* or *group* which may have a feature mismatch between *i*F and *u*F, leading to both plural and singular agreement, as in (3.26) where the auxiliary is singular while the anaphor is plural.

13. Wechsler and Zlatić (2000, 2003) use the terms INDEX and CONCORD to refer to semantic and syntactic agreement respectively, a terminology also used by Nevins (2018) for features on coordinate phrases. I remain partial to the use of 'semantic' and 'morphological' since I mostly use the framework developed by Smith (2015) and further implemented on coordination by Adamson and Anagnostopoulou (accepted, to appear).

(3.26) The committee **has** decided to give **themselves** increased powers (Smith 2015:147)

If DPs are able to have two sets of features as in (3.27), then the mismatch between the auxiliary and the anaphor can be explained by virtue of the former displaying the uF features, having undergone morphological agreement, and the latter displaying the iF features, having undergone semantic agreement.

(3.27) *ϕ-features for the English collective noun 'committee'* (Smith 2015:122)

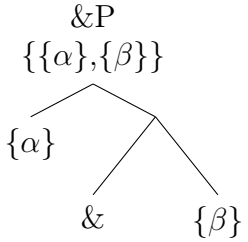


English sentences like (3.26) are similar to Tunisian (3.24b)[14] above or Welsh (3.28), where different agreement targets display mismatching features.

(3.28) **Roeddwn** i ac Emyr yn **ysgrifenwyr** rhagorol
was.1SG 1SG and E. PT **writers** excellent
Emyr and I were excellent writers. Welsh (Sadler 2003:21,(74))

The difference is that the Tunisian and Welsh examples have &P subjects. Recently, Adamson and Anagnostopoulou (accepted) and Adamson (accepted) have implemented Smith's (2015) system to coordinate structures in order to analyze gender resolution primarily in Greek. In their proposal, at the phrasal level, a given &P gets features from both conjuncts, in a process called *percolation* (3.29).

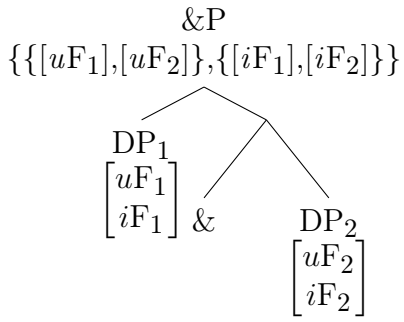
(3.29) *Feature percolation to &P* (Adamson and Anagnostopoulou, accepted:26)



14. In Tunisian, the verb is singular and the clitic on the adjunct is plural.

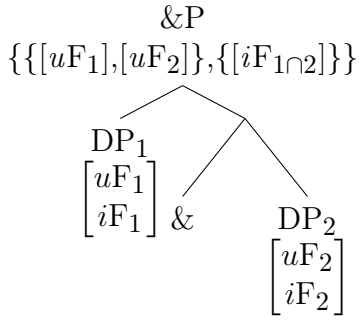
Percolation targets both *i*Fs and *u*Fs, such that each DP may pass its two bundles of features to the &P (3.30).

(3.30) *Percolation of* u*Fs and* i*Fs to &P*



However, a possible second step called *conversion*, can only happen on *i*Fs (3.31).

(3.31) *Feature conversion only applies to iFs*



Conversion takes the two sets of *i*Fs and intersects them (in Adamson and Anagnostopoulou's (accepted) proposal), leading to one set. Conversion is limited to *i*Fs because resolution is semantic in nature (Shen and Smith 2019:8; Harbour 2020; Corbett 2023:20): It makes reference to the referential features of DPs (cf. Grosz 2015). On the other hand, percolation of two sets of *u*Fs is not followed by conversion as such a process does not operate on *u*Fs, which are uninterpretable by nature and as such do not make a semantic contribution (Pesetsky and Torrego 2007:264–265). This leads to both of the sets being sent to PF as is.

As an illustration, a coordination of two inanimate feminine nouns leads to feminine agreement on the predicative adjective (3.32), as the *u*FEM of each conjunct percolates to &P.

Because both sets of gender *u*Fs are the same, vocabulary insertion is successful (Adamson and Anagnostopoulou, accepted:33f.).

(3.32) I fusta ke i bluza ine vromikes
the.F.SG skirt and the.F.SG t-shirt are dirty.F.PL
The skirt and the t-shirt are dirty.
Greek (Adamson and Anagnostopoulou, accepted:33,(64))

By contrast, when inanimate nouns with mismatched genders are coordinated, the predicative adjective surfaces as neuter (3.33).

(3.33) O pinakas ke i karekla ine {vromika /*vromiki}
the.M.SG blackboard and the.F.SG chair are {dirty.N.PL /dirty.M.PL}
The blackboard and the chair are dirty.
Greek (Adamson and Anagnostopoulou, accepted:34,(68))

Neuter agreement arises by the percolation of the *i*Fs instead of the *u*Fs. In particular, each conjunct, being inanimate, bears *i*CLASS,[15] which is interpreted as inanimate/neuter. Percolation of *i*CLASS is followed by conversion, and neuter exponence on the probe obtains. If the *u*Fs had percolated, the probe would copy the two mismatching sets, one being *u*FEM and the other *u*MASC, which would lead to a feature clash at PF.

Although this system is made to account for resolution in coordinations, I extend its use to cases of FCA in Tunisian, arguing that what looks like FCA on the surface (3.34) is simply a lack of clash at PF because the probe copies matching sets of *u*Fs, while the gender-matching requirement (3.35) is the surface manifestation of a feature clash at PF.

(3.34) ʒeː-t Rania w-ʔAzza mabʔað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL

15. CLASS is the organizing node for gender in the version of Harley and Ritter's (2002) feature geometry that Adamson and Anagnostopoulou implement. Its default interpretation is inanimate/neuter (Adamson and Anagnostopoulou, accepted:16). In this system, masculine nouns are specified as $\left\{\begin{matrix}\text{CLASS}\\ \text{MASC}\end{matrix}\right\}$, and feminine nouns as $\left\{\begin{matrix}\text{CLASS}\\ \text{MASC}\\ \text{FEM}\end{matrix}\right\}$.

Rania and Azza came together. Tunisian

(3.35) * ʒeː-t Rania w-Seːmi mabʕað-hom
come.PFV-3FSG R.F and-S.M together-3PL.CL
Rania and Sami came together. Tunisian

Before moving on to the next subsection, I must address a glaring issue: The system proposed by Adamson and Anagnostopoulou is made to account for resolution with conjuncts (mis)matching not only in gender but also in animacy. A crucial component that my discussion on agreement with coordinate structures in Arabic lacks are patterns of FCA with inanimate DPs. I limited my investigation of agreement into coordinate structures to human DPs, following much of the previous literature on FCA in Arabic (although see Lorimor (2007) for a notable exception). However, in order to truly test the adequacy of my analysis of agreement into coordinate structures in Tunisian, inanimate DPs must be tested. In a two-gender system like Arabic, assuming that inanimate DPs do not have interpretable gender—their grammatical gender being arbitrary (Kramer 2015:Chap. 6)—no *i*GENDER percolation or conversion should obtain.[16] We thus predict that there is a gender-matching requirement between conjuncts for FCA to obtain with a conjunction of inanimates, given that no gender resolution should be able to obtain in this scenario. This is *a priori* the result that I have found—as shown in the contrast between (3.36a) and (3.36b)—with the caveat that speakers judge FCA as marked compared to resolved agreement with human DPs, an impression that is even more salient with inanimate DPs.

(3.36) a. ?(?) tʕaːħ-ət l-forʃiːta w-əs-səkkiːna
fall.PFV-3FSG DEF-fork.FSG and-DEF-knife
The fork and the knife dropped. Tunisian

b. ??/* tkassər l-korsi w-ətʕ-tʕawla
break.PFV.3MSG DEF-chair.MSG and-DEF-table.FSG
The chair and table broke. Tunisian

I leave this issue for future research, and I turn to applying the dual-feature system to Tunisian.

16. However, see Hammerly (2019) for a different view where all gender features are interpretable at LF.

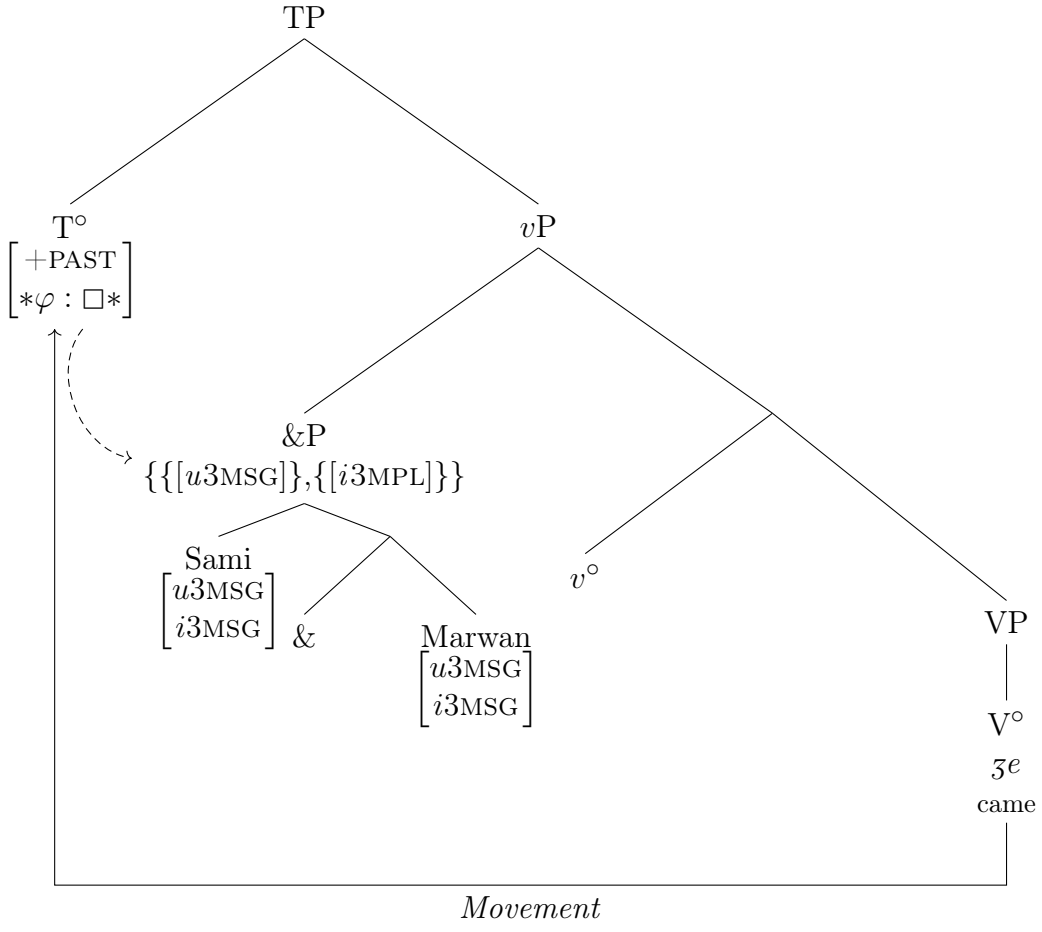
3.4.2 Applying the dual-feature system to Tunisian

In order to show how the gender-matching requirement is derived, I will start with the derivation of an example where the subject is an &P with conjuncts matching in features (3.37).

(3.37) ʒe Se:mi w-Marwe:n
come.PFV.3MSG S.M and-M.M
Sami and Marwan came.

Following the previous discussion, the &P *Sami and Marwan* may have two sets of features (*i*Fs and *u*Fs) as shown in (3.38), where both sets are present at the &P level.

(3.38) *Derivation of* (3.37)



With regards to the *u*Fs, the two percolated feature sets being identical, the feature specifica-

tion on the &P in (3.38) is equal to the singleton ϕ-feature set {[u3MSG]} (Asarina 2011:14; Shen and Smith 2019:7–8; Adamson and Anagnostopoulou, accepted:33). As for the iF set, it is the set resulting from the resolution of the two sets of iFs that percolate from each conjunct.[17]

During the derivation, T° probes down for a suitable goal in its c-command domain.[18] There are two possible sets of features that can be copied onto the probe: the iFs and uFs. Focusing on the latter, the representation of $\begin{matrix}\text{T}^\circ \\ \left[\begin{matrix}\varphi : \text{3MSG} \\ +\ \text{past}\end{matrix}\right]\end{matrix}$ is in (3.39), following Hewett (2020, 2023b), with features organized according to the hierarchy Person – Number – Gender.

(3.39) *Terminal node* T *in* (3.38)

$$\begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+singular} \\ \text{–feminine} \\ \text{+past} \end{bmatrix}$$

Hewett (2020:30; 2023b:1110) posits a post-syntactic "Semitic non-author fission rule" that splits up the features [–author] and [α singular] before vocabulary insertion, leading to the node in (3.40) which has two positions, each with its own set of features.[19]

17. I do not dwell on resolution rules here, beyond assuming that Tunisian, like other dialects of Arabic, has the following resolution rules (Al Khalaf 2022:349):

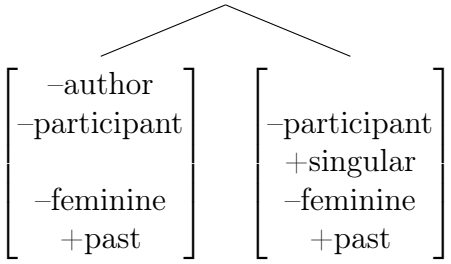
Number	Person	Gender
SG & SG = PL	1 & 2 = 1	M & M = M
PL & PL = PL	2 & 3 = 2	M & F = M
	3 & 3 = 3	F & F = F

18. In a mono-verbal sentence like (3.37) with a perfective verb, T is the locus of the ϕ-probe and V-to-T movement is assumed to occur (cf. Shlonsky 1997:Chap. 3; Aoun, Benmamoun, and Choueiri 2010:33–5; Tucker 2011:188). However, see §7.4 for a refinement of this analysis of tense and agreement in Arabic, where Asp° would also be a probing head in this configuration, in addition to T°. Because this later analysis doesn't interfere with the primary insights of the analysis presented in this chapter, I will ignore it here.

19. Fission is a post-syntactic operation that turns an input terminal node into two positions of exponence (Arregi and Nevins 2012:133; Hewett 2023b:1094). For a given set of features [F_1, F_2, F_n, $\cdots$, F_m], fission splits F_1 and F_2 into two separate nodes, while copying all orthogonal features [F_n, $\cdots$, F_m] (Hewett 2020:22):

(i) *Structure of Post-Syntactic Fission* (Arregi and Nevins 2012:134)

(3.40) *Application of fission on* (3.39)



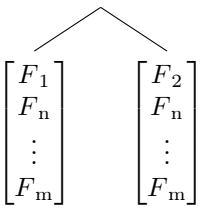
The last step is Vocabulary Insertion (VI), which proceeds based on the following vocabulary entries.

(3.41) *Vocabulary entries for suffix conjugation* (slightly adapted from Hewett 2020:36)

a. *3rd person*
$[+\ \text{past}] \leftrightarrow \varnothing$

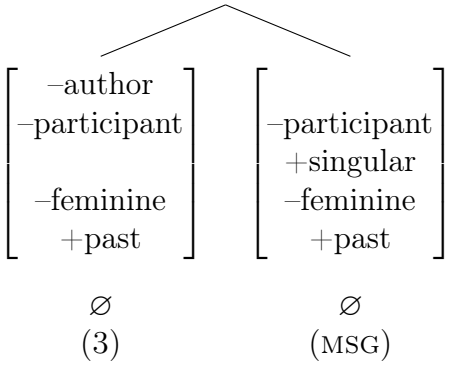
b. *Masculine singular*
$\begin{bmatrix} +\ \text{singular} \\ +\ \text{past} \end{bmatrix} \leftrightarrow \varnothing$

Following the Subset Principle (Halle and Marantz 1993; Halle 1997),[20] (3.41a) ends up as the exponent of the first set of features in (3.42) and (3.41b) as the exponent of the second set, yielding the phonologically null 3rd person singular agreement on the verb (which is decomposed into two morphemes in Hewett's (2020) proposal).

$\begin{bmatrix} F_1 \\ F_2 \\ F_\text{n} \\ \vdots \\ F_\text{m} \end{bmatrix} \longrightarrow$ 

20. "Subset Principle: The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. When several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen." (Halle 1997:428).

(3.42) *Vocabulary Insertion by* (3.41)

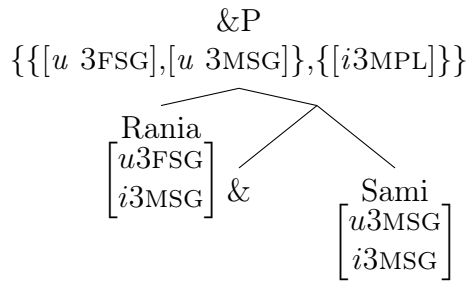


It is probably becoming clear now what goes wrong with conjuncts that do not match in features as in (3.43), where neither feminine singular (*i.e.,* FCA) nor masculine singular agreement is acceptable.

(3.43) {*ʒeː-t / *ʒe} Raːnia w-Seːmi mabʕað-hom
{*come.PFV-3FSG / come.PFV.3MSG} R.F and-S.M together-3PL.CL
Rania and Sami came together.

While feature percolation of *u*Fs is free to happen (3.44), it leads to two sets of features that would yield two distinct outputs if copied on a head like T°.

(3.44) *Feature specification of &P with conjuncts mismatching in gender*



All else being equal, in the case of the conjuncts in (3.43), we end up with $\begin{bmatrix} \text{T}^\circ \\ \varphi : \{[u3\text{FSG}],[u3\text{MSG}]\} \\ +\ \text{past} \end{bmatrix}$, with φ being valued twice. Following Asarina (2011:13) and Bjorkman (2016:73; 2021:14),[21]

21. See Coon and Keine (2021) for a similar proposal on what they call "gluttonous probes," which are probes that have agreed with two DPs.

when a given element is assigned two different values for the same feature, the result is duplication of that feature. Thus, the terminal node in this configuration has two sets of features, with the [+past] specification found in each set, as shown in (3.45) where I continue implementing Hewett's (2020) feature representation for each set.

(3.45) *Terminal node* T *in* (3.43)

$$\left\{ \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+singular} \\ \text{–feminine} \\ \text{+past} \end{bmatrix} \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \text{+past} \end{bmatrix} \right\}$$

This means that the terminal node—a single position of exponence—has two sets of features that clash: they have opposite specifications for the [feminine] value. Note that insertion of two Vocabulary Items is not possible due to the principle of *Uniqueness* (Embick 2015:98), whereby only one Vocabulary Item may apply to a morpheme, a basic assumption in Distributed Morphology (see Halle and Marantz 1993:116; Arregi and Nevins 2012:119).[22] Ultimately, we want to say that the conflicting requirements of the terminal node in (3.45) lead to ineffability, following similar proposals by Citko (2005:488), Coon and Keine (2021:687–8), and Adamson (accepted:24). However, things are not so simple from a DM perspective, where competing conflicting forms like we have here are still regulated according to the subset principle (see fn.20 above): There is either (i) a vocabulary entry that is the most specific for this node, or (ii) two vocabulary entries that are equally specific, which should be able to lead to the insertion of either Vocabulary Item (Hein and Murphy 2020:271) by possibly stipulating one as the winner (Halle and Marantz 1993) via extrinsic ordering, or by appealing to a feature hierarchy (Noyer 1992). Bjorkman (2016) claims that "this guarantee of morphological realizability [...] appears to be too strong." There needs to be room for morphological ineffability for non-syncretic feature conflicts (see also Asarina 2011:9–12), a

22. In cases where fission (see fn. 19) has applied prior to vocabulary insertion, we get two positions of exponence out of the one terminal node, as the case will be below. However, no such operation has applied here yet: We simply have a multivalued probe with conflicting requirements (Coon and Keine 2021:687–8).

desirable result for the conjunct agreement data in Tunisian.

Before getting into how this morphological ineffability occurs, we need a clearer picture of what vocabulary entries are at stake in this context: The vocabulary entries for 3rd person (3.41a) and masculine singular (3.41b) above are repeated here as (3.46a) and (3.46b), in addition to the 3rd person feminine singular (3.46c).

(3.46) *Vocabulary entries for suffix conjugation* (slightly adapted from Hewett 2020:36)

a. 3rd person
$[+\ \text{past}] \leftrightarrow \varnothing$

b. Masculine singular
$\begin{bmatrix} +\ \text{singular} \\ +\ \text{past} \end{bmatrix} \leftrightarrow \varnothing$

c. 3rd feminine singular
$\begin{bmatrix} +\ \text{singular} \\ +\ \text{feminine} \\ +\ \text{past} \end{bmatrix} \leftrightarrow t$

So, we have three possible rules (3.46) for two sets of features (3.45) and one terminal node. In such a case, Bjorkman (2016:73–75) proposes that competition between different Vocabulary Insertion rules occurs for the same position of exponence, with VI being successful only in the case where the same rule (*i.e.,* vocabulary entry) is used for each feature set. Though we can already see that the each one of the sets in (3.45) requires a different rule from (3.46), I will walk through the competition between rules in an explicit manner. Before that, however, we need to apply the operations that precede VI, like fission (3.40) and impoverishment.[23] Concerning the latter, Hewett (2020:29) proposes a "third feminine singular author impoverishment" rule, deleting the [–author] feature in a T° morpheme specified as [–participant, +singular, +feminine].

Taking all of this into account, starting with our terminal node in (3.47a), Hewett's (2020:29) impoverishment rule applies (3.47b) given that we have a set specified as [–participant, + singular, + feminine]. Then, Hewett's (2020:30) "Semitic non-author fission rule" applies (3.47c), splitting the features [–author] and [+singular].[24]

23. Here, I follow the order of post-syntactic operations proposed by Hewett (2020:50): Impoverishment $\prec$ Fission $\prec$ Vocabulary Insertion. See Chapter 8 for a more detailed discussion of the order of post-syntactic operations.

24. Note that the impoverishment rule applying in (3.47b) bleeds the application of fission on the second

(3.47) *Post-Syntactic operations on* (3.45) *preceding vocabulary insertion*

a. Output of syntax

$$\left\{ \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+singular} \\ \text{–feminine} \\ \text{+past} \end{bmatrix} \quad \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+ singular} \\ \text{+ feminine} \\ \text{+ past} \end{bmatrix} \right\}$$

b. Impoverishment

$$\left\{ \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \text{+singular} \\ \text{–feminine} \\ \text{+past} \end{bmatrix} \quad \begin{bmatrix} \\ \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \text{+past} \end{bmatrix} \right\}$$

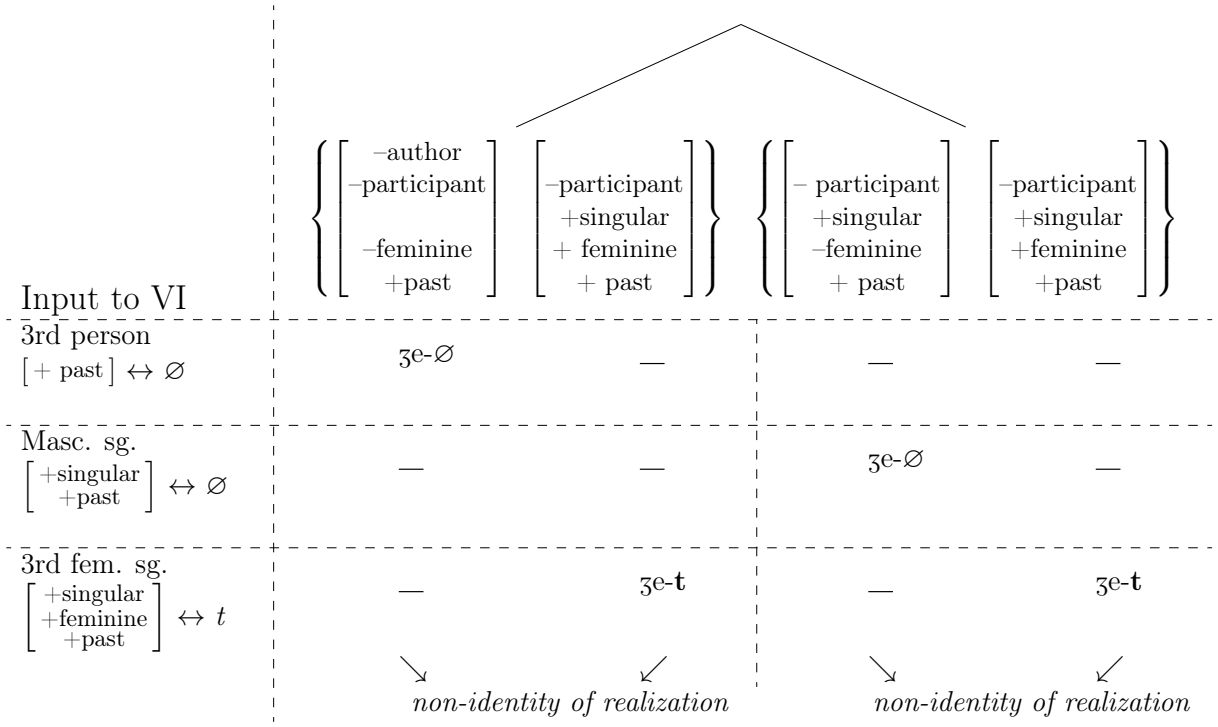
c. Fission

$$\left\{ \left\{ \begin{bmatrix} \text{–author} \\ \text{–participant} \\ \\ \text{–feminine} \\ \text{+ past} \end{bmatrix} \quad \begin{bmatrix} \\ \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \text{+ past} \end{bmatrix} \right\} \left\{ \begin{bmatrix} \text{– participant} \\ \text{+singular} \\ \text{–feminine} \\ \text{+past} \end{bmatrix} \quad \begin{bmatrix} \\ \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \text{+past} \end{bmatrix} \right\} \right\}$$

Because fission splits the targeted features while copying all orthogonal ones, the result in (3.47c) is exactly that, considering that the features of the 2nd set are also orthogonal. The input to Vocabulary Insertion is thus the fissioned T° node now containing two positions of exponence but with each position having two conflicting sets of features. The final step is the competition between the different vocabulary insertion rules (3.48): For each feature set, a rule applies. If the two rules for a given position are the same, then VI is successful (Asarina 2011; Bjorkman 2016). Otherwise, we have two vocabulary items for one position, resulting in a PF clash.

set of features.

(3.48) *Evaluation of vocabulary insertion rules*



In (3.48), for each position of exponence, different rules apply, leading to ineffability, hence the ungrammaticality of (3.49).

(3.49) {*ʒeː-t / *ʒe} Rania w-Seːmi mabʕað-hom
{*come.PFV-3FSG / come.PFV.3MSG} R.F and-S.M together-3PL.CL
Rania and Sami came together.

The only grammatical output for conjuncts mismatching in gender is resolved agreement, *i.e.,* plural features on the verb (3.50). Note that in Tunisian, plural verb forms are neutral: They underspecified for gender.

(3.50) ʒeː-w Rania w-Seːmi mabʕað-hom
come.PFV-3PL R.F and-S.M together-3PL.CL
Rania and Sami came together.

To obtain resolved agreement (3.50), the features that are copied are not the *u*Fs but the *i*Fs.

A significant hypothesis that I make here is that *i*Fs can be copied in the downward-AGREE configuration that I assume occurs in (3.50).[25] In the system proposed by Smith (2015) and as it is followed by Adamson and Anagnostopoulou (to appear, accepted) and Adamson (accepted), there is an asymmetry between *u*Fs and *i*Fs: The former can be the target of AGREE irrespective of structural conditions, while the latter can only be copied onto a probe when the probe is c-commanded by the goal. Smith (2015:125) calls this the "LF-visibility requirement". I depart from this requirement in particular because there is no evidence for it in the spoken Arabic data, as opposed to what we find in Standard Arabic, as well as the agreement asymmetries we find in Romance between pre-nominal and post-nominal adjectives (Adamson, accepted:27). In Standard Arabic, resolved agreement occurs if the subject is pre-verbal and first conjunct agreement is obligatory if the subject is post-verbal (Mohammad 1990:96–98; Soltan 2007a:192).[26] By contrast, in spoken Arabic, resolution is always possible—and even preferred—with both pre- and post-verbal subjects. The pre-/post-verbal asymmetry only applies to FCA, which is possible only when the subject follows the verb. Thus, Smith's (2015) LF-visibility requirement would be too strong in this case.[27]

When conjuncts mismatch in gender as is the case here, the gender of the &P is masculine following the resolution rules I assume here (see fn. 17), though this gender specification does not matter for verbal agreement: It is reasonable to assume that once the set for 3rd masculine plural is copied on T°, an operation of gender impoverishment occurs,[28] deleting the [± feminine] feature in the presence of [–singular].[29] Then, the relevant vocabulary

25. It is the same configuration as in (3.38) above, with the probe being T° and the subject being in [Spec, *v*P].

26. Similarly, other agreement asymmetries include no number agreement with post-verbal subjects but obligatory number agreement with pre-verbal ones.

27. I do, however, propose that when Spec-Head agreement occurs—which is always in the particular configuration where the probing head carries a binder—agreement with *i*Fs is obligatory. I introduce this idea in §3.6.

28. Similar to Hewett's (2023a:145) first person gender impoverishment rule.

29. This operation would be specific to agreement morphemes on T/Asp: There are gender distinctions on plural DPs in Tunisian which intersect with (in)animateness (see Dali 2020).

insertion rules apply.

To summarize, in this section, I proposed a solution to Puzzle #2 whereby in Tunisian, the first conjunct is not accessible for agreement: All agreement with coordinate structures involves copying the features that have percolated to the &P level. In addition, there is always percolation of both semantic/interpretable and morphological/uninterpretable features to the &P level, and those are the ones that get copied on the probe. The probe may copy either set of features, but crucially only interpretable features can be resolved. Uninterpretable features remain as percolated. When the latter are copied, two possibilities emerge: If the two conjuncts differ in features, there is a clash at PF between conflicting feature sets on the probe, resulting in ineffability. However, if the two conjuncts have matching features, no such clash arises and vocabulary insertion is successful. As for resolved agreement, it is the result of copying interpretable features, which always undergo resolution.

3.5 First Conjunct Agreement in Palestinian within a dual-feature system

In this section, I extend the dual-feature system to Palestinian Arabic, attempting to explain two main things: (i) FCA in Palestinian is incompatible with certain plural-seeking elements like 'together' or 'at the same time' and (ii) FCA in general is possible and is not restricted to gender-matching DPs. I propose that the dual-feature system can explain the restrictions we find in Palestinian, but the grammar of Palestinian differs from that of Tunisian in that it is a Peeking Grammar (Marušič, Nevins, and Badecker 2015): In Palestinian, the probe can copy the features of the first conjunct, while in Tunisian, the probe only has access to the features that have percolated to the &P level.

3.5.1 Palestinian FCA and plural-seeking elements

As mentioned above, FCA in Palestinian does not require gender-matching DPs, being more available than in Tunisian. However, it has a particular restriction on the number sensitive item 'together' (3.51a), to the exclusion of other items like the verb 'meet' (3.51b).

(3.51) *First conjunct agreement in Palestinian*

a. ??/* ʔaʒa-t Raːnia w-ʕAzza maʕbaʕdˤ
come.PFV-3FSG R. and-A. together
Intended: 'Rania and Azza came together'

b. ltaʔa-t Raːnia w-ʕAzza
meet.PFV-3FSG R. and-A.
Rania and Azza met.

In §3.3.2, I proposed that a plausible explanation for this incompatibility is perhaps that a requirement for 'together' to be licensed in Palestinian is that the subject be both semantically and morphologically plural. This is especially apparent with the hybrid noun *ʃille* 'group', which can only license 'together' if it triggers plural agreement on the verb (3.52b).[30]

(3.52) *Agreement patterns with hybrid nouns*

a. əʃ-ʃille {ʔaʒa-t / ʔaʒ-u}
DEF-group.FSG {come.PFV-3FSG / come.PFV-3PL}
The group came.

b. əʃ-ʃille {*ʔaʒa-t / ʔaʒ-u} maʕbaʕdˤ
DEF-group.FSG {come.PFV-3FSG / come.PFV-3PL}
The group came together.

The parallel with (singular) FCA in (3.51a) is quite neat: The incompatibility of this adverb with FCA can be explained within the dual feature system proposed for Tunisian, with a slight modification regarding percolation of *u*F values.

Assuming that in (3.52a), singular agreement is the result of agreement with the *u*F value of the hybrid noun, and plural is the result of agreement with the *i*F value, then the gener-

30. This isn't the case in Tunisian where 'together' is licensed with both singular and plural agreement with this hybrid noun (3.22).

alization is the following: The plural-seeking element 'together' can only be licensed when the verb agrees with the (plural) *i*F value of the noun. However, this generalization seems strange: Why would the kinds of features that are copied matter for the licensing of an adverbial? It makes more sense that the features on the DP/&P would be the crucial ones.

A potentially more successful way of framing this is the following: As mentioned in §3.3.2 above, 'together' requires both semantic and morphological plurality to be licensed (Munn 1999). In the present framework, both *i*Fs and *u*Fs must contain a plural feature for the plural seeking element to be licensed.[31]

A problem with this hypothesis is the following: Assuming that *u*Fs are always singular for the hybrid noun 'group' or for an &P made up of two singular conjuncts, how do we model the grammaticality of plural agreement? Even when plural *i*Fs get copied, the *u*F value should still be singular.

Following Adamson and Anagnostopoulou (accepted) and Adamson (accepted), I propose that within the dual feature system, there are different possibilities for feature representation and percolation, one of which is lack of representation or percolation of *u*Fs. In other words, it is possible that a DP or &P have an empty *u*F value. When a DP or an &P has no *u*F value, Adamson and Anagnostopoulou (accepted:15) propose a Redundancy Rule (3.53) which copies the *i*F values onto the empty *u*F values.

31. Note that this framing might be a nice way to explain the data reported by Munn (1999:650) where FCA in Moroccan is compatible with 'together' when the first conjunct is plural (ii) but not when it is singular (i).

(i) * mʃa ʕUmar w-Saʕid məʒmuʕin
left.3SG Omar and-Said together
Omar and Said left together.

(ii) mʃitu ntuma w-ana məʒmuʕin
left.2PL you.PL and-I together
You and I left together.

In (ii), the *u*Fs on the &P would have a plural feature just like the *i*Fs would, and 'together' would be licensed, while no such plural specification would be found in the *u*Fs on the &P in (i).

(3.53) **R-Rule** (a redundancy rule):
*i*F values are copied to corresponding empty *u*F values at Transfer.

With our Palestinian hybrid nouns then, I suggest that an element like 'together' can only be licensed by a subject bearing a plural feature on *i*F and *u*F. Thus, singular agreement with 'group' cannot license 'together' in (3.54) because the [+singular] feature must be present in the *u*F value.

(3.54) əʃ-ʃille {*ʔaʒa-t / ʔaʒ-u} maʕbaʕdˤ
DEF-group.FSG {come.PFV-3FSG / come.PFV-3PL} together
The group came together.

However, plural agreement licensing 'together' points to a derivation where the noun *ʃille* 'group' comes without *u*Fs, and the value of *i*Fs are copied onto it.

By contrast, the feature specification {[*u*3FSG],[*i*3PL]} is compatible with the verb 'meet' (3.55).

(3.55) əʃ-ʃille {ltaʔa-t / ltaʔ-u}
DEF-group.FSG {meet.PFV-3FSG / meet.PFV-3PL}
The group met.

The same principle applies for &Ps: An &P must have the resolved features of the conjuncts for both the *i*F (semantic) and *u*F (morphological) value, otherwise, the plural-seeking adverb cannot surface. Thus, in (3.56a), we can assume that the &P has a [+singular] feature in the *u*F value. The presence of this feature is not problematic in (3.56c), where the verb does not require morphological plurality.

(3.56) a. ??/* ʔaʒa-t Raːnia w-ʕAzza maʕbaʕdˤ
come.PFV-3FSG R. and-A. together
Intended: 'Rania and Azza came together'
b. ʔaʒ-u Raːnia w-ʕAzza maʕbaʕdˤ
come.PFV-3PL R. and-A. together
Intended: 'Rania and Azza came together'

c. ltaʔa-t Raːnia w-ʕAzza
meet.PFV-3FSG R. and-A.
Rania and Azza met.

Plural agreement in (3.56b) licenses the presence of 'together', which means that the *u*F value contains a plural. I assume that this plural was copied onto the it from the *i*F value via the redundancy rule (3.53).

Because of the interplay between semantic and morphological features in (dis)allowing plural-seeking elements, the division between *i*Fs and *u*Fs seems to play a significant role in Palestinian as well, despite the fact that this dialect is more permissive with FCA than Tunisian: The gender-matching requirement does not hold. That said, I continue to assume that feature percolation and conversion happen at the &P level: For an adjunct such as 'together' to be licensed, the feature specification of the &P must be {[*u*F: PL], [*i*F: PL]}. I also take resolution to be a semantic process that can be followed by copying *i*Fs onto the empty *u*F value: Such a process leads to the appropriate feature specification to license 'together'.Thus, the analysis of resolved agreement is the same for both dialects. As for first conjunct agreement, there must be an additional mechanism that allows targeting the closest conjunct of a post-verbal &P in Palestinian, assuming that the absence of the gender-matching requirement in this dialect is due to this.

3.5.2 The possibility of agreement with the first conjunct

I propose that Palestinian differs from Tunisian in exactly this respect. While the &P makes it to PF with the *u*Fs that have percolated from both conjuncts, in Palestinian, copying is not limited to the feature sets at the &P level: Feature-copying is able to target the first conjunct, which is both the hierarchically highest element pre-linearization and the linearly closest to it post-linearization. In Marušič, Nevins, and Badecker's (2015) words, Palestinian has a Peeking Grammar and Tunisian has a No-Peeking Grammar. In Tunisian, the values

at the &P level must be copied and if they mismatch, they inevitably lead to a crash:[32] The grammar of conjunct agreement in Tunisian is a grammar that does not have access to individual conjuncts. In Palestinian, a given probe establishes AGREE-LINK (Arregi and Nevins 2012:86) with the &P goal, but at PF, it may copy the features it needs only from the first conjunct (Marušič and Nevins 2020). In other words, the percolation of mismatching features does not lead to a crash in Palestinian; its Peeking Grammar allows the copying of only the set of features of the closest conjunct, leading to convergence at PF.

It is reasonable to model differences between dialects with regards to conjunct agreement as slightly varying grammars: I propose that in both dialects, uninterpretable and interpretable features play an important role regulating the restrictions on FCA, but the results are not the same because each dialect has a different grammar (and speakers within those dialects have varying grammars as well, as in *e.g.,* Slovenian (Marušič, Nevins, and Badecker 2015)).

32. To be precise, in Marušič, Nevins, and Badecker's (2015) proposal, the No-Peeking Grammar ends up inserting a default feature if the features on &P are missing, because they are operating under the assumption that &° cannot compute its own gender value. Such an assumption is not at stake in the system proposed here, where the semantic features can be resolved while the morphological ones cannot, regardless of type (gender, number, or person). There remains the question of why wouldn't the No-peeking Grammar of Tunisian allow insertion of a default (3MSG) feature to prevent the derivation from crashing when the probe copies sets of features that mismatch, given that this is exactly the result of a No-Peeking Grammar in Slovenian. In other words, why is default agreement on the verb in (i) not an acceptable output, where we have conjuncts mismatching in gender?

(i) * ʒeː l-mudiːr-a w-l-muʕalləm
come.PFV.3MSG DEF-principal-F and-DEF-teacher.M
Intended: 'The principal and the teacher came.'

According to Coon and Keine (2021:688), default agreement is either the realization of unvalued probe (see Preminger (2009), and §2.3.3 in Chapter 2 above), or the result of the insertion of an elsewhere vocabulary entry in cases where no more specific VI is applicable. Just like in Coon and Keine's (2021) data, the probe in this case does have a value—it has two of them—, and a more specific VI rule than the elsewhere is available, though it is blocked by competition between VI rules, as discussed in §3.4.2. Additionally, I suspect that default agreement is the possibly the lowest ranked option in such contexts due to the availability of resolution as a strategy. With coordination of DPs, resolved agreement is the preferred agreement strategy across the board, and I suspect that a singular default where a plural can be inserted via copying the *i*Fs is dispreferred in the same way that FCA in general is dispreferred over resolved agreement: Among possible derivations with/without *u*F copying, the derivation where resolution obtains seems to always be ranked highest, and default agreement as a possible rescue is probably not the most accessible repair strategy. Lebanese speakers in an experimental setting produced default agreement for examples like (i), and even with &Ps whose conjuncts were both feminine singular (though much less frequently) (Lorimor 2007:179). It seems that default insertion is possible to varying degrees, and is perhaps more amenable to being tested in experimental settings rather than elicitation settings.

Tunisian is more constrained than Palestinian, not allowing a probe to look inside conjunctions it c-commands, while Palestinian does not have this restriction. Conjunct agreement displays high degrees of inter and intra-speaker variation in many languages (van Koppen 2005, 2007; Marušič, Nevins, and Badecker 2015) including Arabic as reported by Aoun, Benmamoun, and Sportiche (1994), Harbert and Bahloul (2002), and Al Khalaf (2022) and as such it is not surprising that these two dialects of Arabic would have different grammars for agreement with coordinate structures. The approach proposed here can be used to account for different grammars of conjunct agreement in Arabic and thus capture the variation between dialects and idiolects: The preference for gender parallelism in Lebanese Arabic as reported by Aoun, Benmamoun, and Sportiche (1994) and Lorimor (2007) can be modeled as an irresolvable competition at PF like in Tunisian above, while leaving room for a different grammar that allows "peeking" inside the conjunction for other speakers of these same dialects.

3.5.3 Interim Summary

So far, I focused on the possibility of first conjunct agreement with lexical DPs in Tunisian and Palestinian, showing that it is not freely available and subject to different constraints in each dialect. I provided an explanation in terms of feature percolation and calculus at the &P level, accounting for the gender matching requirement in Tunisian as a feature clash at PF. I then extended the dual feature system in order to account for the incompatibility of the plural seeking element *together* with FCA in Palestinian. In the next section, I focus on Puzzle #3, the obligatory resolved agreement with pre-verbal subjects. The solution to this puzzle will naturally bring us to the solution to Puzzle #1, namely the impossibility of first conjunct clitic doubling of lexical DPs.

3.6 Puzzle #3: Resolved agreement with pre-verbal subjects

While Tunisian and Palestinian differ in the possible patterns of FCA, they have in common an asymmetry between pre-verbal and post-verbal subjects found not only across Arabic but also cross-linguistically more generally: When the subject is pre-verbal, only resolved agreement is possible. Neither agreement with the last conjunct (*i.e.,* the linearly closest one to the verb in this configuration), nor the first are possible.

(3.57) *Agreement with pre-verbal subjects is obligatorily resolved*

a. Raːnia w-ʕAzza {*ʒeːt / ʒeː-w}
R.F and-A.F {*come.PFV-3FSG / come.PFV-3PL}
Rania and Azza came. Tunisian

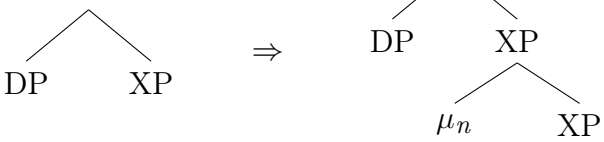
b. Saːmi w-Mħammad {*ʔaʒa / ʔaʒ-u}
S.M and-M.M {*come.PFV.3MSG / come.PFV-3PL}
Sami and Mhammad came. Palestinian

The data in (3.57) is in line with a common cross-linguistic generalization noted by *e.g.,* Samek-Lodovici (2002), Bjorkman and Zeijlstra (2019), and Adamson (accepted): Where both are possible, Upward-AGREE is never poorer than Downward-AGREE.

Based on the analysis of resolved agreement proposed in this chapter, namely that it is the result of agreement with the semantic features of the &P, it is reasonable to assume that this is also the mechanism behind resolved agreement in (3.57). The question we need to answer is the following: In principle, nothing prevents say, the Tunisian &P in (3.57a) to have *u*Fs and *i*Fs. In cases of post-verbal subjects, as we saw above, agreement with either *u*Fs or *i*Fs is possible. We wouldn't want to say that the uninterpretable features do not percolate just in case the subject moves, though we still need to say something about the necessity of semantic agreement in this case. I propose that the necessity of semantic agreement in this case comes naturally from the type of probe we have, which I intuitively describe as a "semantic probe".

When subjects are post-verbal, we can assume they are in [Spec, *v*P] (or [Spec, AspP]), below

T°: AGREE occurs downward from probe to goal (see §3.4.2 above, (3.38)). By contrast, pre-verbal subjects move to [Spec, TP] (Benmamoun 2000:chap.3; Tucker 2011:191; Crone 2017:184). Crucially, in the system I adopt in the dissertation, this type of movement triggers μ-adjunction as shown in (3.58a) (Büring 2005:245; Hewett 2023c:400–2). μ is a binder prefix responsible for binding gaps under A-movement—our concern here—, but also responsible for binding (base-generated) resumptive pronouns—which will be of concern in Chapter 4—(Hewett 2023c, 2023d). Thus, μ-prefixes trigger Predicate Abstraction (3.58b) (Heim and Kratzer 1998:186,(4)).

(3.58) a. 

Where n is an index and DP occupies an A-position or an $\overline{\text{A}}$-position.

b. $[\![\, \mu_n \text{ XP} \,]\!]^g = \lambda x_e.[\![\, \text{XP} \,]\!]^{g^{n \to x}}$

(Hewett 2023c:400-1,(98a–b))

So, what does movement and consequently μ-adjunction have to do with our agreement problem? Well, one of the main arguments made in this dissertation is that a head carrying a μ-binder must agree with the element in its specifier (3.59).

(3.59) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

When a subject moves to [Spec, TP], this results in μ-adjunction, hence the probing head T carries a μ-binder, making it probe in its specifier instead of downwards.

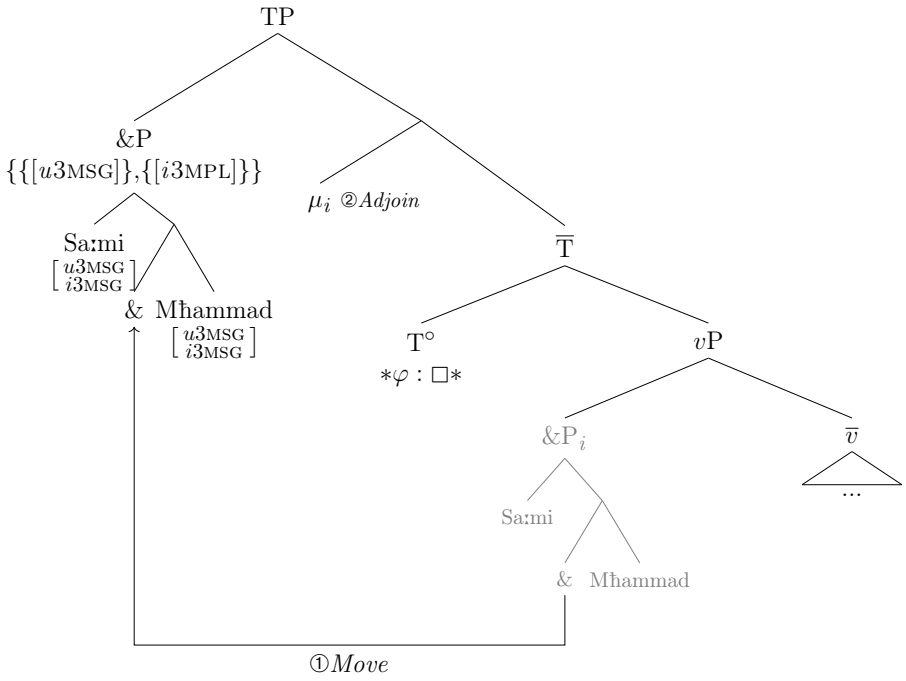
So, in example (3.60) (repeated from (3.57b)), the relevant steps of the derivation are as follows. First, the subject moves to [Spec,TP], which is followed by μ-adjunction (3.61a). This in turns makes the structure meet the requirement for (3.59) to apply, which it does in

(3.61b), leading to Spec-Head agreement.[33]

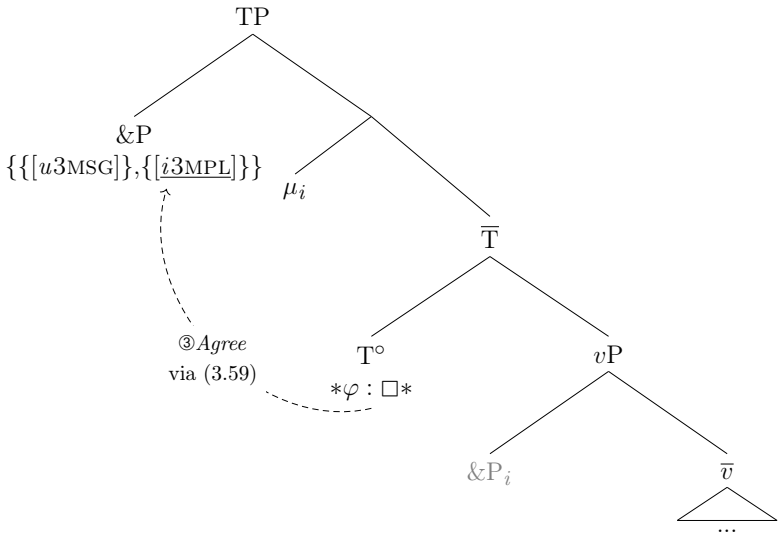
(3.60) Sa:mi w-Mħammad {*ʔaʒa / ʔaʒ-u}
S.M and-M.M {*come.PFV.3MSG / come.PFV-3PL}
Sami and Mhammad came. Palestinian

(3.61) *Agreement with moved &P in* (3.57b)

a. *Movement and μ-adjunction by* (3.58a)



b. *Spec-Head Agreement*



33. I thank Zach Lebowski for suggesting this idea to me.

In (3.61b), resolved agreement doesn't necessarily follow from the Spec-Head relation: In principle, the probe should be able to copy the *u*Fs of the moved subject. Although some scholars have posited that Spec-Head agreement with &Ps leads to resolved agreement (*e.g.,* Munn 1999; Harbert and Bahloul 2002), under the dual-feature system used here, it seems that the probe should be able to copy either the *u*Fs or the *i*Fs from the &P. Indeed, in Smith's (2015) proposal, *u*Fs can also be targeted an upward-AGREE configuration. Though admittedly a stipulation, I propose that Spec-Head agreement must always target interpretable features. This is because Spec-Head agreement in this context only occurs in a very specific circumstance: that of a head carrying a μ-binder. Intuitively, we want to say that this type of probe is semantic, so to speak.

The idea that Spec-Head agreement—or upward agreement more generally—is agreement in semantic features has some precedent. At minimum, there is ample cross-linguistic evidence that agreement in S–V structures is 'richer' (Samek-Lodovici 2002:1; Bjorkman and Zeijlstra 2019:529) or less 'fragile' (Franck et al. 2006:181, 197) than in V–S structures. Additionally, in Smith's (2015:125) dual-feature system, agreement with *i*Fs "requires the controller to c-command the target at LF." My proposal is different insofar as the directionality of the entailment: Here, I suggest that if the controller c-commands the target, then agreement must occur with *i*Fs. It seems reasonable to make this stipulation given what we know about agreement asymmetries cross-linguistically and their manifestations in spoken Arabic. Where the asymmetries can be rigid for *e.g.,* English collective nouns (3.62),[34] or Modern Standard Arabic coordination (3.63), in Tunisian and Palestinian at least, 'poor' (FCA) agreement is possible in V–S order but not in S–V order, while 'rich' (resolved) agreement is possible in either case: They are not in complementary distribution like in (3.63).

(3.62) *Agreement with collective nouns in British English*
a. This committee {is / are} deciding on a solution. V–S

34. For English collective nouns, as Smith (2017) notes, plural agreement is more restricted than singular agreement.

b. There {is / *are} a committee deciding the budget for next year. S–V
(Adamson, accepted:28, citing Smith 2017:824–5)

(3.63) *Agreement with &P subjects in Modern Standard Arabic*

a. {ʒaːʔa-t / ***ʒaːʔ-aː**} Hind-un wa-Zayd-un
{came-3FSG / ***came-3DU**} Hind-NOM and-Zayd-NOM
V–S

b. Hind-un wa-Zayd-un {*ʒaːʔa-t / *ʒaːʔa / **ʒaːʔ-aː**}
Hind-NOM and-Zayd-NOM {*came-3FSG / *came.3MSG / **came-3DU**}
Hind and Zayd came. S–V

Thus, I propose that semantic agreement is always possible: *i*Fs can be copied in a Spec-Head or a downward-AGREE configuration. However, in the former, they are the only features that can be copied. This stipulation also plays a crucial role in deriving the ban on first conjunct clitic doubling of DPs in the next section.

3.7 Back to Puzzle #1: The ban on first conjunct clitic doubling of lexical DPs

This last section is dedicated to our central puzzle #1, namely the ban on clitic doubling of first conjunct lexical DPs. Recall the main contrast between first conjunct agreement as in (3.64) and first conjunct clitic doubling as in (3.65).

(3.64) *Agreement with &P subject*

a. {ʒeː-t / ʒeː-w} Raːnia w-ʕAzza
{come.PFV-3FSG / come.PFV-3PL} R.F and-A.F
Rania and Azza came. Tunisian

b. {ʔaʒa / ʔaʒu} Saːmi w-Mħammad
{come.PFV.3MSG / come.PFV-3PL} S.M and-M.M
Sami and Mhammad came. Palestinian

(3.65) *Clitic doubling of &P object*

a. ʃof-t-{***ha$_i$/hom$_{i+j}$**} [Raːnia$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL**} R.F and-A.F
I saw Rania and Azza. Tunisian

b. ʃuf-t-{***o**$_i$/**hom**$_{i+j}$} la-[Sa:mi$_i$ w-Mħammad]$_{i+j}$
see-PFV.1SG-{***3MSG.CL/3PL.CL**} OM-S.M and-M.M
I saw Sami and Mhammad. Palestinian

While in (3.64) the verb can seemingly agree with only the first conjunct (keeping in mind the caveats discussed in §3.4 and §3.5), the mirror object clitic doubling pattern is simply unacceptable, even if we control for conjuncts that match in gender in Tunisian (3.65a).

The difference between the pairs in (3.64) and (3.65) is puzzling, because the order between &P and the ϕ-morpheme cross-referencing it is the same in the two configurations, as shown in (3.66), with the &P surfacing *after* the ϕ-morpheme in both. Yet, only one (3.66b) is acceptable.

(3.66) *Tunisian first conjunct agreement and doubling*

a. ʃof-t-***ha$_i$** / ***3FSG.CL** [Ra:nia$_i$ w-ʕAzza]$_{i+j}$
saw-1SG- R.F and-A.F
I saw Rania and Azza.

b. ʒe:-**t** / **3FSG** Ra:nia w-ʕAzza
came- R.F and-A.F
Rania and Azza came.

Looking at the relevant configurations schematically as in (3.67), we see that the order ϕ-morpheme – &P is shared by (3.67a) and (3.67b), yet they do not pattern together. Instead, the clitic doubling configuration (3.67b) patterns with the configuration we find with pre-verbal subjects (3.67c), with a singular ϕ-morpheme being unacceptable.

(3.67) a. ✓AGR$_{\varphi_SG}$ [$_{\&P}$ DP$_1$ & DP$_2$]

b. ✗CL$_{\varphi_SG}$ [$_{\&P}$ DP$_1$ & DP$_2$]

c. ✗[$_{\&P}$ DP$_1$ & DP$_2$] AGR$_{\varphi_SG}$

Although this pattern may seem strange at first glance, the fact that object clitic doubling and agreement with preverbal subjects must be resolved follows from my analysis. Both resolved agreement with pre-verbal subjects and resolved clitic doubling arise via the same

mechanism of Spec-Head Agreement under binding: Both the &P subject in (3.67c) and the &P object in (3.67b) are in the specifier of a probe carrying a μ-binder, a configuration that leads to Spec-Head agreement, which I argue to be semantic agreement, *i.e.,* agreement in *interpretable* features. The reason why the clitic surfaces before the &P is due to its movement with the verb to a position preceding the object.

Recall that our analysis of clitic doubling (3.68) has a crucial ingredient, namely (3.68c), which requires the movement of the double to the specifier of the clitic (3.69).

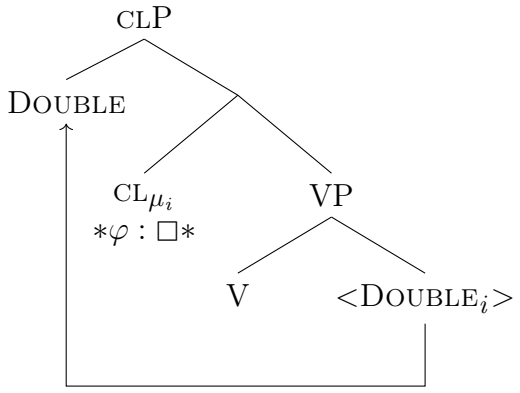
(3.68) **The ingredients of clitic doubling**

a. A clitic projection, CLP, headed by a CL$^\circ$ (Sportiche 1996; Angelopoulos and Sportiche 2021; Saab 2024). Doubling clitics are the surface realization of CL$^\circ$.

b. The CL$^\circ$ is a ϕ-probe: It comes unvalued and must agree with the element it doubles (Sportiche 1996; Saab 2024).

c. The CL$^\circ$ is a μ-binder (Büring 2004, 2005): It requires an element in its specifier which binds a pronoun or **a trace**. By virtue of being a μ-binder, a doubling clitic triggers Predicate Abstraction (Heim and Kratzer 1998:198,(4)).

(3.69) *Analysis of Clitic Doubling*



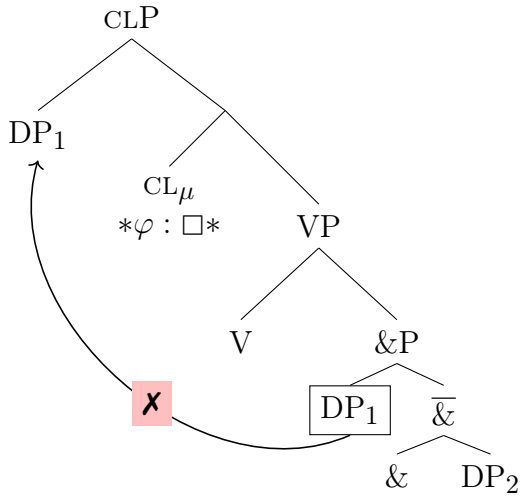
This analysis predicts the unacceptability of first conjunct clitic doubling of DPs in a straightforward manner: If the clitic head is itself a μ-binder, then the configuration we have in (3.69) is roughly the same as the one we have for subject movement to [Spec, TP] above in (3.61a). The only difference is that for subjects, movement resulted in μ-adjunction while for clitics,

the derivation starts with a μ-binder which itself requires movement. The resulting configuration is one where a head carries a μ-binder, which is exactly the configuration that triggers the application of Spec-Head agreement under binding (3.70).

(3.70) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

So, even in a dialect like Palestinian, with a peeking grammar allowing it to probe inside a conjunction phrase, first conjunct clitic doubling of DPs could not occur because it would require the movement of that conjunct to [Spec, CLP], stranding the rest of the &P, violating the CSC (3.1), as shown in (3.71).

(3.71) *First conjunct clitic doubling violates the CSC*



By contrast, resolved doubling (3.72) is predicted to be grammatical under this analysis.

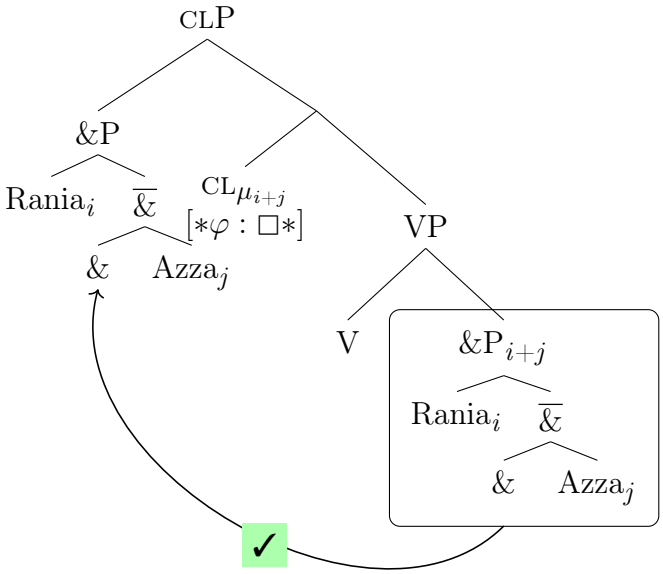
(3.72) ʃof-t-**hom$_{i+j}$** [Ra:nia$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-**3PL.CL** R. and-A.
I saw Rania and Azza.

In the derivation of (3.72), the entire &P object moves to the specifier of CL$^\circ$ (3.73a). It is agreed with in Spec-Head fashion (3.73b) following (3.59), and the clitic binds the trace of

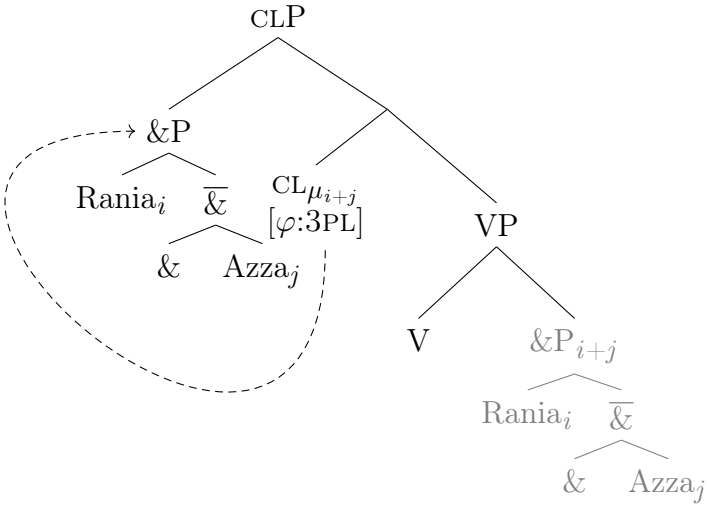
the &P.[35]

(3.73) *Derivation of resolved doubling*

a. *Movement of &P*



b. *Spec-Head Agreement*



35. Note that while the structure in (3.73) shows the clitic below the &P, the clitic ultimately surfaces on T° in this example due to head movement of the verb which moves to CL° then T°, yielding the surface order we find in (3.72).

Now, we run into a similar problem as we did in §3.6 for resolved agreement with pre-verbal subjects, namely that &P bears two sets of features, *u*Fs and *i*Fs. Again, we have the same configuration as for subjects: Spec-Head agreement under binding. The probe here being semantic as well, agreement must occur with *i*Fs, hence obligatory resolved doubling even if *u*Fs are free to percolate in this case as well.

Before concluding this chapter, I would like to point out the parallel between the structure of clitic doubling that I propose in (3.73b) and what a resumptive dependency with two coordinated *wh*-phrases would look like. This relates to my point about doubling clitics being a category distinct from pronouns and from agreement (Saab 2024), halfway between these two endpoints of the grammaticalization path from pronoun to agreement. Taking doubling clitics to be heads that are binders (CL_{μ}), and resumptive pronouns to be regular pronouns that need to be bound by an operator (*via* μ: Hewett 2023c), the comparison with resumption is adequate as they have similar ingredients.[36] Consider the example in (3.74), where two coordinated *wh*-expressions can only be resumed by the plural clitic.

(3.74) [ʔamma təlmið$_i$ w-amma muʕallma$_j$]$_{i+j}$ ʃof-t {-hom$_{i+j}$/ *-u$_i$/
which student and-which teacher.F see.PFV-2SG {-3PL.CL/ *-3MSG.CL/
*-ha$_j$}
*-3FSG.CL}
Which student and which teacher did you see?

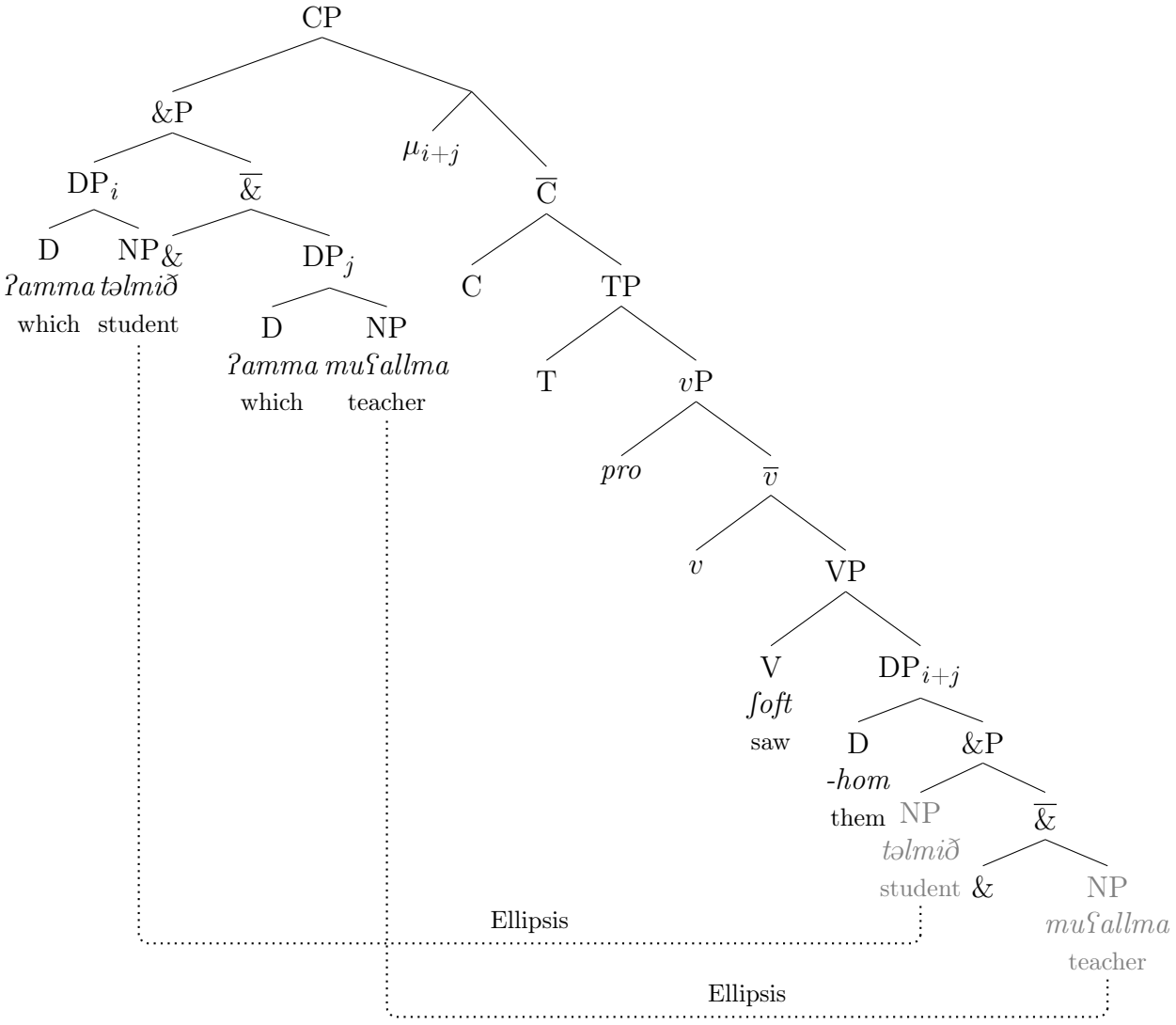
Just like in the doubling dependency in (3.72), only a plural clitic is possible. This makes sense since the entire &P in [Spec, CP] must bind the resumptive pronoun. Following Hewett's (2023c) analysis of Arabic $\overline{\text{A}}$-dependencies, the *wh*-&P is base generated in [Spec, CP], and the clitic *-hom* in (3.74) would be the resumptive pronoun, a D° whose complement is an elided NP[37,38] as shown in (3.75).

36. This isn't coincidental, as I propose a diachronic path from right dislocation to clitic doubling that involves the reinterpretation of a resumptive dependency into a doubling dependency in Chapter 6.

37. See §6.2 in this dissertation and Hewett (2023c:§6.2) and references therein for details on the NP-ellipsis theory of pronouns.

38. Here, the complement is an &P, which adds a complication for the NP-ellipsis theory of pronouns. That

(3.75) *Derivation of* (3.74)



Both (3.73b) and (3.75) have an &P, a μ-binder prefix, and a clitic. In particular, both representations have an &P binding some element *via* the μ prefix. In (3.75), μ binds the clitic, while in (3.73b), the μ is itself the clitic, binding the trace of the &P. And just like a

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said, we can abstract away from this problem here, assuming that E-type pronouns are able to have split antecedents as in Elbourne's (2001:276,(86)) example (ia), where we understand the elided complement to be *donkey and horse* (ib).

(i) a. If Mary sees a donkey and a horse, she waves to them.
b. If Mary sees a donkey and a horse, she waves to them [~~donkey and horse~~.]

I thank Matthew Hewett for talking through this problem with me and pointing me to Elbourne's discussion of split antecedents.

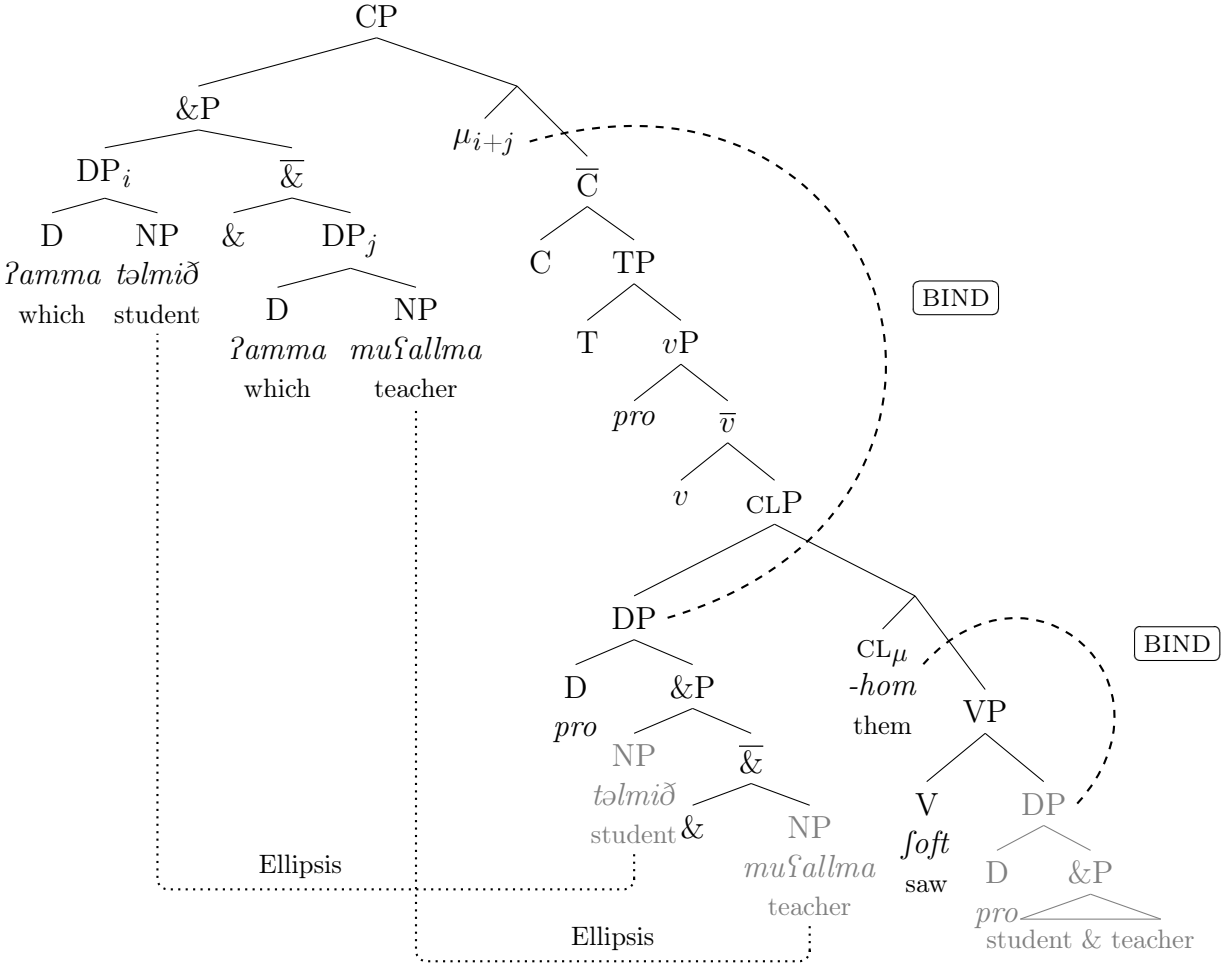
singular clitic is unacceptable in resuming a *wh*-&P (3.74), so is a singular clitic unacceptable in doubling of an &P (3.72) in my analysis.

Although an analysis where clitics in resumptive dependencies are themselves the resumptive pronouns as in (3.75)—*á la* Hewett (2023c)—is perfectly plausible, let me anticipate an important argument that I make later in the dissertation: In §6.2 and §6.3, when I propose a diachronic path for the evolution of clitic doubling, I argue that in the dialects of Arabic investigated here, there are no synchronic pronominal clitics, there are only doubling clitics and agreement clitics.[39] Thus, I propose a modification of this analysis of resumption, where clitics are always the realization of CL°. So I ultimately complicate the derivation in (3.75) by saying that the resumptive pronoun in (3.74) is actually a silent *pro*, and the plural clitic is the realization of CL° doubling that *pro*. However, I keep Hewett's (2023c) insight, namely that this resumptive *pro* is itself a pronominal D° with an elided NP/&P complement. Thus, the derivation that I ultimately propose for (3.74), based on arguments made later in the dissertation, is shown in (3.76).

This derivation still contains the main ingredients of Hewett's (2023c) analysis, namely an element base-generated in [Spec, CP], binding a resumptive pronoun whose complement is an elided NP. The resumptive pronoun is also merged in argument position (complement of V here). The difference is that I propose that there is an additional clitic projection whose head binds the trace of the resumptive pronoun, and realizes the clitic that we see attached to the verb in (3.74).

39. Agreement clitics are the clitics that surface on negation and *wh*-words.

(3.76) *Derivation of* (3.74) *within a theory where clitics are always the realization of* CL°



3.8 Conclusion

This chapter's primary puzzle is the difference between agreement and doubling with coordinate structures whose first conjunct is a DP: While agreement with a first conjunct DP seems *a priori* possible,[40] doubling of a first conjunct DP is not. I explained this important difference by the movement mechanism underlying clitic doubling: In clitic doubling, the double must move to the specifier of the clitic. If only the first conjunct moved, that would lead to a CSC violation, whereas movement of the entire &P incurs no such violation, hence the grammaticality of resolved clitic doubling. Although my analysis of clitic doubling is

40. Keeping in mind my analysis of FCA in Tunisian as being illusory.

different from the Move-and-Reduce analysis proposed by Ostrove (2018), we explain the impossibility of first conjunct clitic doubling in the same way, *i.e.,* as a CSC violation.

In finding an explanation for this puzzle, we were led to explore two secondary puzzles: The restrictions on First Conjunct Agreement, and in particular the gender matching requirement in Tunisian (Puzzle #2) and the fact that resolved agreement with preverbal DPs is always obligatory (Puzzle #3). The answers to both puzzles paved the way to our understanding of the ban on first conjunct clitic doubling of DPs, in particular, the interplay between movement and Spec-Head agreement being semantic. In addition, this chapter makes an empirical contribution to the landscape of first conjunct agreement patterns cross-linguistically.

CHAPTER 4

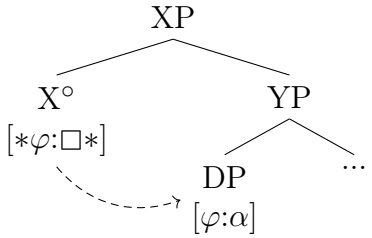
FIRST CONJUNCT PRONOUNS, BROAD SUBJECTS AND BROAD OBJECTS

4.1 Introduction

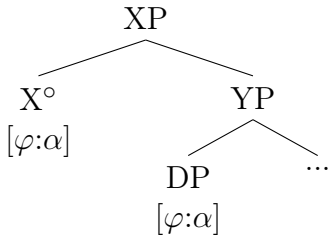
Up to now, I have strived to make a clear distinction between agreement and clitic doubling, keeping their analyses distinct. As a reminder, I take agreement to be the reflex of the operation AGREE (Chomsky 2000, 2001) between a head (probe) and a goal (4.1a), with the ϕ-features of the goal being realized on the probing head (4.1b).

(4.1) *The mechanics of agreement*

a. *Agree*

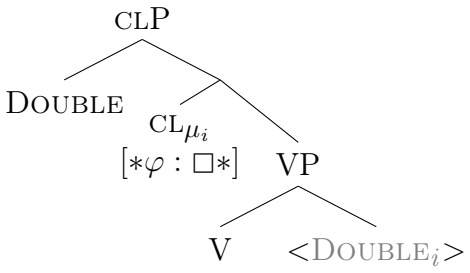


b. *Valuation*



By contrast, clitic doubling is the result of merging CLP, a projection whose head—which ends up being realized as a doubling clitic—is not only a ϕ-probe but also a μ-binder (4.2).

(4.2) *Analysis of Clitic Doubling*



In this chapter, I explore a set of data that presents us with a puzzle given the claims I have

been making so far. Agreement and clitic doubling are surprisingly very similar with regards to coordinate structures whose first conjuncts are pronouns: Pronouns lift restrictions on first conjunct agreement, and allow first conjunct clitic doubling.

In Tunisian, the gender matching requirement (Puzzle #2 from Chapter 3) makes (4.3b) unacceptable. This requirement is seemingly lifted if we replace the lexical DP *Rania* with a pronoun, as in (4.3c).

(4.3) *The gender matching requirement in Tunisian*

a. ʒeː-t Raːnia w-ʕAzza mabʕað-hom
come.PFV-3FSG R.F and-A.F together-3PL.CL
Rania and Sami came together.

b. * ʒeː-t Raːnia w-Seːmi mabʕað-hom
come.PFV-3FSG R.F and-S.M together-3PL.CL
Rania and Sami came together.

c. ʒeː-t hijja w-Seːmi mabʕað-hom
come.PFV-3FSG PRON.3FSG and-S.M together-3PL.CL
She and Sami came together.

In Palestinian, the adverb *maʕbaʕdˤ* 'together' is unacceptable in a sentence with FCA, as in the contrast between (4.4a) and (4.4b).

(4.4) a. {ʔtmaʃʃa / tmaʃʃ-u} Muʕtaz w-Raːnia
{ʔwalk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F
Mutaz and Rania walked around. Palestinian

b. {??/*tmaʃʃa / tmaʃʃ-u} Muʕtaz w-Raːnia maʕbaʕdˤ
{??/*walk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F together
Mutaz and Rania walked around together. Palestinian

Yet, just like in Tunisian, this restriction is lifted if we replace the first conjunct lexical DP in (4.4b) by a pronoun (4.5).

(4.5) tmaʃʃa huwwe w-ʕAzza maʕbaʕdˤ
walk.PFV.3MSG PRON.3MSG and-A.F together
He and Azza walked around together. Palestinian

With regards to clitic doubling, the main generalization made in Chapter 3 is that only resolved doubling of &Ps is possible, with first conjunct clitic doubling of DPs being unacceptable (4.6).

(4.6) *Clitic doubling of &P object*

a. ʃof-t-{***ha$_i$/hom$_{i+j}$**} [Ra:nia$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL**} R.F and-A.F
I saw Rania and Azza. Tunisian

b. ʃuf-t-{***o$_i$/hom$_{i+j}$**} la-[Sa:mi$_i$ w-Mħammad]$_{i+j}$
see-PFV.1SG-{***3MSG.CL/3PL.CL**} OM-S.M and-M.M
I saw Sami and Mhammad. Palestinian

We made sense of this restriction with an analysis of clitic doubling that requires the movement of the &P to [Spec, CLP] followed by Spec-Head agreement between CL° and the &P double. Movement of only the first conjunct would lead to ungrammaticality on account of a violation of the CSC.

This restriction is entirely lifted if we replace the first conjunct lexical DP by a pronoun. In this case, both the singular and plural clitic are acceptable.

(4.7) *Clitic doubling of &P object with pronominal first conjunct*

a. ʃof-t-{**ha$_i$/hom$_{i+j}$**} [hijja$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{**3FSG.CL/3PL.CL**} PRON.3FSG and-A.F
I saw her and Azza. Tunisian

b. ʃuf-t-{**o$_i$/hom$_{i+j}$**} [huwwe$_i$ w-Mħammad]$_{i+j}$
see.PFV-1SG-{**3MSG.CL/3PL.CL**} PRON.3MSG and-M.M
I saw him and Mhammad. Palestinian

The analysis of agreement and doubling with coordinate structures that I propose in Chapter 3 revolves around two main ingredients: (i) Feature calculus happening at the &P level and (ii) Spec-Head agreement with an &P obligatorily resulting in resolved agreement. Based on this, it is unclear how feature calculus at the &P level should be affected by the presence of a pronoun as the first conjunct in (4.3c). What's more, if clitic doubling of a first conjunct lexical DP is impossible (4.6) because the whole &P must move to the specifier of CL°,

forcing (resolved) Spec-Head agreement, it is unclear how replacing that DP with a pronoun (4.7) makes a difference: The Coordinate Structure Constraint shouldn't be sensitive to the type of DP moving out of the &P.

In this chapter, I show that this puzzling resemblance between agreement and clitic doubling can be explained by one important property of pronouns that distinguishes them from lexical DPs: Their ability to be interpreted as variables (Büring 2011:975), which allows them to be bound. The main claim of this chapter is the following: What looks like agreement with or doubling of first conjunct pronouns is in reality agreement with a covert DP *binding* that pronoun, hence the illusion of first conjunct agreement/doubling with pronominal first conjuncts.

I draw an explicit parallel between Arabic multiple subject constructions like (4.8) and (4.9).

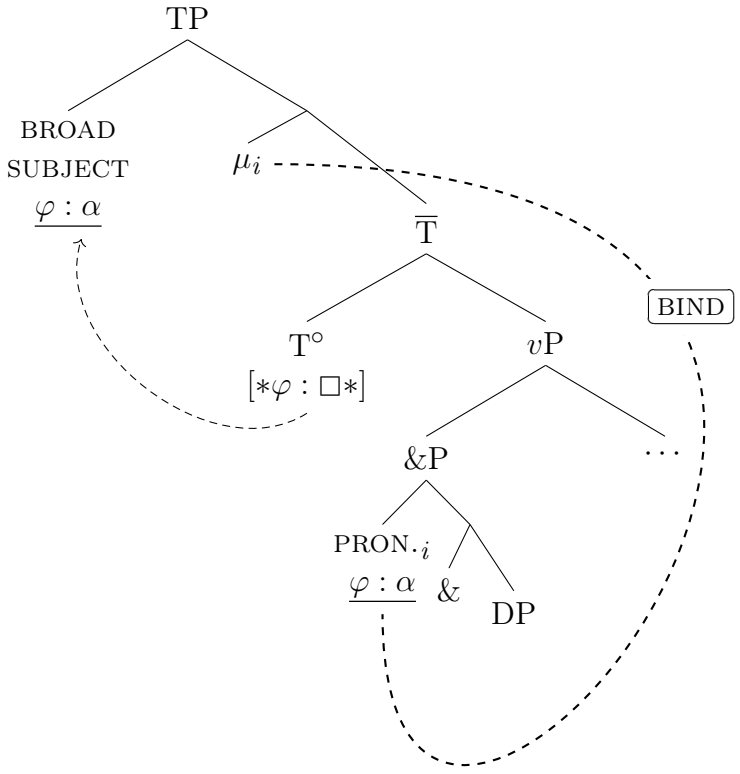
(4.8) {Raːnia$_i$ / *pro*$_i$} **keːn-ət** ʃʕar-ha$_i$ tˤwiːl
{R.F / pro} **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
{Rania / She} had long hair (*lit.* '(Rania) was [such that] her hair long' Tunisian

(4.9) {Raːnia$_i$ / *pro*$_i$} **ʒeː-t** hijja$_i$ w-Sami
{R.F / pro} **come-PFV.3FSG** PRON.3FSG and-S.M
{Rania / She} and Sami came (*lit.* '(Rania) came she and Sami.') Tunisian

I propose that in both (4.8) and (4.9), the verb agrees with the (c)overt BROAD SUBJECT (Doron and Heycock 1999). This BROAD SUBJECT binds the possessor pronoun in (4.8), and it binds the pronominal conjunct in (4.9).

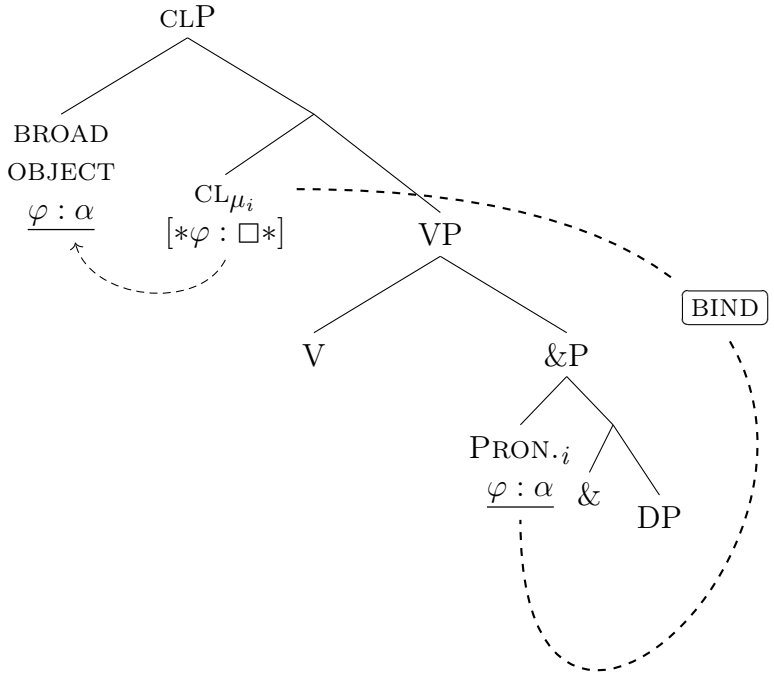
Thus, in the case of subject-verb agreement, I analyze what looks like first conjunct agreement with a pronoun as agreement with a BROAD SUBJECT binding that pronoun (4.10).

(4.10) *Analysis of "first conjunct agreement" with pronouns*



I extend the idea of BROAD SUBJECTS to object clitic doubling, and propose that what looks like first conjunct clitic doubling of a pronoun is doubling of a covert BROAD OBJECT binding that pronoun (4.11).

(4.11) *Analysis of "first conjunct clitic doubling" with pronouns*



The remainder of this chapter is organized as follows: I start by introducing the concept of BROAD SUBJECTS in §4.2 and providing a novel analysis of them. Then, in §4.3, I extend this analysis to agreement with coordinate structures and provide empirical evidence that first conjunct agreement with pronouns is underlyingly agreement with a BROAD SUBJECT. In §4.4, I further develop the analysis, testing it on sentences of different complexity and word orders. A summary of the most important arguments is provided mid-chapter, in §4.5. In §4.6, I account for clitic doubling of pronominal first conjuncts, arguing that it is underlyingly doubling of a BROAD OBJECT—a mirror category to BROAD SUBJECTS that I introduce. I address issues with my analysis and with BROAD SUBJECTS in general in §4.7, and conclude the chapter in §4.8.

4.2 Broad Subjects in Arabic: A novel analysis

A BROAD SUBJECT,[1] according to Doron and Heycock's (1999) original proposal is a non-thematic subject that is merged in a higher specifier of T°, the lower specifier being occupied by the moved thematic (or NARROW) subject. An example of a classic double subject construction[2] in Tunisian is shown in (4.12), where *ʃʕar-ha* 'her hair' is the thematic or NARROW subject, and *Raːnia* is the BROAD SUBJECT (see also Jlassi 2013:161ff.).

(4.12)

BIND		
Raːnia	ʃʕar*(-ha)	tˤwiːl
R.F	hair.MSG*(-3FSG.CL)	long.MSG
broad S.	*sentential predicate*	

Rania has long hair. (*lit.* 'Rania her hair long.')

Thus, a BROAD SUBJECT is the subject of a sentential predicate (Doron and Heycock 1999:71), which in turn is a full clause that can stand alone as a sentence (Hallman and Al-Suleem 2017).[3] The sentential predicate must contain a pronoun to be bound by the BROAD SUBJECT (Ayoub 1996:380; Heycock and Doron 2003:108; Hallman and Al-Suleem 2017:246) as it is the variable on which Predicate Abstraction (Heim and Kratzer 1998:186,(4)) operates (Yoon 2015:84–87). In (4.12) *Raːnia* binds the resumptive pronominal possessor *ha*.

There is a longstanding debate on whether broad subjects actually exist in Arabic and other Semitic languages in the same way they do in Japanese (Alexopoulou, Doron, and Heycock 2004; Doron and Heycock 2010; Landau 2009, 2011; Aoun, Benmamoun, and Choueiri 2010:64–66, 229–235; Alotaibi 2019; Alqarni and Alanazi 2023), specifically with regards to the difference between BROAD SUBJECTS (4.13a) and Clitic Left Dislocated elements (4.13b):

1. They are also called MAJOR SUBJECTS in the literature on Japanese (Heycock 1993; Tateishi 2017 and references therein) and Korean (Yoon 2015 and references therein).

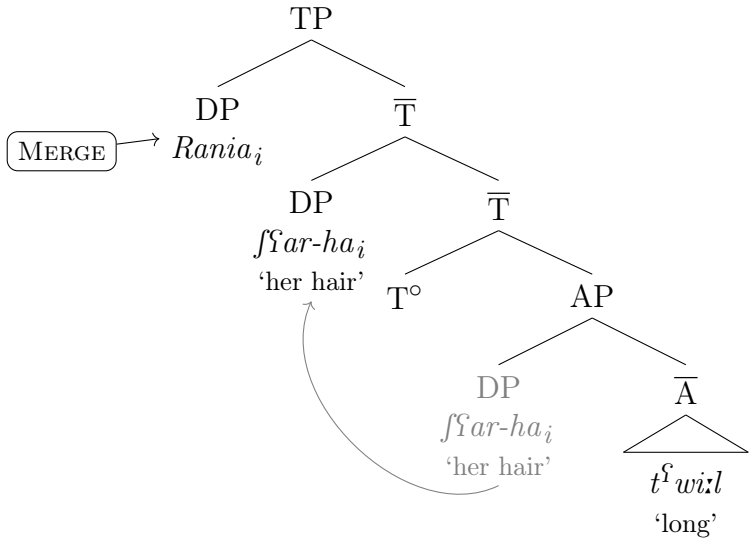
2. These constructions are called double subject constructions in both Japanese (Tateishi 2017) and Arabic (Aoun, Benmamoun, and Sportiche 1994; Jlassi 2013).

3. While Hallman and Al-Suleem (2017) call these "Nominative Topics", they seem to refer to the same type of constituent that is called BROAD SUBJECT by Doron and Heycock (1999), though they propose an analysis in terms of Left Dislocation for such constituents in Classical Arabic. My understanding is that these are similar to the concept of *mubtadaʔ* in Arabic grammar, although they are not equivalent to one another (Ayoub and Bohas 1983:39).

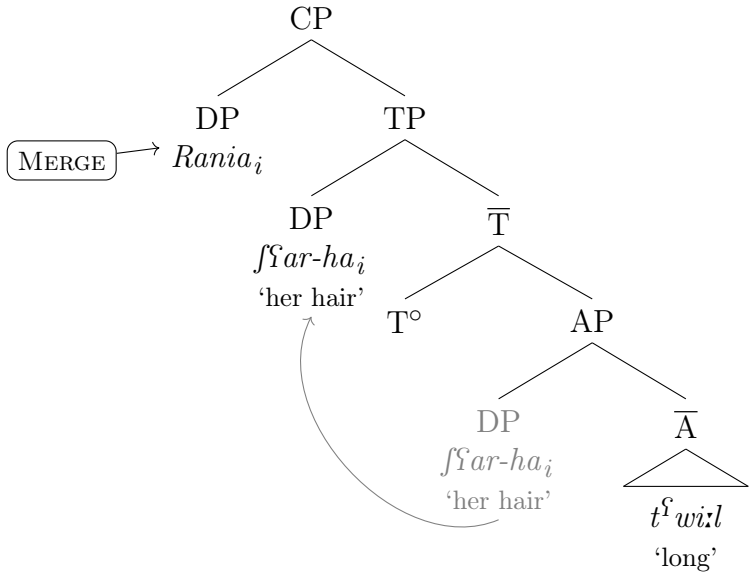
Both require a resumptive pronoun in the clause they are merged onto (Aoun, Benmamoun, and Choueiri 2010:233), and both require predicate abstraction (Landau 2011:90).

(4.13) *Two possible structures for* (4.12)

a. *'Rania' is a Broad Subject*



b. *'Rania' is Left Dislocated*



In this section, I argue that BROAD SUBJECTS must be considered as a category different from left dislocation based on one decisive piece of evidence alone: Their ability to trigger agreement on a verb.[4]

4. Alexopoulou, Doron, and Heycock (2004) provide a battery of diagnostic tests to differentiate BROAD

Consider the Tunisian example in (4.14), which is the past tense version of (4.12), with an obligatorily overt copula.[5]

(4.14) Raːnia$_i$ {**keːn-ət** / keːn} ʃʕar-ha$_i$ tˤwiːl
R.F {**be-PFV.3FSG** / be.PFV.3MSG} hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

In (4.14), the copula can either agree in feminine singular features with the preceding BROAD SUBJECT *Raːnia* or in masculine singular features with the following NARROW or thematic subject *ʃʕar-ha*. Assuming that the copula is located in T° (Alharbi 2017:117; Jarrah and Abusalim 2021:132), I propose that the latter is the result of T° probing downward, while the former is the result of T° agreeing with the element in its specifier. The ability of T° to

SUBJECTS—which they maintain are in [Spec, TP] (4.13a)—from Left Dislocated elements which are merged in the left periphery (4.13b). They propose that they behave like subjects in many respects: They can be embedded under ECM verbs, under auxiliaries, under antecedents of conditionals, can appear to the right of adjuncts, etc. They also are neutral with regards to information structure (they can function as topics or foci), and as such must not be in a position associated with distinct information structural segments. They also show that certain elements like bare quantifiers cannot be CLLD'd but can appear as BROAD SUBJECTS (see also Wehbe 2023:696). Additionally, they contend that BROAD SUBJECTS are not island sensitive while CLLD'd elements are. This latter argument goes against Aoun, Benmamoun, and Choueiri's (2010:201) observation that CLLD in Arabic violates island conditions. More generally, Arabic has base-generated $\overline{\text{A}}$-dependencies (Hewett 2023c), and so island-insensitivity would be a shared property of BROAD SUBJECTS and CLLD'd elements in Arabic. The discussion on BROAD SUBJECTS becomes even more complicated in the face of analyses of pre-verbal subjects as occupying an $\overline{\text{A}}$-position in Arabic (and more generally in null subject languages, see Camacho (2013:chap. 8) for a summary of the arguments). For instance, Soltan (2006, 2007a) proposes that [Spec, TP] in Arabic is an $\overline{\text{A}}$-position and that pre-verbal subjects are always linked to a resumptive pronoun (null or overt) within the clause. This muddies the distinction between CLLD and BROAD SUBJECTS even more, even though Alexopoulou, Doron, and Heycock (2004) insist that BROAD SUBJECTS are generated in an A-position, and thus T°'s specifiers must be A-positions (see also Rezac 2011; Hewett 2024 on A-resumption). All of these diagnostic tests, while useful, are not categorical. Agreement, however, is hard to explain as anything other than the ability of BROAD SUBJECTS being merged low enough to be controllers of agreement.

5. The same data as (4.14) is reported for Modern Standard Arabic by Doron and Heycock (1999:73, ex. (9)) and by Aoun, Benmamoun, and Choueiri (2010:231, ex. (41b)), repeated below, with their proposed translation.

(i) kaːnat Zaynab-u ʃaʕr-u-ha tˤawiːl-an
was.3FSG Zaynab-NOM hair.MSG-NOM-3FSG.CL long-ACC
Zaynab, her hair was long.

Note that this kind of data where the putative broad subject is embedded under the initial copula is disputed by Alqarni and Alanazi (2023:18–20), who maintain that examples like (i) are completely ungrammatical in Modern Standard Arabic. This does not pose an issue here as there is more than enough empirical evidence that these constructions are perfectly acceptable in the dialects under consideration. See Hewett (2023d, 2024) for additional examples of BROAD SUBJECT constructions in Jordanian, Iraqi, and Tunisian.

agree with a BROAD SUBJECT in its specifier naturally follows from rules and assumptions we have already seen in the previous chapters.

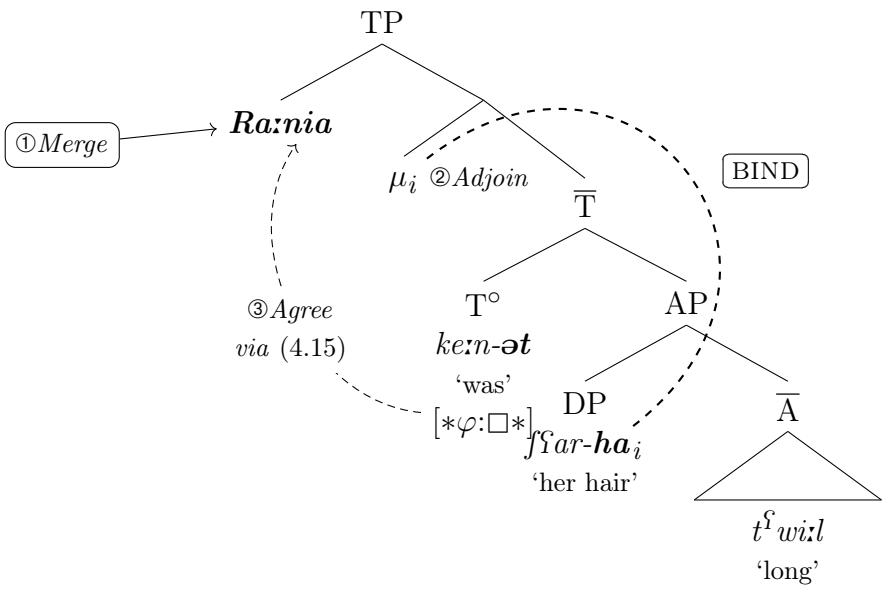
In particular, the BROAD SUBJECT being base-generated in [Spec, TP], and binding a resumptive pronoun from that position, leads to the application of the Spec-Head agreement under Binding rule (4.15).

(4.15) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

To be more explicit, let's walk through the derivation of the version of (4.14) where the copula agrees with the BROAD SUBJECT in feminine singular features (4.16).

(4.16) a. Raːnia$_i$ **keːn-ət** ʃʕar-ha$_i$ tˁwiːl
R.F **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

b.



If *Raːnia* is merged in [Spec, TP], then μ-adjunction obtains.[6] This leads to T° probing

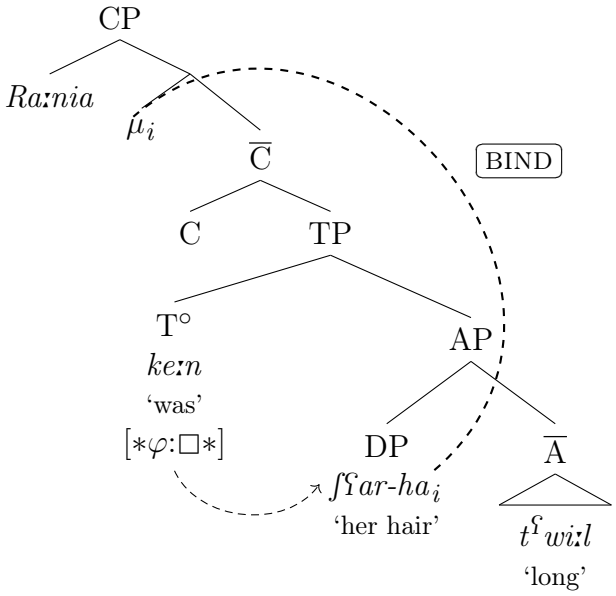
6. As discussed in §3.6, μ is a binder prefix responsible for binding gaps under A-movement, but also responsible for binding (base-generated) resumptive pronouns (ia), triggering Predicate Abstraction (ib) (Heim and Kratzer 1998:186,(4)).

in Spec-Head fashion in application of (4.15), copying the features of the BROAD SUBJECT *Ra:nia*, not those of the NARROW SUBJECT *ʃʕar-ha* 'her hair'.

By contrast, I argue that the version of (4.14) with masculine singular features on the copula (4.17a)—indicating agreement with the thematic subject *ʃʕar-ha* 'her hair'—is an instance of clitic left dislocation (4.17b).

(4.17) a. Ra:nia$_i$ **ke:n** ʃʕar-ha$_i$ tʕwi:l
R. **be.PFV.3MSG** hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

b.



In (4.17b), the left dislocate *Ra:nia* is merged in [Spec, CP], and thus cannot be targeted by the probe T° for agreement. This configuration does lead to μ-adjunction, but in this case, it happens in C, and C° does not have a ϕ-probe. In (4.17b) then, Spec-Head agreement

---

(i) a. 

Where n is an index and DP occupies an A-position or an Ā-position.

b. $[\![\mu_n \text{ XP}]\!]^g = \lambda x_e.[\![\text{XP}]\!]^{g^{n \to x}}$

(Hewett 2023c:400-1,(98a–b))

(4.15) cannot apply, and T° probes downward, copying the features of the thematic subject.

Thus, we are able to derive both agreement patterns in (4.14) by distinguishing two possible positions in which the putative broad subject can be merged: If it is indeed a BROAD SUBJECT, then it is merged in [Spec, TP] and is the agreement controller per (4.15). If it is merged in [Spec, CP], then it is a left dislocated element that cannot be an agreement controller.

Analyzing BROAD SUBJECTS as being base-generated in [Spec, TP] predicts one important condition of their possibility to trigger agreement: Their locality to the ϕ-probe (4.18).

(4.18) **Locality Condition on Broad Subjects:**
A BROAD SUBJECT must be local to the ϕ probe.

Compare the minimal pair in (4.19): (4.19a) (repeated from (4.14)), and (4.19b) differ in the position of the thematic subject. When the thematic subject immediately precedes the copula, agreement with the BROAD SUBJECT is impossible (4.19b).

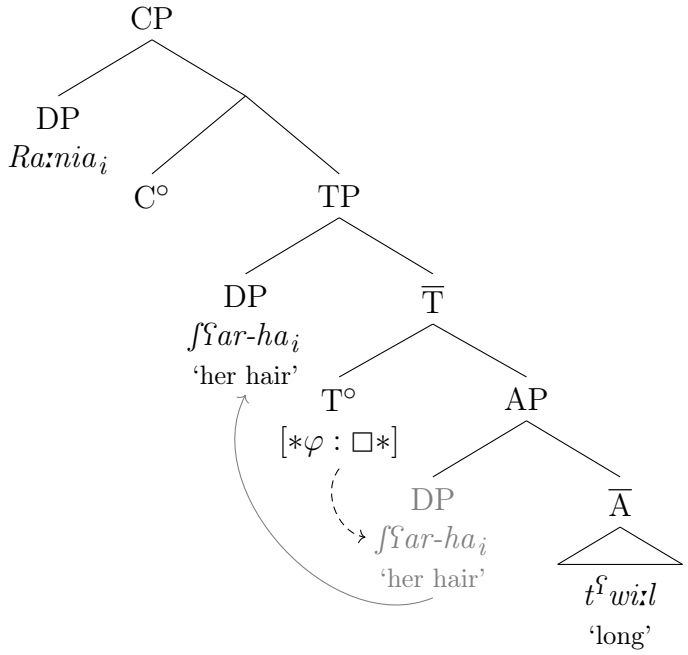
(4.19) a. Raːnia$_i$ {**keːn-ət** / keːn} ʃʕar-ha$_i$ tˁwiːl
R.F {**be-PFV.3FSG** / be.PFV.3MSG} hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

b. Raːnia$_i$ ʃʕar-ha$_i$ {***keːn-ət** / keːn} tˁwiːl
R.F hair.MSG-3FSG.CL {**be-PFV.3FSG** / be.PFV.3MSG} long.MSG
Rania's hair was long. Tunisian

In my analysis, this locality constraint on agreement is directly captured by the difference between a true BROAD SUBJECT (4.16) and a left dislocated element (4.17). The reason why agreement with *Raːnia* isn't possible in (4.19b) is simply because the thematic subject moves to [Spec, TP] in this case, leading to a derivation similar to the one in (4.17b), where T° carries no binder, and thus probes downwards and agrees with the subject that subsequently moves to its specifier.[7]

7. Another possible derivation would be that the thematic subject moves to [Spec, TP], which is followed

(4.20) *Derivation of* (4.19b)



Thus, in order to analyze double subject constructions, there is no need to posit two specifiers for T° (at least in Arabic), the way Doron and Heycock (1999) do.[8] It would be hard to differentiate between this putative higher specifier position and say, [Spec, CP]. Instead, my proposal makes a clear distinction between BROAD SUBJECTS and other things that may look like them: Only DPs that can trigger agreement are actually merged in [Spec, TP] and they trigger agreement *via* (4.15)—Spec-Head agreement under binding—which by now should be a familiar piece of the analysis of agreement proposed in this dissertation. Otherwise, the narrow subject is the agreement controller. All other putative instances of broad subjects are elements that are base generated in the left periphery that are, for all intents and purposes, clitic left dislocated elements.

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by μ-adjunction and Spec-Head agreement by (4.15). This would result in the same agreement pattern we observe in (4.19b).

8. In fact, their analysis makes sure that broad subjects wouldn't be able to trigger agreement, as they are merged in a higher specifier of T°, above the position which the thematic subject moves to.

4.3 Broad Subjects and coordination: Empirical evidence

In the previous section, I argued that BROAD SUBJECTS are a category of their own, based on their ability to control agreement on the verb, which is impossible for elements that are base-generated in [Spec, CP]. In this section, I lay out my main proposal, starting from the observation that there is a parallel between the copular clause in (4.21) and the verbal clause in (4.22).

(4.21) Raːnia$_i$ **keːn-ət** ʃʕar-ha$_i$ tˤwiːl
R.F **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

(4.22) Raːnia$_i$ **ʒeː-t** hijja$_i$ w-Sami
R.F **come-PFV.3FSG** PRON.3FSG and-S.M
Rania and Sami came (*lit.* 'Rania came she and Sami.') Tunisian

In particular, I argue that in both sentences, *Raːnia* is a BROAD SUBJECT, which is why in both sentences, we see agreement with it. In (4.21), it binds the possessive clitic inside the narrow subject, and in (4.22), it binds the pronominal first conjunct inside the narrow subject. From this observation, I argue that the optionality we see between "first conjunct agreement" and resolved agreement in (4.23) is in reality due to two underlying structures.

(4.23) {ʒeː-t / ʒeː-w} hijja w-Sami
{come.PFV-3FSG / come.PFV-3PL} PRON.3FSG and-S.M
She and Sami came. Tunisian

In (4.23), feminine singular agreement is in reality agreement with a covert BROAD SUBJECT binding the pronominal conjunct: The version of (4.23) with singular agreement is (4.22) with pro-drop of the BROAD SUBJECT, as schematized in (4.24a). In this section, I will provide evidence for the ability of BROAD SUBJECTS to be pro-dropped, showing that what I propose in (4.24a) is a plausible scenario.

(4.24) *Two different derivations for "FCA" and resolved agreement*

a. *pro*$_i$ ʒeː-t hijja$_i$ w-Seːmi
pro come.PFV-3FSG PRON.3FSG and-S.M
She and Sami came.

b. ʒeː-w [$_{\&P}$ hijja w-Seːmi]$_{\phi 3PL}$
come.PFV-3PL PRON.3FSG and-S.M
She and Sami came.

By contrast, resolved agreement is agreement with the &P subject, in a structure that does not contain a BROAD SUBJECT (4.24b).

Pronouns do not magically lift the gender matching requirement: Their ability to be bound (as opposed to lexical DPs) makes it possible to merge a BROAD SUBJECT which itself can be the controller of agreement. The illusion of first conjunct agreement with pronouns is due to the BROAD SUBJECT and the pronominal conjunct having the same features.

In this section, I provide evidence for my analysis of "first conjunct agreement" with pronominal conjuncts as agreement with a BROAD SUBJECT. The first piece of evidence discussed in §4.3.1 comes from overt and covert broad subjects in sentences containing coordinate structures as in (4.22). The second piece of evidence comes from patterns of sandwiched agreement, discussed in §4.3.2.

4.3.1 (C)overt broad subjects in verbal sentences with &P subjects

Let us begin with the first piece of evidence for my proposal that agreement with a pronominal first conjunct is actually agreement with a BROAD SUBJECT binding that pronoun. As mentioned above, there is a striking resemblance between (4.25) and (4.26) (repeated from (4.21) and (4.22) respectively).[9]

9. In this chapter, I mostly use the same family of examples, with the same names and verbs, only changing them minimally, to have minimal pairs. However, the data that I report here is corroborated by similar corpus examples, which I provide in footnotes where applicable. For instance, the naturally occurring

(4.25) Raːnia$_i$ **keːn-ət** ʃʕar-ha$_i$ tˁwiːl
R.F **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

(4.26) Raːnia$_i$ **ʒeː-t** hijja$_i$ w-Sami
R.F **come-PFV.3FSG** PRON.3FSG and-S.M
Rania and Sami came (*lit.* 'Rania came she and Sami.') Tunisian

In both sentences, the DP *Rania* binds a pronoun, and in both cases, the verb agrees with this DP. Now, one could argue that in (4.26), it could be the case that the verb agrees with the pronominal conjunct. However, there are a few objections to this. First, given the data from Chapter 3, and in particular the gender matching requirement in Tunisian, it would be unexpected for the verb to be able to agree with the first conjunct pronominal in (4.26) while it cannot do so with the first conjunct lexical DP in (4.27).

(4.27) * ʒeː-t Rania w-Seːmi mabʕað-hom
come.PFV-3FSG R.F and-S.M together-3PL.CL
Rania and Sami came together. Tunisian

More generally, I have argued in Chapter 3 that sentences like (4.27) reflect the non-peeking grammar (Marušič, Nevins, and Badecker 2015) of Tunisian, which cannot copy the features of the first conjunct directly. If it cannot do so with a lexical DP (4.27), all else being equal, then it shouldn't be able to do so with a pronoun (4.26). We can make a similar generalization for Palestinian, whose Peeking grammar allows copying the features of the first conjunct directly (4.28a) (cf. §3.5), but there is a restriction in those cases whereby plural seeking elements like *together* are incompatible with such an agreement pattern (4.28b).

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sentence in (i) is very much similar to the example I provide in (4.26).

(i) n-əsmaʕ l-weːlda$_i$ t-ətheːməs hijja$_i$ w-ʔəxut-iː
1SG.IPFV-hear DEF-spawner.F 3FSG.IPFV-whisper PRON.3FSG and-siblings-1SG.CL
(lit.) I would hear the spawner [my mom] whispering she and my siblings. Tunisian (TC:text 3598)

(4.28) a. {ʔtmaʃʃa / tmaʃʃ-u} Muʕtaz w-Raːnia
{ʔwalk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F
Mutaz and Rania walked around. Palestinian

b. {??/*tmaʃʃa / tmaʃʃ-u} Muʕtaz w-Raːnia maʕbaʕdˤ
{??/*walk.PFV.3MSG / walk.PFV-3PL} M.M and-R.F together
Mutaz and Rania walked around together. Palestinian

c. Muʕtaz tmaʃʃa huwwe w-ʕAzza maʕbaʕdˤ
M. walk.PFV.3MSG PRON.3MSG and-A.F together
Mutaz and Azza walked around together. Palestinian

Yet, in Palestinian as well, this restriction is lifted in (4.28c). Here too, the fact that *together* isn't licensed in (4.28b)—which could be analyzed as true first conjunct agreement in Palestinian—is evidence that in (4.28c), no first conjunct agreement with the pronoun is happening, but indeed with the higher subject *Muʕtaz*.[10]

Second, it is clearly not the case that the verb agrees with the pronominal possessor in (4.25), it must be agreeing with the BROAD SUBJECT. Given the resemblance between (4.25) and (4.26) then, it seems more economical to think of them as having similar derivations.

Finally, in both sentences, it is possible to *pro*-drop the BROAD SUBJECT, keeping the agreement on the verb the same.

(4.29) **keːn-ət** ʃʕar-ha tˤwiːl
be-PFV.3FSG hair.MSG-3FSG.CL long.MSG
She had long hair. Tunisian

10. This isn't restricted to Tunisian and Palestinian, Jad Wehbe (*pers. comm.*) tells me that in his Lebanese dialect, first conjunct agreement with lexical DPs is generally unacceptable, whether they match in gender or not, but it is completely fine with pronouns. In Wehbe (2023), he provides examples like (i), which are parallel to Tunisian (4.26), and analyses the agreement as being controlled by the higher subject.

(i) Rasha raʔasit hiyye w Hadi
R.F danced.3FSG her and H.M
'Rasha and Hadi danced with each other' Wehbe 2023:694,(2a)

However, he proposes that this higher subject moves to [Spec, TP] from its base position as the first conjunct, and that the pronominal conjunct we see is a resumptive pronoun resulting from this movement. Given the amount of evidence that resumptive $\overline{\text{A}}$-dependencies are base-generated in Arabic, and not the result of movement (Hewett 2023c), it is perfectly plausible that the higher subject in Lebanese is also base-generated in its surface position.

(4.30) **ʒeː-t** hijja w-Sami
come-PFV.3FSG PRON.3FSG and-S.
She and Sami came Tunisian

Just like above, it would be strange to think of the verb in (4.29) as agreeing with the pronominal possessor *ha*, and given what we know about conjunct agreement in Tunisian, analyzing the pattern in (4.30) as agreement with the pronominal conjunct is not straightforward at all. The same goes for Palestinian if we compare (4.28b) above with (4.31) below.

(4.31) tmaʃʃa huwwe w-ʕAzza maʕbaʕdˤ
walk.PFV.3MSG PRON.3MSG and-A. together
He and Azza walked around together. Palestinian

If FCA is degraded with plural seeking elements (see Wehbe (2023:696,fn.3) for similar observations on Lebanese), then what is happening in (4.31) must not be FCA, but agreement with something else: a covert BROAD SUBJECT.

The kind of data that I report here is not novel, although it is not very much discussed. Similar data is reported for Lebanese by Aoun, Benmamoun, and Sportiche (1994),[11] where this double subject construction obligatorily leads to agreement with the DP preceding the verb and not the &P. They particularly focus on examples where there are two agreement targets: The main verb and an auxiliary, as in (4.32) (see also Wehbe 2023:697,(9)).

(4.32) *The double subject construction in Lebanese Arabic*
a. Kariːm keːn huwwe w-Marwaːn ʕam jilʕabo
K. be.PFV.3MSG he and-M. PROG play.3PL
b. * Kariːm keːno huwwe w-Marwaːn ʕam jilʕabo
K. be.PFV.3PL he and-M. PROG play.3PL
Karim and Marwan were playing.
Aoun, Benmamoun, and Sportiche 1994:209

Both Aoun, Benmamoun, and Sportiche (1994) and Wehbe (2023) claim that agreement in these cases is with the higher subject. This is especially plausible in the face of the

11. See also Soltan (2007b:59,(32b)) for similar Modern Standard Arabic data.

ungrammaticality of (4.32b): If there is a higher subject, not only is agreement possible with it, it is obligatory. The Lebanese data in (4.32) brings us to the second piece of evidence for my analysis: The interaction between BROAD SUBJECTS and sandwiched agreement.

4.3.2 Additional evidence from sandwiched agreement

So far, I've discussed one main asymmetry between first conjunct lexical DPs and first conjunct pronouns; namely the lack of gender-matching requirement in Tunisian and the compatibility of *together* in Palestinian. In this subsection, I discuss an asymmetry found between first conjunct lexical DPs and pronouns in sandwiched agreement configurations, where there are two agreement targets: a main verb and auxiliary, with the subject sandwiched between them.

In sandwiched agreement configurations (4.33), the &P subject controls resolved agreement on the main verb, an expected outcome as the subject precedes the verb (cf. §3.6). However, despite *following* the auxiliary, meaning we could in principle expect first conjunct agreement on the auxiliary,[12] only resolved agreement is allowed in (4.33a) and (4.33b).

(4.33) *Sandwiched agreement (&P subject with first conjunct lexical DP)*

a. {*keːn-ət / keːn-u} Rania w-ʕAzza j-ʒiː-w l-əl-faːk
{*be.PFV-3FSG / be.PFV-3PL} R.F and-A.F 3.IPFV-come-PL to-DEF-university
koll nhaːr
every day
Rania and Azza used to come to campus every day. Tunisian

b. {??/*kaːn-at / kaːn-u} Rania w-ʕAzza j-iːʒ-u
{??/*be.PFV-3FSG / be.PFV-3PL} R.F and-A.F 3.IPFV-come.PL
ʕa-l-ʔahwe
to-DEF-coffee_shop
Rania and Azza used to come to the coffee shop. Palestinian

Interestingly, if we replace the first conjunct lexical DP in sentences like (4.33) by a pronoun,

12. Recall that FCA does not necessarily mean true agreement with the first conjunct in this context, rather, it is the descriptive term of what seems to be going on in this type of examples.

both singular and plural agreement are possible on the auxiliary.

(4.34) *Sandwiched agreement (&P subject with first conjunct pronoun)*

a. {keːn-ət / keːn-u} hijja w-ʕAzza j-ʒiːw
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-A.F 3.IPFV-come-PL
l-əl-faːk koll nhaːr
to-DEF-university every day
She and Azza used to come to campus every day. Tunisian

b. {kaːn-at / kaːn-u} hijje w-ʕAzza j-iːʒ-u
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-A.F 3.IPFV-come-PL
ʕa-l-ʔahwe
to-DEF-coffee_shop
She and Azza used to come to the coffee shop. Palestinian

There are two puzzles here: First, it is not immediately clear why the auxiliary cannot be singular, since it seems like the structural requirement for FCA (target preceding controller) is met. Second, why do pronouns circumvent this restriction?

Regarding the first puzzle, I propose that there is an economy condition—Valuation Economy (Smith 2012)—on agreement with &P subjects when there are two agreement targets, such that both must copy the same features from the subject, leading to resolved agreement on both the main verb and the auxiliary. As for the second puzzle, this data is already predicted by our analysis: In (4.34a) and (4.34b), there is a pro-dropped BROAD SUBJECT controlling agreement on the auxiliary, while in (4.33) no such BROAD SUBJECT can be merged.

The requirement that the auxiliary and the main verb both agree with the resolved features of the &P subject in sandwiched configurations may seem unexpected. In principle, we expect singular agreement on the auxiliary in both (4.35a) and (4.35b).

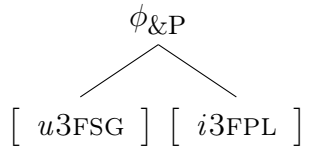
(4.35) *Sandwiched agreement (&P subject with first conjunct lexical DP)*

a. {*keːn-ət / keːn-u} Rania w-ʕAzza j-ʒiː-w l-əl-faːk
{*be.PFV-3FSG / be.PFV-3PL} R.F and-A.F 3.IPFV-come-PL to-DEF-university
koll nhaːr
every day
Rania and Azza used to come to campus every day. Tunisian

b. {??/*kaːn-at / kaːn-u} Rania w-ʕAzza j-iːʒ-u
{??/*be.PFV-3FSG / be.PFV-3PL} R.F and-A.F 3.IPFV-come.PL
ʕa-l-ʔahwe
to-DEF-coffee_shop
Rania and Azza used to come to the coffee shop. Palestinian

In Tunisian, the &P 'Rania and Azza' should license FCA on the auxiliary: It has gender-matching conjuncts and it follows the agreement target, which are the two main conditions for FCA in Tunisian. Following the dual-feature system used in Chapter 3, we can imagine a possible derivation where the &P has the feature specification in (4.36), with the main verb agreeing with the *i*F set and the auxiliary with the *u*F set.

(4.36) *Possible feature specification for the &P 'Azza and Rania'*



In Palestinian (4.35b), the auxiliary should be able to copy the features of the first conjunct directly, but this isn't what we find in (4.35b).[13]

We can account for the unacceptability of the feature mismatch between auxiliary and main verb in (4.35a) and (4.35b) with an additional economy condition on agreement: Smith's (2012, 2013, 2015) Valuation Economy (4.37).

(4.37) **Valuation Economy** (Smith 2012:22,(39))
When an element enters into more than one agreement relation in the same domain, the same feature on the controller must be used for all targets of the same type.

Thus, in both (4.35a) and (4.35b), after the main verb agrees with the *i*Fs, every subsequent head agreeing with the &P must agree with those resolved features, following (4.37).

13. Note that the sandwiched agreement data also displays a lot of inter-speaker variation, and the grammaticality of FCA_RA sandwiched agreement is attested in Lebanese (Aoun, Benmamoun, and Sportiche 1994:208), Jordanian (Al Khalaf 2022) and is possibly acceptable for other speakers of Tunisian and Palestinian Arabic, who may have different grammars.

Turning to sandwiched agreement patterns with pronominal first conjuncts, the requirement that the auxiliary and the verb match in features disappears, with apparent optionality between FCA and resolved agreement on it (4.38a)–(4.38b).

(4.38) *Sandwiched agreement (&P subject with first conjunct pronoun)*

a. {keːn-ət / keːn-u} hijja w-ʕAzza j-ʒiːw
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-A.F 3.IPFV-come-PL
l-əl-faːk koll nhaːr
to-DEF-university every day
She and Azza used to come to campus every day. Tunisian

b. {kaːn-at / kaːn-u} hijje w-ʕAzza j-iːʒ-u
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-A.F 3.IPFV-come-PL
ʕa-l-ʔahwe
to-DEF-coffee_shop
She and Azza used to come to the coffee shop. Palestinian

Just like in examples with only one verb, I attribute the optionality in (4.38a) and (4.38b) to two underlying structures: Singular agreement is underlyingly agreement with a pro-dropped BROAD SUBJECT binding the pronominal conjunct (4.39a).

(4.39) *Two underlying structures for (4.38a)*

a. *pro*$_i$ keːn-ət [$_{\&P}$ hijja$_i$ w-ʕAzza]$_{\phi 3PL}$ j-ʒiː-w l-əl-faːk
pro be.PFV-3FSG PRON.3FSG and-A. 3.IPFV-come-PL to-DEF-university

b. keːn-u [$_{\&P}$ hijja$_i$ w-ʕAzza]$_{\phi 3PL}$ j-ʒiː-w l-əl-faːk
be.PFV-3PL she and-A. 3.IPFV-come-PL to-DEF-university
She and Azza used to come to campus.

Plural agreement, by contrast, is resolved agreement with the thematic &P subject, in a structure without a BROAD SUBJECT (4.39b). Again, the evidence for this analysis comes from examples where we can merge an overt BROAD SUBJECT, in which case, singular agreement with this BROAD SUBJECT becomes the only option (4.40)–(4.41).[14]

14. Patterns of sandwiched agreement with BROAD SUBJECTS are not restricted to contexts with &P subjects. In Tunisian, we find examples like (i).

(4.40) Raːnia$_i$ {keːn-ət / *keːnu} hijja$_i$ w-ʕAzza jʒiːw
R. {be.PFV-3FSG / *be.PFV-3PL} PRON.3FSG and-A. 3.IPFV-come.PL
l-əl-faːk koll nhaːr
to-DEF-university every day
Rania, she and Azza used to come to campus every day. Tunisian

(4.41) Raːnia$_i$ {kaːn-at / *kaːn-u} hijje$_i$ w-ʕAzza j-iːʒ-u
R. {be.PFV-3FSG / *be.PFV-3PL} PRON.3FSG and-A. 3.IPFV-come.PL
ʕa-l-ʔahwe
to-DEF-coffee_shop
Rania, she and Azza used to come to the coffee shop. Palestinian

In (4.40) and (4.41), a BROAD SUBJECT precedes the auxiliary and forces this auxiliary to have its features (*via* Spec-Head agreement, see §4.4 below). Note that this isn't at all in violation of the valuation economy rule in (4.37), as the auxiliary and the main verb agree with two different controllers: The former agrees with the higher subject while the latter agrees with the lower, &P subject. By contrast, in the absence of a BROAD SUBJECT, both the auxiliary and the main verb must match in features, agreeing with the resolved features of the &P in (4.35a) and (4.35b), following the valuation economy rule (4.37).

Thus, the ability of illusory agreement with a pronominal first conjunct in sandwiched agreement configurations is easily predicted by our analysis: Because a pronominal conjunct is able to be bound by a BROAD SUBJECT, this additional subject can be merged and agreed

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(i) Raːnia$_i$ **keːn-ət** ʃʕar-ha$_i$ j-ətʕweːl fissaʕ
R.F **be-PFV.3FSG** hair.MSG-3FSG.CL 3MSG.IPFV-be_long quick
Rania's hair used to grow quickly. Tunisian

See Hewett (2023d, 2024) for similar constructions in other dialects, like the Iraqi pseudo-passive (ii).

(ii) l-zoːlijja$_k$ **ʧaːnat** da-jindaːs *pro*$_{\text{IMPRS}}$ ʕaleː-ha$_k$
the-carpet.FSG$_k$ **was.3FSG** PROG-step.PASS.3MSG *pro*$_{\text{IMPRS}}$ on-3FSG.CL$_k$
(lit.) 'The carpet$_k$ was being stepped on it$_k$.' Hewett 2024:1,(5)

See also Al-Aqarbeh and Al-Sarayreh (2017:78,(37)) who report the following example in Standard Arabic (their translation included).

(iii) **kaːna** ʕalijj-un$_i$ tu-saːʕidu-hu$_i$ al-muʕallimat-u
was.3MSG Ali.MSG-NOM$_i$ 3FSG.IPFV-help-3MSG.CL$_i$ the-teacher.FSG-NOM
Ali was in a state that the female teacher helped him.

with. No such BROAD SUBJECT can be merged in a sentence without a pronoun, predicting lack of illusory FCA with a lexical DP on the auxiliary.

In this section, I provided empirical evidence that what seems like agreement with a pronominal first conjunct is in reality agreement with a covert BROAD SUBJECT. I showed that making the BROAD SUBJECT overt forced agreement with it in monoverbal sentences §4.3.1 and in sentences containing two verbs §4.3.2. I compared sentences with thematic &P subjects containing a pronoun to sentences with thematic DP subjects containing a pronoun, and showed that they have a very similar behavior with regards to agreement. I also provided evidence for the ability of BROAD SUBJECTS to be pro-dropped both with thematic DP subjects and thematic &P subjects. This gave further support to my claim that the apparent optionality between resolved and first conjunct agreement in sentences like (4.42) (repeated from (4.23)) is in reality optionality between two different derivations.

(4.42) {ʒeː-t / ʒeː-w} hijja w-Sami
{come.PFV-3FSG / come.PFV-3PL} PRON.3FSG and-S.M
She and Sami came. Tunisian

Singular agreement in (4.42) is agreement with a pro-dropped BROAD SUBJECT binding the pronominal conjunct (4.43).

(4.43) *pro*$_i$ ʒeː-t hijja$_i$ w-Seːmi
pro come.PFV-3FSG PRON.3FSG and-S.M
She and Sami came.

Plural agreement in (4.42) is agreement with the resolved features of the &P, in a derivation that has no BROAD SUBJECT (4.44).

(4.44) ʒeː-w [$_{\&P}$ hijja w-Seːmi]$_{\phi 3PL}$
come.PFV-3PL PRON.3FSG and-S.M
She and Sami came.

4.4 Broad subjects and coordination: Deriving agreement patterns

Now that we have evidence for a covert BROAD SUBJECT being the controller of agreement in sentences like (4.45), where it looks like agreement is with the pronominal first conjunct, we can further develop the analysis of agreement with BROAD SUBJECTS in the context of coordination.

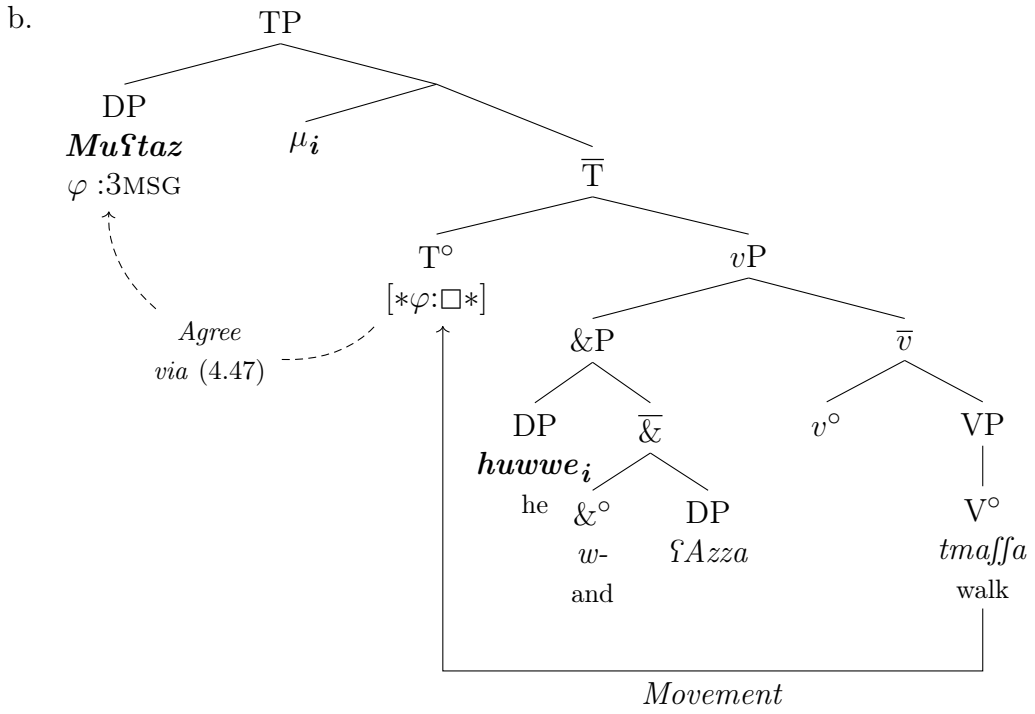
(4.45) a. ʒeː-t hijja w-Seːmi
come.PFV-3FSG PRON.3FSG and-S.
She and Sami came. Tunisian

b. ʔaʒa huwwe w-Raːnia
come.PFV.3MSG PRON.3MSG and-R.
He and Rania came. Palestinian

First, let's begin with an example containing an overt BROAD SUBJECT, applying the analysis of agreement with BROAD SUBJECTS proposed in §4.2. This will be our baseline example.

(4.46) a. Muʕtaz$_i$ tmaʃʃa huwwe$_i$ w-ʕAzza
M.M walk.PFV.3MSG PRON.3MSG and-A.F
Mutaz and Azza walked around. Palestinian

b.



In (4.46), the BROAD SUBJECT is merged in [Spec, TP], and binds the resumptive pronoun in the NARROW SUBJECT. T° carries a binder, which forces the application of Spec-Head agreement under binding (4.15), repeated here as (4.47).

(4.47) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

Assuming V°–to–T° movement as shown in (4.46b),[15] the verb ends up with the features of the BROAD SUBJECT (3MSG).

In the remainder of this section, I analyze various configurations with &P subjects, deriving the different patterns of agreement we see in the presence or absence of a BROAD SUBJECT,

15. See Aoun, Benmamoun, and Choueiri (2010:28–35), Soltan (2011:241–5), and Tucker (2011:188f.), and the discussion in Chapter 7 below, especially in §7.3 and §7.4. Note that this analysis ought to be refined by including the contributions of §7.4. To be explicit, taking into account the obligatory presence of Asp° and T° argued for in §7.4, the tree in (4.46b) should be modified with an additional Asp projection below TP and above *v*P. The BROAD SUBJECT is generated in the specifier of Asp°, both Asp° and T° agree with this BROAD SUBJECT, and the verb, Asp° and T° end up in a complex head, with T°'s features remaining unpronounced because they would be homophonous to those of Asp°.

while also showing how the analysis predicts the ungrammaticality of unattested patterns.

Before looking at all the possible agreement configurations, I will first be explicit about my assumptions on the Arabic clause structure and the location of ϕ-probes, as they are immediately relevant to the analysis. In sentences with only one verb, as those in (4.45) and (4.46a) above, I assume for now that there is one ϕ-probe located on T°.[16] In sentences with periphrastic tenses like (4.48), I assume that there are two ϕ-probes: One in Asp° and one in T°.

(4.48) {keːn-ət / keːn-u} hijja w-ʕAzza j-ʒiː-w l-əl-faːk
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-A.F 3.IPFV-come-PL to-DEF-university
koll nhaːr
every day
She and Azza used to come to campus every day. Tunisian

Following Tucker (2011) and Soltan (2011), the main verb is in Asp° and the auxiliary in T°.[17] Furthermore, I propose that BROAD SUBJECTS can only be merged in specifiers of ϕ-probes, that is either [Spec, TP] or [Spec, AspP] (see Hewett 2024 as well). Finally, an independently motivated assumption that will be crucial in deriving the agreement patterns in this section is the following: In Arabic, [Spec, AspP] must always be filled (Tucker 2011; Crone 2017).[18] Thus, either the thematic subject must raise to [Spec, AspP], or a BROAD

16. See §7.4 for a refinement of this analysis whereby even monoverbal sentences have two ϕ-probes, one in Asp° and one in T°. For the sake of simplicity, I do not include this refinement here, as it wouldn't change the analysis in a substantial way, but the reader should keep it in mind (see also fn. 15).

17. See discussion in Chapter 7 (especially §7.4) for more justification for these assumptions. I assume that the auxiliary is base-generated in T°, while the main verb moves to Asp°.

18. Tucker (2011:187f.) makes an independent argument for an obligatory EPP feature on Asp°, saying that subjects in Arabic must at least raise to that position. He claims that the word order AUX-V-S is only grammatical under a contrastive focus reading of the entire verbal complex: It cannot have the discourse neutral reading of S–AUX–V or AUX–S–V. Crone (2017:197) provides corroborating evidence from Lebanese Arabic: His consultants report the unacceptability of this word order (i). I have gleaned similar intuitions from speakers of Tunisian and Palestinian, whereby in sentences like (i), the subject seems to be right dislocated.

(i) * keːno ʕam jədruso Kariːm w-Marwaːn
were.3PL PROG study.3PL K. and-M.
Intended: 'Marwan and Karim were studying.'

SUBJECT must be merged there.

Taking all of these assumptions into account, I start by analyzing monoverbal sentences in §4.4.1 then move on to sentences with two verbs (*i.e.,* sandwiched agreement) in §4.4.2.

4.4.1 Type #1: Only one agreement target

The first type of sentence, exemplified in (4.49), containing only one agreement target—the lexical verb—is relatively straightforward.

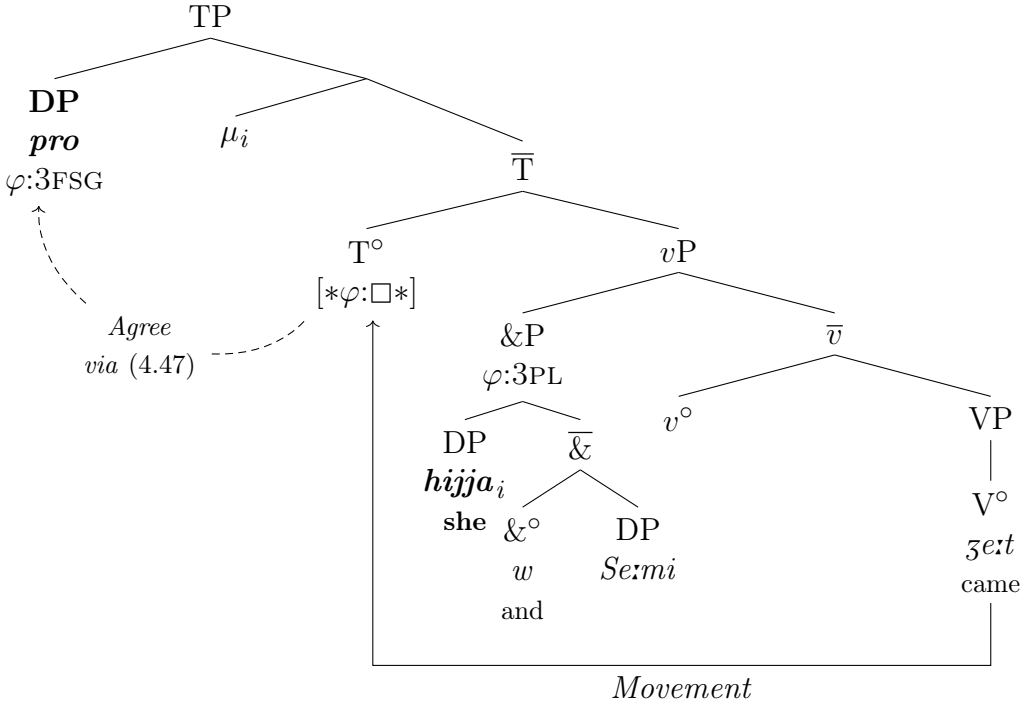
(4.49) {ʒeː-t / ʒeː-w} hijja w-Sami
{come.PFV-3FSG / come.PFV-3PL} PRON.3FSG and-S.
She and Sami came. Tunisian

I analyze the optionality between singular and plural agreement in (4.49) as being the result of two possible derivations. What seems like agreement with the first conjunct pronoun is underlyingly agreement with a null BROAD SUBJECT in [Spec, TP] (4.50a), while plural agreement is agreement with the thematic subject &P (4.50b).[19]

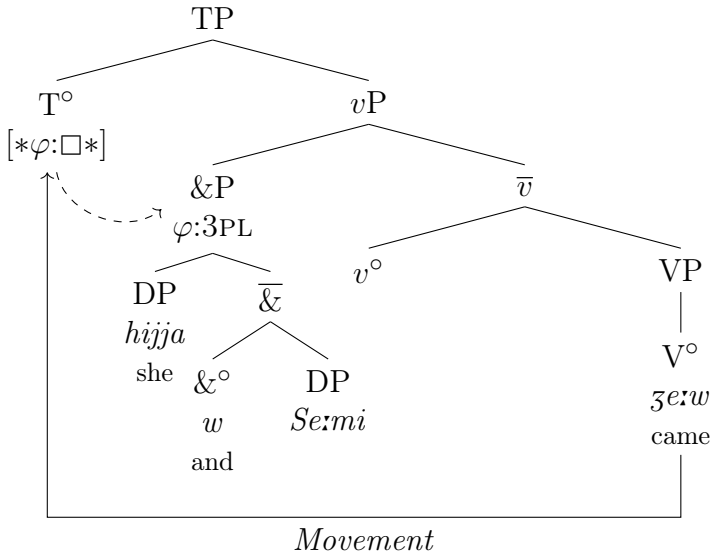
19. Throughout this section, I represent the verbs as having their agreement morphemes in V° for the sake of simplicity. However, I assume that those morphemes become part of the verb only after V°-to-T°/Asp° movement.

(4.50) *Two possible derivations for* (4.49)...

a. *... with a covert broad subject*



b. *... without a covert broad subject*



We know it is possible to merge a BROAD SUBJECT in [Spec, TP] from our example (4.46) above and examples like it in previous sections. Note that the word order in which the subject &P precedes the verb always leads to resolved agreement and thus need not concern us here (see §3.6 above).

4.4.2 Type #2: Two agreement targets

Sentences like (4.51) with two agreement targets are more complex due to (i) the presence of two ϕ-probes, and (ii) different possible word orders that restrict the possibilities of agreement with the BROAD or NARROW subject.

(4.51) {keːn-ət / keːn-u} hijja w-Seːmi j-ʒiː-w l-əl-faːk
{be.PFV-3FSG / be.PFV-3PL} PRON.3FSG and-S.M 3.IPFV-come-PL to-DEF-university
koll nhaːr
every day
She and Sami used to come to campus every day. Tunisian

The patterns are complex, so I will divide the discussion into three main parts, following the position where a BROAD SUBJECT may be merged. I will first discuss cases where there is no BROAD SUBJECT, then cases where the BROAD SUBJECT is in [Spec, TP], then I move on to cases where it is in [Spec, AspP]. I show that when the BROAD SUBJECT is base-generated [Spec, TP], the auxiliary must agree with it following Spec-Head agreement under binding (4.47), while the main verb agrees with the thematic subject that must raise to [Spec, AspP] (Tucker 2011; Crone 2017). When the BROAD SUBJECT is base-generated in [Spec, AspP], both the auxiliary in T° and the main verb in Asp° must agree with it. Under my analysis, configurations where T° agrees with the thematic subject while Asp° agrees with the BROAD SUBJECT are predicted to be ungrammatical due to locality violations.

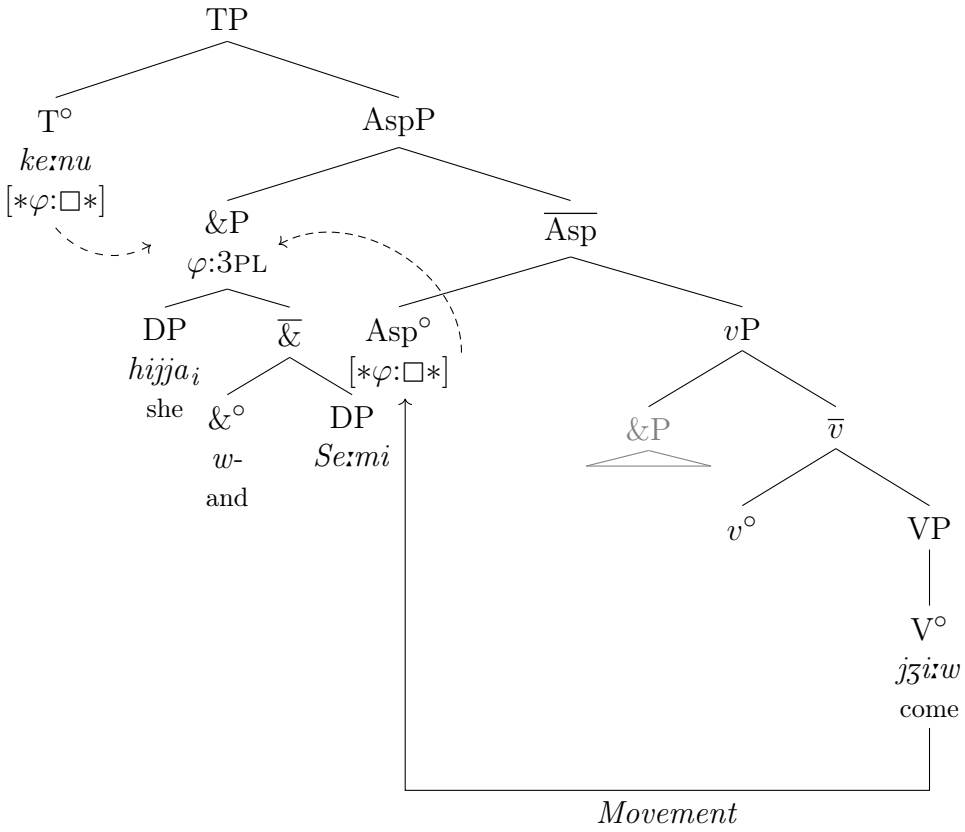
No Broad Subject

I analyze plural agreement on both the auxiliary and the main verb in (4.52a) as the result of both T° and Asp° agreeing with the &P subject which moves to AspP. In this case, no BROAD SUBJECT is merged, and we expect both Asp° and T° to agree with the resolved features of the &P subject.[20]

20. Note that in both derivations (4.52b) and (4.53b), I represent the agreement relation between Asp° and the &P Subject as Spec-Head agreement after movement of the subject from its base position in [Spec, vP] (cf. §3.6). This is also due to Spec-Head agreement under binding (4.47): The subject moves and Asp°

(4.52) a. keːn-u hijja w-Seːmi j-ʒiː-w l-əl-faːk
be.PFV-3PL PRON.3FSG and-S.M 3.IPFV-come-PL to-DEF-university
She and Sami used to come to campus. Tunisian

b.



Broad Subject is in Spec, TP

For cases where a BROAD SUBJECT is merged in [Spec, TP], we expect it to only affect agreement on the auxiliary, because the auxiliary is in T°, *i.e.,* the BROAD SUBJECT is in the specifier of the auxiliary. Thus, in the version of (4.51) with feminine singular agreement on the auxiliary (4.53a), this agreement pattern is due to the auxiliary agreeing with the BROAD SUBJECT that is merged in [Spec, TP] (4.53b).[21]

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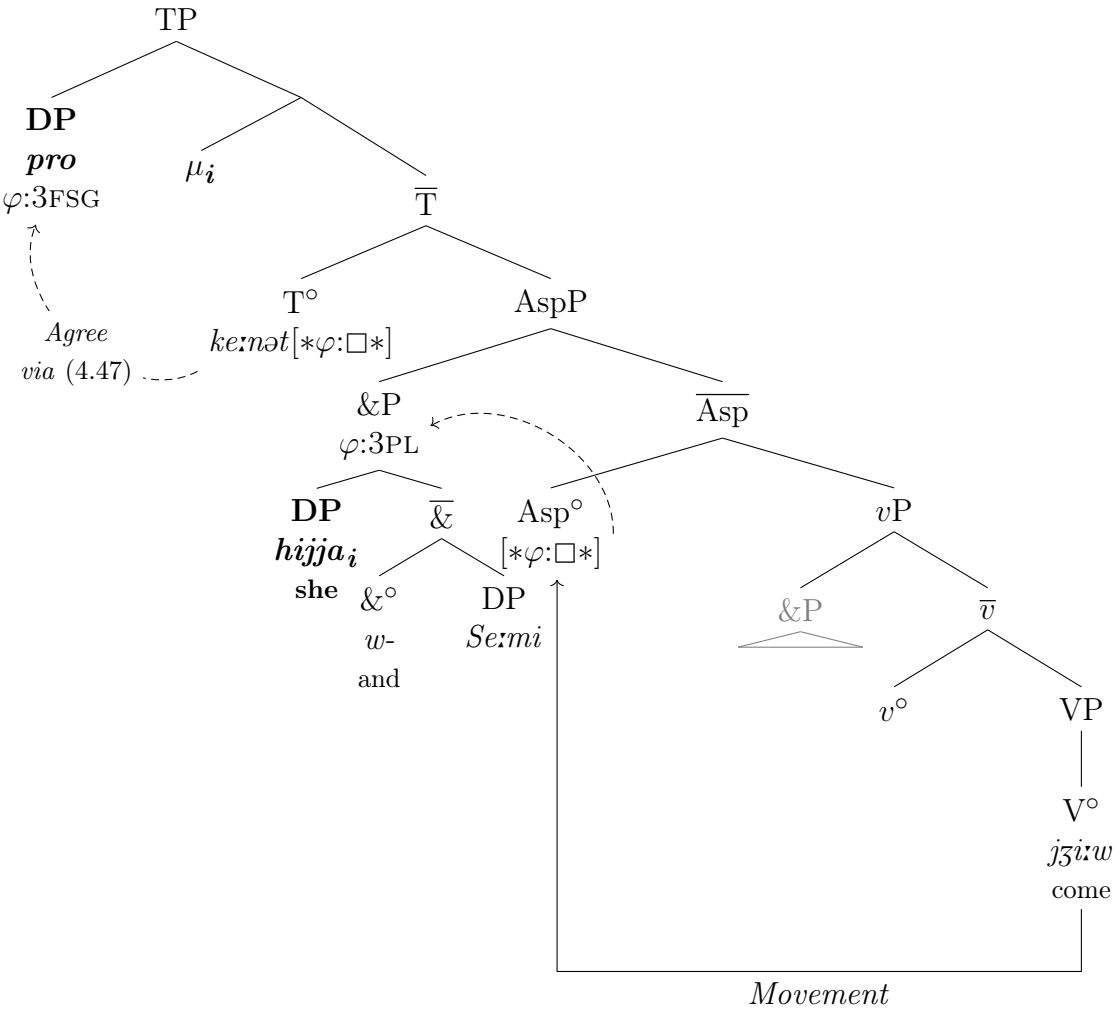
carries a binder binding the trace of the subject. I do not note all of these details so as to not overcrowd the tree, the primary focus here being BROAD SUBJECTS.

21. I choose to keep the same examples throughout this section, only changing one variable at a time. Note, however, that the data that I have elicited is corroborated by corpus examples of sandwiched agreement patterns. For example, a naturally occurring example that is similar to (4.53a) is (i).

(i) kon-t ʔena w-sˤħaːb-i n-aʕml-u tsˤaːwər l-faʒr
be.PFV-1SG PRON.1SG and-friends-1SG.CL 1.IPFV-do.PL pictures DEF-dawn

(4.53) a. ke:n-ət hijja w-Se:mi j-ʒi:-w l-əl-fa:k
be.PFV-3FSG PRON.3FSG and-S.M 3.IPFV-come-PL to-DEF-university
She and Sami used to come to campus. Tunisian

b.



c. Ra:nia$_i$ ke:n-ət hijja$_i$ w-Se:mi j-ʒi:-w l-əl-fa:k
R.F be.PFV-3FSG PRON.3FSG and-S.M 3.IPFV-come-PL to-DEF-university
Rania, she and Sami used to come to campus. Tunisian

In (4.53c), I provide a version of (4.53a) with an overt BROAD SUBJECT, showing that the position where I assume it is merged when it is covert in (4.53a) is indeed the position where we see it when it is overt.

Me and my friends used to take "dawn pictures" Tunisian (TC:3618)

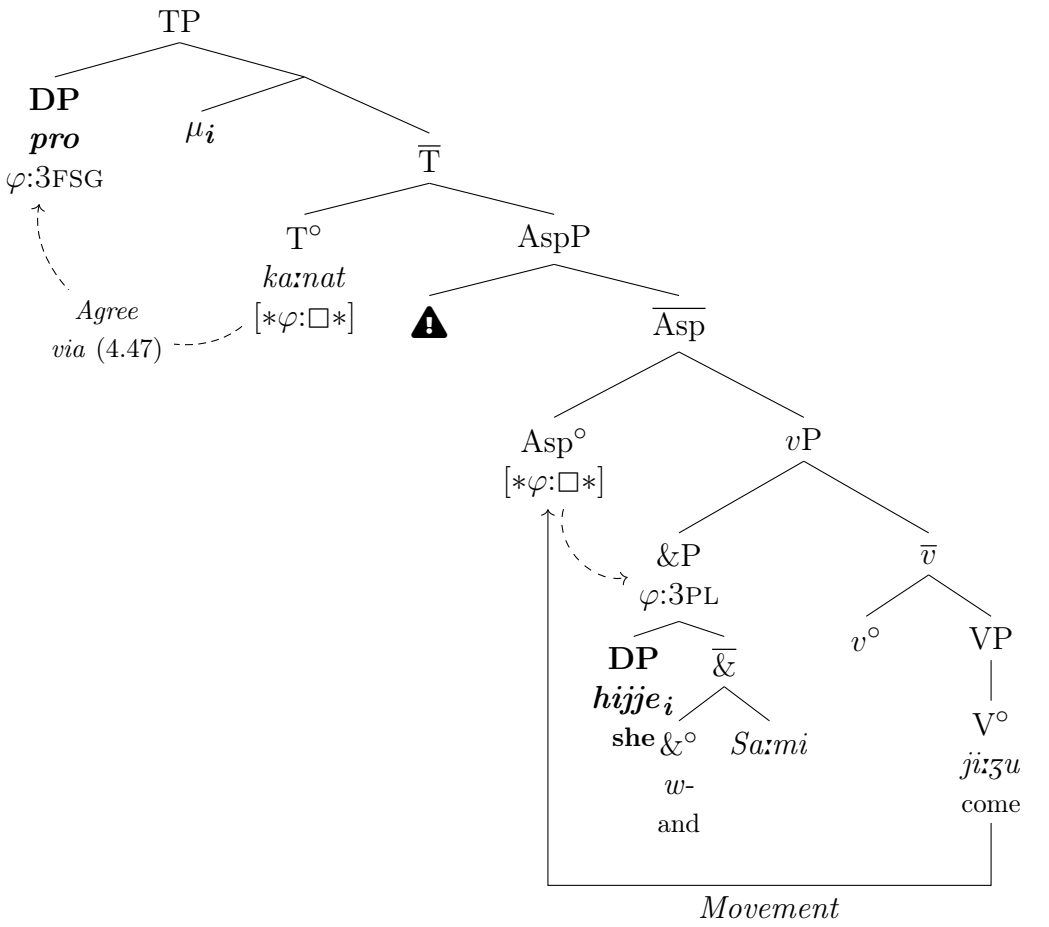
In (i), under my analysis, there's a BROAD SUBJECT in [Spec, TP], the specifier position determined by the head where the auxiliary surfaces.

The analysis predicts the unacceptability of examples like (4.54a), where the auxiliary would be agreeing with a BROAD SUBJECT in [Spec, TP], while the verb would agree with the thematic subject that hasn't moved to [Spec, AspP]. This unacceptability is due to [Spec, AspP] remaining empty, which is ungrammatical (Tucker 2011; Crone 2017).

(4.54) a. * kaːn-at j-iːʒ-u hijje w-Saːmi
be.PFV-3FSG 3.IPFVcome-PL PRON.3FSG and-S.M

Palestinian

b. *



c. * Raːnia kaːn-at j-iːʒ-u hijje w-Saːmi
R.F be.PFV-3FSG 3.IPFVcome-PL PRON.3FSG and-S.M

Palestinian

(4.54c) further shows that this pattern is unacceptable with an overt BROAD SUBJECT preceding the auxiliary, without the thematic &P subject intervening between the auxiliary and the main verb, as it does in (4.53a) and (4.53c).

Thus, when the BROAD SUBJECT is in [Spec,TP], we predict that it can only ever be the controller of agreement for the auxiliary, since the auxiliary is in T°. And our other independently motivated assumption on the necessity of filling [Spec, AspP] derives unacceptability of the word order in (4.54a) and (4.54c).

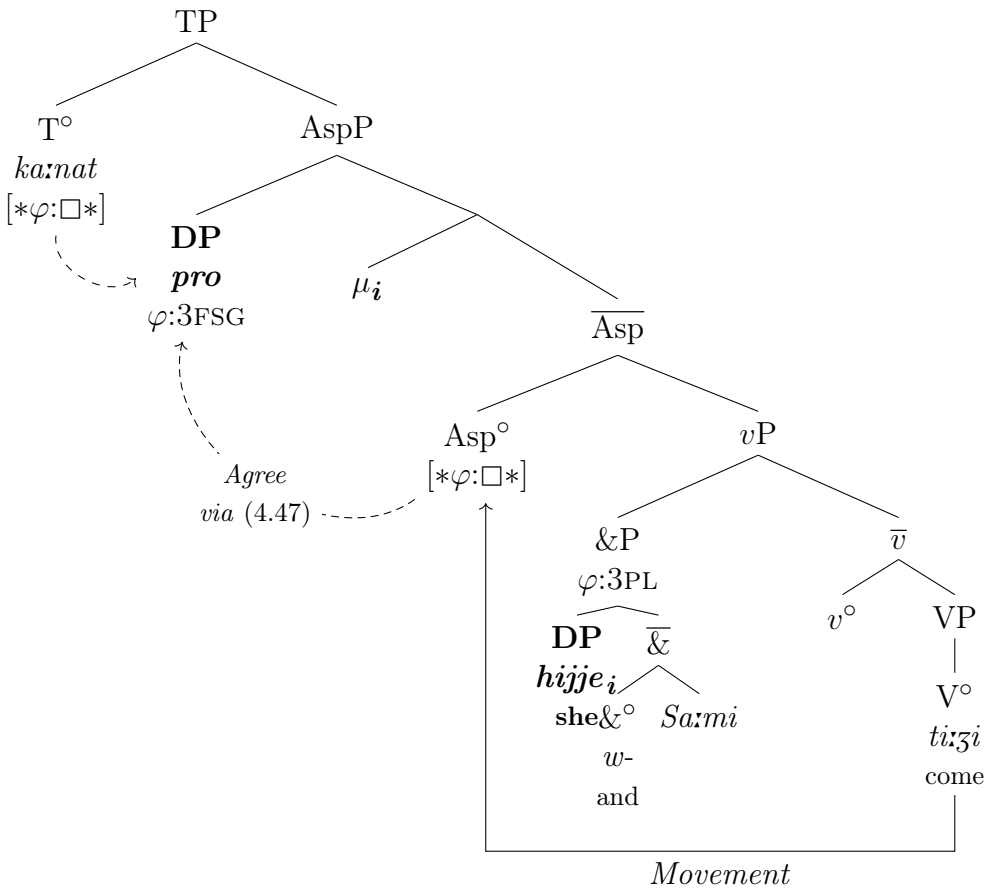
Broad Subject is in Spec, AspP

When the BROAD SUBJECT is merged in [Spec, AspP], we predict that both the auxiliary and the main verb agree with it, as in (4.55a). This is because Asp° would be forced to agree with the BROAD SUBJECT in its specifier (4.55b). This BROAD SUBJECT would in turn be the closest goal for T°.

(4.55) a. ka:n-at t-i:ʒi hijje w-Sa:mi
be.PFV-3FSG 3FSG.IPFV-come PRON.3FSG and-S.M

Palestinian

b.



c. ka:n-at Ra:nia$_i$ t-i:ʒi hijje$_i$ w-Sa:mi
be.PFV-3FSG R.F 3FSG.IPFV-come PRON.3FSG and-S.M

Palestinian

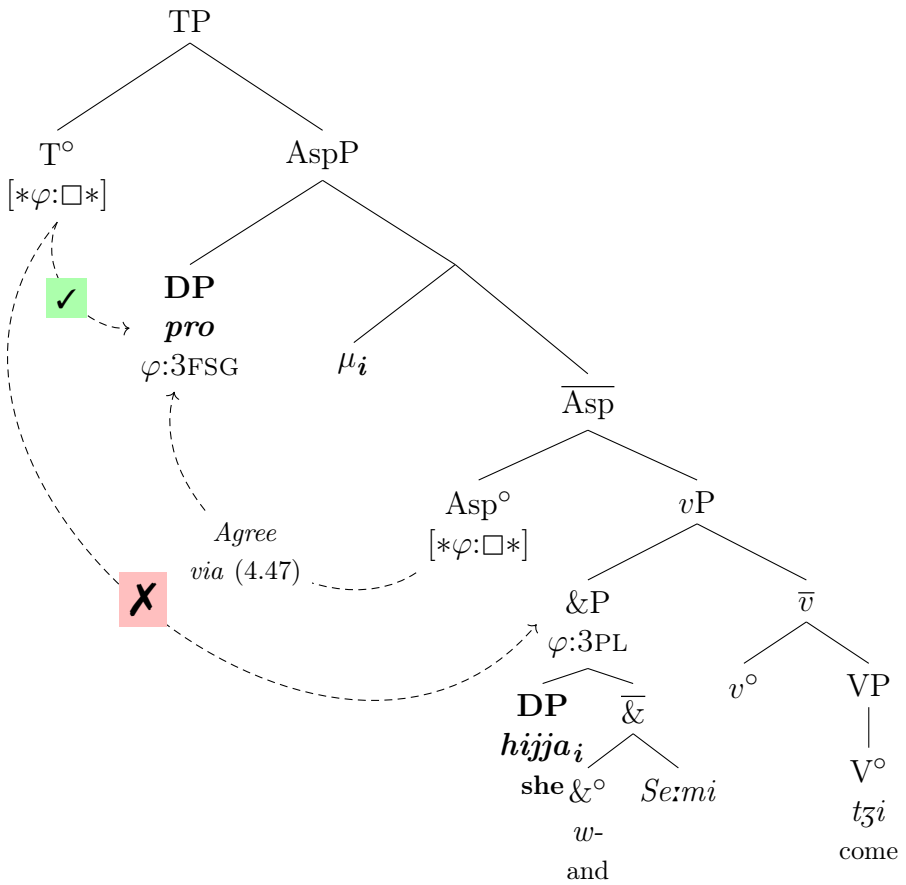
In this configuration, the thematic subject remains in its base position, and the requirement that [Spec, AspP] must always be filled is met by the BROAD SUBJECT, which can be overt, as shown in (4.55c).

In addition, the analysis predicts the ungrammaticality of a sentence like (4.56a), where the auxiliary agrees with the thematic subject and the main verb with the BROAD SUBJECT.

(4.56) a. * ke:n-u t-ʒi hijja w-Se:mi
be.PFV-3PL 3FSG.IPFV-come PRON.3FSG and-S.

Tunisian

b. *



c. * ke:n-u Ra:nia$_i$ t-ʒi hijja$_i$ w-Se:mi
be.PFV-3PL R.F 3FSG.IPFV-come PRON.3FSG and-S.

Tunisian

In this case, the auxiliary would not be agreeing with the closest goal—the BROAD SUBJECT in [Spec, AspP]—but with the thematic subject in [Spec, vP], skipping over the BROAD SUBJECT (4.56b).

In this section, I further developed the analysis of agreement with pronominal first conjuncts as agreement with a covert BROAD SUBJECT, showing that it predicts different configurations of word orders and agreement patterns, in both monoverbal (§4.4.1) and multiverbal (§4.4.2) sentences. My analysis of BROAD SUBJECTS, coupled with independently motivated assumptions about the location of ϕ-probes, verb movement, and subject movement allows us to derive the attested patterns and predict the unacceptability of the unattested ones.

4.5 Interim Summary

Before moving on to the remainder of the discussion, let us take stock. So far in this chapter, I have argued the following.

1. BROAD SUBJECTS in Arabic are a true category of their own, distinct from clitic left dislocation, with the decisive piece of evidence being their ability to trigger agreement on the verb.

2. The ability of BROAD SUBJECTS to trigger agreement is due to them being base-generated in specifiers of ϕ-probes (T° and Asp°): Heads that carry binders agree in Spec-Head fashion, following the rule of Spec-Head agreement under binding (4.47).

3. What looks like first conjunct agreement with a pronominal DP is underlyingly agreement with a *covert* BROAD SUBJECT binding that pronominal DP.

Because of the ability of pronominal conjuncts to be bound (as opposed to lexical DPs), BROAD SUBJECTS can be base-generated to bind them, leading to illusory first conjunct agreement. Crucially, there's no need to change the analysis of agreement with coordinate

structures developed in Chapter 3. The ability of pronouns to lift the restrictions that we find in agreement with coordinate structures whose first conjunct is a DP thus has a perfectly reasonable explanation: Pronouns license BROAD SUBJECTS and BROAD SUBJECTS represent an additional agreement controller.

In the following section, I extend this analysis to object clitic doubling, showing that pronouns are able to participate in first conjunct clitic doubling because they license BROAD OBJECTS.

4.6 First Conjunct Clitic Doubling of Pronouns

The puzzle that pronominal conjuncts pose with doubling is very much similar to the agreement puzzle discussed in the previous sections, in that pronouns seem to lift a requirement that lexical DPs must abide by. With object clitic doubling, doubling of a 1st conjunct lexical DP is ungrammatical (4.57).

(4.57) *Clitic doubling of &P object with 1st conjunct lexical DP*

a. ʃof-t-{***ha**$_i$/**hom**$_{i+j}$*} [Ra:nia$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL***} R. and-A.
I saw Rania and Azza. Tunisian

b. ʃuf-t-{***o**$_i$/**hom**$_{i+j}$*} la-[Sa:mi$_i$ w-Mħammad]$_{i+j}$
see-PFV.1SG-{***3MSG.CL/3PL.CL***} OM-S. and-M.
I saw Sami and Mhammad. Palestinian

However, doubling of 1st conjunct pronoun is acceptable (4.58).

(4.58) *Clitic doubling of &P object with pronominal first conjunct*

a. ʃof-t-{**ha**$_i$/**hom**$_{i+j}$} [hijja$_i$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{***3FSG.CL/3PL.CL***} PRON.3FSG and-A.
I saw her and Azza. Tunisian

b. ʃuf-t-{**o**$_i$/**hom**$_{i+j}$} [huwwe$_i$ w-Mħammad]$_{i+j}$
see.PFV-1SG-{***3MSG.CL/3PL.CL***} PRON.3MSG and-M.
I saw him and Mhammad. Palestinian

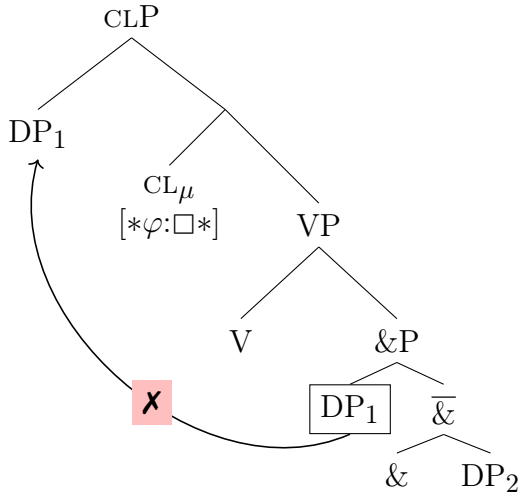
In this section, I show that my analysis of clitic doubling already fits very well with this data. Because CL$^\circ$ is both a probe and a μ-binder, meaning that it agrees with the element in its specifier and it can bind a resumptive pronoun, it can host a BROAD OBJECT. Thus, I propose that what looks like doubling of the pronominal first conjunct in (4.58) is underlyingly doubling of a BROAD OBJECT in the specifier of CL$^\circ$. This BROAD OBJECT binds the pronominal conjunct in the &P object, just like the BROAD SUBJECT binds the pronominal conjunct in multiple subject constructions. The category of BROAD OBJECTS is a novel category that I introduce here, based on similarities between the agreement and doubling data with pronominal conjuncts. I will start by discussing the data with lexical DPs and then show how the analysis predicts the data with pronominal conjuncts.

The primary puzzle in Chapter 3 is the impossibility of first conjunct clitic doubling of lexical DPs (4.57). When a doubling clitic cross-references an &P object, it can only be plural. I derived this fact straightforwardly as a consequence of my analysis of clitic doubling: CL$^\circ$ is a μ-binder, therefore it requires that its specifier be filled. Usually, the double moves to that specifier and CL$^\circ$ agrees with it in application of Spec-Head agreement under binding (4.59).

(4.59) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

When the object is an &P, generating a singular clitic would entail movement of only the first conjunct for CL$^\circ$ to agree with it. This movement would violate the CSC—as shown in (4.60)—hence the impossibility of first conjunct clitic doubling of lexical DPs.

(4.60) *First conjunct clitic doubling violates the CSC*



Resolved doubling is acceptable because it would be the result of the movement of the entire &P to the specifier of CL°, satisfying the requirement of this head. Because Spec-Head agreement is always resolved (see §3.6), resolved clitic doubling is the only option (see §3.7).

We don't want to say that movement of a pronominal DP would be less of an issue for the CSC than movement of a lexical DP.[22] My proposal, which is more reasonable, is that what looks like clitic doubling of a pronominal first conjunct is in reality doubling of a BROAD OBJECT base-generated in the specifier of CL° and binding that pronominal first conjunct. Recall the three ingredients of clitic doubling, and in particular ingredient (4.61c).

22. This is exactly the solution proposed by van Craenenbroeck and van Koppen (2008:230ff) for first conjunct clitic doubling of pronouns in Dutch (i).

(i) ... omda-ge gou en ik makannern gezien emmen
because-you$_{\text{CLITIC}}$ you$_{\text{STRONG}}$ and I each.other seen have
... Because you and I saw each other. (van Craenenbroeck and van Koppen 2008:229,(44))

They propose that the pronominal conjunct acts as a resumptive pronoun, saving the CSC violation that would be caused by movement of the clitic to the complementizer. There is a problem in applying such a proposal to Arabic, a language in which resumption is not island-sensitive (Hewett 2023c, 2023d). Since resumptive dependencies are base-generated in Arabic, saying that the first conjunct acting as a resumptive would save the CSC violation in clitic doubling cases like (4.58) would not make a lot of sense. However, the idea that the pronominal conjunct is a resumptive pronoun is insightful; we simply need to adapt it to Arabic's base-generated resumption strategy, which our analysis of clitic doubling readily allows.

(4.61) **The ingredients of clitic doubling**

a. A clitic projection, CLP, headed by a CL° (Sportiche 1996; Angelopoulos and Sportiche 2021; Saab 2024). Doubling clitics are the surface realization of CL°.

b. CL° is a ϕ-probe: It comes unvalued and must agree with the element it doubles (Sportiche 1996; Saab 2024).

c. The CL° is a μ-binder (Büring 2004, 2005): It requires an element in its specifier which binds **a pronoun** or a trace. By virtue of being a μ-binder, a doubling clitic triggers Predicate Abstraction (Heim and Kratzer 1998:198,(4)).

So far, we have seen instances of CL° binding the trace of the moved double. Traces aren't the only thing that μ can bind, however. As argued at length in this chapter, BROAD SUBJECTS bind pronouns *via* μ (see also Hewett 2024). I propose a parallel structure for objects. Whereas I claimed that the specifier of T° or Asp° may be filled by the moved thematic subject or a BROAD SUBJECT in §4.4, I claim here that the specifier of CL° can be filled by the moved object or by a BROAD OBJECT, provided the latter can bind a pronoun in the object, a general condition on BROAD SUBJECTS/OBJECTS.

The primary piece of evidence for this analysis is that we can make the BROAD OBJECT overt. Compare the minimal pairs in (4.62) and (4.63).

(4.62) a. xtar-t{**-u**$_{\boldsymbol{i}}$/**-hom**$_{\boldsymbol{i+j}}$} [**howwa**$_{\boldsymbol{i}}$ w-Ra:nia$_j$]$_{i+j}$
choose-PFV.1SG{**-3MSG.CL/-3PL.CL**} **PRON.3MSG** and-R.F
I chose him and Rania. Tunisian

b. ? xtar-t{**-u**$_{\boldsymbol{i}}$/***-hom**$_{\boldsymbol{i+j}}$} Se:mi$_i$ [howwa$_i$ w-Ra:nia]$_{i+j}$
choose-PFV.1SG{**-3MSG.CL/*-3PL.CL**} S.M PRON.3MSG and-R.F
I chose Sami, him and Rania. Tunisian

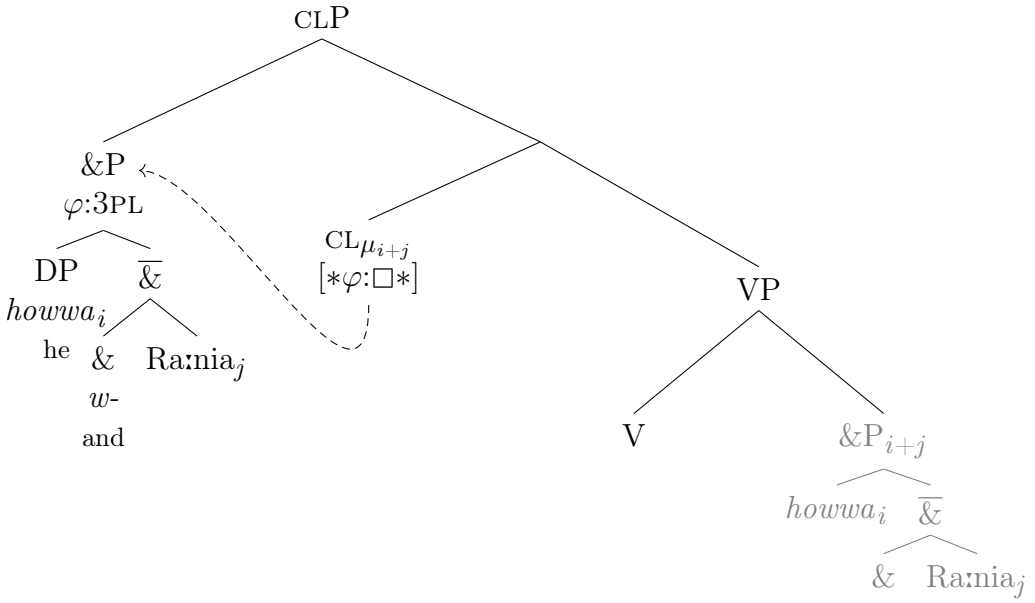
(4.63) a. ʃuf-t{**-o**$_{\boldsymbol{i}}$/**-hom**$_{\boldsymbol{i+j}}$} [**huwwe**$_{\boldsymbol{i}}$ w-Ra:nia$_j$]$_{i+j}$
see-PFV.1SG{**-3MSG.CL/-3PL.CL**} **PRON.3MSG** and-R.F
I saw him and Rania. Palestinian

b. ? ʃuf-t{**-o**$_{\boldsymbol{i}}$/*-**hom**$_{\boldsymbol{i+j}}$} la-Sa:mi [**huwwe**$_{\boldsymbol{i}}$ w-Ra:nia$_j$]$_{i+j}$
see-PFV.1SG{**-3MSG.CL/*-3PL.CL**} **PRON.3MSG** and-R.F
I saw Sami, him and Rania. Palestinian

In (4.62a) and (4.63a), both a singular clitic seemingly cross-referencing the pronominal first conjunct, and a plural clitic cross-referencing the entire &P are acceptable. If we make the referent of the pronominal conjunct overt, as in (4.62b) and (4.63b), then only the singular clitic is acceptable. This is predicted under my analysis where the referent of the pronominal conjunct is a BROAD OBJECT merged in the specifier of the clitic. In this case, only the BROAD OBJECT could be the target of agreement, and not the &P object.

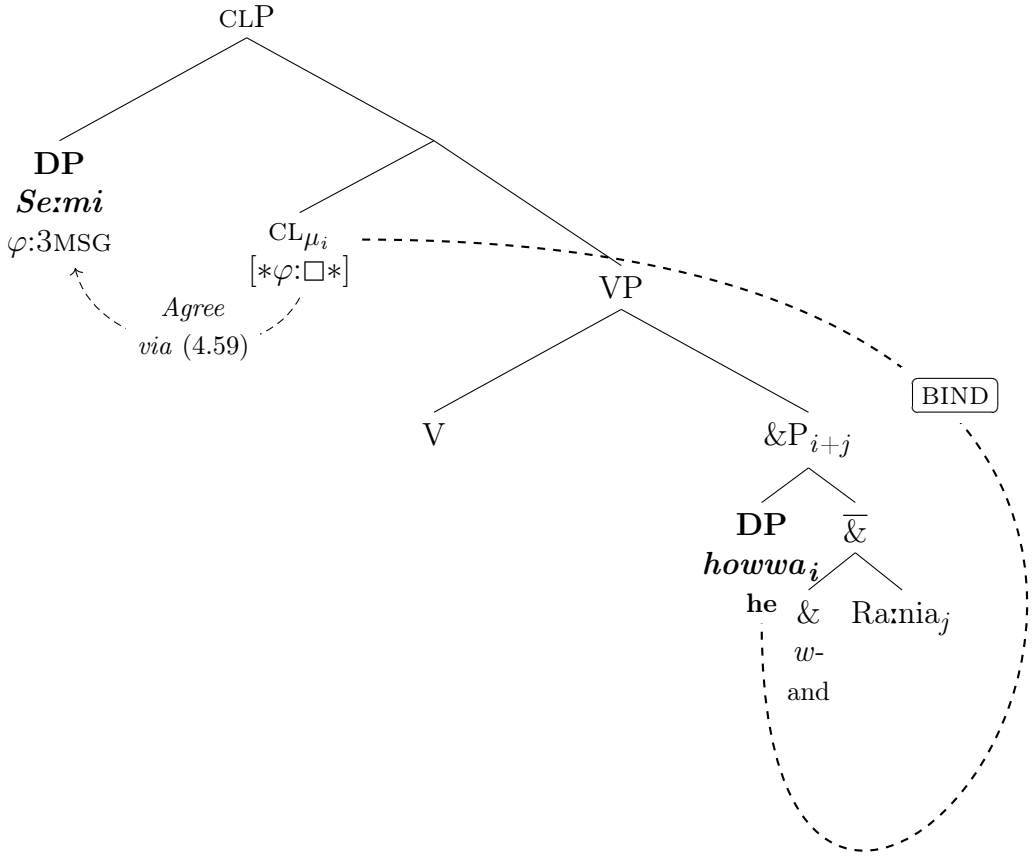
Thus, resolved doubling in (4.62a) obtains via the movement of the &P object to the specifier of CL°, followed by Spec-Head agreement *via* (4.59), as shown in (4.64).

(4.64) *Derivation of resolved doubling in* (4.62a)



By contrast, doubling of the BROAD OBJECT in (4.62b) means leaving the &P object in its base position, and base-generating the BROAD OBJECT in the specifier of CL°, followed by Spec-Head agreement, as shown in (4.62b).

(4.65) *Derivation of clitic doubling of a Broad Object* (4.62b)



Just like with subject agreement then, the optionality between the singular and plural clitic we see in (4.62a), repeated here as (4.66) is due to two different underlying structures.

(4.66) xtar-t{**-u$_i$**/**-hom$_{i+j}$**} [**howwa$_i$** w-Ra:nia$_j$]$_{i+j}$
choose-PFV.1SG{**-3MSG.CL**/**-3PL.CL**} **PRON.3MSG** and-R.F
I chose him and Rania.

The singular clitic is the result of clitic doubling of a covert BROAD OBJECT (4.67a), while the plural clitic is the result of doubling the entire &P object (4.67b).

(4.67) *Two different derivations for "first conjunct doubling" and resolved doubling*

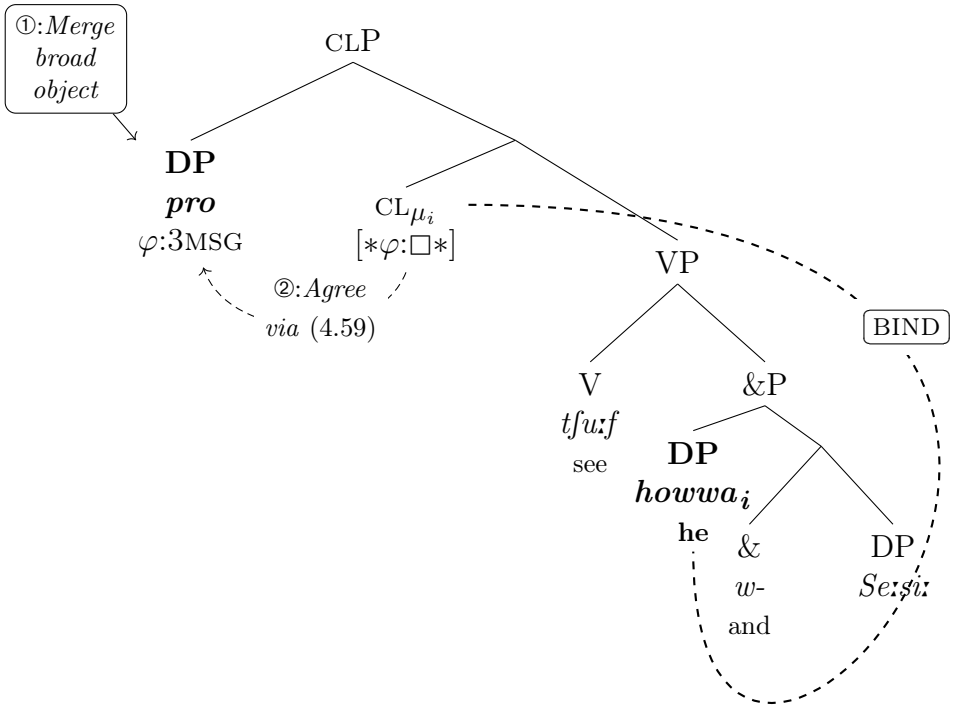
a. xtar-t-u$_i$ *pro*$_i$ [$_{\&P}$ howwa$_i$ w-Ra:nia$_j$]$_{i+j}$
choose-PFV.1SG-3MSG.CL pro PRON.3MSG and-R.F

b. xtar-t-hom$_{i+j}$ [$_{\&P}$ howwa$_i$ w-Ra:nia$_j$]$_{i+j}$
choose-PFV.1SG-3PL.CL PRON.3MSG and-R.F

Accordingly, the analysis of first conjunct clitic doubling as in (4.68a) is one where there is a covert BROAD OBJECT in the specifier of CL$^\circ$ (4.68b).

(4.68) a. sa:ʕa:t t-ʃu:f-**u$_i$** **howwa$_i$** w-Se:si: ka-sˤħa:b
sometimes IPFV.2SG-see.IPFV-**3MSG.CL PRON.3MSG** and-S. as-friends
Sometimes you see him and Sassi as friends. Tunisian (TC:3742)

b.



4.7 Analytical wrinkles: Elusive Properties of Broad Subjects

So far, I have been focusing on figuring out why first conjunct agreement and doubling with pronouns seem to be much more permissive than their counterparts with lexical DPs. I have argued that this follows from the ability of a pronoun to be bound by a covert BROAD SUBJECT (4.69a) or BROAD OBJECT (4.69b), which are the true controllers of agreement in these cases.

(4.69) a. *pro*$_i$ ʒeː-t hijja$_i$ w-Seːmi
pro come.PFV-3FSG PRON.3FSG and-S.
✓BIND
She and Sami came.

b. xtar-t-u$_i$ *pro*$_i$ [&P howwa$_i$ w-Rania$_j$]$_{i+j}$
choose-PFV.1SG-3MSG.CL *pro* PRON.3MSG and-R.
✓BIND
I chose him and Rania.

This analysis followed from other principles: The independently motivated analysis of BROAD SUBJECTS (§4.2), the evidence for overt and covert BROAD SUBJECTS (§4.3), and the independently motivated analysis of clitic doubling which requires that the clitic bind a trace or a pronoun (§4.6).

In this section, I address two main issues with this analysis, both of which relate to what I believe are elusive properties of BROAD SUBJECTS. I will describe these issues and propose possible avenues for future research on them.

The first and perhaps very obvious problem is that a BROAD SUBJECT/OBJECT should be able to bind a second conjunct resumptive pronoun, and thus we would predict that second conjunct agreement (4.70a) and second conjunct clitic doubling (4.70b) are possible.

(4.70) a. * *pro*$_i$ ʒeːt Seːmi w-hijja
pro come.PFV-3FSG S. and-PRON.3FSG
✓BIND
Intended: 'Sami and her came.'

b. * xtart-u$_i$ *pro*$_i$ [&P Rania$_j$ w-howwa$_i$]$_{i+j}$
choose-PFV.1SG-3MSG.CL *pro* R. and-PRON.3MSG
✓BIND
Intended: 'I chose Rania and him.'

If the only two ingredients that are needed are (i) the proper binding relation between a BROAD SUBJECT/OBJECT and a pronoun, and (ii) Spec-Head agreement, then we should find sentences like (4.70a) and (4.70b), contrary to fact.

The second problem, which is a more general issue with BROAD SUBJECTS outside of coordination, is that not every sentence like (4.71) (repeated from (4.14)) is possible in Arabic.

(4.71) Raːnia$_i$ {**keːn-ət** / keːn} ʃʕar-ha$_i$ tˤwiːl
R. {**be-PFV.3FSG** / be.PFV.3MSG} hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

Just like with coordination, it is not sufficient to have the proper binding relation between the BROAD SUBJECT and the pronoun in the sentential predicate. While agreement with either the BROAD or NARROW SUBJECT is possible in (4.71), it is restricted to the narrow subject in (4.72).[23]

(4.72) Raːnia$_i$ {***keːn-ət** / keːn} buː-ha$_i$ sˤʕiːb
R. {**be-PFV.3FSG** / be.PFV.3MSG} father-3FSG.CL difficult.MSG
Rania's dad was difficult. Tunisian

This second problem with BROAD SUBJECTS is not specific to Arabic or my analysis in particular: Although the main issue in Arabic is to derive agreement, BROAD SUBJECTS

23. Under my analysis in §4.2, *Rania* is a left dislocated DP in (4.72), and not a BROAD SUBJECT, as BROAD SUBJECTS must trigger agreement. However, this isn't crucial to this discussion as the question here is: Why can't a BROAD SUBJECT be merged in (4.72)?

pose problems in Japanese and Korean due to them receiving nominative case in addition to the thematic subject (see Yoon (2015) and Tateishi (2017) and references therein). For example, BROAD SUBJECTS in Korean are felicitous only if the inner predicate denotes a "characteristic property" (Yoon 2009, 2015). Thus (4.73a), with nominative case on both the BROAD SUBJECT *Cheli* and the NARROW SUBJECT *apeci* 'father' is acceptable, while (4.73b) is not, because only the event of one's father death can characterize an individual due to its significance, compared to the event of one's father falling.

(4.73) *Broad Subjects are restricted in Korean* (Yoon 2015:84)

a. Cheli-ka apeci-ka tolaka-si-ess-ta
C.-NOM father-NOM pass.away-HON-PST-DECL
Cheli's father passed away.

b. ?* Cheli-ka apeci-ka nemeci-si-ess-ta
C.-NOM father-NOM fall-HON-PST-DECL
Cheli's father (tripped and) fell.

Yoon further claims that the property of being characteristic is very much context-dependent, and as such there is an important pragmatic component to multiple subject constructions, in addition to the syntactic and semantic components. Similar to Yoon's description of the Korean facts, intuitively, there is a sense in which *Rania* is more of an affected subject in (4.71) than in (4.72): I will refer to this elusive condition as the **affectedness threshold**. It is elusive because no matter how affected Rania was by her father's difficulty, as far as I know, (4.72) remains unacceptable. That being said, I think that the examples with coordinated subjects in particular are judged as acceptable and are widely attested in corpora for this reason.

(4.74) Raːnia$_i$ **ʒeː-t** hijja$_i$ w-Seːmi
R. **come-PFV.3FSG** PRON.3FSG and-S.M
Rania and Sami came (*lit.* 'Rania came she and Sami.') Tunisian

In (4.74) (repeated from (4.26)), *Rania* is an affected subject, in fact she is a subject and fully performs the action denoted by the verb, as much as *Sami*. BROAD SUBJECTS binding

pronominal conjuncts thus can attain the affectedness threshold required for them to be merged in a structure more so those binding a pronominal possessor as in (4.71) and (4.72). I don't have more insights on this issue in particular, but hope that the data presented here and in Hewett (2023d, 2024) sparks a conversation on the correct analysis of BROAD SUBJECTS.[24]

Coming back to the potential problem with pronominal second conjuncts, which is our main concern here, I don't have a solution either, but it is worth investigating resumption within conjuncts more generally, if only to understand the puzzle better. The main problem is that my analysis, as is, predicts the existence of examples like (4.75), contrary to fact.

(4.75) * *pro*$_i$ ʒeːt Seːmi w-hijja
pro come.PFV-3FSG S. and-PRON.3FSG
✓BIND
Intended: 'Sami and her came.'

One might understand the ungrammaticality of (4.75) as a more general ban on second conjunct resumptive pronouns. This is not the case. In Tunisian at least, &P subjects with $\overline{\text{A}}$-bound second conjunct resumptives are acceptable, although marked.[25,26]

24. One possible avenue for research is to compare BROAD SUBJECT constructions to the diachronic development of experiencer subjects from oblique experiencers, as with the verb *like* in English (Croft 2001:157–9). The Gothic construction with a dative experiencer for this verb (i) ultimately becomes the Modern English (ii), with a subject experiencer.

(i) galeikaida uns ei biliþanai weseima
pleased.3SG 1PL.DAT that left might.be1PL
It pleased us that we might be left. Gothic (Cole et al. 1980:721,(4))

(ii) We like it.

Just like oblique experiencers were not subjects and acquired subject properties over time, culminating in their ability to control agreement (Cole et al. 1980:742), we can characterize the Arabic data as follows: Certain elements that could be interpreted as left dislocated take on more and more subject-like properties over time, becoming BROAD SUBJECTS being able to control verbal agreement. This development is limited to certain predicates.

25. I think they are marked because there are other, more effective ways to ask this kind of question, as in 'Which student do you think came with him to the ceremony?' My Palestinian consultant rejected all the sentences with $\overline{\text{A}}$-bound second conjunct resumptive pronouns in favor of the comitative strategy.

26. Note that when testing for the possibility of second conjunct resumptive pronouns, I will only use

(4.76) ?(?) **ʔamma təlmiːða$_i$** j-oðˤhor-lək ʒeː-w howwa
which student$_i$ 3MSG.IPFV-seem-2SG.DAT.CL come-PFV.3PL PRON.3MSG
weyyeːha$_i$ lə-s-eʁemoni
and.PRON.3FSG to-DEF-ceremony
(lit.) Which student$_i$ do you think him and her$_i$ came to the ceremony?
Tunisian

If second conjunct resumptive pronouns are acceptable, all else being equal, we would expect second conjunct pronouns resuming a BROAD SUBJECT to be possible, which isn't the case (4.75). It is unclear why, but just like with the examples in (4.71) and (4.72) above, there must be some additional restrictions on BROAD SUBJECTS, which are likely the result of different (syntactic, semantic, pragmatic) principles acting together.

Now, we find an interesting result when flipping the order of conjuncts and keeping the verb before the subject[27] as in (4.77): Resolved agreement, which was possible in (4.76) becomes unacceptable.

(4.77) ?(?) ʔamma təlmiːða$_i$ j-oðˤhor-lək **{ʒeː-t** /
which student$_i$ 3MSG.IPFV-seem-2SG.DAT.CL **{come-PFV.3FSG** /
*ʒeː-w} hijja$_i$ weyyeːh lə-s-eʁemoni
*come-PFV.3PL} PRON.3FSG and.PRON.3MSG to-the-ceremony
(lit.) Which student$_i$ do you think she$_i$ and him came to the ceremony?
Tunisian

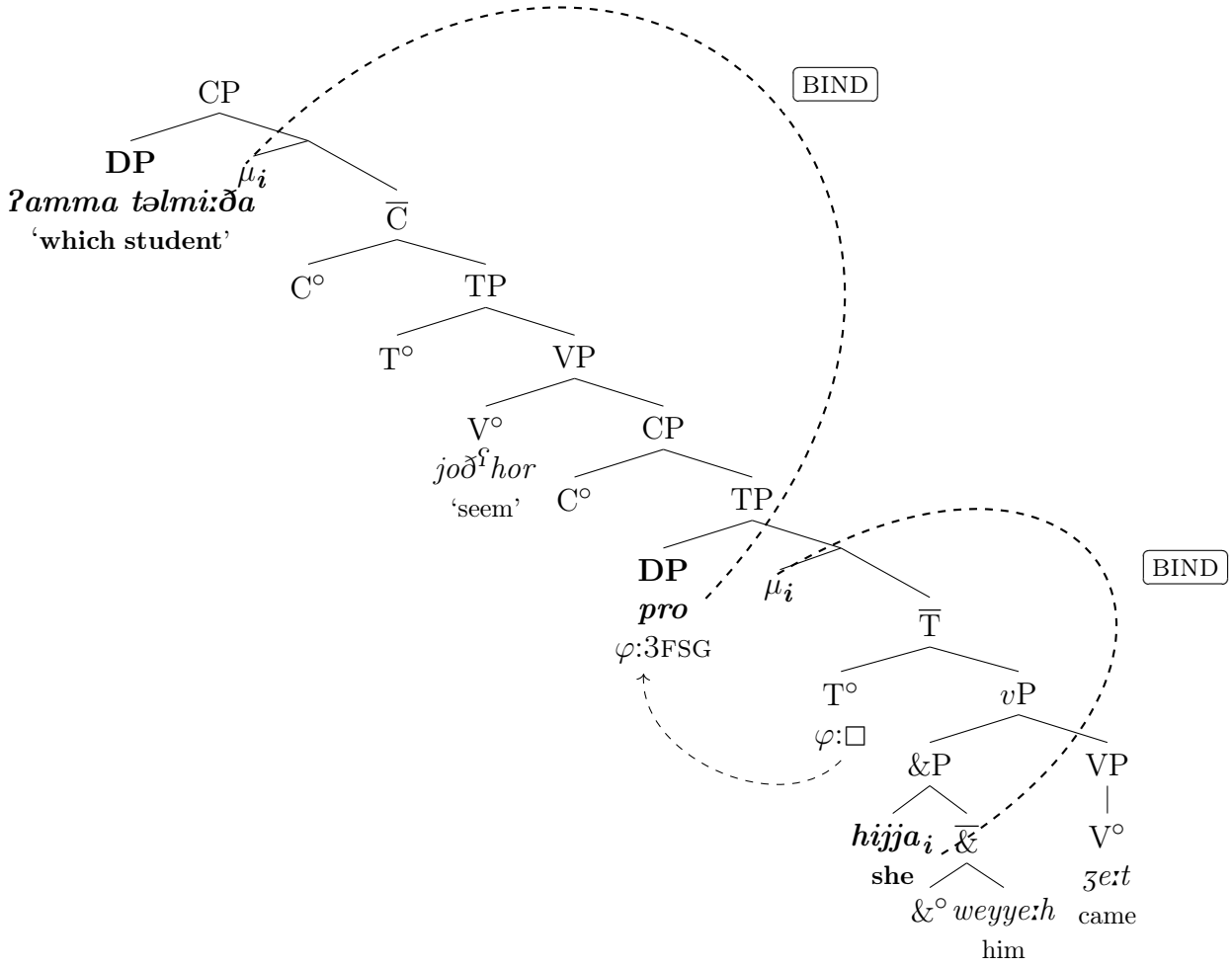
Following my analysis, there must be a BROAD SUBJECT in (4.77) and not in (4.76). This seems like the most plausible analysis, given that we know the *wh*-phrase 'which student',

examples where both conjuncts are pronouns as in (4.76), even though ideally, the predictions should be tested on the order DP-pronoun as in (4.75), given that we have been dealing with the order pronoun-DP up until now, giving us minimal pairs. However, the order DP-Pronoun is unacceptable in most contexts, even when (first conjunct) agreement is not at stake: Tunisian and Palestinian consultants report that the order DP-Pronoun sounds very degraded compared to the Pronoun-DP order. It is not uncommon for languages to have a restriction on the ordering of conjuncts (Nevins and Weisser 2019:225, fn.3). The unacceptability of the DP-pronoun order possibly relates to Information Structure and the preference for ordering old or given information before new information (Bock and Irwin 1980; Arnold et al. 2000, see also Chen and Narasimhan (2018) for this preference in coordination). Because such an order would create a confound anyways, I choose to set it aside and focus on coordinations of pronouns.

27. The crucial comparison here is when the verb precedes the &P subject. If it follows it, we always get resolved agreement so those sentences aren't informative.

base-generated in [Spec, CP], shouldn't trigger agreement on the verb of the embedded clause. Similarly, we don't expect it to force agreement with the pronominal conjunct it binds. A a possible derivation to account for illusory agreement with the first conjunct pronoun in (4.77) is shown in (4.78).[28]

(4.78) *Possible derivation of* (4.77)



28. An alternative where the *wh*-phrase is base-generated in [Spec, TP] of the embedded clause and moves to [Spec, CP] of the matrix clause is also a possibility. What's important here is that there is a BROAD SUBJECT in the specifier of T° of the embedded clause.

The generalization that transpires from comparing resumptive pronouns in first and second conjunct position is the following: In principle, nothing prevents a pronominal second conjunct from being a resumptive, as in (4.76). However, pronominal conjuncts resuming a BROAD SUBJECT must be in initial position, as in (4.77), (4.78). There doesn't seem to be a purely syntactic principle governing this ordering, as there doesn't seem to be a purely syntactic principle governing the possibility of merging a BROAD SUBJECT in the examples (4.71) and (4.72). That being said, one possible reason for the restricted ordering of conjuncts with BROAD SUBJECTS as opposed to left-peripheral elements merged in [Spec, CP] may be related to Information Structural principles. In general, it is argued that in terms of ordering, given information tends to precede new information: This is dubbed the GIVEN-BEFORE-NEW PRINCIPLE (see Arnold et al. (2000:30) and references therein). There is experimental evidence that the GIVEN-BEFORE-NEW PRINCIPLE is at stake in conjunct ordering in adult speech (Chen and Narasimhan 2018).[29] It might be the case that for *wh*-phrases and other focused information, the ordering of conjuncts is not crucial. BROAD SUBJECTS, however, are subjects of predication, in what can be described as Topic-Comment structures. It is possible that this kind of structure restricts the ordering of conjuncts within the sentential predicate, forcing the given and perhaps more salient BROAD SUBJECT to be resumed first.

Admittedly, the restriction on BROAD SUBJECTS that I posit here whereby they can only bind a pronominal conjunct if it is ordered first may seem *ad hoc*. There are, however, reported asymmetries between first and second conjuncts in many languages, specifically as it relates to extraction. van Craenenbroeck and van Koppen (2008:232) report that Dutch allows first conjunct clitic doubling, but not second conjunct clitic doubling of pronouns, even

29. It is fair to wonder here how such a general principle seems to break in the face of English data like *Sam and I* vs. the much less acceptable *I and Sam*. However, there is evidence that the 'X and I' constraint is the result of a "pervasive prescriptive effect" (Grano 2006:40), and that English speakers favor the pronoun-DP order as well more generally according to Grano's (2006) corpus survey (though there are more variables in English, such as nominative vs. accusative case on the pronoun, cf. Parker, Riley, and Meyer 1988:223).

though their Big-DP analysis of the facts predicts either to be possible. Similarly, Georgi and Amaechi (2023:974,fn.16) report that Igbo allows movement-derived resumptives in first conjunct position, wile movement-derived resumptives in second conjunct position are degraded. So, asymmetries between first and second conjuncts wouldn't be only restricted to binding by BROAD SUBJECTS, there is something more general about them in movement/binding dependencies.

4.8 Conclusion

This chapter focused on the puzzling resemblance between agreement and clitic doubling with regards to pronominal first conjuncts. As opposed to lexical DPs, pronominal first conjuncts seemed to lift restrictions on agreement and clitic doubling: They seemed to be able to be targeted by those operations in a way that lexical DPs were not, as discussed at length in Chapter 3.

This resemblance between the two phenomena I have been striving to distinguish, while unexpected, has a logical explanation given two independent facts: (i) Pronouns can be bound and (ii) Arabic has BROAD SUBJECTS/OBJECTS. Once we take into account these two facts, the behavior of pronouns within coordinate structures makes sense: It is not that they magically lift restrictions on agreement and doubling; those restrictions still hold with whatever types of conjuncts we have. Rather, their ability to be bound leaves room for a BROAD SUBJECT/OBJECT to be merged and to be agreed with in Spec-Head fashion, creating the illusion of first conjunct agreement or doubling.

Part II

Completing the analysis: Doubling clitics vs. Agreement clitics

OVERVIEW

In Part I of the dissertation, I focused on the coordination diagnostic for agreement and clitic doubling. I showed that the main difference between subject-verb agreement and object-clitic doubling with regard to this diagnostic is that only subject-verb agreement can cross-reference a first conjunct DP (Chapter 3). I also found that agreement and doubling behave the same way when the first conjunct is a pronoun, and that this resemblance is due to the ability of pronouns to be bound: I proposed that agreement with and clitic doubling of pronominal first conjuncts have the same underlying derivation, whereby agreement/doubling targets a BROAD SUBJECT/OBJECT that binds that pronoun.

In addition to the analytical insights from Part I, we were able to add another property to the properties of agreement and doubling investigated in Chapter 2, namely the ability to cross-reference a first conjunct lexical DP. Once again, agreement and doubling differ with regard to this property, securing the roles of subject-verb agreement and object clitic doubling as gold standards for agreement and doubling respectively. This additional property and the ones from Chapter 2 are reported in Table 4.1 below.

Property	Subject-Verb Agreement	Object Clitic Doubling
Obligatory	✓	✗
Tense-variant	✓	✗
Possibility of default	✓	✗
Sensitive to controller	✗	✓
Pragmatic restrictions	✗	✓
Cross-referencing of a 1st conjunct lexical DP	✓	✗

Table 4.1: Properties of subject-verb agreement and object clitic doubling in Tunisian and Palestinian

Part II of the dissertation is meant to complete the analysis, going back to one of the overarching goals of the dissertation: Demonstrating the difference between doubling clitics and agreement clitics. Chapter 5 completes the diagnostic picture. By extending the tests from Part I to the other clitics, and by adding other diagnostics, I show that complementizer clitics (IIB) act like object clitics (IIA) in all respects, and are thus doubling clitics.

(II) A. *Object clitic doubling*
ʃof-t-**ha$_i$** [Ra:nia$_i$] lbe:raħ
see.PFV-1SG-**3FSG.CL** R. yesterday
I saw Rania yesterday. Tunisian

B. *Complementizer clitic*
ħaka ʔinn-**ha$_i$** [tˤ-tˤa:lb-e$_i$] xallasˤat l-imtiħa:n
said.3MSG COMP-**3FSG.CL** DEF-student-F finished.3FSG DEF-exam
He said that the student finished the exam. Palestinian

C. *wh-clitic*
we:n-**ha$_i$** [tˤ-tˤa:lb-e$_i$]
where-**3FSG.CL** DEF-student-F
Where is the student? Palestinian

D. *Negation clitic*
[t-təlmi:ð-a$_i$] ma-**ha$_i$**-ʃ f-l-qasm
DEF-student-F NEG-**3FSG.CL**-NEG in-DEF-class
The student is not in the class. Tunisian

By contrast, wh-clitics (IIC) and negation clitics (IID) act like subject-verb agreement in all respects, and are thus agreement clitics.

Based on these diagnostics, Chapter 6 further justifies the analysis of clitic doubling advocated for in this dissertation, describing a diachronic path from right dislocation to clitic doubling that can explain the current distribution of this construction. This chapter also extends the analysis of clitic doubling to cases of complementizer clitics. In Chapter 7, I propose an analysis of agreement clitics as the realization of T° when no verb moves to that head, accounting for their distribution, which differs from that of doubling clitics. Finally, in Chapter 8, I derive the distribution of agreement and doubling clitics, focusing on the fact that they have a different syntax but the same exponents.

CHAPTER 5

CLITIC DOUBLING VS. AGREEMENT: COMPLETING THE EMPIRICAL PICTURE

5.1 Introduction

The goal of this chapter is to complete the empirical picture of Tunisian and Palestinian Arabic clitics in two ways. Throughout the chapter, I investigate complementizer clitics (5.1a), *wh*-clitics (5.1b), and negation clitics (5.1c) and compare them to object clitics and subject-verb agreement, our two gold standards established in Chapter 2.

(5.1) a. *Complementizer clitic*
ħaka ʔinn-**ha**$_{i}$ [tˤ-tˤaːlb-e$_{i}$] xallasˤ-at l-imtiħaːn
say.PFV.3MSG COMP-**3FSG.CL** DEF-student-F finish.PFV-3FSG DEF-exam
He said that a student finished the exam. Palestinian

b. *wh-clitic*
weːn-**ha**$_{i}$ [tˤ-tˤaːlib-e$_{i}$]
where-**3FSG.CL** DEF-student-F
Where is the student? Palestinian

c. *Negation clitic*
[t-təlmiːð-a$_{i}$] ma-**ha**$_{i}$-ʃ f-l-qasm
DEF-student-F NEG-**3FSG.CL**-NEG in-DEF-classroom
The student is not in the classroom. Tunisian

In addition, I provide other diagnostic tests for agreement vs. doubling. I start by going over the facts from the coordination diagnosis explored in Chapters 3 and 4, and applying it to the contexts of interest (5.1) in §5.2. I move on to distributional tests in §5.3, then morphological tests in §5.4. These two categories of tests not only include a more detailed discussion of some properties introduced in Chapter 2 (§2.3.3), such as sensitivity to controller (§5.3.1) and the possibility of a default (§5.4.2), they also contain novel pieces of internal evidence showing the difference between agreement and doubling, such as the complementary distribution between verbs and clitics (§5.3.3) and the possibility of deflected agreement (§5.4.3).

This chapter thus provides a detailed empirical picture of the behavior of object clitics, complementizer clitics, *wh*-clitics and negation clitics, showing that object clitics and complementizer clitics pattern together as instances of *doubling clitics*, while *wh*-clitics and negation clitics are *agreement clitics*. A preview of these results is provided in table 5.1.

	Doubling Clitics		**Agreement Clitics**		
Diagnostic Test	Object clitics	Comp. clitics	Negation clitics†	*wh*-clitics	Subj–V Agreement
Cross-referencing of 1st conj. lexical DP	✗	✗	N/A	✓	✓
Sensitivity to controller	✓	✓	✗	✗	✗
Pragmatic restrictions	✓	✓	✗	N/A	✗
Complementary distribution w/ verbs	✗	✗	✓	✓	N/A
3rd fem. sg. Allomorphy†	✗	✗	✓	✓	N/A
Presence of default	✗	✗	✓	N/A	✓
Deflected agreement	✗/ **?**†	✗/ **?**†	✓	✓	✓

† marks things that are exclusive to Tunisian

Table 5.1: Summary of patterns of cliticization and agreement in Tunisian and Palestinian

5.2 Diagnosing clitic doubling: Coordination

In this section, I discuss the coordination diagnostic and extend it to complementizer clitics, *wh*-clitics and negation clitics. In Chapters 3 and 4, we saw that the main difference between subject-verb agreement and object clitic doubling with regards to coordination is the possibility of cross-referencing a 1st conjunct lexical DP.[1]

(5.2) *Agreement with post-verbal &P subject in Tunisian*
{ʒeːt / ʒeːw} Raːnia w-ʕAzza
{come.PFV-3FSG / come.PFV-3PL} R.F and-A.F
Rania and Azza came.

(5.3) *Clitic doubling with &P object in Tunisian*
ʃof-t-{***ha$_i$/hom$_{i+j}$**} [Raːnia$_i$ w-ʕAzza]$_{i+j}$
see.PFV-1SG-{***3FSG.CL/3PL.CL**} R.F and-A.F
I saw Rania and Azza.

While a singular verb is possible in (5.2), only a plural clitic is grammatical in (5.3). Thus,

1. Despite the analytical claims I make in Chapters 3 and 4, I will keep referring to this phenomenon as "cross-referencing of a 1st conjunct" for ease of exposition.

I take the ability to cross-reference a 1st conjunct lexical DP as an indicator of agreement, formulating the coordination diagnostic as follows.

(5.4) **The coordination diagnostic**
If a ϕ-morpheme can cross-reference a 1st conjunct lexical DP, then it is an agreement morpheme. If it cannot cross-reference a 1st conjunct lexical DP, then it is a doubling morpheme.

We can now apply (5.4) in the other contexts where clitics surface.

In both dialects, complementizer clitics are unable to cross-reference a first conjunct lexical DP (5.5), patterning with object clitics (5.3).

(5.5) *Complementizer clitics cannot cross-reference a 1st conjunct lexical DP*

a. ʔul-t-illak {ʔinno / ***ʔinn-ha$_i$** / **ʔinn-hom$_{i+j}$**} [Manaːl$_i$
say.PFV-1SG-2SG.DAT.CL {COMP / ***COMP-3FSG.CL** / **COMP-3PL.CL**} [M.
w-Raːnia]$_{i+j}$ niʒħ-u
and-R.] pass.PFV-3PL
I told you that Manal and Rania passed. Palestinian

b. tγaʃʃaʃ-t xaːtˤr-{***u$_i$/hom$_{i+j}$**} [Seːmi$_i$ w-Muʕtazz]$_{i+j}$
get_angry.PFV-1SG because-{***3SG.CL/3PL.CL**} S. and-M.
ʕaml-u barʃa ħəss
make.PFV-3PL many noise
I got upset because Sami and Mutaz made a lot of noise. Tunisian

By contrast, *wh*-clitics are able to surface in the singular before &Ps whose first conjunct is a DP (5.6), mirroring the behavior of verbs.

(5.6) wh-*clitics are able to cross-reference a first conjunct DP*

a. wiːn-{**ʔ-ha$_i$/-hom$_{i+j}$**} [Raːnia$_i$ w-ʕAzza]$_{i+j}$
where-{**ʔ-3FSG.CL/-3PL.CL**} [R.F and-A.F]
Where are Rania and Azza? Tunisian[2]

b. weːn{**-o$_i$/-hom$_{i+j}$**} [Saːmi$_i$ w-Muʕtaz]$_{i+j}$
where{**-3MSG.CL/-3PL.CL**} [S.M w-M.M]
Where are Sami and Mutaz? Palestinian

2. Note the following corpus example with inanimate nouns in Tunisian:

What's more, the gender-matching requirement of Tunisian also holds in this context: In (5.7), only the plural clitic is acceptable. Thus *wh*-clitics not only behave like subject-verb agreement with regards to FCA, they have the same restrictions as subject-verb agreement in this context.

(5.7) wiːn-{*__-ha$_i$__/__-hom$_{i+j}$__} [Raːnia$_i$ w-Seːmi]$_{i+j}$
where-{?__-3FSG.CL__/__-3PL.CL__} [R.F and-S.M]
Where are Rania and Sami? Tunisian

Negation is a harder to test for in this context because there seems to be a restriction on word order with negation whereby it has to follow the subject (Benmamoun and Al-Asbahi 2014:81), and that creates a problem for this test which relies on the rigid target-controller word order. Aoun, Benmamoun, and Choueiri (2010:108) note this for *e.g.,* Moroccan, where (5.8) is ungrammatical.

(5.8) * ma-huwa-ʃ l-wəld f-d-dar
NEG-PRON.3MSG-NEG DEF-child in-DEF-house
Intended: 'The child is not in the house.' Moroccan

Similar examples in Tunisian are not unacceptable per se, but they express constituent negation: The Tunisian counterpart to (5.8) is translated as 'It is not the child who is in the house' (Benmamoun et al. 2014:130, fn.14). Testing the ability of first conjunct agreement in this context provides mixed results due to two main complications. First, it is hard to create a context where the word-order (5.8) with an &P subject is acceptable.

(5.9) ??/* ma-{__ha$_i$__/__hom$_{i+j}$__}-ʃ [Maneːl$_i$ w-Raːnia$_j$]$_{i+j}$ f-d-daːr
NEG-{__3FSG.CL__/__3PL.CL__}-NEG M. and-R. in-DEF-house
Intended: 'It's not Manal and Rania who are in the house.'

(i) wiːn-__u$_i$__ [l-stiqraːr$_i$ w-l-stimraːr$_j$]$_{i+j}$
where-__3MSG.CL__ DEF-stability and-DEF-continuity
Where are the stability and the continuity? Tunisian (TCI:text 3711)

Second, testing the acceptability of the different clitics in a sentence like (5.10) is even harder in light of the fact that speakers usually express constituent negation with the default negative morpheme, without clitics, given that negation clitics are not obligatory (see discussions in §5.4.2 and §7.5).

(5.10) ʔ(ʔ) muʃ Maneːl w-Raːnia f-d-daːr
NEG M. and-R. in-DEF-house
Intended: 'It's not Manal and Rania who are in the house.'

Because of these complications, I proceed with caution and note the coordination test as non-applicable on negation. Given that there are plenty of other tests in this chapter and that the goal is to look at the tendencies, other tests will show how negation clitics pattern more like agreement than doubling.

Recall that a second manifestation of the coordination diagnostic (5.4) uncovered in Chapter 4 is that pronominal first conjuncts are special with regards to doubling: They can be cross-referenced by object clitics, a property that I analyzed as the result of CL° being able to host a BROAD OBJECT in its specifier. Interestingly enough, replacing the first conjuncts in (5.5a) and (5.5b) by pronouns, as in (5.11a) and (5.11b), leads to the same effect as with object clitics, with the singular clitic cross-referencing only the first conjunct becoming acceptable.

(5.11) *Complementizer clitics can cross-reference a 1st conjunct pronoun*

a. ʔul-t-illak {ʔinno / **ʔinn-ha$_i$** / **ʔinn-hom$_{i+j}$**} [hijje$_i$
say.PFV-1SG-2SG.DAT.CL {COMP / **COMP-3FSG.CL** / **COMP-3PL.CL**} [PRON.3FSG
w-Raːnia]$_{i+j}$ niʒħ-u
and-R.] pass.PFV-3PL
I told you that she and Rania passed. Palestinian

b. tɣaʃʃaʃ-t xaːtˤr-{**u$_i$/hom$_{i+j}$**} [howwa w-Muʕtazz]$_{i+j}$
get_angry-PFV.1SG because-{**3SG.CL/3PL.CL**} PRON.3MSG and-M.
ʕamlu barʃa ħəss
make.PFV-3PL many noise
I got upset because he and Mutaz made a lot of noise. Tunisian

Thus, complementizer clitics behave exactly like object clitics with regards to their ability to cross-reference a first conjunct: They can do so with pronouns (5.11), but not lexical DPs (5.5).[3]

In this section, I applied the coordination diagnostic to our other contexts of interest. I started by isolating the main generalization which is the inability of first conjunct lexical DPs to be cross-referenced by a clitic (5.4). With regards to this primary generalization, we find that complementizer clitics pattern like object clitics in not being able to cross-reference first conjunct lexical DPs, and thus are *doubling clitics*. By contrast, *wh*-clitics pattern like subject-verb agreement in this regard and thus are *agreement clitics*. What's more, the restrictions applying on first conjunct agreement like the gender-matching requirement in Tunisian still apply for *wh*-clitics, meaning that these clitics behave exactly like subject-verb agreement. Finally, just like for object clitics, pronouns lift the ban on first conjunct doubling by complementizer clitics. Thus, the coordination diagnostic is really a set of diagnostics, and with regards to this set of diagnostics, *wh*-clitics behave like subject verb-agreement and complementizer clitics behave like object clitics.

5.3 Diagnosing clitic doubling: Distributional tests

In this section, I tackle the distributional family of tests, which contains three tests: I start by testing whether clitics are sensitive to the type of DP they may cross-reference in §5.3.1, then look into the pragmatic restrictions on doubling clitics in §5.3.2. Both of these tests were introduced in Chapter 2 (§2.3.3), and I extend them here to complementizer clitics, negation clitics and *wh*-clitics. I show that complementizer clitics pattern like object clitics in their sensitivity to the type of controller and to pragmatic restrictions, while negation clitics and *wh*-clitics pattern like subject-verb agreement in their lack of restrictions in these regards. The last distributional test in §5.3.3 is novel and is a diagnostic for agreement

3. See §6.5.2 for a more detailed discussion of complementizer clitics and subject &Ps, in particular the interaction between the ϕ-features on the verb and the ones on the complementizer clitics.

clitics: Negation clitics and *wh*-clitics are generally unable to surface in sentences that already contain a verb. In other words, these clitics are in complementary distribution with verbs, a distribution that distinguishes them from doubling clitics, the latter not being sensitive to the presence of a verb in the clause. A preview of the results of distributional tests is provided in table 5.2 below.

	Doubling Clitics		**Agreement Clitics**		
Diagnostic Test	Object clitics	Comp. clitics	Negation clitics†	*wh*-clitics	Subj–V Agreement
Sensitivity to controller	✓	✓	✗	✗	✗
Pragmatic restrictions	✓	✓	✗	N/A	✗
Complementary distribution w/ verbs	✗	✗	✓	✓	N/A

† marks things that are exclusive to Tunisian

Table 5.2: Summary of distributional tests

5.3.1 Sensitivity to DP type

As noted in §2.3.3, in both Tunisian and Palestinian, there is there is a split between DPs that can be clitic doubled and DPs that cannot be doubled. I will explore this restriction along two dimensions: Definiteness, and quantification. With regards to the former, the main generalization is that only definite DPs may be clitic doubled in both dialects. As for the latter, the generalization is that DPs that cause Weak Crossover violations in non-doubling contexts cannot be clitic doubled. These two generalizations allow us to isolate conditions that prevent a doubling clitic from surfacing: Both object clitics and complementizer clitics are sensitive to the type of DP they cross-reference. By contrast, negation clitics and *wh*-clitics, like subject-verb agreement, are not.

Definiteness

In Chapter 2, we established that Subject-Verb agreement is always obligatory, being insensitive to the type of controller, while object clitic doubling is optional and may or may not surface depending on the type of controller. The main generalization I make here is

formulated in (5.12).[4]

(5.12) **The definiteness condition on doubling clitics**
Only definite DPs may be clitic doubled. Both definite and indefinite DPs can be agreement controllers.

While subject-verb agreement remains possible, in fact, obligatory with indefinite DPs as in (5.13), object clitic doubling is restricted to definite DPs: In (5.14), clitic doubling is only possible if the object DP is definite (the definite article is not optional).

(5.13) *Verbal agreement with an indefinite subject in Palestinian*
tˤaːlib ʔaʒa / ʔaʒa tˤaːlib
student come.PFV.3MSG / come.PFV.3MSG student
A student came.

(5.14) *Object clitic doubling in Palestinian*
l-ustaːz ʃaːf-**o**$_i$ la-*(tˤ)-tˤaːlib$_i$
DEF-professor saw.3MSG-**3MSG.CL** OM-DEF-student
The professor saw the/*a student.

As it turns out, in both dialects, complementizer clitics behave just like object clitics in being able to surface with definite controllers (5.15) while being unable to surface with indefinite ones (5.16).[5]

(5.15) *Complementizer clitics with definite subjects*
a. l-proːf waqqəf d-dars xaːtˤər(**-ha**) t-təlmiːð-a
DEF-professor stop.PFV.3MSG DEF-lecture because(**-3FSG.CL**) DEF-student-F
ʒ-ʒdiːd-a daxl-ət
DEF-new-F enter-PFV-3FSG

4. The same generalization is made by Abu-Haidar (1979) for Lebanese Arabic, by Zarka (2021:2) for Druze Arabic spoken in Palestine, and by Hallman and Al-Balushi (2022) for Syrian Arabic, which are all part of the Levantine subgroup, just like the variety of Urban Palestinian I investigate here.

5. Data like (5.16) is reported by Omari (2011:66,(50)) for Jordanian Arabic, with the complementizer bearing default 3rd masculine singular features (glossed as DFLT) being the only option in cases like (i).

(i) Ali gaːl ʔin-{*hum / uh} wlaːd marr-u min hon
A. say.PFV.3MSG COMP-{*3MPL.CL / DFLT} boys pass_by.PFV-3PL from here
'Ali said that boys have passed by from here.'

The professor interrupted the lecture because the new student came in.
Tunisian

b. ħaka {ʔinno / ʔinn-**ha**$_i$} tˤ-tˤaːlb-e$_i$ xallasˤ-at l-imtiħaːn
say.PFV.3MSG {COMP / COMP-**3FSG.CL**} DEF-student-F finish.PFV-3FSG DEF-exam
He said that the student finished the exam. Palestinian

(5.16) *Complementizer clitics with indefinite subjects*

a. l-proːf waqqəf d-dars xaːtˤər(***-ha**) təlmiːð-a ʒdiːd-a
DEF-professor stop.PFV.3MSG DEF-lecture because(***-3FSG.CL**) student-F new-F
daxlət
enter-PFV-3FSG
The professor interrupted the lecture because a new student came in.
Tunisian

b. ħaka {ʔinno / *ʔinn-**ha**$_i$} tˤaːlb-e$_i$ xallasˤ-at l-imtiħaːn
say.PFV.3MSG {COMP / *COMP-**3FSG.CL**} student-F finish.PFV-3FSG DEF-exam
He said that a student finished the exam. Palestinian

Interestingly, negation clitics do not display the same behavior. Simply by looking at what kinds of DPs can co-occur with a clitic, we get a consistent result that distinguishes negation from complementizers, even though in both cases, the clitic cross-references a subject. For example, in (5.17) the negation clitic cross-references an indefinite subject, which isn't possible for complementizer clitics (5.16).

(5.17) tawwa telifuːn$_i$ ma-**hu**$_i$-ʃ ħaʒa γaːlja t-əʒʒəm t-əʃri
now phone NEG-**3MSG.CL**-NEG something expensive 2SG.IPFV-can 2SG.IPFV-buy
smartfoːn b-suːm morfaq
smart_phone at-price affordable
Now, a phone is not an expensive thing, you can buy a smartphone at a decent price.
Tunisian

(5.18) illustrates the contrast between negation clitics and complementizer clitics, where the same indefinite subject can be cross-referenced by a clitic on negation, but not on the complementizer.

(5.18) ma-j-ħəbb-ʃ smartfoːn kado xaːtˤər(***-u**$_i$) telifuːn$_i$
NEG-3MSG.IPFV-want-NEG smart_phone gift because(***-3MSG.CL**) phone

ma-**hu$_i$**-ʃ ħaʒa γaːlja, j-nəʒʒəm jəʃri weːħəd
NEG-**3MSG.CL**-NEG something expensive 3MSG.IPFV-can 3MSG.IPFV-buy one
b-fluːs-u
with-money-3MSG.CL
He doesn't want a smartphone as a gift because a phone is not an expensive thing, he can buy one with his own money. Tunisian

There is in principle no ban on two clitics cross-referencing the same argument in a single clause, as shown in (5.19), where the definite subject *t-təlmiða* 'the student' is cross-referenced by a clitic on the complementizer and one on negation.

(5.19) l-proːf fraħ xaːtˤər-**ha$_i$** t-təlmiːð-a$_i$ ma-**ha$_i$**-ʃ
DEF-professor was_happy.3MSG because-**3FSG.CL** DEF-student-F NEG-**3FSG.CL**-NEG
mʕaːwd-a lʕaːm
repeat.PTCP-F DEF-year
The professor was happy because the student is not repeating the year. Tunisian

We find the same effect with negatively quantified subjects, as in (5.20), where, in the same sentence, the clitic on the complementizer is ungrammatical, while the one on negation is not.

(5.20) l-proːf fraħ xaːtˤər(***-ha$_i$**) ħatta təlmiːð-a$_i$
DEF-professor be_happy.PFV.3MSG because(***-3FSG.CL**) any student-F
ma-**ha$_i$** mʕaːwd-a l-ʕaːm
NEG-**3FSG.CL** repeat.PTCP-F DEF-year
The professor was happy because no student is repeating the year. Tunisian

So, the contrast between (5.19)[6] and (5.20) suggests that negation clitics are not restricted in the same way as complementizer clitics. A clitic on negation can cross-reference a negatively quantified subject (5.20), as well as other indefinite DPs as in (5.17), something that is not possible for complementizer clitics.

6. The reader might notice here that negation is discontinuous in (5.19) but only the first part of it appears in (5.20). This is because in Tunisian, as well as in many other Arabic dialects (cf. Benmamoun (1997:268–9) for Moroccan), the ʃ segment is in complementary distribution with NPIs (R. M. Bahloul 1996:74).

Wh-clitics are harder to test in this context: It doesn't seem to be possible to have an indefinite DP be the subject of a sentence like (5.21). The presence of a clitic or lack thereof in (5.21) does not make the sentence better or worse, as this sentence is unacceptable either way.

(5.21) * wiːn(-u$_i$) telifuːn$_i$
where(-3MSG.CL) phone
Intended: 'Where is there a phone?/Where can I find a phone?'
(*lit.* Where is a phone?) Tunisian

However, we will be able to test some other DP types with *wh*-clitics which will confirm that they pattern like negation in the following section on quantification and crossover.

Quantification and Crossover

I dedicate the following pages to quantification and crossover as diagnoses because of the importance of this topic in the literature on clitic doubling. While definiteness is mostly a condition on whether a DP can be doubled, quantification comes with another important consideration: The interaction of clitic doubling with Weak Crossover. It has been noticed for some languages that quantificational DPs resist being clitic doubled, for instance in Greek (Anagnostopoulou 1994:Chap. 2) and Amharic (Baker and Kramer 2018). However, a more common claim regarding these DPs is not only that they can be clitic doubled, but that their clitic doubling circumvents Weak Crossover violations in Bulgarian (Harizanov 2014), Greek (Anagnostopoulou 2003:207–215, Paparounas and Salzmann 2023b), Lebanese Arabic (Aoun and Sportiche 1981; Aoun 2011), Romanian (Cornilescu and Dobrovie-Sorin 2009:306–308), Spanish (Suñer 1988; Di Tullio, Saab, and Zdrojewski 2019; Saab 2024), etc. This poses a problem because the two claims seem to be at odds. I focus on this issue in more detail in Chapter 6 (§6.4.2), and keep the following discussion more descriptive. As we will see here,

in Tunisian and Palestinian, the following generalization holds.[7]

(5.22) **Quantification and doubling clitics**
Doubling clitics cannot cross-reference the range of DPs that usually cause Weak Crossover (WCO) violations, like *wh*-words and quantified DPs.

In order to understand this diagnostic test, let us first look at a couple of representative examples of Weak Crossover inducing elements.[8] In Palestinian, we see that a quantified DP like *every teacher* causes a Weak Crossover effect in (5.23b). While the co-construal between *his* and *every teacher* is accessible in (5.23a), it is not in (5.23b).[9]

(5.23) *Weak Crossover with quantified DP in Palestinian*

a. baʕat-ət la-kull ʔustaːz$_i$ sˁuːrt-o$_i$
send-PFV.1SG to-every teacher picture-3MSG.CL
I sent every teacher$_i$ his$_i$ picture.

b. * baʕat-ət sˁuːrt-o$_i$ la-kull ʔustaːz$_i$
send-PFV.1SG picture-3MSG.CL to-every teacher
I sent his$_i$ picture to every$_i$ teacher.

Similarly, in the Tunisian examples in (5.24), the co-construal between *who* and *his* available in (5.24a) becomes impossible in (5.24b).

(5.24) *Weak Crossover with* wh*-word in Tunisian*

a. ʃkuːn$_i$ ʃeːf omm-u$_i$
who see.PFV.3MSG mother-3MSG.CL
Who$_i$ saw his$_i$ mother?

b. * ʃkuːn$_i$ omm-u$_i$ ʃeːf-ət
Who mother-3MSG.CL see.PFV-3FSG
Who$_i$ did his$_i$ mother see?

7. This is the same generalization that Baker and Kramer (2018:1053) make for Amharic, a language whose quantificational DPs resist doubling as well.

8. A few more are given at the end of this section when I discuss the gradability of Weak Crossover effects and how it correlates to acceptability of clitic doubling.

9. The discussion on Weak Crossover in this chapter will take for granted the kind of analysis that assumes (i) quantifier raising and (ii) that weak crossover effects arise in examples like (5.23) and (5.24) because neither the pronoun co-construed with the (raised) quantifier or (moved) *wh*-word nor the variable bound by them c-commands the other (see Hewett (2023c:327) for this formulation of primary weak crossover).

We can see our generalization (5.22) in action in (5.26) and (5.25). The types of DPs that cause WCO in the non-doubling contexts exemplified in (5.23b) and (5.24b) are unable to be doubled, as shown in (5.25) and (5.26).

(5.25) *Quantified DPs cannot be doubled in Tunisian and Palestinian*

a. * l-proːf ʃeːf-**ha$_i$** [koll təlmiːð-a]$_i$
DEF-professor see.PFV.3MSG-**3FSG.CL** [every student-F]
Tunisian

b. * l-ustaːz ʃaːf-**ha$_i$** la-[kull tˤaːlb-e]$_i$
DEF-professor see.PFV.3MSG-**3FSG.CL** OM-[every student-F]
The professor saw every student. Palestinian

(5.26) *Wh-words cannot be doubled in Tunisian and Palestinian*[10]

a. * ʃof-t-**u$_i$** ʃkuːn$_i$
see.PFV-2SG-**3MSG.CL** who
Tunisian

b. * ʃuf-t-**o$_i$** la-miːn$_i$
see.PFV-2SG-**3MSG.CL** OM-who
Who did you see? Palestinian

This contrasts with some varieties of Spanish which can not only use clitic doubling with in-situ *wh*-words, but also with quantifiers. Consider for instance (5.27a), where the in-situ *wh*-word *quién* 'who' is doubled,[11] and (5.27b) where the quantifier *todos* 'everybody' is doubled. Not only that but the clitic in (5.27b) is reported to be necessary for the sentence to be fully acceptable, alleviating the Weak Crossover effect arising post quantifier raising.

(5.27) *Clitic doubling of wh-words and quantifiers in Argentinian Spanish*

a. Quién lo$_i$ visitó a quién$_i$
who CL.3MSG.ACC visited.3SG A who
Who visited whom? (Hewett 2023c:167)

b. Su$_i$ madre *(los$_i$) quiere a todos$_i$
his mother CL.3MPL.ACC like.3SG A everybody
His mother likes everybody. (Suñer 1988:421)

10. The use of in-situ *wh*-words here is on purpose to distinguish a doubling structure from a possible resumptive dependency, were the *wh*-word to precede the verb.

11. See also Dobrovie-Sorin (1990) for clitic doubling of *wh*-words in Romanian.

The difference between Spanish and European languages in general on the one hand and Tunisian and Palestinian Arabic and Amharic on the other hand is quite surprising. It suggests that what we call clitic doubling across languages is actually a different phenomenon depending on the language. In European languages, clitic doubling of crossover inducing elements is not only possible but necessary in Weak Crossover configurations such as (5.27b). In our three Semitic languages, clitic doubling of crossover inducing elements is simply impossible. What's more, Baker and Kramer's (2018:1057) explanation of the Amharic facts is puzzling because it seems to be at odds with the rest of the literature. In fact, they propose that doubling of a quantifier is ungrammatical because it would lead to a Weak Crossover violation, by basing their explanation on a specific implementation of Safir's (2004) analysis of crossover.[12] As for the possibility of European languages to clitic double these elements, they seem to chalk it up to what exactly can count as a quantifier for weak crossover. Perhaps certain quantifiers do not undergo quantifier raising due to their strong referentiality which in turn is caused by clitic doubling. It is unclear whether Arabic or Amharic are different from European languages, or if there is some way to reconcile all these facts.[13] In Chapter 6 (§6.4.2), I explain the Arabic facts as being due to the historical evolution of clitic doubling from right dislocation, and not to an interaction between clitics and crossover. For now, however, let us simply restate the generalization in (5.22): In Palestinian and Tunisian Arabic, the range of DPs that cause Weak Crossover effects cannot be clitic doubled (5.26)-(5.25), but they are freely agreed with (5.28).

12. The crucial part of Baker and Kramer's (2018:1056–7) analysis is the what they call the "Crossover Condition." It is a single condition resulting from Safir's Quantifier Dependency Condition with the addition of his Extended Independence Principle. In this view, the reason why clitic doubling of a quantifier is ungrammatical in Amharic is that the pronominal clitic—which is dependent on the quantifier's trace post-QR—is embedded within a constituent ($v°$) which c-commands that trace. This configuration, which is shown in (i) violates the Crossover Condition, which results in ungrammaticality according to them.

(i) [$_{\text{TP}}$ everyone [$_{\text{TP}}$ Lemma T° [$_{v\text{P}}$ [him - v] [$_{\text{VP}}$ loves <u>everyone</u>]]]]

13. While Baker and Kramer (2018:1075–1080) try to reconcile the facts, their proposal does not seem to explain the amelioration effect observed in European languages.

(5.28) *Subject-Verb Agreement with quantified DPs*

a. [koll təlmiːð-a] **ʒeː-t**
[every student-F] **come.PFV-3FSG**
Tunisian

b. [kull tˁaːlb-e] **ʔaʒa-t**
[every student-F] **come.PFV-3FSG**
Every student came. Palestinian

Given the behavior of complementizer clitics up to now, it should come with no surprise that those clitics cannot cross-reference quantified DPs (5.29), patterning once again like object clitics.

(5.29) *Complementizer clitics cannot cross-reference quantified DPs*

a. l-proːf fraħ xaːtˁər(***-ha$_i$**) [koll təlmiːð-a]$_i$
DEF-professor be_happy.PFV.3MSG because(***-3FSG.CL**) [every student-F]
nəʒħ-ət
pass.PFV-3FSG
The professor was happy because every student passed. Tunisian

b. ħaka {ʔinno / ***ʔinn-ha$_i$**} [kull tˁaːlib-e]$_i$ xallasˁ-at
say.PFV.3MSG {COMP / ***COMP-3FSG.CL**} [every student-F] finish.PFV-3FSG
l-imtiħaːn
DEF-exam
He said that every student finished the exam. Palestinian

By contrast, negation clitics in Tunisian pattern with subject-verb agreement in this regard, as seen by their ability to cross-reference the quantified DP in (5.30) (I discuss *wh*-clitics at the end of this subsection).

(5.30) lqa [koll təmiːða]$_i$ ma**-ha$_i$-ʃ** fi blaːsˁət-ha
find.PFV.3MSG [every student-F] NEG**-3FSG.CL-**NEG in place-3FSG.CL
He found every student not in her place (*e.g.,* at her desk). Tunisian

Furthermore, as Baker and Kramer (2018:1059) note, quantificational DPs vary with regards to the extent to which they may cause WCO violations, which in turn correlates with them varying with regards to their resistance to clitic doubling. Consider the English pair in (5.31), where there is an improvement between (5.31a) and (5.31b). Although both sentences have

similar meanings, for many speakers, only in (5.31a) is there a Weak Crossover violation, meaning that a reading with co-variation between the quantified DP *every student* and the pronoun *his* is hard to obtain. In (5.31b),[14] this violation is absent, with co-construal being much more acceptable (see also Safir 2017:23ff.).

(5.31) a. * His$_i$ laziness ends up ruining [every student]$_i$
b. Their$_i$ laziness ends up ruining [all the students]$_i$

In the Tunisian examples in (5.32), a similar improvement to the one seen in English obtains between (5.32a) and (5.32b).[15] This suggests that not all quantificational DPs are the same with regards to WCO.

(5.32) *Weak Crossover effects in Tunisian*
a. ??/* muʕallm-u$_i$ j-ʕaːwən [koll sˤγiːr]$_i$
teacher-3MSG.CL 3MSG.IPFV-help [every child]
His$_i$ teacher helps every child$_i$.
b. ?(?) muʕallim-hom$_i$ j-ʕaːwən [sˤ-sˤγaːr l-koll]$_i$
teacher-3PL.CL 3MSG.IPFV-help [DEF-children DEF-all]
Their$_i$ teacher helps all the children$_i$.

The facts in (5.32) are paralleled in (5.33) with clitic doubling: As Baker and Kramer (2018:1061) observe, and as our generalization (5.22) states, the same kinds of DPs that resist clitic doubling also give rise to WCO effects in non-clitic doubling contexts. From this angle then, given that the QP *koll sˤγiːr* 'every child' causes WCO in (5.32a), it makes sense that it cannot be clitic doubled in (5.33a). By contrast, the WCO effect is weak or almost absent in (5.32b), and conversely, clitic doubling of the QP *sˤ-sˤγaːr l-koll* 'all the children' is acceptable (5.33b).

14. See Cinque (1990:11,(32)):

(i) Le *loro* affermazioni incaute hanno finito per rovinare *tutti i miei amici*
Their incautious statements ended up ruining *all my friends.*

15. The judgement of ?(?) for (5.32b) is possibly due to the cataphora rather than a WCO effect, as cataphoric relations as in 'His$_i$ mother loves John$_i$' are quite degraded compared to English. See §6.4.2 for another discussion of cataphoric relations as they relate to clitic doubling.

(5.33) a. * ʕaːwən-t-**u$_i$** [koll sˤʕiːr]$_i$
help-PFV.1SG-**3MSG.CL** [every child]
I helped every child. Tunisian

b. ʕaːwən-t-**hom$_i$** [sˤʕ-sˤʕaːr l-koll]$_i$
help-PFV.1SG-**3PL.CL** [children DEF-all]
I helped all the children. Tunisian

This reasoning can be extended to Palestinian, where I found no contrast between the two quantifiers: Both *every* in (5.34a) and *all* in (5.34b) cause weak crossover seemingly to the same degree for my consultant, with no amelioration like the one observed for English in (5.31) or Tunisian in (5.32).

(5.34) *Weak Crossover effects in Palestinian*

a. * ʔimm-o$_i$ bi-t-ħibb [kull walad]$_i$
mother-3MSG.CL IND-3FSG.IPFV-love [every boy]
His mother loves every boy.

b. * ʔustaːz-hom$_i$ bi-ħibb [kull tˤʕ-tˤʕollaːb]$_i$
teacher-3PL.CL IND-3MSG.IPFV.love [all DEF-student.PL]
Their teacher loves all the students.

Based on what we have seen until now, the unacceptability of (5.34b) predicts that a DP like *kull tˤʕ-tˤʕollaːb* 'all the students' cannot be clitic doubled, and this is indeed what we find in (5.35).

(5.35) * l-ustaːz ʃaːf-**hom$_i$** la-[kull tˤʕ-tˤʕollaːb]$_i$
DEF-professor see.PFV.3MSG-**3PL.CL** OM-[all DEF-student.PL]
The teacher saw all the students. Palestinian

Complementizer clitics are also unacceptable with such a quantifier (5.36).

(5.36) ħaka {ʔinno / *ʔinn-**hom$_i$**} [kull tˤʕ-tˤʕollaːb]$_i$ xallasˤʕ-u
say.PFV.3MSG {COMP / COMP-**3PL.CL**} every DEF-student.PL finish.PFV-3PL
l-imtiħaːn
DEF-exam
He said that every student finished the exam. Palestinian

The gradability of weak crossover effects within and between dialects turns out to be crucial in our understanding of *wh*-clitics as agreement clitics and not doubling clitics. Recall that *wh*-clitics presented a challenge above, because both the presence and absence of the clitic with an indefinite subject did not make the sentence more or less acceptable in (5.21). This unacceptability surfaces again with the quantified DP in (5.37), leading to the same problem we faced above.

(5.37) * we:n(-o$_i$) kull t$^{\text{ʕ}}$a:lib$_i$
where(-3MSG) every student
Where is every student? Palestinian

By contrast, the QP *kull t$^{\text{ʕ}}$-t$^{\text{ʕ}}$olla:b*, which is incompatible with object clitics (5.35) and complementizer clitics (5.36), is nonetheless compatible with the *wh*-clitic (5.38).

(5.38) we:n**-hom$_i$** kull t$^{\text{ʕ}}$-t$^{\text{ʕ}}$olla:b$_i$
where**-3PL.CL** all DEF-student.PL
Where are all the students? Palestinian

The acceptability of the clitic in (5.38) counts as evidence that in Palestinian, *wh*-clitics don't seem to be sensitive to the type of DP they cross-reference.

Summary

Both with regards to definiteness and quantification, complementizer clitics pattern with object clitics while negation and *wh*-clitics (when testing is possible) pattern with subject-verb agreement.

5.3.2 Semantic/pragmatic restrictions

In this subsection, I explore the pragmatic restrictions on Tunisian and Palestinian clitics or lack thereof, finding that once again, complementizer clitics behave like object clitics, while

negation clitics behave like subject-verb agreement.[16] Because these pragmatic restrictions can be hard to pinpoint, this discussion is limited to a few observations and intuitions leaving a more thorough investigation for future research.

Focus, specificity and D-linking

In Chapter 2, I introduced the idea that object clitic doubling was restricted by discourse conditions. This is a typical property of clitic doubling cross-linguistically: The doubled DP must be specific, or topical, or familiar, etc. A related claim made in the literature is that clitic doubling should not occur with focused noun phrases in *e.g.,* Spanish (Jaeggli 1982:48; Gutiérrez-Rexach 1999:330), Greek (Angelopoulos 2019) and Lubukusu (Sikuku, Diercks, and Marlo 2018:377). This is due to the semantic/pragmatic contribution of clitic doubling in these languages: For clitic doubling to be felicitous, doubled elements need to be topical or presupposed (Givón 1976; Suñer 1992). Gutiérrez-Rexach (1999:329f. 2003:339f.) couches this idea in terms of a "Presuppositionality Constraint" whereby the argument associated with an accusative clitic in Spanish is a presupposed set. As such, this constraint predicts the ungrammaticality of examples such as (5.39).[17]

16. I ignore *wh*-clitics in this subsection as the types of sentences tested here do not work in the context of the *wh*-word *wiːn*. It is hard to isolate semantic or pragmatic conditions for this context where we already have interrogative clauses, whereas the other contexts have declarative ones: For example, it's hard to make up a sentence where the element cross-referenced by the *wh*-clitic is focused, since there is already a *wh*-word in the clause. It also unclear what kind of context would license asking for the location of something that is unfamiliar since I isolate familiarity as a condition for doubling clitics. In other words, we cannot adequately compare the behavior of *wh*-clitics to the other clitics in this context.

17. However, see Di Tullio, Saab, and Zdrojewski (2019:220) who report the following judgements for Argentinian Spanish:

(i) Question: Who did Juan greet?

Answer: Juan (la) saludó [a María]$_F$
J. CL.3FSG.ACC greet.PST.3SG A M.

Juan greeted Maria.

Karlos Arregi (*pers. comm.*) tells me that the equivalent (5.39) is acceptable in Basque Spanish, which, being a *leísta* variety, uses the form *le* instead of *la/lo* in this context (see also Franco and Mejías-Bikandi 1999:108).

(5.39) *Doubling of a focused noun phrase in Spanish*

Q: ¿A quién viste? // A: (***Lo**) vi a Juan
A who saw.2SG // (***3MSG.CL**) saw.1SG A J.
Q: Who did you see? // A: I saw Juan. (Gutiérrez-Rexach 1999:330,(41a))

I have elicited similar judgements in Tunisian, whereby object clitic doubling is incompatible with information focus (5.40).

(5.40) Q: ʃkuːn ʃof-t fə-l-ʕərs lbeːraħ?
who see.PFV-2SG at-DEF-wedding yesterday?
Q: Who did you see at the wedding yesterday?
A: ʃof-t(***-u**) Seːmi
see.PFV-1SG(***-3MSG.CL**) S.
A: I saw Sami.

In Palestinian, however, object doubling in the context of (5.41) is acceptable, though less so than its non-doubled counterpart.[18]

(5.41) Q: miːn ʃuf-t mbaːrəħ? // A: (?) ʃuf-t-**o** **la**-Saːmi
who see.PFV-2SG yesterday? // see.PFV-1SG-**3MSG.CL** **OM**-S.
Q: Who did you see yesterday? // A: I saw Sami.

My consultant reports that clitic doubling in contexts like (5.41) is more adequate when the larger discourse situation involves continued discussion about the doubled element. A prerequisite is that Sami is known to both interlocutors, and that the person using clitic doubling as a strategy is doing so before elaborating more on Sami or their seeing him the day before. This is in line with Brustad's (2000:355) claim that clitic doubling has a function of reinvoking a topic into active registry, in contexts where the speaker assumes the doubled element to be identifiable by their interlocutor, but that that element is not necessarily in the active conversational registry. It is not immediately clear why we find this difference between Tunisian and Palestinian in this context. In Tunisian doubling in contexts like

18. See however Zarka (2023:61f.) who reports that clitic doubling is impossible for arguments that serve as new information focus in Levantine Arabic.

(5.40) is unacceptable, even if the speaker were to continue talking about Sami. I believe this may have to do with the fact that object clitic doubling is an older phenomenon in Palestinian Arabic, as it is attested in Levantine Arabic in the 9th and 10th century CE (Blau 1966:416f.; Jiries 2022a), while clitic doubling in Tunisian seems to be a more recent innovation, and has a more limited distribution. While I offer more insights on this in my diachronic account of clitic doubling in Chapter 6, I will limit the discussion here to the pragmatic restrictions that are shared by both dialects.

In both dialects, it is unacceptable to clitic double *wh*-words in situ (cf. (5.26) above), even D-linked ones such as *ʔamma kteːb* 'which book' in (5.42), which in Amharic for instance, can be doubled (Kramer 2014:601).[19]

(5.42) *No object clitic doubling of a D-linked wh-word in Tunisian*
qriːt(***-u$_i$**) [ʔamma kteːb]$_i$
read.PFV.2SG(***-3MSG.CL**) which book
Which book did you read?

(5.43) *No clitic doubling of a D-linked wh-word in Palestinian*
a. * ʔakal-t**-ha$_i$** **la-**ʔayy kaʕke$_i$ mbarəħ
eat.PFV-2SG-**3FSG.CL OM**-which cake yesterday
b. ʔakal-t ʔayy kaʕke mbarəħ
eat.PFV-2SG which cake yesterday
Which cake did you eat yesterday?

Note that both (5.42) and (5.43) were elicited as part of contexts where the set of books or cakes was a discourse topic that was salient and limited to a few options, that is highly D-linked.[20]

19. Kramer provides the following example from Amharic:

(i) Almaz tɨnant yätiñnaw-ɨn tämari ayy-ätʃtʃ-**ɨiw**
Almaz.F yesterday which-ACC student see-3FS.S-**3MS.O**
Which student did Almaz see yesterday? (Kramer 2014:601,(17))

20. This means that the relevant necessary property for Arabic clitic doubling is probably not specificity, as in Amharic (Kramer 2014:601).

Keeping this in mind, we can use this restriction on cross-referencing *wh*-words in our other contexts of interest. In both dialects, complementizer clitics cannot cross-reference a *wh*-word, even if it is D-linked (5.44b), (5.45).

(5.44) *Tunisian complementizer clitics with* wh*-words*

a. Q: ʕleːh j-oðˤhor-lək ma-fammeː-ʃ makdo fi tuːnəs
why 3MSG.IPFV-seem-2SG.DAT.CL NEG-there-NEG McDonald's in Tunisia
Q: Why do you think there's no McDonald's in Tunisia?

A: xaːtˤr(***-u$_i$**) ʃkuːn$_i$ bʃ j-əmʃi j-eːkəl γaːdi trah
Because(***-3MSG.CL**) who FUT 3MSG.IPFV-go 3MSG.IPFV-eat there PTCL
A: Because who would go eat there anyways?

b. w-fhəm-t ʕleːh ʕaleqaːt-i diːma t-əfʃl
and-understand-PFV.1SG why relationships-1SG.CL always 3FSG.IPFV-fail
xaːtˤər(***-ha$_i$**) [amma tˤofla]$_i$ tarðˤa b-l-maʃeːkəl heːði
because(***-3FSG.CL**) which girl 3FSG.IPFV-accept with-DEF-problems this
l-koll
DEF-all
And I understood why my relationships always fail, because which girl would accept all these problems?

(5.45) *Palestinian complementizer clitics with* wh*-words*

baʕdeːn fhim-ət leːʃ kull ʕilaqaːt-i fiʃl-at {laʔinno /
Then understand-PFV.1SG why all relationships-1SG.CL fail.PFV-3FSG {because /
*laʔinn**-ha$_i$**} ʔayy binət$_i$ raħ t-iʔbal bi-kull l-maʃaːkil haːy
*because**-3FSG.CL**} which girl FUT 3FSG-IPFV.accept with-all DEF-problems these
Then I understood why all my relationships had failed, because which girl would accept all these problems?

By contrast, with negation (5.46), the clitics are free to surface with both D-linked (5.46a) and non-D-linked *wh*-words (5.46b) and vary in gender, displaying a behavior that is once again parallel to subject-verb agreement.

(5.46) a. ʔamma tˤofla$_i$ ma**-ha$_i$**-ʃ ʒeːj-a l-s-sahrejja
which girl NEG**-3FSG.CL-**NEG come.PTCP-FSG to-DEF-party
Which girl isn't coming to the party? Tunisian

b. ʃkuːn$_i$ ma-**hu$_i$**-ʃ ʒeːj l-s-sahrejja
who NEG**-3MSG.CL**-NEG come.PTCP.MSG to-DEF-party
Who isn't coming to the party? Tunisian

Familiarity

An additional constraint we've seen above on clitic doubling is that the familiarity of all interlocutors with the doubled argument is a necessary (but not sufficient) condition for the clitic to surface in object clitic doubling. This is a common constraint in many clitic doubling languages, though the notion of familiarity is not always very well-defined. For instance, some languages like Greek (Paparounas and Salzmann 2023b:33–34) or Lubukusu (Sikuku, Diercks, and Marlo 2018:383) might require discourse-givenness: The referent of the clitic doubled object must have been mentioned previously in the discourse. From what I can gather, in Tunisian and Palestinian, this is highly dependent on the context, but it seems that the necessary condition is common ground familiarity: The referent of the doubled DP need not be mentioned in the discourse, but it must be known—or assumed to be known or inferable—to all discourse participants as part of their shared knowledge.[21] So, as we saw in (2.29), repeated here as (5.47), doubling of the object in Palestinian is infelicitous in the case where A does not know who Rania is (this also applies to (5.41)). This is true even if the speaker were to elaborate on the unfamiliar object by making it more familiar, as B does in the example. Meanwhile, the sentence uttered by B is completely felicitous without the clitic doubling strategy.[22]

(5.47) A. miːn ʃuf-t mbaːrəħ bi-l-ħafle
who see-PFV.1SG yesterday at-DEF-party
Who did you see last night at the party?

B. # ʃuf-t-**ha**$_i$ **la**-Raːnia$_i$, binət b-tudros maʕ-i
see-PFV.1SG-**3FSG.CL** **OM**-R. girl IND-3FSG-IPFV.study with-1SG.CL
bi-ʒ-ʒaːmʕa
at-DEF-university
I saw Rania, she's a girl who goes to college with me.

21. I elaborate on this in Chapter 6 (§6.4.1), where I provide examples with clitic doubling of objects that are not necessarily discourse given but assumed by the speaker to have an easily inferable referent.

22. In this case as well, elaborating on the identity of the referent is crucial as it would be absurd to mention someone by name if the interlocutor had never heard of them. Doubling in this case is infelicitous, even though the common ground is promptly updated, while the sentence without doubling is only felicitous with the prompt update of the common ground.

This type familiarity is also essential for complementizer clitics to be licensed in this dialect.

Context:

B is talking with a professor while A is waiting nearby. When B joins A, A asks what the conversation was about. B answers:

(5.48) l-ustaːz ħaka {ʔinno / #**inn-ha**$_{i}$} Raːnia$_{i}$ saʔtˤ-at
DEF-professor say.PFV.3MSG {COMP / #**COMP-3FSG.CL**} R. fail.PFV-3FSG
The professor said that Rania failed.

In (5.48), the use of the complementizer clitic is not felicitous in case the interlocutor does not know who Rania is, where only the default complementizer is acceptable.

Tunisian complementizer clitics behave in a similar fashion, with familiarity being a prerequisite to them surfacing. What's more, both dialects have a similar reading associated with the use of a clitic on the complementizer vs. the plain version (without a clitic).

(5.49) a. ʔul-t-illak {ʔinno / **ʔinn-hom**$_{i+j}$} [Manaːl$_{i}$ w-Raːnia]$_{i+j}$
say.PFV-1SG-2SG.DAT.CL {COMP / **COMP-3PL.CL**} [M. and-R.]
niʒħ-u
pass.PFV-3PL
I told you that Manal and Rania passed. Palestinian

b. tɣaʃʃaʃ-t xaːtˤr-{∅/**hom**$_{i+j}$} [Seːmi$_{i}$ w-Muʕtazz]$_{i+j}$ ʕaml-u
get_angry.PFV-1SG because-{∅/**3PL.CL**} S. and-M. make.PFV-3PL
barʃa ħəss
many noise
I got upset because Sami and Mutaz made a lot of noise. Tunisian

As Bruno Herin points out to me, the use of the clitic on the complementizers in (5.49a) and (5.49b) is not the default, and seems to be restricted to contexts where the element being doubled is going to be an important part of the QUD, *i.e.,* Brustad's (2000:355) characterization as reinvocation into active registry. As Jiries (2022a:7) observes for object clitic doubling, this reinvocation can have different motivations, including emphasizing the role of the doubled element in a given narrative, or to communicate an emotional stance

concerning that element. This is in accordance with the way object clitic doubling is used, especially in the Palestinian example (5.41) discussed above. The same pragmatic effect seems to be at play here, whereby the speaker emphasizes the importance of the embedded subjects in the discourse situation by using the doubling clitic as opposed to the more information structurally neutral clitic-less complementizer.

It is more challenging to conduct this test on negation or the *wh*-word *wiːn*. For the latter, it amounts to the same challenges we've come across in §5.3.1 with indefinites, as it would be strange to ask for the location of a referent that is unknown to the interlocutor (see discussion in fn.16). For the former, it is hard to test out of the blue sentences where the subject is unfamiliar. However, given examples like (5.46), it seems reasonable to assume that the familiarity requirement does not apply to negation: *wh*-words such as 'who' are by definition not familiar, yet they are freely cross-referenced by a negation clitic. So once again, negation clitics behave distinctly from complementizer clitics, even though in both contexts, the argument cross-referenced by the clitic is a subject.

Despite pragmatic restrictions on clitic doubling being hard to isolate in a clear manner, we were able to explore them here and see that there is still a distinction between object and complementizer clitics on one hand, and negation clitics on the other.

5.3.3 Complementary distribution with verbs

So far, we have looked at certain restrictions on the distribution of object clitics and complementizer clitics. This distribution is regulated by a number of semantic/pragmatic conditions, most notably the need for the element cross-referenced by the clitic to be definite and to belong to the common ground. The last distributional test concerns a specific pattern restricted to negation clitics and *wh*-clitics. Whereas these clitics are not regulated

by discourse conditions,[23] they have a special syntactic distribution: They are *generally* in complementary distribution with verbs.[24] Thus, in (5.50a-i) and (5.50b-i), the clitic surfaces on the *wh*-word, but becomes ungrammatical when the clause contains a verb (5.50a-ii), (5.50b-ii).

(5.50) wh-*clitics are in complementary distribution with verbs...*

a. *... in Palestinian*

i. weːn**-kom**
where**-2PL.CL**
Where are you?

ii. weːn(***-kom**) roħ-tu
where(***-2PL.CL**) go.PFV-2PL
Where did you go?

b. *... in Tunisian*

i. wiːn**-ək**
where**-2SG.CL**
Where are you?

ii. wiːn(***-ək**) mʃiː-t
where(***-2SG.CL**) go.PFV-2SG
Where did you go?

This isn't the case for complementizer clitics which are not sensitive to the presence of verbal elements in the clause in either dialect (cf. (5.15b), (5.44) above).

Negation clitics are also in complementary distribution with verbs: In (5.51a), the clitic surfaces inside the circumfixal negation *ma...ʃ*, while in (5.51b), it is the verb that does, with the clitic becoming unacceptable. The clitic and verb thus seem to compete for the slot between the two negative morphemes.

23. Brustad (2000:297f.) proposes that the "negative copula" has the pragmatic function of contradicting a presupposition in Moroccan, Egyptian, and Kuwaiti, but that this function is absent in Syrian. Tunisian seems to be aligned with Syrian in this respect.

24. The data is a more complex and nuanced than this generalization. While *wh*-clitics are in true complementary distribution with verbs, negation clitics may surface when there is a verb in the clause, crucially a verb that does not surface inside the circumfixal negation. In Chapter 7, I analyze agreement clitics (*i.e.,* negation and *wh*-clitics) as the realization of T° when no verb moves to it, despite the surface differences between negation and *wh*-clitics. The reason for the perfect complementary distribution between *wh*-clitics and verbs is (V° to) T° to C° movement in *wh*-questions, while V° to Neg° movement can be blocked, in which case T° can surface as a clitic as there is no verb inside negation.

(5.51) *Negation clitics are in complementary distribution with verbs in Tunisian*

a. sħaːb-i ma-**hom-ʃ** f-l-qahwa
friends-1SG.CL NEG-**3PL.CL-**NEG in-DEF-cafe
My friends are not at the cafe.

b. sħaːb-i {ma-**mʃeːw-ʃ** / *ma-**hom-ʃ** mʃeːw} l-l-qahwa
friends-1SG.CL {NEG-**went.3PL**-NEG / NEG-**3PL.CL**-NEG went.3PL to-DEF-cafe
My friends did not go to the cafe.

While this property has been noticed across dialects for negation (Benmamoun et al. 2014, Aoun, Benmamoun, and Choueiri 2010:108, Pallottino 2016:299–300) it has not been investigated in detail from the perspective of whether the clitic is the realization of doubling or agreement. Aoun, Benmamoun, and Choueiri (2010) do observe that that the clitic on negation occurs mainly in present tense copular clauses, *i.e.*, those clauses that lack a verb. In fact, they use this as an evidence against an agreement analysis of the clitic, arguing that there is no ban on two heads (*e.g.,* an auxiliary and a main verb) agreeing with the subject in Arabic, so there should be no ban for an agreement clitic to surface when a verb is also present.[25] That being said, the pronominal incorporation account sketched by Benmamoun et al. (2014:133ff), fails to explain this complementary distribution just as much, so this argument is not particularly convincing. I think we can frame the complementary distribution differently from a descriptive point of view: With *wh*-words and negation, the clitic seems to be taking on the role of an overt copula in the present tense,[26] the one context where in declarative affirmative clauses, there is no copula. Consider the examples of Tunisian copular clauses in (5.52): Only the past (5.52b) and future/habitual (5.52c) have an overt verb bearing tense-sensitive agreement morphemes, while the present tense (5.52a) has no copula (and no pronoun or any element mediating the relation between the subject and the

25. And indeed there is no ban on negation clitics to surface when a verb is also present: It all depends on the tense of the verb (see Chapter 7, in particular §7.2.2).

26. This is only a way to describe the distribution and not necessarily an analytical stance at this point. The complex formed by negation and the clitic is usually called a "negative copula" in the literature, by *e.g.,* Cowell (1964:387); Brustad (2000:296); Aoun, Benmamoun, and Choueiri (2010:107) or "negative pronoun" by *e.g.,* Benmamoun et al. (2014); Choueiri (2016:124). In addition, I extend this idea to auxiliaries in Chapter 7, where I argue that the clitic is the realization of T°, a head that also bears auxiliaries.

predicate).

(5.52) *Declarative affirmative copular clauses in Tunisian*

a. Raːnia f-d-daːr
R. in-DEF-house
Rania is in the house.

b. Raːnia **keːn-ət** f-d-daːr
R. **be-PFV.3FSG** in-DEF-house
Rania was in the house.

c. Raːnia **t-kuːn** f-d-daːr
R. **3FSG.IPFV-be** in-DEF-house
Rania will be/(habitually) is in the house.

In (5.52)'s interrogative counterparts in (5.53), the only context where the clitic is able to surface is the present tense clause (5.53a).

(5.53) *Copular clauses with* wiːn *in Tunisian*

a. wiːn**-ha** Raːnia
where**-3FSG.CL** R.
Where is Rania?

b. wiːn(***-ha**) **keːn-ət** Raːnia
where(***-3FSG.CL**) **be-PFV.3FSG** R.
Where was Rania?

c. wiːn(***-ha**) **t-kuːn** Raːnia
where(***-3FSG.CL**) **3FSG.IPFV-be** R.
Where will Rania be?/Where is Rania (habitually)?

The same applies to the negative counterparts of (5.52), where the clitic can only surface in the context where there was no copula in the affirmative.[27]

(5.54) *Negative copular clauses in Tunisian*

a. Raːnia ma-**ha**-ʃ f-d-daːr
R. NEG-**3FSG.CL**-NEG in-DEF-house
Rania is not in the house.

b. Raːnia {ma-**keːn-ət**-ʃ / *ma-**ha**-ʃ keːn-ət} f-d-daːr
R. {NEG-**be-PFV.3FSG**-NEG / *NEG-**3FSG.CL**-NEG was-3FSG} in-DEF-house
Rania was not in the house.

27. See Alruwaili (2018:133f.) for similar insights.

c. Raːnia {ma-**t-kuːn**-ʃ / *ma-**ha**-ʃ t-kuːn} f-d-daːr
R. {NEG-**3FSG.IPFV-be**-NEG / *NEG-**3FSG.CL**-NEG 3FSG-be} in-DEF-house
Rania is (habitually) not in the house.

Leaving the proper analysis of these facts to Chapter 7, we can make a generalization on negation clitics and *wh*-clitics: They are in complementary distribution with verbs. In this sense, they act like subject-verb agreement: They surface where we would otherwise expect a verb bearing agreement morphemes. This clearly sets them apart from complementizer clitics, which do not display such a distribution, even though in all three environments, the clitic cross-references a subject. Thus, in addition to the other two distributional tests we have run in §5.3.1 and §5.3.2, this is yet another test for which negation clitics and *wh*-clitics pattern together as agreement clitics, as opposed to complementizer clitics and object clitics, which are doubling clitics.

In the next section, I discuss morphological tests that may enable us to distinguish between agreement and doubling, and show that negation clitics and *wh*-clitics continue to pattern together as agreement, while object clitics and complementizer clitics continue to pattern together as doubling.

5.4 Diagnosing clitic doubling: Morphological tests

Morphological and morphophonological tests have been regularly used as means to distinguish between clitic doubling and agreement in the literature. Morphophonological tests have been criticized for not being very informative (Yuan 2021; Akkuş 2021; Paparounas and Salzmann 2023b), with good reason: The Arabic clitic exponents we are interested in in this dissertation are pronominal clitics and not agreement affixes by this metric (see discussion in §1.1 and Chekili 1982:228ff.), and yet we have seen in the previous section on distributional tests that they seem to be playing different roles in different contexts in Tunisian and Palestinian. Focusing on morphological diagnostics, a prominent one in the literature is that true

pronominal clitics are of category D while agreement affixes are not. This idea goes back to Uriagereka (1995) who, building up on Torrego (1988), pointed out the formal similarity between third person object clitics and definite determiners in Romance languages (*e.g.,* Galician, Spanish, French, etc.), both of which are derived from the same source (Anagnostopoulou 2017:36). This diagnostic has been used for Greek (Anagnostopoulou 2003) and Amharic (Kramer 2014), among other languages. However, in Arabic, there is no obvious relationship between the definite article and clitics.[28] Moreover, even if we find that clitics are of category D, the mismatch between morphology and syntax is not unheard of: For instance, Yuan (2021) shows that the Inuit object markers are agreement morphemes in Kalaallisut and pronominal clitics in Inuktitut, despite being of the same morphological category on the surface. In Arabic, the clitics behave more like pronominals in some contexts and more like agreement in some other contexts, despite having the same form in all of them, so it would be against the spirit of this dissertation to rely on such diagnostics anyways. Additionally, from a historical perspective, this type of finding is without surprise given the diachronic relationship between clitics and agreement morphemes, the latter commonly deriving from the former (Givón 1976; Hopper and Traugott 2003:15; Corbett 1995:264–267; Heggie and Ordóñez 2005:2) and so, as Ostrove (2018:120) and Paparounas and Salzmann (2023b:42) note, morphological similarity to D elements should only be taken to reflect diachronic relationship, not necessarily synchronic evidence. Indeed, in Chapters 6 and 7, I will talk more about the diachronic development of pronominal clitics into doubling clitics and agreement clitics. For the time being, I put the issue of the morphophonological shape of clitics aside, and I choose to focus on three morphological diagnostics that I think will be informative for our purposes here. The first diagnostic in §5.4.1 is purely morphological and has to do with the actual surface form of the clitics in different contexts in Tunisian. The two other

28. Though there is evidence that both the 3rd person pronouns (Huehnergard 2019b:54) and the definite article (Al-Jallad 2021:58) are historically related to the demonstrative pronouns in the Semitic language family, that relationship is very much obscured in Arabic, as opposed to Romance languages where the forms are very similar to each other synchronically.

tests are morphosyntactic. In §5.4.2, I explore Preminger's (2009) diagnostic of the presence of a default or lack thereof, which was introduced in Chapter 2. Finally, in §5.4.3, I focus on a specific agreement pattern in Arabic called "deflected agreement"—which seems to be degraded with doubling clitics. A preview of the results of these three tests is provided in table 5.3.

	Doubling Clitics		**Agreement Clitics**		
Diagnostic Test	Object clitics	Comp. clitics	Negation clitics†	*wh*-clitics	Subj–V Agreement
3rd fem. sg. Allomorphy†	✗	✗	✓	✓	N/A
Presence of default	✗	✗	✓	N/A	✓
Deflected agreement	✗/ **?**†	✗/ **?**†	✓	✓	✓

† marks things that are exclusive to Tunisian

Table 5.3: Summary of morphological tests

5.4.1 Allomorphy in the 3rd feminine singular in Tunisian

So far, we have seen that the same clitic series is used in all of the environments under investigation (cf. tables 2.4 and 2.5 in §2.3.1). For instance, no matter the context, the 3rd person masculine singular clitic is realized by the same surface morpheme. Modulo phonological changes which operate across categories, we find the *-u/-hu* morpheme whether the clitic has as a host a verb (5.55a), a complementizer (5.55b), negation (5.55c) or a *wh*-word (5.55d).

(5.55) *The Tunisian 3rd masculine singular clitic*

a. ʃoft-**u**$_i$ Se:mi$_i$
saw.1SG-**3MSG.CL** S.
I saw Sami.

b. fraħ-t ʕlaxa:tˤr-**u**$_i$ Se:mi$_i$ ʒe:j
be_happy-PFV.1SG because-**3MSG.CL** S. come.PTCP.MSG
I was happy because Sami is coming.

c. Se:mi$_i$ ma-**hu**$_i$-ʃ ʒe:j
S. NEG-**3MSG.CL**-NEG come.PTCP.MSG
Sami is not coming.

d. wi:n-**u**$_i$ Se:mi$_i$
where-**3MSG.CL** S.
Where is Sami?

However, one clitic stands out in this respect. The third feminine singular clitic in Tunisian can have two forms: *ha* and *(h)i*. Interestingly, these forms do not have the same distribution: *ha* can be used in any cliticization context, whereas *(h)i* can only be used with negation and *wh*-words. So, in the context of the object clitic in (5.56), none of the sentences allow the form *(h)i* to surface, no matter if it is simple cliticization (5.56a), clitic doubling of a strong pronoun (5.56b) or that of a full DP (5.56c).

(5.56) *The Tunisian feminine singular object clitic*

a. ʃof-t{**-ha**/***-hi**}
see-PFV.1SG{**-3FSG.CL**}

b. ʃof-t{**-ha**/***-hi**} hijja
see-PFV.1SG{**-3FSG.CL**} PRON.3FSG
I saw her.

c. ʃoft{**-ha**/***-hi**} ə-t-təlmiːð-a
see-PFV.1SG{**-3FSG.CL**} DEF-student-F
I saw the student.

The same goes for the clitic on the complementizer (5.57), where only *ha* is possible.

(5.57) *Complementizer clitic with feminine singular embedded subject*
ma-nəʒʒəm-t-ʃ n-odxol ʕlaxaːtˤər{**-ha**/***-hi**} mma xðeːr-t
NEG-can-PFV.1SG-NEG 1SG.IPFV-enter because{**-3FSG.CL**} mom take-PFV.3FSG
l-mfeːtaħ
DEF-keys
I couldn't get in because mom took the keys.

This is notable because it is yet another way in which complementizer clitics pattern with object clitics, and crucially differ from negation and *wh*-clitics. In the latter two contexts, both *ha* and *(h)i* are available, as shown in (5.58) and (5.59).

(5.58) wiːn *with feminine singular subject*

a. wiːn**-ha**$_i$ l-ʕruːsa$_i$
where**-3FSG.CL** DEF-bride
Where is the bride? (TC:text 1852)

b. wiːn**-i**$_i$ [sˤaːħəb-t-ək]$_i$ ʕziːz-i
where**-3FSG.CL** friend-F-2SG.CL dear-1SG.CL
Where is your girlfriend, my dear? (TC:text 3737)

(5.59) *Negation with feminine singular subject*

a. d-dənja$_i$ ma-**ha$_i$-ʃ** saʕaːda w-farħa kahaw
DEF-life NEG-**3FSG.CL-**NEG happiness and-joy only
Life is not just happiness and joy. (TC:text 3948)

b. bə-nnəsba li-hom t-taʒrba$_i$ ma-**hi$_i$-ʃ** seːhla
in-relation to-3PL.CL DEF-experience NEG-**3FSG.CL-**NEG easy
For them, the experience is not easy. (TC:text 3848)

Not only the *(h)i* allomorph is only possible with negation and *wiːn*, it is also the more common one in these contexts, by a wide margin. In the corpus of Tunisian Arabic Tunisiya (TC; TCI), the allomorph *(h)i* cliticizes to *wiːn* 52 times, against two occurrences for *ha* in this context. For negation, *hi* has 147 results while *ha* only has 26 in the Tunisiya corpus. Similar results are found in another corpus (TuniCo), where *hi* returns twice as many hits as *ha* for negation. So, in this context, *(h)i* is the preferred form, though the reason behind this preference may not be immediately clear from a synchronic point of view.[29] Expectedly, this form on the complementizer returns no hits on any available corpus.

As a test, this is quite limited as it only applies to Tunisian and not all of the clitics have contextually conditioned forms. That being said, this slight difference found in the 3rd person feminine singular turns out to be interesting perhaps not on its own, but insofar as it confirms a pattern that has been emerging, grouping object clitics with complementizer clitics together as different from negation clitics and *wh*-clitics.

29. I will offer more insights on this in Chapter 7 (§7.6) but there is a historical reason for this: the *(h)i* form is derived from the nominative pronoun *hijja* while the *ha* form is the historically oblique pronominal clitic. While synchronically, all of the forms on negation and *wiːn* are the oblique clitics in Tunisian (other varieties may use the nominative strong pronouns exclusively for negation, see Benmamoun et al. 2014:133,table 4), there was probably a stage at which the negation clitics paradigm was strictly nominative, followed by a replacement of all nominative forms by oblique ones, leading to the synchronic paradigm, according to Leddy-Cecere (2023). The *(h)i* form seems to be a vestige from this old nominative paradigm, occurring alongside *ha*, the more innovative form. I suspect other members of the paradigm don't keep their nominative allomorphs because the difference between the nominative and oblique forms is starker. For example the 2nd person singular nominative is *ʔinti* while the oblique form is *ək*. The strong similarity between *ha* and *(h)i* is perhaps the reason why both forms continue to coexist, while the oblique forms have completely replaced the nominative forms in the remainder of the paradigm.

5.4.2 The presence/lack of a default

As discussed in Chapter 2, the possibility of a default is a diagnostic test put forward by Preminger (2009) based on the idea that we can distinguish between ϕ-agreement and clitic doubling from their failures. Preminger's (2009:623) proposal is the following: Given a relation $\mathcal{R}$ between agreement-morpheme/clitic $\mathcal{M}$ and a noun phrase $\mathcal{F}$, if $\mathcal{R}$ is broken and the result is grammatical, then we should look at what happens to $\mathcal{M}$. If it surfaces with default ϕ-features, and crucially not the ϕ-features of $\mathcal{F}$, then $\mathcal{R}$ is AGREE. If however, $\mathcal{M}$ disappears entirely, then $\mathcal{R}$ is clitic doubling. So, in a scenario where AGREE is blocked by say, a phase boundary, and the derivation does not crash, default features should surface on the head that came with unvalued features, because for those features to remain unvalued would result in ungrammaticality (Ostrove 2018:66). Conversely, according to Preminger, clitic doubling is not a process of feature valuation but a process of creation of a pronominal element whose features match those of an existing DP, so it is reasonable to hypothesize that a possible repair of failed clitic doubling is its disappearance. Within the analysis advocated for in this dissertation, I make sense of the disappearance of the clitic by the optionality of CLP, by contrast to the obligatory presence of a probe like T°. Thus, failure of valuation for T° leads to the insertion of default features, whereas a derivation without CLP is possible and grammatical.

The crucial data from Chapter 2 illustrating this diagnostic are (5.60) and (5.61) (repeated from (2.27) and (2.28) respectively). While in (5.60), the lack of a suitable goal for the verb to agree with ends up leading to default ϕ-features (3rd masculine singular) on the verb, such a lack of goal in (5.61) leads to the disappearance of the clitic, and not a default 3rd masculine singular clitic.[30]

(5.60) *Default agreement in Tunisian*

30. Using a DP that is incompatible with clitic doubling is an innovative application of Preminger's diagnostic found in Kramer (2014:603).

{*∅/**jo-**/***to-**}ðˤhor-li [əlli l-muˤallm-a
{*∅/**3MSG.IPFV-**/***3FSG.IPFV-**}seem-1SG.DAT.CL [that DEF-teacher-F
bʃ-t-ɣiːb]
FUT-3FSG.IPFV-be_absent]
It seems that the teacher will be absent.

(5.61) *No default object clitic in Tunisian*
koll nhaːr n-ʃuf(***-u**/∅) barʃa kliyãn-eːt
every day 1.IPFV-see(***-3MSG.CL**/∅) many client-PL
Every day, I see a lot of customers.

Palestinian behaves the same way as Tunisian in this respect with the clitic disappearing entirely in cases such as (5.62).

(5.62) *No default object clitic in Palestinian*
ʃuft{***-ha**/***-o**/∅} (*la)-tˤaːlb-e
saw.1SG{***-3FSG.CL**/***-3MSG.CL**/∅} (*OM)-student-F
I saw a student.

Perhaps expectedly given the patterns we've seen so far, complementizer clitics behave the exact same way as object clitics.

(5.63) *No default complementizer clitic in Tunisian*
ˤawəd-t fassar-t xaːtˤr-{***-ha**/***-u**/∅} təlmiːða
repeat-PFV.1SG explain-PFV.1SG because{***-3FSG.CL**/***-3MSG.CL**/∅} student-F
ma-fəhm-ət-ʃ
NEG-understand.PFV-3FSG-NEG
I explained again because a student didn't understand.

In (5.63), the subject in the embedded clause is incompatible with clitic doubling because it is indefinite, and, just like it is absent in (5.61), it is also absent in (5.63).

So far so good. Now, applying Preminger's diagnostic may seem more complicated for Palestinian complementizer clitics because of the form of the complementizer in this dialect. Palestinian has two possible forms for its complementizer: The first and by far most common

form[31] is *ʔinno* which historically derives from the complementizer *ʔinn* suffixed with the 3rd person masculine singular clitic *-o*. The second form is *ʔinn-* followed by a clitic agreeing with the embedded subject. Crucially however, *ʔinn* cannot surface on its own, it is either *ʔinno* or *ʔinn*+clitic.[32] This fact, among other things, is used by Germanos (2010:146) as evidence that *ʔinno* is monomorphemic (see also Herin 2010:178). This means that while historically, *ʔinno* can be decomposed into a complementizer and a 3rd person masculine singular clitic, synchronically, it is not parsed or analyzed as such. Now, one could analyze it as such, and even use this as evidence for complementizer clitics being true ϕ-agreement in Palestinian, in the face of data like (5.64) (repeated from (5.29b)).

(5.64) ħaka {**ʔinno**/ ***ʔinn-ha$_i$**} [kull tˤaːlb-e]$_i$ xallasˤ-at
say.PFV.3MSG {**COMP**/ ***COMP-3FSG.CL**} [every student-F] finish.PFV-3FSG
l-imtiħaːn
DEF-exam
He said that every student finished the exam.

After all, this would be a prediction of Preminger's (2009) diagnostic, and would be evidence that complementizer clitics in Palestinian are different from their Tunisian counterparts. However, *ʔinno* can also surface when the agreement/clitic doubling relation is not broken, *i.e.,* in cases where the clitic is perfectly acceptable, as in (5.65).

(5.65) ħaka {**ʔinno** / **ʔinn-ha$_i$**} tˤ-tˤaːlb-e$_i$ xallasˤ-at l-imtiħaːn
say.PFV.3MSG {**COMP** / **COMP-3FSG.CL**} DEF-student-F finish.PFV-3FSG DEF-exam

He said that the student finished the exam.

As far as I know, Palestinian Arabic does not allow 3rd masculine singular agreement with non-3rd masculine singular subjects, as shown in (5.66), which mirrors the order of (5.65),

31. This is not only an impression from the data that I've gathered from my consultant but also a more general pattern in Levantine dialects. For instance, Germanos (2010) reports that the form *ʔinno* accounts for over 95% of the tokens she's collected.

32. This may or may not be the case in other Levantine varieties. For example, Herin (2010:179) reports that the Arabic of Salt (Jordan) has the short form *ʔinn*.

with the agreement controller following the target.

(5.66) {xallasˤ-at / *xallasˤ} l-binət l-imtiħaːn
{finish.PFV-3FSG / *finish.PFV.3MSG} DEF-girl DEF-exam
The girl finished the exam.

Based on this evidence, if complementizer clitics were agreement morphemes, then analyzing *ʔinno* as a complementizer + a clitic would be surprising. We would have to explain why the putative agreement clitic *-o* is possible in (5.65) while such agreement is not for verbs as in (5.66). We thus have convincing evidence that *ʔinno* is indeed monomorphemic synchronically, and that it surfacing in examples like (5.64) means that the clitic disappears entirely, in line with Preminger's prediction for clitic doubling, not that default ϕ-features have surfaced to salvage the structure.[33]

So, once again, object clitics and complementizer clitics pattern together with regards to this diagnostic test in both dialects. Let's now look into negation for Tunisian and see how we can use Preminger's diagnostic in its intended application to better understand negation clitics. Recall that Preminger bases his diagnostic on a restriction regarding the operation AGREE: It is subject to the Phase Impenetrability Condition (PIC) (Chomsky 2000, 2001), which restricts it from operating across a finite clause. This is why a 3rd feminine singular agreement morpheme on the verb in (5.60) is ungrammatical, as AGREE would be crossing a phase boundary in this case.

33. It is almost certain that the Levantine *ʔinno* corresponds directly to Classical/Standard Arabic *ʔinnahu* (COMP-3MSG.CL) where 3rd person clitic is a "dummy" pronoun (Bloch 1990:32) acting as a buffer between the complementizer and the embedded clause (Ryding 2005:423f.). The function of this pronoun is disputed: It has been argued that it cross-references the entire embedded clause (see *e.g.,* Reckendorf 1921:376, and this is indeed a common view in medieval Arabic grammar (see Peled (1990:4–9) for a review). Bloch (1990) however argues that this non-referential pronoun is inserted to separate the complementizer from the embedded clause in cases where the embedded clause has a word-order incompatible with the complementizer (most notably V.S word order). Under the view of this clitic cross-referencing the entire clause then, it resembles French clitics as documented by Angelopoulos and Sportiche (2021). Under the view where it is simply a buffer, it may be considered an expletive (see Mohammad 2000:Chap. 3). Whatever was/is the function of this non-referential pronoun in the Classical/Standard variety, it seems that Levantine dialects have this default form completely grammaticalized, and developed a system of complementizer clitics on their own that is different from the one in Classical/Standard Arabic (on which, see discussion in §2.3.1, fn. 8).

Based on the configuration in (5.60), we can test whether the clitic on negation will show up with default ϕ-features or disappear entirely. We have to add another manipulation to the sentence in order to test negation though, because the clitic cannot surface when there is a verb in the clause. So we need to replace the verb with an active participle, so as to allow for a clitic to surface. The resulting sentences are in (5.67).

(5.67) *Preminger's (2009) diagnostic on Tunisian negation*

a. * ma-**ha**$_{i}$-ʃ ðˤaːhr-a [əlli l-muˤallm-a$_{i}$ bʃ-t-ɣiːb]
NEG-**3FSG.CL**-NEG apparent-FSG [that DEF-teacher-F FUT-3FSG.IPFV-be_absent]

b. ma-**hu**-ʃ ðˤaːhər [əlli l-muˤallm-a
NEG-**3MSG.CL**-NEG apparent.MSG [that DEF-teacher-F
bʃ-t-ɣiːb]
FUT-3FSG.IPFV-be_absent]

c. **muʃ** ðˤaːhər [əlli l-muˤallm-a bʃ-t-ɣiːb]
NEG apparent.MSG [that DEF-teacher-F FUT-3FSG.IPFV-be_absent]
It's not clear that the teacher will be absent.

The ungrammaticality of (5.67a) is unsurprising as the embedded subject is not a suitable goal for agreement, as per the PIC. (5.67b) is exactly what the diagnostic predicts: The default 3rd person masculine clitic surfaces. However, (5.67c)—where the clitic disappears entirely—is also acceptable. This complicates the picture because the disappearance is supposedly evidence for clitic doubling and we have used it as such in (5.63) above. That being said, there is a difference in availability of the 3rd masculine singular clitic between (5.63) and ((5.67b)-(5.67c)). In (5.63), the option of using the 3rd masculine singular clitic is not available, while in (5.67b), it is. The fact that the wholesale disappearance of the clitic is possible in (5.67c) is not due to the clitic not being able to surface, as we've posited for (5.63) above, but because the clitic on negation is optional regardless; negation can *always* surface without a clitic. To drive the point home, consider (5.68) which is a version of (5.67b) with an additional level of embedding.

(5.68) bʃ-n-ʒi lə-l-lise xaːtˤr{-∅/***-u**/***-ha**$_{i}$}
FUT-1SG.IPFV-come to-DEF-school because{-∅/***-3MSG.CL**/***-3FSG.CL**}

{ma-**hu-ʃ** / **muʃ**} ðˤaːhir [əlli l-muˤallm-a
{NEG-**3MSG.CL**-NEG / NEG} apparent.3MSG [that DEF-teacher-F
bʃ-t-ɣiːb]
FUT-3FSG.IPFV-be_absent]
I'll come to school because it's not clear that the teacher will be absent.

In (5.68), the complementizer cannot bear a 3rd feminine singular clitic agreeing with the embedded subject, and neither can it bear a 3rd masculine singular default. That default clitic is free to surface on negation though, alongside not surfacing at all. (5.68) shows that once again, cliticization on the complementizer and on negation obeys different constraints. Applying Preminger's (2009) diagnostic confirms the trends we have observed so far, with complementizer clitics behaving like object clitics and negation clitics behaving like subject-verb agreement.

Note that this test is not applicable to *wh*-clitics: It is hard to construct a set of sentences like those in (5.67) where there would be a phase boundary, and I've discussed cases with *wh*-clitics cross-referencing different types of DPs in §5.3.1 and §5.3.2 above.

Before concluding this subsection, I should note that there is an alternative to this diagnostic, whereby it is not so much that the default features are the result of failure of agreement, but rather they are the result of agreement with the embedded clause (as mentioned in §2.3.3, fn. 25). This is an important difference, but one that does not take anything away from the generalizations we have made so far. If it were the case that in (5.68), the negation clitic is in reality agreeing with the clause, then it would still be different from the complementizer clitic, which cannot surface in such a context. Whatever way we analyze the 3rd masculine singular features on negation, they are able to surface while those same features on a complementizer in the same context are not. Thus, our understanding of the crucial mechanism behind the diagnostic test is irrelevant to the generalization that complementizer clitics and negation clitics behave differently in this regard.

5.4.3 Deflected agreement

This last morphological test concerns the availability of deflected agreement in our contexts of interest. In Arabic, "deflected agreement"—as opposed to strict agreement—refers to an agreement pattern in which a plural NP triggers feminine singular morphology on verbs, adjectives and pronouns (Ferguson 1989; Belnap 1991; Hachimi 2011). This pattern is found in most dialects of Arabic, including Palestinian (Yassin 2022) and Tunisian (Ritt-Benmimoun 2017; Procházka and Gabsi 2017), where both strict and deflected agreement are possible with certain types of plurals (mainly non-human broken plurals).[34]

Deflected agreement is usually available for subject-verb agreement (5.69a)-(5.70a), noun-adjective agreement (5.69b)-(5.70b), anaphora (5.69c)[35]-(5.70c), and resumption (5.69d)-(5.70d).

(5.69) *Deflected agreement in Palestinian*

a. l-ʒaraːjid {nmazaʔ-u / nmazʔ-at}
DEF-newspaper.PL {rip-PFV.3PL / rip-PFV.3FSG}
The newspapers ripped.

34. There are a number of factors making feminine singular agreement available for plural controllers, with two main factors—one morphological and one semantic—that have been noticed in the literature. Concerning the morphology of the plural controller, deflected agreement is more available with so-called 'broken' plurals than with 'sound' plurals across dialects (Ferguson 1989:9; Owens 2021:486). Broken plurals are derived via internal vocalic alternation while sound plurals are derived via suffixation of a plural morpheme (McCarthy 2011). As for the semantic restrictions, deflected agreement is usually only available for non-human plurals, though there are a few exceptions noted by *e.g.,* Belnap (1991) and Bettega (2017).

35. See however, Zarka (2023:67f.), who claims that broken plurals (glossed as BP) can only be referred to anaphorically with plural pronouns. She provides the following example:

(i) feʃ kti:r ʃbabiik fl-bet. bnðaf{-on/*-a} b-sorʔa
NEG many windows.BP in-home. clean.1SG{-3PL.OBJ/*-3FSG.OBJ} in-quickness
There aren't many windows at home. (I) clean them quickly. (Zarka 2023:68,(21))

This seems to be the only example of deflected agreement she provides, and it is unclear to me that the ungrammaticality of deflected agreement on the clitic in (i) is due to it cross-referencing a broken plural anaphorically. (i) seems to also be a context where the number of windows is quite low, as evidenced by the 'not many'. It is documented in *e.g.,* Syrian Arabic that "plurals of paucity [...] almost always have plural agreement in the predicate" (Cowell 1964:425), see also Brustad (2008). Thus, the feminine singular clitic in (i) is not necessarily unacceptable due to it being used anaphorically and that in anaphoric contexts, only the individuated plural pronoun is acceptable (Zarka 2023:67). It is possible that in this particular context, the collective reading of the singular clitic is incompatible with the low number of windows.

b. l-ʒaraːjid {l-ʔdaːm / l-ʔadiːm-e}
DEF-newspaper.PL {DEF-old.PL / DEF-old-FSG}
The old newspapers.

c. hadoːl l-ʒaraːjid$_i$ ʔadiːm-e maː-fiː-ha$_i$[36] maʕluːm-aːt mufiːd-e
these DEF-newspaper.PL old-FSG NEG-in-3FSG.CL information.PL interesting-FSG
The newspapers are old, they don't have any interesting information.

d. l-ʒaraːjid$_i$ illi qaraʔ-t-{ha$_i$/hom$_i$}
DEF-newspaper.PL that read-PFV.1SG-{3FSG.CL/3PL.CL}
The newspapers that I have read.

(5.70) *Deflected agreement in Tunisian*

a. l-ʒaraːjid {tqatʕtʕ-u / tqatʕtʕ-ət}
DEF-newspaper.PL {rip-PFV.3PL / rip-PFV.3FSG}
The newspapers ripped.

b. l-ʒaraːjid {l-qdom / l-qdiːm-a}
DEF-newspaper.PL {DEF-old.PL / DEF-old-FSG}
The old newspapers.

c. ʒiːb l-ʒaraːjid$_i$ bʃ n-aqraː-{ha$_i$/hom$_i$}
bring.2SG DEF-newspapers so_that 1SG.IPFV-read{3FSG.CL/3PL.CL}
Bring the newspapers so I can read them. (Hewett 2023c:172)

d. [xitʕaːb-eːt-hom]$_i$ əlli kassr-uː-lna bi-ha$_i$[37] ruːs-na
speech-PL-3PL.CL that break-PFV.3PL-1PL.DAT.CL with-3FSG.CL head-1PL.CL
Their speeches that they beat us over the head with. (TC:text 21)

Given the data in (5.69) and (5.70), we would expect deflected agreement to be available across the board. However, this is not the case for either dialect. In both Palestinian (5.71) and Tunisian (5.72), strict agreement is preferred for object clitic doubling, with the feminine singular clitic being either unacceptable or dispreferred.[38]

36. In this context, a plural clitic is also ok, but degraded given the feminine singular adjective qualifying the newspapers. Provided the adjective is morphologically plural, as in (i), then the plural clitic is acceptable.

(i) hadoːl l-ʒaraːjid$_i$ **ʔdaːm** maː-fiː**-hom$_i$** maʕluːmaːt mufiːd-e
these DEF-newspaper.PL **old.PL** NEG-in-**3PL.CL** information.PL interesting-FSG
The newspapers are old, they don't have any interesting information.

37. This is a corpus example, thus I don't indicate optionality between a singular and plural clitic, but a plural clitic is also possible in this context.

38. My Palestinian consultant had secure judgements with regards to deflected agreement while the judgements in Tunisian were a bit less secure. These differences are reflected in the examples with acceptability

(5.71) qaraʔ-t-{*$\mathbf{ha_i/hom_i}$} la-hadoːl l-ʒaraːjid$_i$
read-PFV.1SG-{***3FSG.CL/3PL.CL**} OM-these DEF-newspaper.PL
I have read these newspapers. Palestinian

(5.72) qriː-t-{??$\mathbf{ha_i/hom_i}$} ha-l-ʒaraːjid$_i$-ə
read-PFV.2SG–{??**3FSG.CL/3PL.CL**} these-DEF-newspaper.PL-Q
Have you read these newspapers? Tunisian

So, the possibility of deflected agreement in Arabic can actually be used as a diagnostic test for the different clitics under investigation.

With regards to complementizer clitics, Palestinian Arabic does not seem to allow a feminine singular clitic to cross-reference a plural. So the pattern that is available for subject verb agreement in (5.69a) becomes unavailable in (5.73).

(5.73) ʔult-illak {**ʔinno** / **ʔinn-hom$_i$** / *$\mathbf{ʔinn\text{-}ha_i}$}
tell-PFV.1SG-2SG.DAT.CL {**COMP** / **COMP-3PL** / *__COMP-3FSG.CL__}
l-ʒaraːjid$_i$ ʔdaːm
DEF-newspaper.PL old.PL
I told you that the newspapers are old. Palestinian

In fact, the 3rd person feminine singular clitic is rejected even when the adjective qualifying the subject is inflected as feminine singular (5.74) in order to potentially force a deflected agreement pattern.

(5.74) ʔul-t-illak {**ʔinno** / ?(?)**ʔinn-hom$_i$** / *$\mathbf{ʔinn\text{-}ha_i}$}
tell-PFV.1SG-2SG.DAT.CL {**COMP** / ?(?)**COMP-3PL.CL** / *__COMP-3FSG.CL__}
l-ʒaraːjid$_i$ ʔadiːm-e
DEF-newspaper.PL old-FSG
I told you that the newspapers are old. Palestinian

The plural clitic, by contrast, remains available in this case, although very degraded compared to the default complementizer, probably due to the mismatch in features between the

diacritics (* *vs.* ??). That being said, in Chapter 6 (§6.4.3), I analyze this degradation as pragmatic, and not the result of ungrammaticality.

plural clitic and a noun phrase that must be interpreted as feminine singular due to the adjective. In (5.73), where the adjective qualifying the subject is plural, the plural clitic is available, as is the default complementizer. Thus, given those three options, deflected agreement is the lowest ranked pattern for complementizer clitics in Palestinian.

In Tunisian, deflected agreement with complementizer clitics is also dispreferred, even in a case where the interpretation of the plural as singular is forced through a feminine singular adjective (5.75).[39]

(5.75) s$^{\text{ʕ}}$addaq-t ʃt$^{\text{ʕ}}$ar l-bibliteːk xaːt$^{\text{ʕ}}$ər(**??/*-ha**) l-ktobba yeːsər qdiːm-a
donate-PFV.1SG half DEF-library because(**??/*-3FSG.CL**) DEF-books very old-FSG
I donated half of the library because the books are very old. Tunisian

The equivalent of (5.75) with a plural adjective and a plural clitic is, however, acceptable.

(5.76) s$^{\text{ʕ}}$addaq-t ʃt$^{\text{ʕ}}$ar l-bibliteːk xaːt$^{\text{ʕ}}$ər(**-hom**) l-ktobba yeːsər qdom
donate-PFV.1SG half DEF-library because(**-3PL.CL**) DEF-books very old.PL
I donated half of the library because the books are very old. Tunisian

39. I have only found one naturally occurring example of a feminine singular clitic cross-referencing a plural inanimate noun on a complementizer in the Tunisiya corpus, shown in (i).

(i) *Deflected complementizer clitic in Tunisian* (TC:text 438)

l-ʒaraʔim əlli kiːma heːði mawʒuːd-a barʃa w-kun-t t-nəːʒʒəm tə-ʃkiː
DEF-crime.PL that like this found-FSG many and-be.PFV-2SG 2SG.IPFV-can 2SG.IPFV-complain
bi-hom ʕlaxaːt$^{\text{ʕ}}$ər**-haː** tas$^{\text{ʕ}}$arruf-eːt ta-taʕaːrið maʕa d-dustuːr
of-3PL.CL because-**3FSG.CL** behavior-PL 3FSG-IPFV.go_against with DEF-constitution

Crimes like these are very common and you could have filed a complaint against them because these are behaviors that go against the constitution.

However, in this example, the clitic *ha* here is not directly cross-referencing the word *tas$^{\text{ʕ}}$arrufeːt* 'behaviors', since there should be a silent subject *pro* referring to the crimes the writer talks about in the matrix clause. The sentence 'behaviors that go against the constitution' is the predicate of this silent subject. Thus, the complementizer clitic in this case cross-references this silent subject which itself is co-referential with the crimes, which is also a non-human plural that can take either deflected or strict agreement. It is still the case that this clitic displays deflected agreement with a plural subject, but I take this example to be more akin to cases of anaphora (6.46c)-(6.47c), which are completely acceptable with deflected agreement, and which I analyze in Chapter 6 as clitic doubling of a silent *pro*, the same process I assume is leading to the realization of the complementizer clitic in (i).
As a side note, it is important to note what the context and the subsequent register of this particular excerpt are. (i) is from an internet forum post belonging to a thread where posters use a mix of Standard Arabic

By contrast to complementizer clitics, in Tunisian, examples of deflected *wh*-clitics (5.77) and negation clitics (5.78) abound in the available corpora.

(5.77) *Deflected wh-clitics*

a. wiːn-**i**$_{i}$ [xitˤaːbeːt-hom]$_{i}$ əlli kassr-uː-lna bi-ha$_{i}$
where-**3FSG.CL** speech.PL-3PL.CL that break.PFV-3PL-1PL.DAT.CL with-3FSG
ruːs-na
head.1PL
Where are their speeches that they beat us over the head with? (TC:text 21)

b. wiːn-**i**$_{i}$ [ħuquːq l-muwaːtˤin w-ħuquːq z-zawweːli]$_{i}$
where-**3FSG.CL** right.PL DEF-citizen and-right.PL DEF-needy
Where are the rights of citizens and the rights of needy people? (TCI:text 3711)

(5.78) *Deflected negation clitics*

a. j-xalliː-k t-xammməm ta-ʕməl ħaʒ-eːt$_{i}$ ma-**hi**$_{i}$-ʃ
3SG.IPFV-let-2SG.CL IPFV.2SG-think IPFV.2SG-do thing-PL NEG-**3FSG.CL**-NEG
mteː-ək
of-2SG.CL
It makes you think of doing things that are unlike you. (TC:text 3766)

b. [ʕruːs-eːt-hom]$_{i}$ ma-**hi**$_{i}$-ʃ kiːf kiːf
wedding-PL-3PL.CL NEG-**3FSG**-NEG same same
Their weddings are not the same. (TC:text 3742)

In both of these contexts, strict agreement is also possible, as shown in (5.79)[40] and (5.80).

(5.79) wiːn-**hom**$_{i}$ [l-ħaʒ-eːt ʒ-ʒdod]$_{i}$
where-**3PL.CL** DEF-thing-PL new.PL
Where are the new things?

---

and Tunisian, which is a common register in discussing certain serious matters such as politics (van Kampen 2019). Indicative features of a higher register in this particular text are:

(ii) The use of unequivocally Standard Arabic words like *ʔayna* 'where', *fa-* 'so', *ʔabnaːʔ* 'sons' *tataʕarið* 'it goes against', etc. mixed with colloquial high-frequency items such as *tnəːʒʒəm* 'can', *əlli* 'that', *ʕlaxaːtˤər* 'because', etc. (Ryding 2011).

(iii) The retention of word-medial glottal stop in *e.g., l-ʒaraʔim* 'crimes' (Ryding 1991).

Interestingly enough, Bettega (2018:147) notices a correlation between the likelihood of using deflected agreement and whether the agreement controller is a Standard Arabic word: Deflected agreement is more likely with Standard words (see also Owens and Bani-Yasin 1987). Given that this tendency is independently found in different dialects, it is possible that the use of deflected agreement in (i) is due to the higher register.

40. Note the use of both a singular clitic (5.78a) and a plural clitic (5.79) to cross-reference the same noun *ħaʒeːt* 'things'.

(5.80) heːðom ħuquːqi ma-**hom**$_{i}$-ʃ weːʒibeːt
these rights NEG-**3PL.CL**-NEG obligations
These are rights not obligations.

So, both deflected and strict agreement are freely available with *wh*-clitics and negation clitics, while deflected agreement is strongly dispreferred with object clitics and complementizer clitics in Tunisian. This is not a categorical test, and it makes sense: The topic of deflected agreement is a very complicated one and there are a number of factors making feminine singular (un)available in different varieties of Arabic,[41] so it is expected that the data is not binary. However, it is fair to say that it provides us with interesting results: Whatever the judgements are for object clitics, they are replicated with complementizer clitics within each dialect, similarly to the types of DPs that may or may not be cross-referenced by a clitic as we saw in §5.3.1 above. So, the generalization we can make here is that speakers disprefer deflected clitic doubling, while freely[42] allowing deflected agreement. In Chapter 6 (§6.4.3), I propose that nothing in the syntax prevents the generation of a clitic doubling structure with a deflected clitic, but that this output leads to a pragmatic clash, accounting for this degradation.

5.5 Conclusion

In this chapter, I completed the empirical picture on the distinction between ϕ-agreement and clitic doubling in Tunisian and Palestinian Arabic, by extending the investigation to our three other contexts of interest (complementizer clitics, negation clitics, and *wh*-clitics), and by bringing forth additional diagnostic tests, all laid out in Table 5.4.

I conducted tests from Chapter 2 (sensitivity to controller, pragmatic restrictions, and pres-

41. Specificity, animacy, humanness, the morphology of the plural noun, its lexical belonging to the standard variety, etc. (Belnap 1991; Procházka and Gabsi 2017; Ritt-Benmimoun 2017; Bettega 2018).

42. Depending on certain pragmatic factors, see §6.4.3 and the literature cited there on these pragmatic factors.

	Doubling Clitics		**Agreement Clitics**		
Diagnostic Test	Object clitics	Comp. clitics	Negation clitics†	*wh* clitics	Subj–V Agreement
Cross-referencing of 1st conj. lexical DP	✗	✗	N/A	✓	✓
Sensitivity to controller	✓	✓	✗	✗	✗
Pragmatic restrictions	✓	✓	✗	N/A	✗
Complementary distribution w/ verbs	✗	✗	✓	✓	N/A
3rd fem. sg. Allomorphy†	✗	✗	✓	✓	N/A
Deflected agreement	✗/ **?**†	✗/ **?**†	✓	✓	✓
Presence of default	✗	✗	✓	N/A	✓

† marks things that are exclusive to Tunisian

Table 5.4: Summary of patterns of cliticization and agreement in Tunisian and Palestinian

ence of a default) and Chapter 3 (ability to cross-reference a first conjunct lexical DP) on those three contexts. The results of these tests grouped complementizer clitics together with object clitics as *doubling clitics* and *wh*-clitics and negation clitics together as *agreement clitics*, due to the behavior of the latter two being very similar to subject-verb agreement. These results are further supported by the additional internal evidence found in the other 3 diagnostic tests: We saw that agreement clitics are in complementary distribution with verbs, while doubling clitics are not. Deflected agreement clitics are acceptable while deflected doubling clitics are degraded, and finally, only agreement clitics had an allomorph in the 3rd person feminine singular in Tunisian.

While none of these tests are enough on their own, taken together, we clearly see a pattern emerge in Table 5.4, thus justifying the distinction between agreement clitics and doubling clitics. In Chapter 6, I develop my analysis of doubling clitics, both synchronically and diachronically, in order to account for the different properties we have uncovered in this chapter. In Chapter 7, I do the same for agreement clitics.

CHAPTER 6

CLITIC DOUBLING AT THE SYNTAX-PRAGMATICS INTERFACE

6.1 Introduction

The goal of this chapter is to implement and refine the analysis of clitic doubling proposed in the dissertation, namely that doubling clitics head their own projections—CLP—with the ingredients in (6.1), and as illustrated in (6.2).

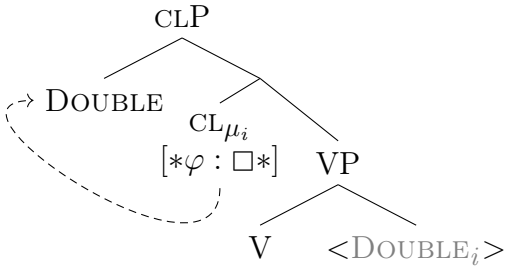
(6.1) **The ingredients of clitic doubling**

a. A clitic projection, CLP, headed by CL° (Sportiche 1996; Angelopoulos and Sportiche 2021; Saab 2024). Doubling clitics are the surface realization of CL°.

b. The CL° is a ϕ-probe: It comes unvalued and must agree with the element it doubles (Sportiche 1996; Saab 2024).

c. The CL° is a μ-binder (Büring 2004, 2005): It requires an element in its specifier which binds a pronoun or a trace. By virtue of being a μ-binder, a doubling clitic triggers Predicate Abstraction (Heim and Kratzer 1998:198,(4)).

(6.2) *Analysis of Clitic Doubling*



In Part I of the dissertation, I applied this analysis for clitic doubling of &P objects whose first conjunct was a DP (Chapter 3) and those whose first conjunct was a pronoun (Chapter 4). Here, I apply this analysis for non-conjoined DP objects, aiming to account for the other properties of clitic doubling uncovered in Chapter 5. In addition, this chapter extends the

analysis of doubling clitics to complementizer clitics, proposing that CLP can be merged higher up in the clause, between TP and CP, and given that it is the same projection that we find in the case of object clitics, all of the properties uncovered in Chapter 5 are found with both object and complementizer clitics, which together form the category of doubling clitics.

In order to account for these properties, I explain the existence of clitic doubling as we observe it in Tunisian and Palestinian as the result of two successive grammaticalization paths: The first path is one where a historically argumental pronominal clitic (DP) is reinterpreted as a functional head (CL°) in the extended projection of the verb, and the second path is one where a right dislocation structure containing a resumptive dependency is reinterpreted as a doubling structure. Taken together, these two developments not only lead to the structure of clitic doubling I propose in (6.1) and (6.2), they also adequately explain the synchronic restrictions on clitic doubling we observed in Chapters 2 and 5. In particular, the fact that doubling clitics are sensitive to the type of DP they cross-reference (§2.3.3; §5.3.1) as well as the pragmatic restrictions of clitic doubling (§2.3.3; §5.3.2) are taken to be direct results of these two grammaticalization paths. As for the synchronic analysis of clitic doubling—(6.1), (6.2)—it accounts for the behavior of clitic doubling with coordinate structures as shown in part I of the dissertation, in addition to other properties such as optionality (§2.3.3), lack of default clitics (§2.3.3; §5.4.2), and tense invariance (§2.3.3).

With respect to the fact that doubling clitics are limited in their distribution to verbs and complementizers,[1] I ultimately explain the parallel between these two clitic positions through the parallel between the VP-periphery and the CP-periphery, both of which contain a TOPIC position (the low left periphery proposal: Jayaseelan 2001; Belletti 2004, 2005; Poletto 2006; Jarrah and Abusalim 2021, *a.o.*). I provide a diachronic analysis of object clitic doubling whereby it arises from right dislocation constructions where the dislocated element

1. As opposed to agreement clitics which are found on *wh*-words and negation.

is merged in a VP-peripheral TOPIC position. The reanalysis involves a process of syntactic rebracketing and the reinterpretation of a resumptive dependency as a doubling dependency that can be manipulated for discourse functions. This then extends to complementizer clitics, the CP layer also containing a TOPIC position. Through this diachronic evolution of doubling clitics, I am able to provide a unified account of the restrictions that characterize both object clitics and complementizer clitics, *i.e.*, doubling clitics.

The remainder of this chapter is organized as follows: In §6.2, I describe the first grammaticalization path I argue for, one where historically pronominal clitics (DPs) become doubling clitics (CL). In §6.3, I focus on the second grammaticalization path from right dislocation to clitic doubling. The insights of this diachronic proposal with regards to the evolution of clitic doubling and its current distribution are explored in §6.4. Then, I show the adequateness of the analysis for complementizer clitics in §6.5. §6.6 concludes.

6.2 From pronominal clitic to doubling clitic

In this section, I retrace the first grammaticalization path that I posit, which is one from pronominal clitic (6.3a) to doubling clitic (6.3b).

(6.3) *The Typology of clitics/ϕ-markers* (loosely based on Saab 2024:23,(68))

a. Pronominal Clitic

$$\begin{bmatrix} \phi: & \text{valued} & \textit{via} & \text{concord} \\ & & \text{index} & \end{bmatrix}$$

b. Doubling Clitic

$$\begin{bmatrix} \phi: & \text{valued} & \textit{via} & \text{probing} \\ & & \text{index} & \end{bmatrix}$$

c. Agreement Clitic

$$\begin{bmatrix} \phi: & \text{valued} & \textit{via} & \text{probing} \\ & & & \end{bmatrix}$$

The change from pronominal element to agreement morpheme is a well-known grammati-

calization cline discussed by many authors (*e.g.,* Givón 1976; Siewierska 1999; Roberts and Roussou 1999; Helmbrecht 2004; Fuss 2005; Haig 2020; Tan, to appear, to cite a few). Following a recent proposal by Saab (2024), I contend that synchronically, the doubling clitics of Arabic are at an intermediate stage between pronouns and agreement morphemes which manifests in clitics being independent heads heading their own projection. Following Saab's analysis of Rioplatense Spanish, it is a change from a phrase that is interpreted as a variable (6.3a)—a bindee—to a head that requires one (6.3b)—a binder—, as the referential properties of the clitic erode. I argue that this grammaticalization path manifests as the reinterpretation of a pronominal clitic as a clitic cross-referencing a null *pro*, and that this reinterpretation is facilitated by the movement of this historically pronominal clitic with the verb such that it is always higher in the structure than its base position (§6.2.1). This leads to the new functional head CL—whose purpose is to introduce doubling clitics—being merged above VP (§6.2.2).

6.2.1 The development of a new functional head: CL^0

The typology of clitics in (6.3) represents not only three diachronic stages of the grammaticalization path from pronoun to agreement, they are also possible coexisting synchronic stages in a given language. Saab (2024:23) argues that Rioplatense Spanish clitics are of type (6.3a) and (6.3b) (depending on the context), but that type (6.3c) is instantiated by subject agreement markers in that language. Following the empirical evidence from Chapters 2 and 5, the series of Arabic clitics discussed in this dissertation are of type (6.3b) and (6.3c), depending on the context. Doubling clitics are found with complementizers and verbs, and agreement clitics are found with *wh*-words and negation. The question is then, are there contexts where the Tunisian and Palestinian Arabic clitic series is the realization of a pronominal element? My answer is negative.

An important component of my analysis is that surface object clitics and complementizer clitics are always the result of an underlying CL°.[2] In other words, these "clitics are present if and only if corresponding Clitic Phrases are" (Angelopoulos and Sportiche 2021:975). This means that even in a sentence without apparent clitic doubling[3] like (6.4a), the clitic is not the surface realization of a pronominal argument (*pace* Estigarribia 2006:130; Saab 2024:17 for Rioplatense Spanish), but it is doubling a null object (6.4b) (Sportiche 1996; Arregi and Nevins 2012; Angelopoulos 2019; Angelopoulos and Sportiche 2021).

(6.4) a. Raːnia ʃeːf-ət-**u**
R. see.PFV-3FSG-**3MSG.CL**

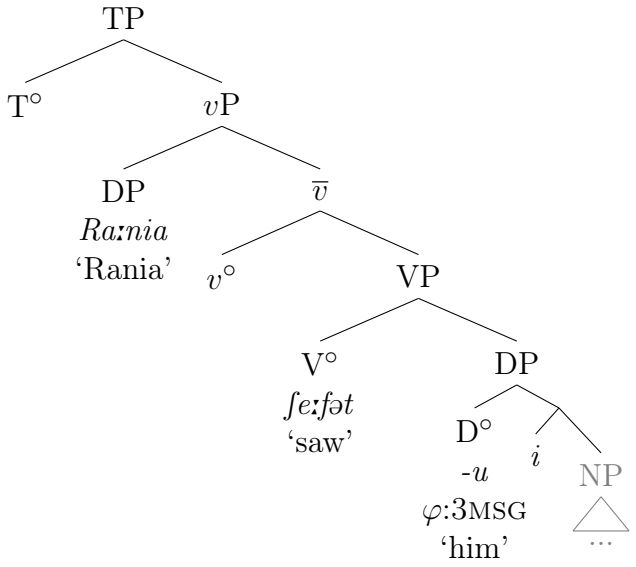
b. Raːnia ʃeːf-ət-$\mathbf{u}_{\boldsymbol{i}}$ $\boldsymbol{pro_i}$
R. see.PFV-3FSG-**3MSG.CL**$_{\boldsymbol{i}}$ $\boldsymbol{pro_i}$
Rania saw him.

I propose that surface bare cliticization as in (6.4a) is always the result of a clitic doubling a silent object (6.4b). Thus, there are no pronominal clitics *synchronically* in Tunisian and Palestinian, all instances of object (and complementizer) clitics are doubling clitics: Doubling clitics are historically derived from pronominal clitics which were merged in argument position and interpreted as variables (6.5).

2. I limit the generalization to object and complementizer clitics here because negation and *wh*-clitics are agreement clitics which are *not* the surface realization of CL°.

3. "Bare cliticization" in Angelopoulos and Sportiche's (2021) terms.

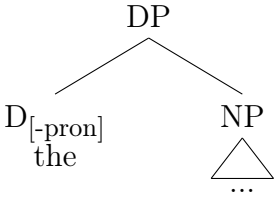
(6.5) *Stage 1: Pronominal clitics as variables merged in argument position*



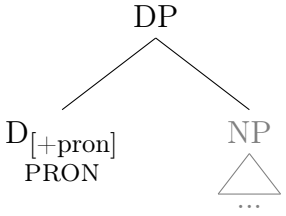
In (6.5), the pronominal clitic is the head of a DP merged as the complement of V. Following the NP-ellipsis analysis of pronouns (see Elbourne (2001, 2013) and Hewett (2023c), and Postal (1966) for an important precedent) where pronominal and non-pronominal DPs have the same structure (6.6), the pronominal clitic is a D° whose complement is an elided NP (6.6b).

(6.6) *NP-ellipsis theory of pronouns* (Hewett 2023c:249,(6)-(7))

a. *Structure of a non-pronominal DP*

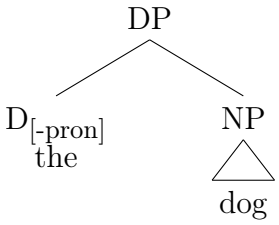


b. *Structure of a pronoun*

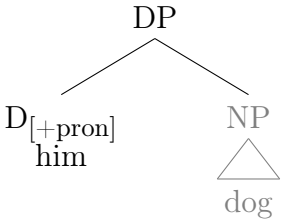


For instance, if in (6.4a), the contextually relevant object of the verb is "the dog", then the elided NP complement of the pronominal D° in (6.5) would be "dog" (6.7b).

(6.7) a. *Structure of the DP* "the dog"



b. *Structure of an object pronoun whose antecedent is* "the dog"



Note also that the pronominal DP in (6.5) contains a structurally-encoded (Hanink 2018) index i (Elbourne 2005:162ff), which is interpreted through an assignment function (6.8) (Heim and Kratzer's (1998:111,(4)) pronouns and traces rule).

(6.8) $[\![i]\!]^g = g(i)$.

(6.5) thus represents an older stage of the language where the pronominal clitic is merged as the complement of V°. I propose that this evolves into a structure where a doubling clitic CL is merged in a non-argumental position, above VP (6.2).

It is common to model the grammaticalization path from pronoun to clitic as a path from DP to D° or from X^{max} to X^{min} (Fontana 1993:259ff.), as in (6.9), with the gradual loss of referential features on the clitic (see also (6.3) above).

(6.9) *The grammaticalization path of clitics*

Pronominal clitic	→ Doubling clitic	→ Agreement Clitic
DP	→ D°	→ ϕ-features

(Fischer, Navarro, and Vega Vilanova 2019:61,(17); Fischer and Rinke 2013:467,(20))

The idea in this type of analysis is that the pronominal clitic, a DP, is reduced to its head only (D°) and then that head gets reanalyzed as uninterpretable ϕ-features on some probe. The change from X^{max} to X° is involved in my analysis, but I suggest that it doesn't necessarily entail a change form DP to D°. In fact, the clitic itself is already a head D in stage 1 (6.5)

above.[4] But in stage 1 (6.5), it is part of a phrase (DP) whose only overt exponent is the clitic D°. I propose that the relevant change is from a head in the nominal functional projection to a head in the verbal functional projection, crucially *without* the elided complement. This change is facilitated by one of two[5] syntactic economy principles proposed by van Gelderen (2004, 2011) that have been shown to participate in syntactic change: The Head Preference Principle (HPP) (6.10).

(6.10) **Head Preference Principle (HPP)**
Be a head, rather than a phrase. (van Gelderen 2004:18)

As van Gelderen (2011:40) puts it, this principle says to "analyze something as small as possible." In our case, this means analyzing the D° clitic and its complement as just the D°.

A crucial property of this pronominal clitic D° at stage 1 (6.5) is that it moves with the verb, such that it never really surfaces in its base position.[6] Thus, the resulting surface structure of (6.5) after verb movement to T° and subject movement to [Spec, TP] is the following, where elements that have moved are indicated by a co-indexed gap (__) and elided material is ~~struck through~~.

(6.11) $[_{\text{TP}}$ *Raːnia*$_3$ $[_{\text{T°}}$ *ʃeːfət*$_2$-*u*$_1$ $[_{v\text{P}}$ __$_3$ $[_{\text{VP}}$ $[_{\text{V°}}$ __$_2$__$_1$ $[_{\text{DP}}$ $[_{\text{D°}}$ __$_1$ $[$~~NP~~$]]$ $]$ $]$ $]$ $]$ $]$
$[_{\text{TP}}$ R.$_3$ $[_{\text{T°}}$ saw$_2$-3MSG.CL$_1$ $[_{v\text{P}}$ __$_3$ $[_{\text{VP}}$ $[_{\text{V°}}$ __$_2$__$_1$ $[_{\text{DP}}$ $[_{\text{D°}}$ __$_1$ $[$~~NP~~$]]$ $]$ $]$ $]$ $]$ $]$
Rania saw him.

I contend that the fact that pronominal clitics have always surfaced with the verb in Arabic[7] has facilitated their reinterpretation as heads close to V, not the heads of the complements

4. See Fischer, Navarro, and Vega Vilanova (2019:61) who argue that Old Catalan clitics must be analyzed as heads, yet this language seems to have both pronominal clitics and doubling clitics.

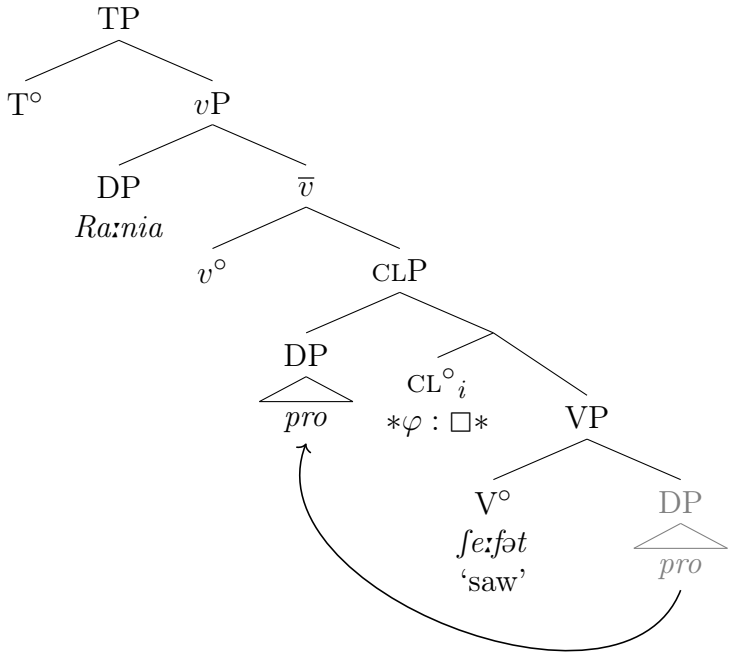
5. The other principle—the Late Merge Principle (6.13)— is discussed below.

6. Although the representation in (6.11) is one where the pronominal clitic moves with the verb from the beginning of the derivation, there is another possibility, where the clitic moves to a specifier position, as an $X^{max}/X°$, then adjoins to the relevant head *via* m-merger as in Matushansky's (2006:84) proposal for Romance clitics. This relevant head can be T° (Matushansky 2006) or $v°$ (Kramer 2014; Harizanov 2014), depending on the language.

7. They seem to have also always surfaced with the verb in older, closely related languages like Safaitic (see for instance Al-Jallad 2015:98). In fact, pronominal clitics are reconstructed for Proto-Semitic (Huehnergard

of V. This is especially plausible in light of the NP-ellipsis theory of pronouns, where the complement of the clitic head is always elided, and thus never pronounced. With the HPP (6.10) in action, given a surface structure like (6.11), with the verb and the clitic moving together, and the NP complement remaining in its base position being elided, it is not far fetched to have the clitic reinterpreted as an independent functional head in the extended projection of the verb, and the elided content that remained in the VP-complement position in (6.11) reinterpreted as a null object *pro*, as in (6.12) (see (6.4b) above).

(6.12) *Stage 2: Doubling clitics are merged as functional heads*



The second economy principle facilitating this change is van Gelderen's (2004, 2011) Late Merge Principle (LMP) (6.13).

(6.13) **Late Merge Principle (LMP)**
Merge as late as possible. (van Gelderen 2004:28)

2019b:54) and in Akkadian—the earliest Semitic language record we have—pronominal clitics are attached to verbs (Hasselbach-Andee 2019:102f.).

Instead of being merged low in the structure, the clitic is now merged later than it would have been had it remained a pronominal clitic: It is now merged above VP. The reinterpretation of the clitic as a functional head in the extended projection of the verb not only changes the category of its complement, but also includes a change in its own category, from D to CL. The clitic is now interpreted as a functional category historically derived from a pronoun, but which is now distinct from it. I argue that this is a necessary (but not sufficient) step to start the grammaticalization process towards becoming agreement. Note also that CL bears an index *i*, just like its historical predecessor does in (6.5): This newly reinterpreted head crucially still bears an index, with a slightly simplified structure. While this index was adjoined to D° in an argument position (6.5), it is now merged in a non-argument position as part of CL, where it triggers Predicate Abstraction (Saab 2024:17–18). This triggering of Predicate Abstraction is precisely the piece that makes movement of the DP *pro* to the specifier of the clitic in (6.12) obligatory. Saab proposes that CL° has an EPP feature causing this movement. I derive this EPP feature from the requirements of CL°: If it triggers predicate abstraction, then it needs to have something in its specifier to saturate the open slot in its sister, which means that there should be an open slot as well. Technically, the null complement of V, being a pronoun, is an open slot, but there must be something in the specifier of CL° regardless. Thus, in this case, a derivation where no movement occurs would lead to a semantically deviant result, whereas movement of the DP complement satisfies the requirements of the index-bearing head CL°.[8]

The change from (6.5) to (6.12) is thus precisely the change from (6.14) to (6.15) (repeated from (6.3a) and (6.3b) respectively) as proposed by Saab (2024).

(6.14) Pronominal Clitic

$$\begin{bmatrix} \phi: \text{ valued } \textit{via} \text{ concord} \\ \text{index} \end{bmatrix}$$

$\rightarrow$

(6.15) Doubling Clitic

$$\begin{bmatrix} \phi: \text{ valued } \textit{via} \text{ probing} \\ \text{index} \end{bmatrix}$$

8. I focus on the movement property in this discussion, but at this stage, it should also be possible to merge a BROAD OBJECT in the specifier of CL°, which would also satisfy the requirements of this head.

This change reflects a hallmark property of grammaticalization: *attrition* (Lehmann 1985:307; Roberts and Roussou 1999:1041; see also Meillet 1912:139 who calls it 'dégradation'), *i.e.,* semantic bleaching.[9] The referential properties of the pronominal clitic are being lost: Whereas it came with an NP complement in (6.5), CL has a verbal complement. In the first stage D° gets its ϕ-features from its complement, while in the second stage CL° gets its ϕ-features from the element in its specifier. I assume that this happens *via* different operations, *i.e.,* concord in the former case vs. AGREE in the latter case (see discussion in Norris (2014:Chap.3)). Note that the change from pronominal clitic to doubling clitic as I retrace it here naturally leads to the ingredients of clitic doubling (6.16).

(6.16) **The ingredients of clitic doubling**

a. A clitic projection, CLP, headed by CL° (Sportiche 1996; Angelopoulos and Sportiche 2021; Saab 2024). Doubling clitics are the surface realization of CL°.

b. The CL° is a ϕ-probe: It comes unvalued and must agree with the element it doubles (Sportiche 1996; Saab 2024).

c. The CL° is a μ-binder (Büring 2004, 2005): It requires an element in its specifier which binds a pronoun or a trace. By virtue of being a μ-binder, a doubling clitic triggers Predicate Abstraction (Heim and Kratzer 1998:198,(4)).

The historically pronominal clitic is reinterpreted as a higher functional head (6.16a), it loses its referential properties, becoming a ϕ-probe (6.16b), but it still bears an index and thus triggers predicate abstraction, which means the conditions for predicate abstraction must be met, that is, (6.16c).

The change from pronominal clitic to doubling clitic thus gives the language a new special head, CL, which it didn't have before. Whereas pronominal clitics were heads of DPs, like other determiners, the new head CL° now is a distinct head introducing clitics into a given structure.[10]

9. Attrition also includes phonological erosion, but I do not dwell on this property here as we are looking a a change from an already functional category: The pronominal clitics are already clitics and not independent words.

10. In a way, the analysis proposed here is very similar to McKenzie's (2012) analysis of Switch Reference

6.2.2 The location of CLP

One might wonder why I propose that the new independent CL head would be merged right above VP, and not above *vP* (Kramer 2014; Baker and Kramer 2018) or even in the T° area. The latter would make most sense in light of surface structures like (6.11) above, where the clitic ends up in a complex head with T°. In fact, many languages have taken this route, such as Greek and Romance, for which the clitic is justifiably posited as being high (Angelopoulos and Sportiche 2021; Paparounas and Salzmann 2023a, 2023b). This makes sense as these languages have "clitic climbing" (6.17), whereby the clitic is not tied to the verb but to a different head (T°), even if the verb does not surface in that head. In a Spanish compound tense (6.17), the clitic must appear before the auxiliary (6.17b) and not the main verb (6.17a).

(6.17) *Clitic Placement in Spanish* (de Andrade and Bok-Bennema 2017:3,(3))

a. * Juana ha visto-**lo**
J. has seen-**3SG.CL**

b. Juana **lo** ha visto
J. **3SG.CL** has seen
Juana has seen it.

Arabic, by contrast, doesn't always have the clitic surface in T° as in (6.11) with simple tenses. In compound tenses, we have the opposite of the Spanish pattern, with the clitic remaining with the verb (6.18a) and not moving to T°, where the auxiliary is (6.18b).

(6.18) *Clitic Placement in Arabic*

a. Raːnia keːn-ət t-ʃuːf-**u**
R. be.PFV-3FSG 3FSG-IPFV.see-**3MSG.CL**

b. * Raːnia keːn-ət-**u** tʃuːf
R. be.PFV-3FSG-**3MSG.CL** 3FSG-IPFV.see
Rania was seeing him.

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morphemes: Where he proposes the SR head, a binder whose only purpose is to introduce SR morphemes, I propose a functional head that is also a binder, whose only purpose is to introduce a clitic. I thank Karlos Arregi (*pers. comm.*) for making the connection between this analysis of clitic doubling and McKenzie's work, which has greatly improved my analysis.

Given frequent inputs like (6.11) and (6.18a), learners would generalize that the clitic is closely associated with the verb, and not some other head. It makes sense then, that the clitic projection would sit immediately above the VP, making sure that the verb moves to the clitic and the clitic ends up wherever the verb ends. This is the most economical derivation given the generalization that the clitic and the verb are closely associated throughout the derivation (see §8.3 for a discussion of the predictions of this proposal and an analysis of surface clitic placement as a post-syntactic operation).

6.3 From right dislocation to clitic doubling

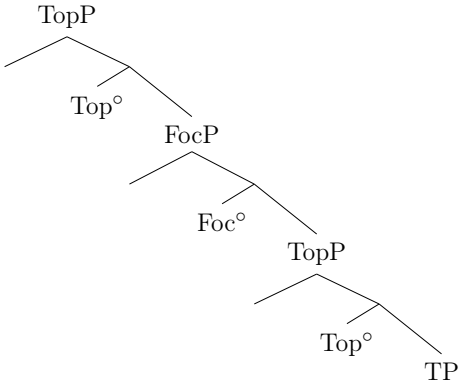
In the previous section, I proposed that there must have been a change from (argumental) pronominal clitics to (non-argumental) doubling clitics as the first step of the progressive change towards the existence of clitic doubling as we see it now. This step is first restricted to reinterpreting clitics as as functional heads merged above VP, given their close association with the verb, accompanied by supplying a null complement to V (*pro*). In this section, I move on to another grammaticalization path that I hold responsible for the type of clitic doubling I document in the dissertation, namely one where doubling clitics cross-reference not only pronouns, but also familiar DPs (see Chapter 5). I propose that the clitic doubling structure as we know it is actually the result of the grammaticalization of a right dislocation structure, following similar proposals that this development happened in Spanish (Gabriel and Rinke 2010) and Greek (de Boel 2008:100–102; Janse 2008:185).

6.3.1 A low topic analysis of Right Dislocation

In order to trace the diachronic change from right dislocation to clitic doubling, we need a starting analysis of the former. There are many available analyses of right dislocation, with variables including movement (Samek-Lodovici 2006) and base-generation (Frascarelli 2004) of the dislocated element, as well as its clause internal (Kayne 1994:78–83; Villalba 1999) or

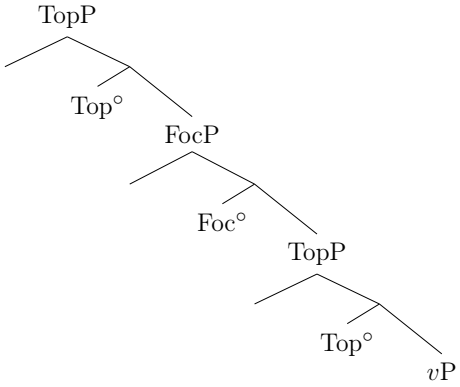
external (Zwart 2001; Ott and de Vries 2016) position, etc. Reviewing all of these analyses is beyond the scope of this dissertation (see Samek-Lodovici (2015:Chap. 4) and van der Linden and Sleeman (2007:2–4) for a review), and in principle, the diachronic development I propose can be implemented within a variety of these analyses of right dislocation, provided there is evidence that they are suited for Arabic right dislocation in general. Although the general idea does not necessarily hinge on this, I will be partial to the proposal that right dislocated elements are TP-internal, and in particular, I implement the low topic analysis (Cecchetto 1999; Belletti 2004, 2005; Villalba 1999; van der Linden and Sleeman 2007), in which dislocated elements are in a vP-peripheral Topic position. This idea fits within the more general proposal that just like the articulated left periphery (6.19), vP also has a discourse-related periphery (6.20) (Jayaseelan 2001; Belletti 2004, 2005; Poletto 2006), a proposal which has been defended for Jordanian (Jarrah and Abusalim 2021) and Najdi (Alshamari and Jarrah 2022) Arabic,[11] although not necessarily to describe right dislocation.

(6.19) *The left periphery*



(slightly adapted from Rizzi 1997:297,(41))

(6.20) *The* v*P periphery*



(slightly adapted from Belletti 2004:25,(19b))

Based on the parallelism between CP and vP, I assume that right dislocated elements are base-generated in the low TopP position, and not moved there (as in *e.g.*, Italian: Cecchetto

11. Alshamari and Jarrah (2022) analyze what they describe as object clitic doubling as an object in a low Topic position resumed by a pronoun on the verb.

1999), given the independent evidence that multiple types of resumptive $\overline{\text{A}}$-dependencies in Arabic are the result of base-generation (Hewett 2023c). So, a low-topic base-generation analysis of right dislocation looks like the derivation of (6.21a) in (6.21b).[12]

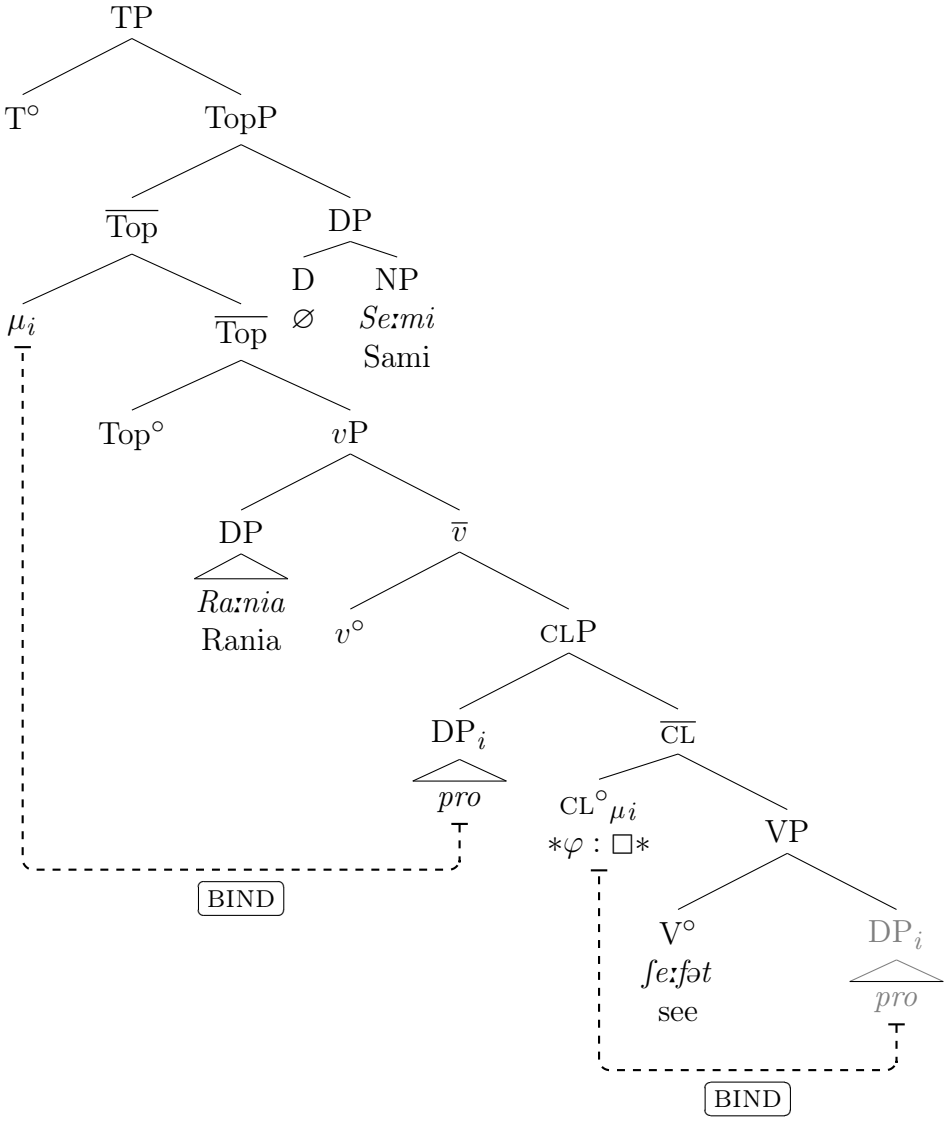
(6.21) a. *Right dislocation in Tunisian*

Ra:nia ʃe:f-ət*(**-u$_i$**) lbe:raħ [Se:mi$_i$]

R. see.PFV-3FSG.PFV*(**-3MSG.CL**) yesterday S.

Rania saw him yesterday, Sami.

b. *A low-topic analysis of right dislocation*



12. Note that I represent the dislocated element in a right specifier of Top° in order to account for the fact that it surfaces as the right-most element in the sentence.

Recall the generalization made in §6.2, namely that clitics are always the result of an underlying CL°. By definition, then, the clitic in (6.21a), must be the realization of CL°. Thus, in (6.21b), the resumptive dependency involves the dislocated element in [Spec, TopP], the null resumptive pronoun in the specifier of CL°, and the doubling clitic in CL°, which bears an index. Following Hewett's (2023c:chap. 7) account of Arabic resumptive $\overline{\text{A}}$-dependencies, the dislocated element binds the resumptive pronoun *via* the μ-binder prefix adjoined to $\overline{\text{Top}}$. This resumptive pronoun itself binds its trace via the index-bearing CL° (as shown in §6.2).

A potential objection to this representation would be that it is superfluous to consider the clitic as the result of the doubling of a null resumptive pronoun: We could simply merge a resumptive clitic in argument position and the dislocated element in [Spec, TopP], and completely do away with this seemingly redundant Clitic Projection in this particular context. This would be in line, and desirably so, with Hewett's (2023c) generalization that resumptive pronouns are ordinary pronouns (citing Doron 1982; Engdahl 1982; McCloskey 2002), and indeed Hewett analyzes them as resumptive clitics merged in argument position. Under this view then, what looks like a resumptive clitic is simply that. However, I argued above that the first part of the grammaticalization path for clitic doubling is the reinterpretation of pronominal clitics as doubling clitics, and that there are no pronominal clitics synchronically. Before showing how a structure like (6.21b) turns into a clitic doubling structure in §6.3.3, I take a brief excursus in §6.3.2 in order to provide more evidence that resumptive clitics can be analyzed as doubling clitics that double a (possibly null or overt) resumptive pronoun, and that this does not undermine Hewett's generalization and analysis.

6.3.2 Excursus: Evidence for a clitic doubling analysis of resumptive clitics

In a chapter on island sensitive resumption, Hewett (2023c:Chap. 5) reviews the differences between base-generated resumption in Arabic and movement-derived resumption in Greek

and Spanish. He argues that the latter is best analyzed within the 'big-DP-*cum*-stranding' approach (Aoun, Choueiri, and Hornstein 2001; Boeckx 2003), where the operator and the 'resumptive' pronoun are merged together as a Big-DP, with the operator moving and the resumptive—which is actually a doubling clitic—remaining stranded in a lower position. Hewett convincingly argues that resumption in Spanish and Greek is a clitic doubling structure with movement, while resumption in Arabic is the result of base-generation of an operator in [Spec, CP] binding a resumptive pronoun in the clause. Hewett documents a number of differences between clitic doubling and resumption. This might seem at odds with what I propose in (6.21b) above, namely that resumption involving clitics contains a clitic doubling structure. We might expect this to make wrong predictions if resumption and clitic doubling differ in Arabic. While a 'big-DP-*cum*-stranding' approach has potential issues, complicating the derivation by adding a Clitic Projection does not, and it gives us a unified way of generating clitics. So I depart from Hewett's (2023c) analysis only in this respect: I differentiate between the base-generated resumptive pronoun and the clitic doubling it, while Hewett takes the clitics to be the resumptive elements. Here, I give two main pieces of evidence for my approach. Although there are ways to make the data that I am about to present compatible with Hewett's approach, given the arguments I make in §6.2, it makes more sense within my analysis to think of clitics as being the realization of CL°.

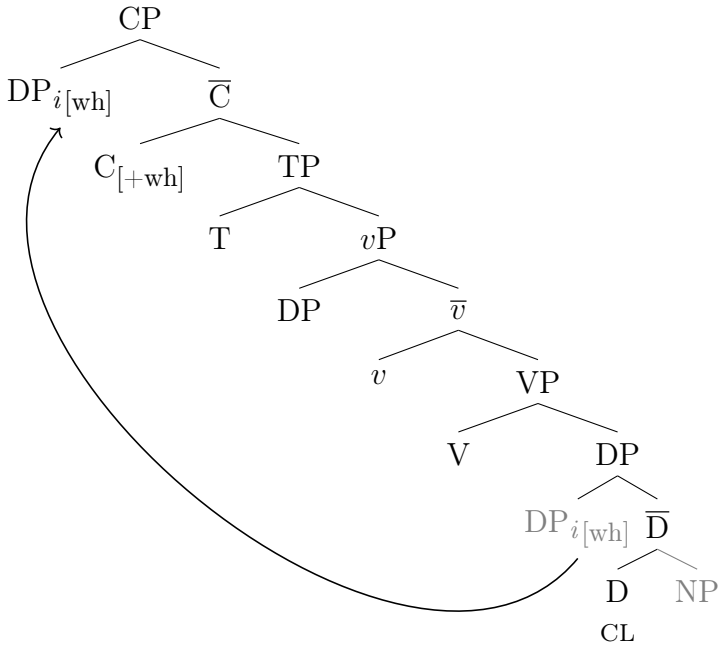
The first piece of evidence, which Hewett actually uses as a diagnostic differentiating the two types of resumption he investigates, is that clitics resuming a *wh*-operator in Syrian Arabic can double strong pronouns as in (6.22a), while they cannot in Argentinian Spanish (6.22b).

(6.22) a. ajja liʕbi$_i$ b-titwaqqaʕi innu Matt kassar {-**ha**$_i$ / ʔ-**ha**$_i$
which toy.FSG IND-suspect.2FSG that M. broke.3MSG {-**3fsg.cl**$_i$ / ʔ-**3fsg.cl**$_i$
hijja$_i$ } b-l-ħadiːʔi ʔ
it$_i$ in-DEF-park
(lit.) Which toy$_i$ do you suspect that Matt broke it$_i$ in the park? (Hewett 2023c:206,(41))

b. A quién$_i$ **lo**$_i$ juzgaste (***a él**) ayer ?
A who$_i$ **3MSG.CL.ACC** judged.2SG (***A him**) yesterday
Whom did you judge yesterday? (Hewett 2023c:205,(37),(38))

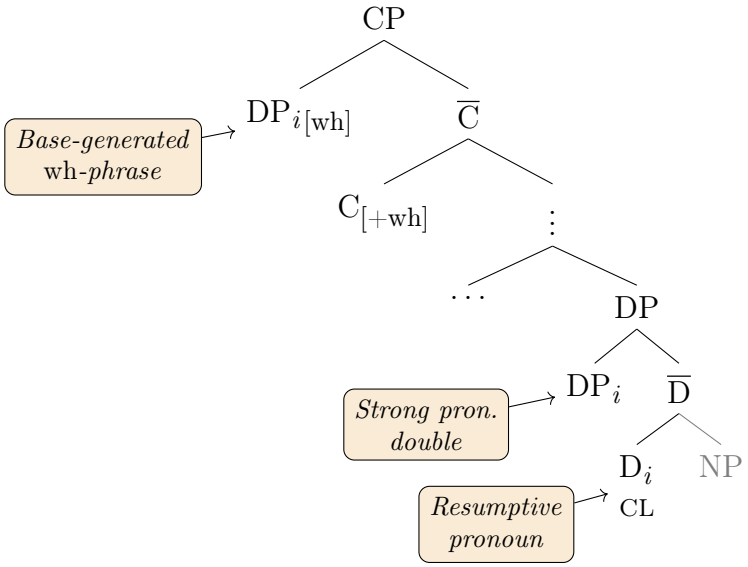
The difference between (6.22a) and (6.22b) makes sense within the big-DP-*cum*-stranding analysis, whereby the big DP can only host the *wh*-operator (in the specifier position), the clitic which is the pronominal head D, and the elided NP complement (following (6.6b)), leaving no room for an additional strong pronoun (6.23).

(6.23) *Movement derived resumption strands a doubling clitic*
adapted from Hewett (2023c:186,(1))



In (6.22a), Hewett proposes that the *wh*-operator is base-generated in [Spec, CP], and thus the resumptive clitic can be the head of a big DP with a strong pronoun in its specifier and an elided NP as its complement (Guilliot and Malkawi 2011:417,(53); Hewett 2023c:207,(43)), as in (6.24).

(6.24) *Arabic base-generated resumption with doubled resumptive pronoun*
adapted from Hewett (2023c:207,(43))

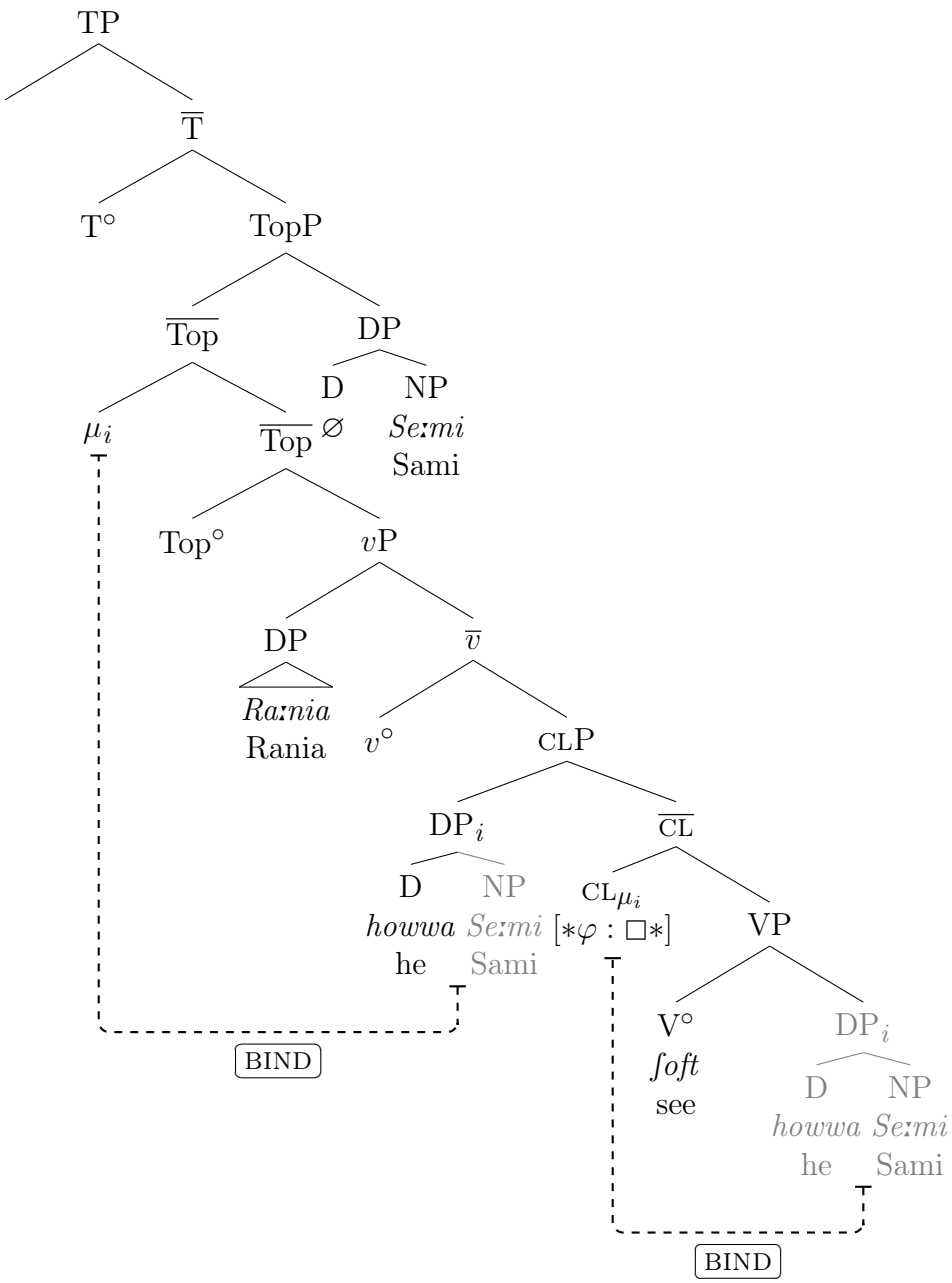


These facts are perfectly compatible with the analysis I propose for doubling clitics, where instead of treating the clitic as the resumptive we treat the strong pronoun as such. Under this view, both Hewett's generalization—that resumptive pronouns are ordinary pronouns—and mine—that clitics always realize CL°—remain true.

Just like it is possible to have a clitic and a strong pronoun in the resumptive dependency in (6.22a), it is also possible in cases of right dislocation as shown in (6.25a). I propose that in such cases, the strong pronoun is generated as the complement of V, moving to [Spec, CLP] to satisfy the requirements of the CL head, and is bound by the dislocated DP in its landing position *via* the μ-prefix adjoined to $\overline{\text{Top}}$ (6.25b).

(6.25) a. Ra:nia ʃe:f-ət*(**-u$_i$**) howwa$_i$ Se:mi$_i$
R. see.PFV-3FSG.PFV*(**-3MSG.CL**$_i$) 3MSG.PRON$_i$ S.
Rania saw him, Sami.

b.



Admittedly, a big-DP analysis as in (6.24) would work just as well for this and similar cases, with the base generation of the dislocated element, and the resumptive clitic heading a big DP with a strong pronoun in its specifier. However, my analysis of clitic doubling extends to other facts that would be trickier—although not impossible—to capture within a big DP approach, which brings me to my second piece of evidence for a unified treatment of clitics: Resumption within conjuncts (6.26).

(6.26) ʔamma təlmiːð$_i$ xtar-t{**-u**$_i$ / ***-hom**$_{i+j}$ / ***__**} [howwa$_i$
which student$_i$ choose.PFV-2SG{**-3MSG.CL**$_i$ / ***-3PL.CL**$_{i+j}$ / ***__**} [PRON.3MSG
w-Raːnia]$_{i+j}$
and-Rania]$_{i+j}$
Which student$_i$ did you choose him$_i$ and Rania?

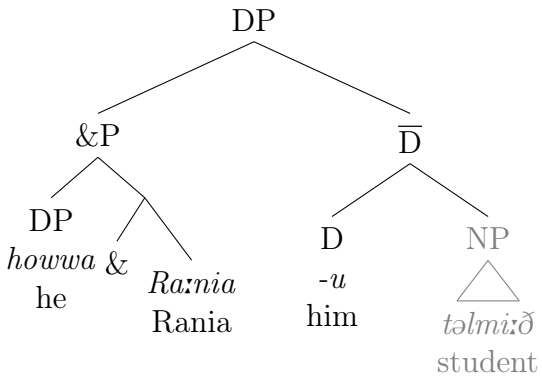
In (6.26), what would be analyzed as the resumptive clitic is not only obligatory,[13] it must also be singular, bearing the ϕ-features of the *wh*-phrase (3rd masculine singular). An analysis that takes the clitic to be the resumptive pronoun would run into an important issue: If the *wh*-phrase is generated in [Spec, CP], and the resumptive clitic is a D° whose complement is the elided NP 'student', then where would the &P *howwa w-Raːnia* 'he and Rania' generated? Surely, it can't be the case that there is a big DP like (6.27), where the element in the specifier is not co-referential with the clitic (though a subpart of it is).[14]

13. In cases without coordination, resumption is generally optional:

(i) ʔamma təlmiːð$_i$ xtar-t{**-u**$_i$ / **__**$_i$}
which student$_i$ choose.PFV-2SG{**-3MSG.CL**$_i$ / **__**$_i$}
Which student$_i$ did you choose?

14. There is another way to derive (6.26), while keeping Hewett's idea that in resumptive dependencies, the clitic is the resumptive pronoun. Such a derivation would include a BROAD OBJECT (see §4.6) merged in [Spec, VP]. This BROAD OBJECT would be a DP whose head is the resumptive clitic, with an elided NP complement. This DP would bind the 1st conjunct pronoun in the object &P, and it itself would be bound by the *wh*-phrase base-generated in [Spec, CP]. In this case however, it would be unclear why a BROAD OBJECT should be merged: The *wh*-phrase should be able to bind the pronominal conjunct from [Spec, CP]. Within my analysis, which also has a BROAD OBJECT, this BROAD OBJECT must be merged because any structure with a pronoun in the position of complement of V should be accompanied by a CLP, given the grammaticalization path discussed in §6.2: Either a BROAD OBJECT must be merged or the entire &P object must move in those cases. That being said, my analysis also has a problem preventing this movement from occurring in these resumptive dependencies, that is it doesn't prevent the generation of the ungrammatical plural clitic in (6.26) (cf. fn. 15).

(6.27)

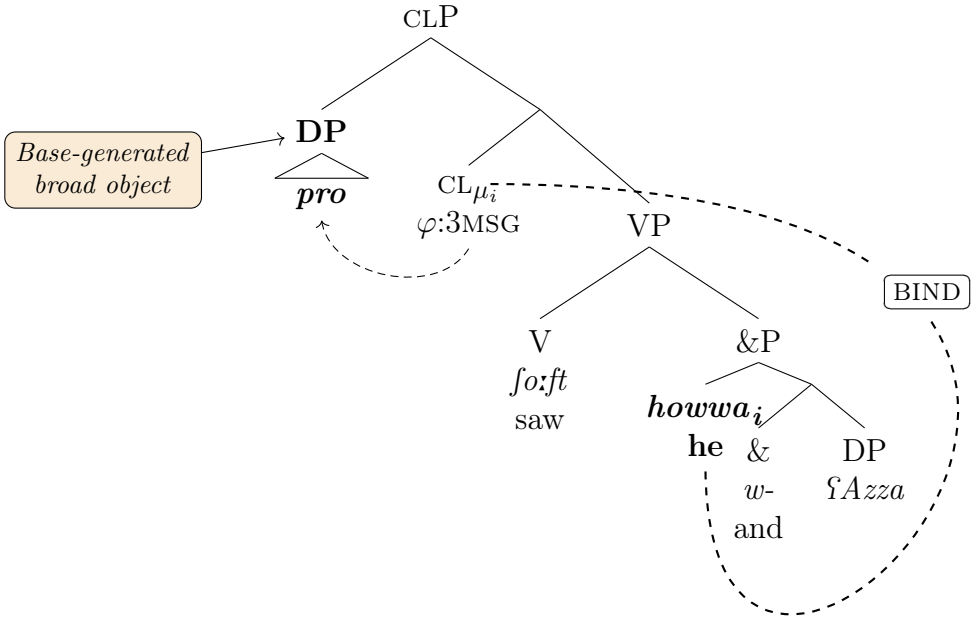


To show how my analysis circumvents this issue, let us backtrack a bit and look at the clitic doubling facts without a *wh*-operator, as they are slightly different. Recall the discussion in Chapter 4 on clitic doubling of &Ps whose first conjunct is a pronoun.

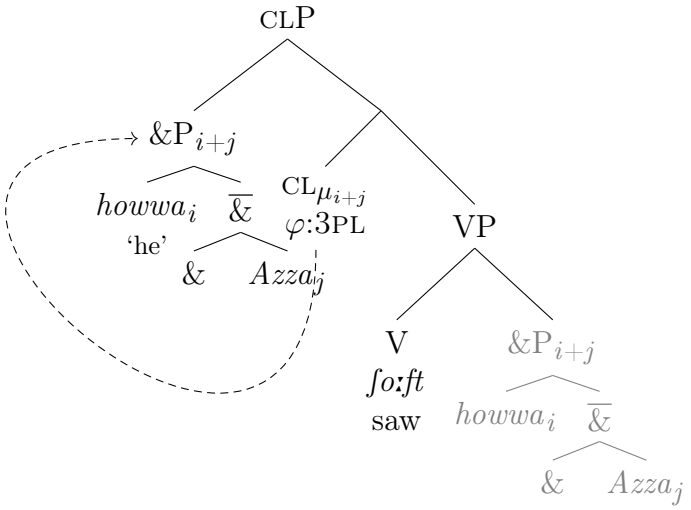
(6.28) ʃof-t*({**-u**$_{i}$/**-hom**$_{i+j}$}) [howwa$_{i}$ w-ʕAzza]$_{i+j}$
see-PFV.1SG-{**3MSG.CL**/**3PL.CL**} PRON.3MSG and-A.
I saw him and Azza.

In contrast to (6.26), both the singular clitic and the plural clitic are possible in (6.28), as long as there is a clitic (obligatory clitic doubling when the first conjunct of an object is a pronoun, cf. Chapter 4). The way the CLP analysis accounts for this is by either having a covert BROAD OBJECT binding the first conjunct pronoun in [Spec, CLP] (6.29), or moving the entire &P to that position (6.30). The former option derives first conjunct doubling, the latter resolved doubling.

(6.29) *Deriving first conjunct clitic doubling*



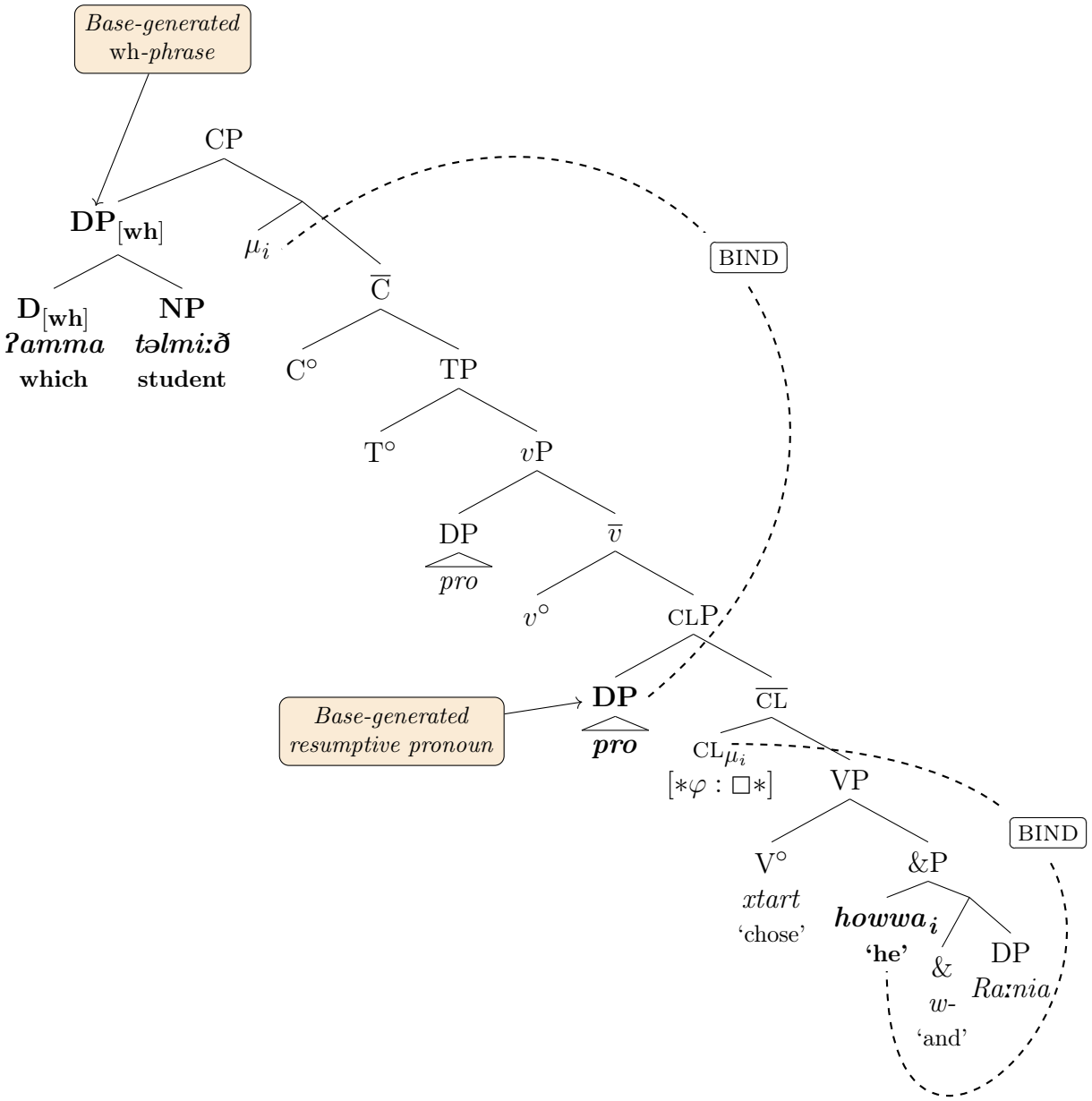
(6.30) *Deriving resolved clitic doubling*



The scenario in (6.29) is very much compatible with the data in (6.31) (repeated from (6.26)), as we land on (6.32) as a possible derivation.

(6.31) ʔamma təlmiːð$_i$ xtar-t{**-u**$_i$ / ***-hom**$_{i+j}$ / ***_**} [howwa$_i$
which student$_i$ choose.PFV-2SG{**-3MSG.CL**$_i$ / ***-3PL.CL**$_{i+j}$ / ***_**} [PRON.3MSG
w-Raːnia]$_{i+j}$
and-Rania]$_{i+j}$
Which student$_i$ did you choose him$_i$ and Rania?

(6.32) *Resumptive $\overline{A}$-dependency with an &P object argument*



The analysis of clitics as being the surface realization of CL° is able to explain why there is a singular clitic in (6.26) and how it can bear the features of the *wh*-operator: The clitic agrees with the resumptive pronoun in its specifier, which itself binds the first conjunct pronoun.[15]

15. However, it is still to be determined how a derivation with a plural clitic is to be avoided. It should be possible for the &P object to move to [Spec, CLP], with its first conjunct being the resumptive pronoun bound by the wh-word generated in [Spec, CP]. This is the configuration for resolved clitic doubling (6.30). However, in (6.26) such a plural clitic is unacceptable. Something else must be at play in order to rule out the generation of this plural clitic.

Although the facts presented in this subsection are not incompatible with Hewett's (2023c) analysis, it makes more sense to keep a unified analysis of clitics (especially object clitics) given the grammaticalization path proposed in §6.2. Having been explicit on how resumptive dependencies ought to be analyzed, we can now go back to the change from right dislocation to clitic doubling.

6.3.3 The grammaticalization of clitic doubling

In this section, I focus on the change from right dislocation to clitic doubling and argue that a right dislocation structure like (6.33) was reinterpreted as a doubling structure without the Topic Projection in the *v*P-periphery, in a process of structure simplification.

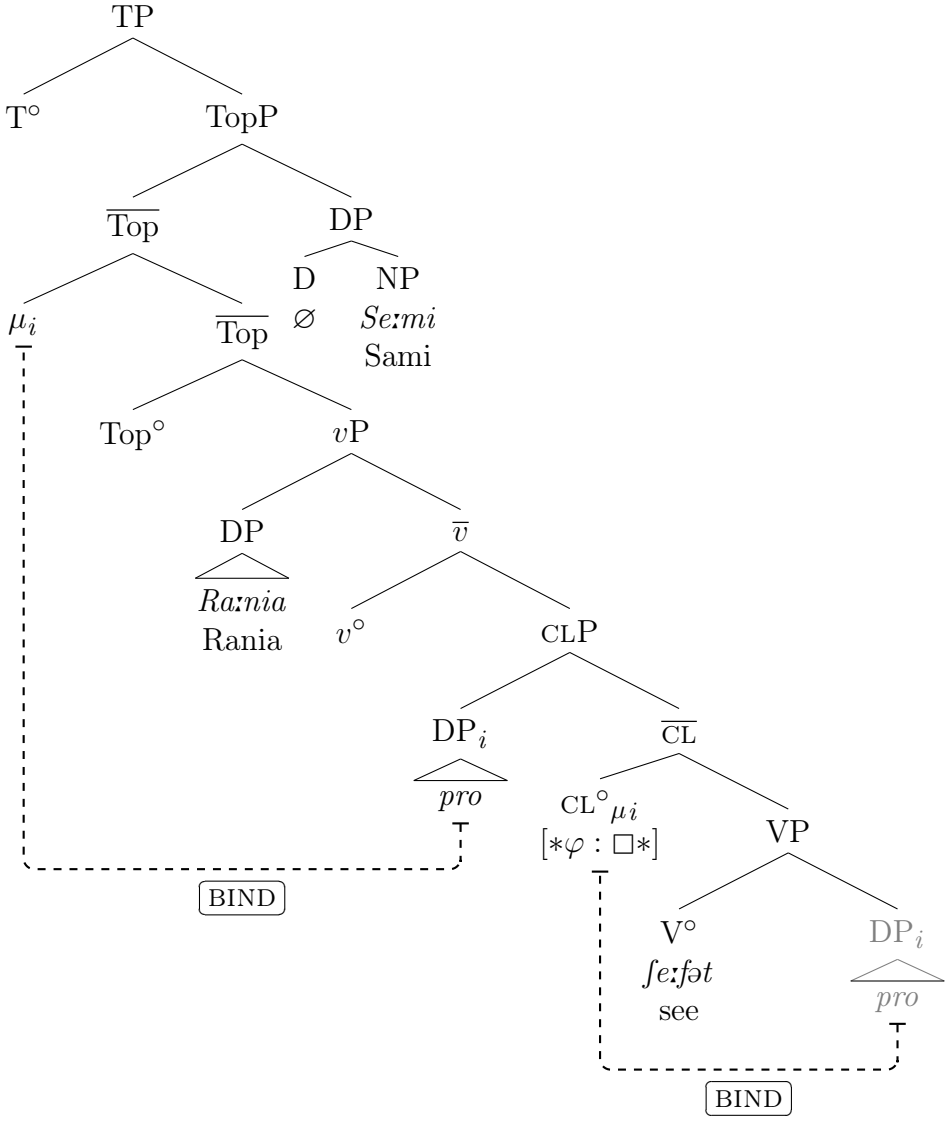
(6.33) a. *Right dislocation in Tunisian*

Raːnia ʃeːf-ət*(**-u**$_{i}$) lbeːraħ [Seːmi$_{i}$]

R. see.PFV-3FSG.PFV*(**-3MSG.CL**) yesterday S.

Rania saw him yesterday, Sami.

b. *A low-topic analysis of right dislocation*



In particular, I propose that clitic doubling arose from constructions like (6.33a), that did not contain adjuncts or other additional elements between the verb and the dislocated element such that the clitic is immediately followed by the dislocated element (6.34), creating an ambiguous surface structure.

(6.34) Ra:nia ʃe:f-ət-**u**$_{i}$ Se:mi$_i$
R. saw.3FSG-**3MSG.CL** S.
Rania saw him, Sami.

According to the analysis of right dislocation sketched in (6.33b), (6.34) would have an underlying structure containing a null *pro* between the clitic and the dislocated element (RD) as in (6.35a). I contend that the crucial change consisted of this null *pro* not being interpreted as being part of the structure (6.35b), due to it not being pronounced.

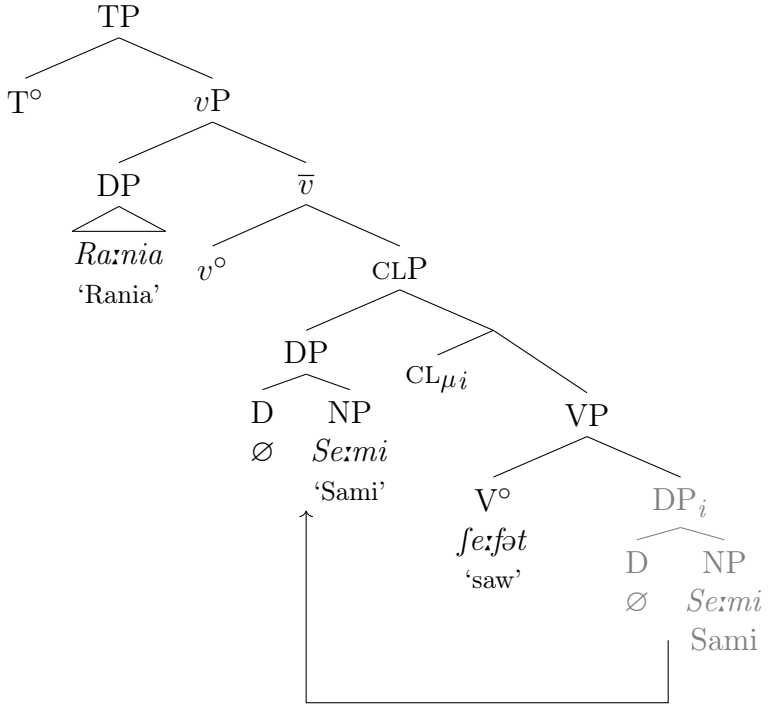
(6.35) a. *Input to the listener*
V-CL$_i$ *pro*$_i$ $\boxed{\text{RD}_i}$

b. *Interpretation of the input*
V-CL$_i$ $\boxed{\text{RD}_i}$

The lack of adjuncts or other elements separating the clitic from the right dislocate in (6.34),(6.35a) makes for another possible interpretation where the right dislocate is not in a peripheral position. It is well known that it can be hard to distinguish clitic doubling from right dislocation in many languages, and that the difference can sometimes only be discerned by the prosodic break characteristic of right dislocations that is not found in clitic doubling (Jaeggli 1986:35; Cecchetto 1999:56; Anagnostopoulou 2017:7). It is possible that this prosodic break not being heavy enough in certain contexts led to the grammaticalization of clitic doubling that I propose.

In other words, a sentence like (6.34) was taken to be derived like any other transitive sentence (6.36): Starting with the object being merged as the complement of V, instead of the resumptive pronoun, simplifying the input structure. Instead of merging a resumptive pronoun moving to the specifier of the clitic and being bound by the right dislocate, the right dislocate itself is reinterpreted as the argument that moves to CLP (6.36).

(6.36) *The reinterpretation of right dislocation*



The resumptive pronoun in (6.33a) is at the same time co-referential with the dislocated element doubled by the clitic, and it is null. This facilitates its replacement by the dislocated element, making this new clitic doubling structure simpler, doing away with the TopicP and the null resumptive pronoun. [Spec, CLP], which was only able to host pronouns given its historical development from a pronominal head, is now able to host elements that may be right dislocated, *i.e.,* given or backgrounded DPs.

Just like the change from pronominal clitic to doubling clitic described in §6.2, the change from right dislocation to clitic doubling does not happen at random: As Gabriel and Rinke (2010:80) argue for Spanish, it is more economical to have a sentence with the object in its VP-internal position than to have an additional projection hosting a dislocated element. Arguably, a structure such as (6.35a) is more complex than one like (6.35b). This isn't to say that right dislocation gets simplified into clitic doubling and is lost: We still have productive right dislocation structures, and as discussed in §2.3.2, it is possible to synchronically differentiate them from clitic doubling. The idea is rather that a structure like right dislocation,

which serves a specific pragmatic purpose—topic continuation (Lambrecht 2001:1074)—in a specific type of context—one where the referent of dislocated element is given, situationally evoked, or inferable (Lambrecht 1981:95)—was over-used in enough contexts (Givón 1976:154), perhaps because it is seen as informationally stronger, as is often the case in cyclical changes (Meillet 1912; Deo 2015a). This over-use results in a widening of its contexts of use, from topic continuation to inducing topichood on the doubled nominal (Kallulli 2008; Janse 2008). Thus, the clitic is reinterpreted as a topic marker in a sense, which is used for a discourse function.

Thus, to get to the distribution of clitic doubling we have today, two separate processes must have occurred: (i) The reinterpretation of pronominal clitics as higher functional heads which originally could only license null pronominal objects (§6.2), and (ii) The grammaticalization of right dislocation in certain contexts whereby the resumptive dependency which itself contains a doubling dependency is reinterpreted as a simpler doubling dependency (§6.3). This proposal is not only plausible, it also proves to be insightful with regards to the current distribution of clitic doubling in Tunisian and Palestinian and its properties we uncovered in Part I and in Chapter 5, in particular its semantic and pragmatic restrictions. However, one may wonder how these restrictions are encoded in the synchronic grammar. Given that I assume a widening of the range of DPs that can be moved to [Spec, CLP], what is it that prevents a non-given DP to move to [Spec, CLP]? There are possible ways to represent this type of restriction synchronically, perhaps by positing a feature on CL° such that it can only host elements bearing the +GIVEN feature in its specifier. That being said, any solution along these lines wouldn't be very insightful, but just a restating of the facts. Although having a diachronic explanation does not free us from providing a synchronic account, I will focus in the next section on the insights that the diachronic account provides.

6.4 The evolution and distribution of clitic doubling: Insights and issues of the grammaticalization account

In this section, I further justify the grammaticalization proposal developed thus far by the observed diachronic evolution of clitic doubling and its current distribution. I show that the two grammaticalization paths proposed in §6.2 and §6.3 explain a good deal of the restrictions on clitic doubling we've observed in Chapter 5, namely the fact that clitic doubling is obligatory with pronouns, optional with familiar lexical DPs, and impossible with non-familiar and indefinite DPs.

Cross-linguistically, clitic doubling seemingly always starts with pronominal elements and extends to other types of DPs (*e.g.*, Romance: Fischer, Navarro, and Vega Vilanova 2019, Spanish: Gabriel and Rinke 2010, Romanian: Hill and Tasmowski 2008:153). If the distribution of clitic doubling is limited in a given language, it is usually limited to pronouns (*e.g.*, French: Kayne 2000:164ff.). To the best of my knowledge, if a language can double lexical DPs, then it can double pronouns. Thus, clitic doubling seems to evolve as sketched in (6.37).

(6.37) *The evolution of clitic doubling*
Stage I → no clitic doubling
Stage II → clitic doubling of pronouns
Stage III → clitic doubling of familiar DPs
(loosely based on Fischer, Navarro, and Vega Vilanova 2019:60,fig. 4.1)

In Tunisian and Palestinian, we see that clitic doubling of pronouns is obligatory, and it is possible with lexical DPs but the phenomenon is pragmatically conditioned and its current distribution is restricted to DPs that are in the common ground (Chapter 5). All of these properties naturally follow from the diachronic account developed in the previous sections. Taking CL to be a new index bearing functional head that can only host null pronouns at first, then extends its domain to hosting DPs that could be right dislocated adequately explains the evolution of clitic doubling whereby it starts with pronouns and then extends

to other categories of DPs, yet not extending to all types of DPs.

In this section, I discuss the relationship between this diachronic development and two main properties: (i) The pragmatic restrictions on clitic doubling, including its sensitivity to definiteness (§6.4.1), and (ii) its incompatibility with crossover inducing elements (§6.4.2). I also address two potential issues arising from this proposal, namely that on its face, this grammaticalization path cannot directly account for the restriction of doubling clitics to individuated DPs, and thus its degradation with deflected agreement (§6.4.3), and it cannot account for the obligatory presence of differential object marking in Palestinian object clitic doubling, a requirement that couldn't have arisen from the grammaticalization of right dislocation, which lacks such a marker (§6.4.4). I provide separate explanations for these two facts and argue that they are independent developments.

6.4.1 Pragmatic restrictions and sensitivity to definiteness

The diachronic path from right dislocation to the special CL$^{\circ}$ explains the sensitivity of clitic doubling to the definiteness of the DP (§5.3.1) and the semantic and pragmatic restrictions on its occurrence, namely the generalization that doubled DPs must be in the common ground (§5.3.2). These two properties are natural consequences of the origin of clitic doubling: In right dislocation structures cross-linguistically, only elements that are identifiable by the hearer may be dislocated (Lambrecht 2001:1073): they must be given, situationally evoked, or inferable (Lambrecht 1981:95). Identifiability, hence presuppositionality, directly correlates with definiteness (Chafe 1976:38ff.; Heim 2011:1000). Definite DPs that are judged to be familiar to the hearer are exactly the set of things that are able to be clitic doubled in Tunisian and Palestinian, and in other Arabic varieties (Syrian (Damascus): Brustad 2000:354ff., Hallman and Al-Balushi 2022:1299; Omani (Al-Batinah): Hallman and Al-Balushi 2022:1318).

In fact, this path explains the distribution of clitic doubling whereby it may be used at

the beginning of a discourse context, provided the speaker takes the referent of the doubled argument to be known to the hearer. Consider for instance this naturally occurring example of Tunisian clitic doubling at the beginning of a video. The sentence in (6.38) is uttered right after the speaker greets her followers, but she is referring to a project she has talked about to this same audience in the past, hence clitic doubling is acceptable here and "fulfills [the] ... function of recalling or reinvoking a topic into active registry" (Brustad 2000:355).[16] It recalls the use of *that* in English, as in "Do you remember *that* project I told you about?".[17]

(6.38) tətðakkruː-**h**$_{i}$ **əl-proʒe**$_{i}$ li ħkiːt-əlkom
remember.IPFV.2PL-**3MSG.CL**$_{i}$ **DEF-project** that talk.PFV.1SG-2PL.CL.DAT
ʕliː-h fi novɑ̃br əlli feːt?
on-3MSG.CL in November that pass.PFV.3MSG
Do you remember the project that I told you about last November? (Jaibi 2024)

Note how this particular function is not one that right dislocation has: Right dislocation is much more restricted in its distribution, and cannot be used as a strategy to recall a topic, especially not in this out-of-the-blue kind of context. In fact, the right dislocate is usually unaccented and the identity of its referent is not at-issue, as discussed in §2.3.2. Take for instance the question in (6.39a) and the two possible answers in (6.39b) and (6.39c).

(6.39) a. A: waqteːh kammal-t druːs-ək?
when finish.PFV-2SG homeworkPL-2SG.CL
A: When did you finish your homework? Tunisian

16. A similar phenomenon that I noticed in Tunisian is that object clitic doubling is very common in yes/no questions where the person asking the question has some degree of confidence that the hearer knows the answer. For example, if I were to leave my notebooks on the table, and have done so in front of my mom, but come back later and do not find the notebooks, I can ask the following, with clitic doubling of the object 'my notebooks', because I have some expectation that my mom would know what notebooks I am talking about and that she knows where they are.

(i) bə-lleːhi ʃof-t-**hom**$_{i}$ kraːrs$_{i}$-i ?
by-god see.PFV-2SG-3PL.CL notebooks-1SG.CL
Hey, did you see my notebooks?

17. Demonstratives in English can be used to foster "a sense of common ground and shared perspective between interlocutors" (Acton and Potts 2014:4), which is reminiscent of this use of clitic doubling in Tunisian. Here, the speaker is assuming they share some relevant knowledge about the referent of the doubled element with their audience, just like Wolter (2006:§3.2.3) describes the use of demonstratives.

b. B: kammal-t-hom$_i$ lbeːraħ druːs$_i$-i
finish-PFV.1SG-3PL.CL yesterday homework-1SG.CL
B: I finished it YESTERDAY, my homework. Tunisian

c. # B: kammal-t-hom$_i$ druːs$_i$-i lbeːraħ
finish-PFV.1SG-3PL.CL homework.PL-1SG.CL yesterday
B: I finished MY HOMEWORK yesterday. Tunisian

In (6.39b), where right dislocation is appropriate, the Question Under Discussion (QUD) is *when* B finished their homework. (6.39b) is an appropriate answer because the accented element is not 'the homework', which is an already established entity in the discourse, by virtue of A's question (6.39a): It is backgrounded. An answer with clitic doubling is infelicitous in this case: There is no need to recall the topic as it has just been mentioned, and the QUD for an answer like (6.39c) seems to be *whether* B finished their homework.

The type of context in (6.39a) clearly isn't the same as the one in (6.38), where the project is the topic of the entire video: The creator continues on to describe the project and its steps in more details. Thus, there is a difference insofar as right dislocated elements need an explicit discourse antecedent (Ott and de Vries 2016:643), or at least a situationally evoked or inferable (Lambrecht 1981:95) antecedent—perhaps deictically (Lambrecht 2001:1074)—, as the hearer cannot accommodate their givenness, while clitic doubled elements only need an inferred antecedent, their givenness being accommodated more easily, as in (6.38), based on what the speaker believes their shared knowledge with the hearer is.

Thus, the diachronic path whereby clitic doubling evolves from a specific right dislocation structure—one where the clitic and the dislocate are adjacent—giving rise to a structure where the clitic itself is used for a discourse function—marking topichood (§6.3.3)—is supported by the current pragmatic effects created by clitic doubling and identified by Brustad (2000:355) as reinvoking a topic into active registry, and specifically in contexts where this topic "has not been active in the conversational registry, or [...] the speaker believes that the interlocutor has forgotten about it." This is particularly plausible in light of the discourse

function of right dislocation found cross-linguistically, which is to signal topic continuation (Lambrecht 2001:1074) or maintenance (Averintseva-Klisch 2016:226) with elements that are active in the conversational registry.

6.4.2 Quantification and Crossover

Another characteristic property of clitic doubling we find in Chapter 5 is the inability to double quantified phrases and *wh*-phrases, *i.e.,* crossover inducing elements. This is a surprising property given the fact that in languages like Bulgarian (Harizanov 2014), Greek (Anagnostopoulou 2003:207–215), or Spanish (Di Tullio, Saab, and Zdrojewski 2019) not only are crossover inducing elements able to be doubled, their doubling circumvents Weak Crossover (§5.3.1). The most common way to explain this amelioration is to link the apparent ability of clitic doubling to affect variable binding to A-movement (see Baker and Kramer 2018; Ostrove 2018; Saab 2024 *a.o.*). That is, clitic doubling must involve a step of A-movement, which turns a sentence containing a Weak Crossover violation like (6.40a) into an acceptable sentence (6.40b).

(6.40) *Weak Crossover amelioration with clitic doubling in Greek*

a. * [i mitera tu$_i$]$_j$ sinodhepse [to kathe pedhi]$_i$
[the mother his] accompanied [the every child]

b. [i mitera tu$_i$]$_j$ **to$_i$** sinodhepse [to kathe pedhi]$_i$
[the mother his] **CL.ACC** accompanied [the every child]
His mother accompanied every child. (Anagnostopoulou 2003:207)

The type of amelioration in (6.40) is seen as a hallmark property of A-movement to a position where the clitic is able to c-command the bound variable pronoun in the subject. How do we explain, then, that not only does clitic doubling in Tunisian and Palestinian *not* circumvent Weak Crossover, those crossover inducing elements cannot be doubled at all? Does our analysis of clitic doubling predict any of these two properties? I contend that it does in two ways: First, the synchronic analysis posits CLP right above VP (and not *v*P as in *e.g.,* Saab 2024) and thus the doubled quantifier would move to a position *below* the subject, not

affecting WCO at all. Second, I propose that the badness of clitic doubled quantifiers is the result of the diachronic development from right dislocation to clitic doubling, because quantifiers cannot be right dislocated and thus were not part of the DPs that were integrated into the grammaticalized clitic doubling construction.

First, it is important to evaluate the claim that WCO is indeed ameliorated by clitic doubling precisely because clitic doubling involves a step of A-movement, which is not uncontroversial. In fact, some authors have called into question the ability of clitic doubling to affect variable binding. Angelopoulos and Sportiche (2021:978–980) argue that any binding interactive properties clitic doubling might seem to have on the surface are due to the associate and not the clitic itself. Their argument is made within a Sportiche (1996) style analysis where the associate DP moves to [Spec, ClP]. Paparounas and Salzmann (2023b) call into question the analyses claiming a step of A-movement based on the binding interactive properties of clitic doubling: Despite data like (6.40), clitic doubling does not affect other binding relations in the expected way if it were due to A-movement. For example, if A-movement were involved in clitic doubling, then a configuration like (6.41), with the clitic, is expected to alleviate a Condition C violation, as DP1 c-commands the co-referential R-Expression contained in DP2.

(6.41) $\textsc{cl}_i$ V $[_{\text{DP1}}$ R-Exp$_j]$ $[_{\text{DP2}}$ X of R-Exp$_j]_i$

(Paparounas and Salzmann 2023b:26,(46))

If clitic doubling of DP2 were the result of A-movement of DP2 across DP1, then indeed we should expect a configuration like (6.41) with clitic doubling to alleviate this violation. According to Paparounas and Salzmann (2023b), this prediction is not borne out. Both with and without clitic doubling, configurations like (6.41) are unacceptable in Greek. Based on this kind of evidence against movement, in addition to evidence that Weak Crossover can be alleviated with other strategies aside from clitic doubling, such as D-linking (Wasow 1979:163f.; Eilam 2011:150–168; Culicover 2013:130–2), Paparounas and Salzmann

(2023b:40–44) argue that it is not so much A-movement that alleviates WCO but rather the informational-structural correlates of clitic doubling. Finally, as Hewett (2023c:210, fn.20) notes, the A-movement analysis of clitic doubling also predicts that clitic doubling should circumvent strong crossover, a possibility which has not been investigated, as far as I know.

Although movement is a crucial component in my analysis, we would not expect such an amelioration regardless because in my analysis, the doubled element moves to [Spec, CLP], a position which is *below* the subject. This movement wouldn't be able to ameliorate WCO effects because the doubled element would never be in a position from where it could c-command the variable pronoun inside the subject. However, if clitic doubling marks topichood, and if "inverse binding is possible if and only if the binder is interpreted as a topic and the bindee as (part of) an I[nformation] S[tructural] focus" (Eilam 2011:150), then why is doubling of quantifiers still ruled out?

The explanation that I pursue here is a historical one: In these dialects of Arabic, the grammaticalization of clitic doubling is not as far along as in say, Greek or Spanish. If the diachronic path that I propose above is indeed correct, then it is possible that the unacceptability of QP doubling is due to the fact that QPs in general can't be right dislocated (in *e.g.,* Italian: Cardinaletti 2002, Dutch and Spanish: Cestari 2023, Maltese: Čéplö 2014:217) and thus did not pertain to the categories of nominals that could be moved to the specifier of the new functional head CL. Take for example the discourse situation in (6.42a), which is very similar to the one in (6.39a) above. An answer like that in (6.39b) with right dislocation is unacceptable, as shown in (6.42c).

(6.42) *Quantified DPs are not compatible with right dislocation in Tunisian*

a. A: waqteːh qaːbəl-t koll walijj ?
when meet.PFV-2SG every parent
A: When did you meet every parent?

b. B: (qaːbəl-t koll walijj) nhaːr θ-θniːn
(meet-PFV.1SG every parent) day DEF-monday
B: (I met every parent) on MONDAY.

c. * B: qaːbəl-t-u$_i$ nhaːr θ-θniːn koll walijj$_i$
meet-PFV.1SG-3MSG.CL day DEF-monday every parent
Intended: 'I met him$_i$ on MONDAY, every parent$_i$.'

Examples like (6.42c), when compared to examples of right dislocation of non-quantified elements (6.39b), show how this construction is restricted. Thus, I chose to explain the incompatibility of doubling with quantified DPs as a result of the diachronic development of clitic doubling from right dislocation structures. In general, the interaction between clitic doubling and crossover inducing elements at the syntactic level does not seem to have a lot of explanatory power: On the one hand, clitic doubling should involve A-movement of the object above the subject in Spanish and Greek for that to be true, but not in Arabic[18] or Amharic. A view whereby clitic doubling ameliorates WCO in Spanish and Greek due to its information-structural properties (Paparounas and Salzmann 2023b) seems to be the most compatible with the inability to double Crossover inducing elements in Tunisian, Palestinian, and Amharic. It is simply possible that in these languages, clitic doubling is more restricted and has not yet extended its uses to quantified DPs. This view would naturally explain the variability of acceptability for clitic doubling of quantifiers in Amharic as reported by Baker and Kramer (2018) and in Tunisian as discussed in §5.3.1: The more referential support or descriptive content (Culicover 2013; Safir 2017) a putative quantifier/operator has (e.g., *which* vs. *who*), the more weakened the WCO effect is, and the more likely the quantifier/operator is to be part of the set of elements that can doubled.

An additional binding-interactive property of clitic doubling that I think is due to its pragmatic effects is its ability to ameliorate cataphoric relations, which has been interpreted as evidence for A-movement (Kramer 2014:604f.; Ostrove 2018:81–91). So, in the examples of unacceptable backward pronominalization in Amharic (6.43b), Tunisian (6.44b), and Palestinian (6.45b), the co-construal between the possessive pronoun inside the subject and the

18. Except in Lebanese, which displays a similar behavior to Greek and Spanish according to Aoun and Sportiche (1981).

DP object is much more available in the presence of a doubling clitic on the verb.

(6.43) *Cataphora amelioration in Amharic* (Kramer 2014:604:(25),(26))

a. Tɨgɨst$_i$ tämari-wa$_i$-n ayy-ätʃtʃ
Tigist.F student-her-ACC see-3FS.S
Tigist$_i$ saw her student$_i$.

b. ?* tämari-wa$_i$ Tɨgɨst$_i$-ɨn ayy-ä
student-her Tigist.F.ACC see-3MS.S
Intended: Her$_i$ student saw Tigist$_i$.

c. tämari-wa$_i$ Tɨgɨst$_i$-ɨn ayy-**at**
student-her Tigist.F.ACC see-(3MS.S)-3FS.O
Her$_i$ student saw Tigist$_i$.

(6.44) *Cataphora amelioration in Tunisian*

a. Raːnia$_i$ ʃeːf-ət sˤaːħəb-ha$_i$
R.$_i$ see.PFV-3FSG friend.M-3FSG.CL$_i$
Rania$_i$ saw her$_i$ friend.

b. * sˤaːħəb-ha$_i$ ʃeːf Raːnia$_i$
friend.M-3FSG.CL$_i$ see.PFV.3MSG R.$_i$
Intended: Her$_i$ friend saw Rania$_i$.

c. sˤaːħəb-ha$_i$ ʃeːf-ha$_i$ Raːnia$_i$
friend.M-3FSG.CL$_i$ see.PFV.3MSG-3FSG.CL$_i$ R.$_i$
Her$_i$ friend saw Rania$_i$.

(6.45) *Cataphora amelioration in Palestinian*

a. Saːmi$_i$ ʃaːf sˤaħibt-o$_i$
S.$_i$ see.PFV.3MSG friend.F-3MSG.CL$_I$
Sami$_i$ saw his$_i$ friend.

b. * sˤaħibt-o$_i$ ʃaːf-at Saːmi$_i$
friend.F-3MSG.CL$_I$ see.PFV-3FSG S.$_i$
Intended: His$_i$ friend saw Sami$_i$.

c. sˤaħibt-o$_i$ ʃaːf-at-o la-Saːmi$_i$
friend.F-3MSG.CL$_I$ see.PFV-3FSG-3MSG.CL$_i$ OM-S.$_i$
His$_i$ friend saw Sami$_i$.

Here again, just like Paparounas and Salzmann (2023b) suggest for Weak Crossover amelioration, it is reasonable that the amelioration effect on cataphora is due to the information-structural correlates of clitic doubling. Recall that clitic doubling serves as a topic marker of

sorts, and reinvokes that topic into active registry (Brustad 2000:355). It is possible to interpret the amelioration from the (b) examples to the (c) examples in each of these languages as the hearer accommodating the doubled element as a salient referent in the cataphoric relation, due to the information structural properties of clitic doubling. Clitic doubling marks the saliency of the object, which in turn improves its co-construal with the cataphoric pronoun. This is a very likely explanation, especially given the evidence that saliency and competition are the two main parameters regulating cataphora use (Trnavac and Taboada 2016): Saliency refers to the degree of topicality of the element cross-referenced by the cataphoric pronoun, and competition (or lack thereof) is the ability of speakers to "distinguish the intended referent from potential competitors" (Trnavac and Taboada 2016:75). In the (c) examples, saliency of the referent and non-competition between potential referents are both fulfilled due to the discourse properties of clitic doubling.

This is a natural consequence of the development of clitic doubling from a right dislocation construction where the dislocate was given, backgrounded, presupposed. These particular properties have carried over to clitic doubling as its contexts of use expanded, and have become associated with this construction, such that cataphoric relations get ameliorated by the hearer being able to pick the intendent referent more easily when it is doubled (*i.e.,* made more salient) *vs.* when it isn't.

6.4.3 Deflected agreement and individuation

The last property of clitic doubling from previous chapters that needs to be explained is the degradation of deflected agreement with it. Although the diachronic path from right dislocation to clitic doubling does not readily predict this restriction, I offer a tentative explanation of the facts in terms of an independent development that was restricted to clitic doubling as it became its own construction distinct from right dislocation.

Deflected agreement refers to an agreement pattern in which a plural DP triggers feminine

singular morphology, as opposed to strict agreement which refers to the expected plural agreement. In §5.4.3, I showed that deflected agreement is usually available for subject-verb agreement (6.46a)-(6.47a), noun-adjective agreement (6.46b)-(6.47b), anaphora (6.46c)-(6.47c), and resumption (6.46d)-(6.47d).

(6.46) *Deflected agreement in Palestinian*

a. l-ʒaraːjid {nmazaʕ-u / nmazʕ-at}
DEF-newspaper.PL {rip-PFV.3PL / rip-PFV.3FSG}
The newspapers ripped.

b. l-ʒaraːjid {l-ʔdaːm / l-ʔadiːm-e}
DEF-newspaper.PL {DEF-old.PL / DEF-old-FSG}
The old newspapers.

c. hadoːl l-ʒaraːjid$_i$ ʔadiːm-e maː-fiː-ha$_i$ maʕluːmaːt mufiːd-e
these DEF-newspaper.PL old-FSG NEG-in-3FSG.CL information.PL interesting-FSG
The newspapers are old, they don't have any interesting information.

d. l-ʒaraːjid$_i$ illi qaraʔ-t-{ha$_i$/hom$_i$}
DEF-newspaper.PL that read-PFV.1SG-{3FSG.CL/3PL.CL}
The newspapers that I have read.

(6.47) *Deflected agreement in Tunisian*

a. l-ʒaraːjid {tqatʕtʕʕ-u / tqatʕtʕʕ-ət}
DEF-newspaper.PL {rip-PFV.3PL / rip-PFV.3FSG}
The newspapers ripped.

b. l-ʒaraːjid {l-qdom / l-qdiːm-a}
DEF-newspaper.PL {DEF-old.PL / DEF-old-FSG}
The old newspapers.

c. ʒiːb l-ʒaraːjid$_i$ bʃ naqraː-{ha$_i$/hom$_i$}
bring.2SG DEF-newspapers so_that 1SG.IPFVread-{3FSG.CL/3PL.CL}
Bring the newspapers so I can read them. (Hewett 2023c:172)

d. [xitʕaːbeːt-hom]$_i$ əlli kassruː-lna bi-ha$_i$ ruːs-na
speech.PL-3PL.CL that broke.3PL-1PL.DAT with-3FSG.CL head.1PL
Their speeches that they beat us over the head with. (TC:text 21)

There are many parameters regulating the meaning associated with strict vs. deflected agreement in these contexts. In broad terms, deflected agreement gives rise to meanings of collectivity (Brustad 2000:54; Cowell 1964:423; Dali and Mathieu 2020:165), generality (Procházka and Gabsi 2017), or to a herd/clump reading (Kramer and Winchester 2017:40).

By contrast, strict agreement gives rise to meanings of distributivity (Dali and Mathieu 2020:165; Kramer and Winchester 2017:47), individuation (Brustad 2000:54; Procházka and Gabsi 2017), and specificity (Brustad 2000:55; Ritt-Benmimoun 2017; Procházka and Gabsi 2017).

Interestingly, we found object clitic doubling to be degraded when using a feminine singular clitic to cross-reference a plural, compared to the plural clitic, as shown in (6.48) and (6.49).

(6.48) qara?t-{*$\mathbf{ha}_i$/$\mathbf{hom}_i$} la-hado:l l-ʒara:jid$_i$
read.1SG–{***3FSG.CL/3PL.CL**} OM-these DEF-newspaper.PL
I have read these newspapers. Palestinian

(6.49) qri:t-{??$\mathbf{ha}_i$/$\mathbf{hom}_i$} ha-l-ʒara:jid$_i$-ə
read.2SG–{??**3FSG.CL/3PL.CL**} these-DEF-newspaper.PL-Q
Have you read these newspapers? Tunisian

The analysis of clitic doubling advocated for in this dissertation does not directly derive this fact. Nothing about the CL head has a restriction on what type of agreement should be privileged, except for the generalization that CL° agrees in Spec-Head fashion, and that I take Spec-Head agreement to be semantic agreement (agreement with *i*Fs). For example, in Chapters 3 and 4, I proposed that Spec-Head agreement with &Ps resulted in agreement with the plural *i*Fs of the &P, even when that &P had singular *u*Fs that could potentially be realized on the probe in case of downward-AGREE.

It is possible to account for deflected vs. strict agreement as the result of *i*F vs. *u*F agreement. This is indeed what Dali (2020) and Dali and Mathieu (2020) propose for Tunisian Arabic deflected agreement, treating these plural nouns as hybrid nouns. This idea is tantalizing and could exclude deflected agreement on doubling clitics, but it might also make wrong predictions based on our previous generalizations.

It can exclude deflected agreement on doubling clitics following my proposal in Chapters 3 and 4 that Spec-Head agreement always targets semantic features. If a noun like *ʒara:jid*

'newspapers' indeed has the feature matrix in (6.50), and if CL° can only copy *i*Fs, then we can exclude the singular features from being copied on CL°.

(6.50) *Possible feature matrix for Arabic inanimate plural*

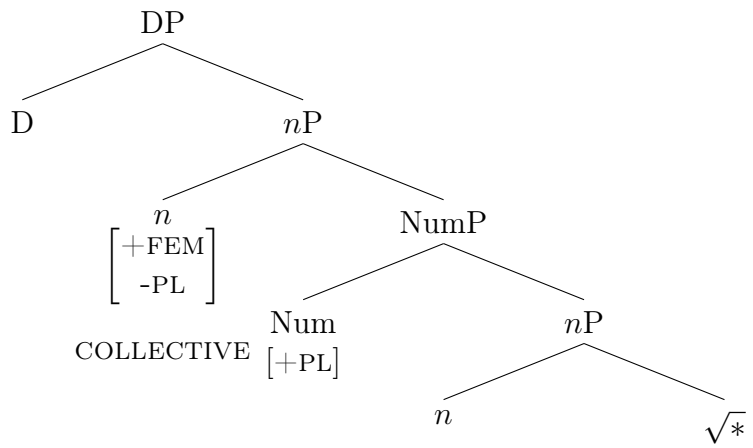
$$\begin{bmatrix} u\text{F: 3SG} \\ i\text{F: 3PL} \end{bmatrix}$$

(adapted from Dali and Mathieu 2020:184,(44))

However, recall the generalization made at the beginning of this chapter, namely that clitics are always the realization of CL°. Following this generalization, the examples of resumption and anaphora with deflected agreement should be derivable by CL° surfacing as feminine singular, hence, it must be possible for CL° to do that, regardless of what the context is (clitic doubling of overt DP or *pro*, or resumption). We can't, based on the syntax alone, exclude clitic doubling from all other contexts that have clitics surface, especially in light of the fact that CL° being responsible for surface clitics is highly desirable, as argued in the diachronic account in §6.2. What's more, the data on deflected agreement is not necessarily black and white: In §5.4.3, I mentioned that the judgements could vary on this phenomenon and described deflected clitic doubling as degraded instead of unacceptable.

More generally, I believe the hybrid noun analysis of these types of plurals in Arabic to be inadequate. Dali and Mathieu (2020) propose that broken plurals have the behavior of hybrid nouns, but broken plurals are not the only nouns that can cause deflected agreement (Procházka and Gabsi 2017). The number of parameters conditioning the compatibility of a given DP with deflected agreement is not small. Because a review of this phenomenon is beyond the scope of this work, I will simply assume Kramer and Winchester's (2017) approach whereby DPs triggering deflected agreement have a higher *n*, with a COLLECTIVE meaning (HERD/CLUMP in their terms), bearing the feminine singular features, which selects for Num[+PL], as sketched in (6.51).

(6.51)



(slightly adapted from Kramer and Winchester (2017:50,(29)))

In this case then, deflected agreement occurs with a DP that has such an n, but any given noun need not have it (that is, not all broken plurals would bear both singular and plural features as in Dali and Mathieu's (2020) system). Thus, there is a version of the word *ʒara:jid* 'newspapers' that has this higher n, and it triggers deflected agreement, and the version of it that does not have this higher n triggers plural agreement. Whichever one suits the context is used, whether the intended meaning is collective or not. In the examples (6.46) and (6.47) above, where I describe deflected agreement as being available, its acceptability depends highly on the context. For instance, deflected agreement in Najdi Arabic is preferred in contexts that require group readings and dispreferred in contexts that require individuation readings (Kramer and Winchester 2017:46). This is largely true of other dialects, including Tunisian (Procházka and Gabsi 2017) and Palestinian (Yassin 2022:117–123), as discussed at the beginning of this section. There are also other factors influencing the use of deflected agreement, including morphological (broken vs. sound plural), semantic (animateness, humanness), and register. Thus, an analysis that completely excludes deflected agreement with clitics will inevitably undergenerate.

Because of all of this, I propose that there is nothing in the syntactic derivation preventing outputs such as (6.48),(6.49) with feminine singular clitics. Instead, such outputs may be grammatical, but they are largely pragmatically unacceptable, because they clash with the

meanings generally associated with clitic doubling. Describing the degradation of deflected clitic doubling as pragmatic seems much more promising, and it aligns with recent experimental research: Zarka and Hacohen (2023a, 2023b) report that speakers of Druze Arabic[19] rate clitic doubling of nouns that are high on the atomicity scale (count nouns) as the most acceptable, while clitic doubling of nouns that are low on the atomicity scale (substance mass) are rated as least acceptable. Collective nouns are on the low end of this scale, and thus receive lower acceptability rates than count nouns. This is very much parallel to our clitic doubling data: We know that deflected agreement gives rise to a collective reading (lower on the individuation scale) and strict agreement gives rise to a distributive reading (higher on the individuation scale).[20] Crucially, individuation is not a binary property, it is gradable (Grimm 2018). Thus, it is not surprising that deflected clitic doubling is reported to be degraded, though is still able to be generated.

While the pragmatic explanation is satisfying, the path from right dislocation to clitic doubling does not explain this property. As far as I know, right dislocation is not limited to individuated nouns or anything of this sort: The crucial property of right dislocates is their being backgrounded. Take for instance the collective noun *ħweːjiʒ* 'things, stuff', which is able to take both strict (plural) and deflected (singular) agreement.[21]

In (6.52b), where the word *ħweːjiʒ* is right dislocated, both a singular and a plural clitic are

19. Druze, like Urban Palestinian, is a Levantine dialect.

20. This seems to be a common restriction on clitic doubling across Semitic, see Khan (1984).

21. There is ample evidence of this in corpora, as in the following examples from the same source (TC:text 19):

(i) j-ətʒalmtˤ-u ʕla ħweːjiʒ ma-j-aʕrf-u-**haː**-ʃ
3.IPFV-get_worked_up-PL on things NEG-3.IPFV-know-PL-**3FSG.CL**-NEG
They get worked up on things that they don't know.

(ii) ħweːjiʒ sˤaːr-**u**
things happen.PFV-**3PL**
Things that have happened.

acceptable.

(6.52) *Right dislocation with collective noun in Tunisian*

a. A: waqteh hazziː-t l-ħweːjiʒ ?
when take.PFV-2SG DEF-stuff
A: When did you take the stuff?

b. B: hazziː-t-{ha$_i$ / hom$_i$} lbeːraħ l-ħweːjiʒ$_i$
take-PFV.1SG-{3FSG.CL / 3PL.CL} yesterday DEF-stuff
I took it yesterday, the stuff.

I propose that the sensitivity of clitic doubling to individuation is something that has developed on its own and became associated with clitic doubling during its development as a construction distinct from right dislocation.

6.4.4 Explaining DOM in Palestinian

Thus far, I have focused on properties of clitic doubling that both Tunisian and Palestinian share, and whether the diachronic analysis proposed in §6.2 and §6.3 accounts for them. One specific property that is restricted to Palestinian and which I have only briefly mentioned in Chapter 2, is the obligatory differential object marking (DOM) that accompanies clitic doubling in Palestinian. Like other Levantine varieties, a clitic doubled object in Palestinian must be preceded by the preposition *la* (6.53), *i.e.,* it obeys Kayne's Generalization (§2.3.2).

(6.53) *Object clitic doubling in Palestinian must co-occur with DOM*

Ramzi zaːr-**o$_i$** *(**la-**)[Kariːm$_i$]
R. visited.3MSG-**3MSG.CL** *(**OM-**)K.
Ramzi visited Karim. (Jiries 2020:8)

DOM is not found in Tunisian, or other North African varieties of Arabic, except for Maltese,[22] but it is well documented in Levantine and Iraqi Arabic. In these two subgroups,

22. DOM in Maltese is restricted to objects high on the animacy scale (Borg and Azzopardi-Alexander 1997:137), independently of clitic doubling. In Maltese, inanimate objects can be doubled, in which case they are not preceded by the object marker (i).

DOM is inextricably linked to clitic doubling (Levin 1987; Erwin 1963; Souag 2017:48–52) If clitic doubling in Palestinian arises from a right dislocation construction, as I propose it does, it is reasonable to wonder where the obligatory DOM comes from. I propose that the development of clitic doubling in Palestinian Arabic was likely internal and it can be retraced as proposed in §6.2 and §6.3, but that it became such a characteristic feature of Levantine Arabic, with DOM being inextricably linked to it through additional contact with Aramaic (possibly *via* Iraqi varieties: Jiries 2022a).

It has generally been proposed that clitic doubling—with its obligatory DOM—in Levantine and Mesopotamian Arabic arose due to contact with Aramaic (*e.g.,* Féghali 1918:84f.; Souag 2017:48–52 and references therein), Aramaic being the most commonly spoken language in those areas before the spread of Arabic (Gzella 2015:*passim*). This hypothesis has been put into question by Pat-El and Stokes (2022), who argue that there isn't enough evidence pointing to this, especially given the distribution of clitic doubling and DOM in the different Aramaic languages: Western Aramaic, which would have been the contact language for Levantine Arabic, had DOM but no clitic doubling accompanying it, while Eastern Aramaic, which would have been the contact language for Mesopotamian Arabic, had DOM with clitic doubling (Pat-El and Stokes 2022:26–28). Additionally, in the few pre-modern texts we have from these varieties of Arabic, the Iraqi ones reflect the Eastern Aramaic pattern with DOM and clitic doubling, and the Palestinian ones reflect the Western Aramaic pattern, with DOM but no clitic doubling. Thus, it would be reasonable to ascribe to Aramaic the existence of this construction in Iraqi, but less so in Levantine. Yet, once we get to the modern attestations of these dialects, both Levantine and Iraqi seem to have the same pattern as Eastern Aramaic. Based on these facts, and additional evidence of population movements from Mesopotamia to the Levant, Jiries (2022a) argues that a plausible development is one

(i) [...] jaf-u juza-w-**ha**$_i$ **l-bibja**$_i$ [...]
[...] 3.IPFV.justify-PL 3.IPFV.use-PL-**3MSG.CL DEF-bible**
They know how to use the bible. (Čéplö 2014:202,(2))

where Iraqi speakers of Arabic borrowed the structure of DOM + clitic doubling from Eastern Aramaic, and those speakers later entrenched this construction in Levantine varieties they came into contact with, giving rise to the distribution we see today. This would explain the similarity between Iraqi and Levantine clitic doubling, and their patterning with only Eastern Aramaic clitic doubling to the exclusion of Western Aramaic.

I propose that it isn't necessarily the case that Arabic borrowed the entire structure involving DOM and clitic doubling. Rather, clitic doubling could have developed independently, with the presence of DOM being due to Aramaic influence.

In the pre-modern varieties of Arabic spoken in Palestine, DOM without clitic doubling is attested (6.54), as opposed to its current obligatory co-occurrence with clitic doubling.

(6.54) *DOM without clitic doubling in Christian Palestinian Arabic* (Blau 1966:414)

a. n-rjd l-jswʕ
1PL.IPFV-want OM-Jesus
We want Jesus.

b. w-j-mʒdw-n l-ʔsm-k
and-3.IPFV-glorify-PL OM-name-2SG.CL
And they glorify your name.

This parallels the distribution of the Western Aramaic varieties Levantine Arabic would have been in contact with, and it seems reasonable to think of DOM as a construction that was familiar to those Levantine speakers from their knowledge of Aramaic. Furthermore, clitic doubling *without* DOM seems to have been attested in these varieties (6.55), but the examples are less secure.[23]

(6.55) xðw-**h$_i$** mn bjn jd-j **ʕdwʔ ʔl-ʔlht**
take-**3MSG.CL** from between hands-1SG.CL **enemy DEF-gods**
Take the enemy of the gods away from me. (Blau 1966:395)

23. Blau (1966) suggests that (6.55) is a literal translation of a Syriac example, but in this case one might wonder why this literal translation wouldn't have included the object marker *l* that is in the Syriac text, if we already do have attestations of DOM from the same era.

Although the evidence is sparse and it is hard to tell exactly how clitic doubling developed in Levantine Arabic, the view that the entire structure with doubling and DOM is the result of direct Aramaic contact seems simplistic. At minimum, it would have had to been slowly integrated via Iraqi Arabic, as Jiries (2022a) suggests. Moreover, clitic doubling structures[24] without DOM are attested in early Arabic texts, and seem to have developed independently in multiple varieties[25] (*pace* Souag 2017). It is thus likely that multiple factors contributed to the distribution of clitic doubling in Palestinian today, including the internal development I propose in this chapter and borrowing of DOM from Aramaic.

6.4.5 Summary

In this section, I have looked at the properties of clitic doubling in Tunisian and Palestinian and showed how they can be accounted for by the grammaticalization paths proposed in the previous sections. The discourse restrictions on clitic doubling and its limitation to certain kinds of DPs were readily explainable by the change from right dislocation to clitic doubling. I also tackled two properties that may put this diachronic proposal into question: The degradation of deflected clitic doubling in both dialects, and the obligatory presence of DOM in Palestinian. I suggested that the restriction of doubling clitics to individuated nouns could be an independent development of the clitic doubling construction as they become specialized, and that the presence of DOM in Palestinian is likely due to language contact with Aramaic.

Having looked at object clitics and their diachronic development in detail, we now turn to complementizer clitics, which have the same restrictions as object clitics. Thus, I propose that they are the realization of a high CL°.

24. They are usually referred to as "anticipatory" pronouns, *e.g.,* Blau 1966; Peled 1990.

25. Brockelmann (1913:227) already mentions examples from Omani and Tunisian, among other varieties.

6.5 Complementizer clitics as the realization of a high CL^0

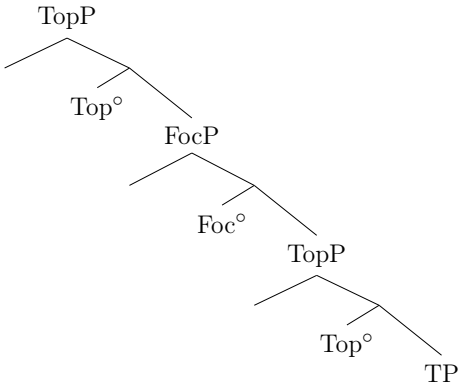
In this section, I extend the analysis of object clitics to complementizer clitics. Following my claim that synchronically, Tunisian and Palestinian doubling clitics are the realization of CL$^\circ$, I argue that the distribution of complementizer clitics makes sense if they are the surface realization of CL$^\circ$ (§6.5.1), and that this analysis naturally extends to the patterns of conjunct doubling with complementizers, which interestingly interacts with subject-verb agreement in those contexts (§6.5.2).

6.5.1 Extending the analysis

In Chapter 5, I offered a detailed description of complementizer clitics in Tunisian and Palestinian, showing that they behave exactly like object clitics in pretty much all respects: They cannot cross-reference first conjunct lexical DPs (§5.2), indefinite DPs and WCO-inducing DPs (§5.3.1), they are pragmatically conditioned (§5.3.2), and are degraded in deflected agreement configurations (§5.4.3). Based on this evidence, it is reasonable to propose that complementizer clitics are also the realization of CL$^\circ$, and thus that there are at least two CLPs in the clause structure: One in the VP-Periphery and one between TP and CP.

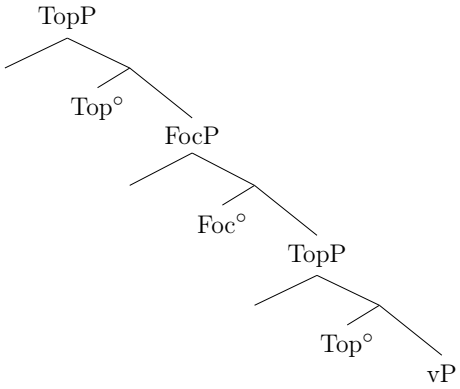
In §6.3, I defended the low-topic analysis of right dislocation (which grammaticalizes into clitic doubling) by relying on the parallelism between the left periphery (6.56) and the vP periphery (6.57), advocated for in *e.g.,* Jayaseelan (2001), Belletti (2004, 2005), Poletto (2006), Jarrah and Abusalim (2021), and Alshamari and Jarrah (2022).

(6.56) *The left periphery*



(slightly adapted from Rizzi 1997:297,(41))

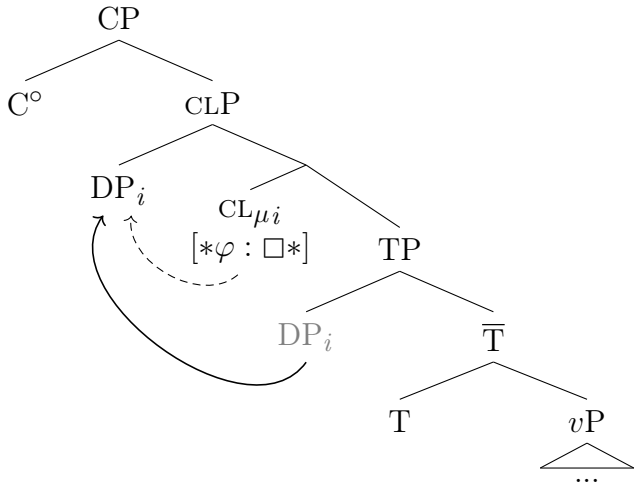
(6.57) *The* v*P periphery*



(slightly adapted from Belletti 2004:25,(19b))

I suggest that this parallelism is likely responsible for the development of complementizer clitics into their distribution as I document it here. Where the speakers took the clause internal TopicP + CLP dependency and simplified it into a CLP construction that has a particular discourse function, the fact that there is also a Topic position in the C-area (6.56) (see Shlonsky 2000; Akkuş 2015; Alatawi 2016; Lewis 2013:33–40 for evidence of this position in Arabic) may be the reason why it is precisely in this position that we find clitics behaving in the same way as those clause internal ones: Speakers generalized CLPs where there are TopicPs, *i.e.,* in the VP area and the CP area, as shown in (6.58).

(6.58) *A high CLP*



The structure in (6.58) is identical to the one in (6.2), the only difference being its location. Thus, the double here is the highest DP that CL° c-commands, *i.e.,* the subject.[26] This DP moves to the specifier of CL°, where it participates in Spec-Head AGREE, as the lower CL° does. Then this higher CL° moves to C, forming a complex head with it.

It is notable that in Classical and Standard Arabic, embedded clauses introduced by the complementizer *ʔinna* (the same complementizer we find in Palestinian) must be followed by a Topic-Comment structure (Peled 1990:24), such that VS sentences are ungrammatical following this complementizer (or, as Mohammad (2000) puts it, *ʔinna* may not be followed by *pro*). As Peled (2008:212) notes, the word-order in sentences introduced by *ʔinna* is GIVEN-NEW. It makes sense then, that complementizer clitics have this specific pragmatic function in spoken Arabic. They do not have this function in Classical/Standard Arabic, their distribution is very different in these varieties (see discussions in §2.3.1, fn. 8 and §5.4.2, fn. 33). The point here is that there seems to have already been a preferred type of word order (topic first) in these embedded clauses and that this has facilitated the generalization of clitics as markers of topic-hood higher in the clause.

Because the higher and lower CL° are essentially the same, the higher CL° is also limited in

26. I focus on complementizer clitics doubling subjects here, leaving for future research the possibility of complementizer clitics cross-referencing objects, and in particular topicalized objects. I assume that in an articulated left periphery, the CLP is right below CP, and thus these topicalized objects would be higher than the subjects for the purposes of complementizer clitic doubling, in which case, they are predicted to move to [Spec, CLP], not the subjects. Jarrah (2019:154ff.) reports that in Jordanian Arabic, this is exactly what we find (although he analyzes the facts as complementizer agreement). In (i), the fronted object is cross-referenced by a complementizer clitic, not the subject.

(i) ʔabuː-j fakkar ʔinn-ha$_i$ ʔis-sijjaːra$_i$ sarag-u-ha
father-1SG.CL believe.PFV.3MSG COMP-3FSG.CL DEF-car.FSG steal.PFV-3PL-3FSG.CL
ʔiz-zulum
DEF-MEN
My father believed that the car, the men stole it. (Jarrah 2019:154,(26a))

So far, I have gotten mixed results while eliciting these types of examples, and I focused on the most common type of data found in corpora, whereby the complementizer clitic cross-references the subject. That being said, I do not claim that complementizer clitics can only cross-reference subjects, I simply set aside other possibilities for the time being, hence the simplified analysis in this section, whereby the closest element in the c-command domain of the high CL° is the subject.

its distribution: It is pragmatically regulated, and can only host certain types of DPs in its specifier, namely ones that are definite, part of the common ground. Thus, the degradation of complementizer clitics with unfamiliar entities as in (6.59) (repeated from (5.48)) can be explained in terms of a pragmatic clash between the expectation that CL° can only cross-reference DPs in the common ground and its use in an ill-suited context here.

Context:

B is talking with a professor while A is waiting nearby. When B joins A, A asks what the conversation was about. B answers:

(6.59) l-ustaːz ħaka {ʔinno / #**inn-ha$_i$**} Raːnia$_i$ saʔat$^{\text{ʕ}}$at
DEF-professor say.PFV.3MSG {COMP / #**COMP-3FSG.CL**} R. fail.PFV-3FSG
The professor said that Rania failed.

Similarly, the fact that deflected agreement with complementizer clitics is degraded is also explained by the fact that the same syntactic phenomenon is involved for object clitics and complementizer clitics, and that this phenomenon is sensitive to individuation, rendering singular complementizer clitics cross-referencing plural subjects less acceptable than their plural counterparts. Just like I propose in §6.4.3, in principle, there doesn't need to be a syntactic mechanism preventing this from being generated, the clash being pragmatic.

Lastly, complementizer clitics' inability to cross-reference a first conjunct DP as in (6.60) (repeated from (5.5)) naturally follows from the requirements of CL°, whereby this head, being a binder, causes the movement of the entire subject &P to its specifier, and agrees with its plural *i*Fs (§3.6, §3.7).

(6.60) *Complementizer clitics cannot cross-reference a 1st conjunct lexical DP*
a. ʔul-t-illak {ʔinno / ***ʔinn-ha$_i$** / **ʔinn-hom$_{i+j}$**} [Manaːl$_i$
say.PFV-1SG-2SG.DAT.CL {COMP / ***COMP-3FSG.CL** / **COMP-3PL.CL**} [M.
w-Raːnia]$_{i+j}$ niʒħ-u
and-R.] pass.PFV-3PL
I told you that Manal and Rania passed. Palestinian

b. tɣaʃʃaʃ-t xaːtˤr-{***u**$_i$/**hom**$_{i+j}$} [Seːmi$_i$ w-Muʕtazz]$_{i+j}$
get_angry.PFV-1SG because-{***3SG.CL/3PL.CL**} S. and-M.
ʕaml-u barʃa ħəss
make.PFV-3PL many noise
I got upset because Sami and Mutaz made a lot of noise. Tunisian

Movement of only one conjunct would cause a CSC violation, as is the case for object clitics (cf. §3.7). By contrast, and just like object clitics, complementizer clitics are able to cross-reference a first conjunct pronoun, as in (6.61) (repeated from (5.11)).

(6.61) *Complementizer clitics can cross-reference a 1st conjunct pronoun*

a. ʔul-t-illak {ʔinno / **ʔinn-ha**$_i$ / **ʔinn-hom**$_{i+j}$} [hijje$_i$
say.PFV-1SG-2SG.DAT.CL {COMP / **COMP-3FSG.CL** / **COMP-3PL.CL**} [she
w-Raːnia]$_{i+j}$ niʒħu
and-R.] pass.PFV-3PL
I told you that she and Rania passed. Palestinian

b. tɣaʃʃaʃ-t xaːtˤr-{**u**$_i$/**hom**$_{i+j}$} [howwa w-Muʕtazz]$_{i+j}$
get_angry-PFV.1SG because-{**3SG.CL/3PL.CL**} he and-M.
ʕamlu barʃa ħəss
make.PFV-3PL many noise
I got upset because he and Mutaz made a lot of noise. Tunisian

This can be derived in the same way as first conjunct object doubling of pronouns in §4.6: By merging a BROAD SUBJECT in [Spec, CLP], just like the possibility of merging a BROAD OBJECT in the lower [Spec, CLP]. I leave the full picture of complementizer clitics and &P subjects for §6.5.2, as the data is a more complex and includes interactions with verb agreement.

My analysis of complementizer clitics differs considerably from proposals treating the phenomenon as complementizer agreement, arising from a ϕ-probe in C° (Lewis 2013; Jarrah 2019; Akkuş 2021). In fact, I don't propose that there is a ϕ-probe in C at all at this stage. That being said, my analysis is compatible with agreement analyses from a diachronic perspective: It is possible for this CLP projection to give rise to true complementizer agreement, following the common grammaticalization cline from pronouns to agreement. This

cline would proceed as such: First, the clitic head is an independent head at the start of the derivation, but it always moves to the complementizer, forming a complex head with it. This complex head [$_{\text{C}}$C$^{\circ}$ [CL$^{\circ}{}_{\varphi:val}$]] gets reinterpreted as a single head [C$^{\circ}{}_{\varphi:\square}$] with a ϕ-probe, similar to what van Gelderen (2011:41ff.) proposes for the subject agreement cycle on T$^{\circ}$. This may already be the case in some dialects that are reported to have a much less restricted distribution for complementizer clitics (see Jarrah 2019).

The compatibility between my analysis and the complementizer agreement ones is important because it takes into account the obvious similarities between the various dialects of Arabic, while being able to explain their differences as the result of each dialect being at a distinct point on the same grammaticalization cline.

6.5.2 Complementizer clitics and subject &Ps

Complementizer clitics behave the same way as object clitics with regards to cross-referencing elements inside coordinate structures: Cross-referencing of a first conjunct lexical DP is impossible (6.60) while that of a first conjunct pronominal is acceptable (6.61).

In Chapter 4, I analyzed object clitic doubling of first conjunct pronouns as the doubling of a BROAD OBJECT, merged in [Spec, CLP], which in turn binds the pronominal conjunct. The same analysis can be extended to complementizer clitics, although in this case, we are dealing with subjects. This makes the facts a little bit more complicated, since we know that BROAD SUBJECTS can be merged in the specifiers of T$^{\circ}$ and Asp$^{\circ}$ (§4.4), in addition to the specifier of CL$^{\circ}$ now offering another position in which a BROAD SUBJECT can potentially be merged.

I begin this subsection by showing how BROAD SUBJECTS can be incorporated to the analysis of complementizer clitics as the realization of a high CL$^{\circ}$, then I test the predictions of such an analysis on the possible patterns of complementizer clitics with &P subjects.

First, we can take sentences from §4.2 with broad subjects outside of coordination, and embed them under complementizers. In (6.62), following the analysis I propose in §4.2, the initial DP *Rania* is a BROAD SUBJECT merged in [Spec, TP] and the copula in T° agrees with it, following the Spec-Head Agreement under binding rule.[27]

(6.62) Raːnia$_i$ **keːn-ət** ʃʕar-ha$_i$ tˁwiːl
R. **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
Rania had long hair. Tunisian

If we embed (6.62) under a complementizer, the complementizer clitic cross-references the BROAD SUBJECT Rania (6.63), which is the highest element that could move to [Spec, CLP].

(6.63) xatˁər{**-ha$_i$** / *-u$_j$} Raːnia$_i$ **keːn-ət** ʃʕar$_j$-ha$_i$ tˁwiːl
because{**-3FSG.CL** / *-3MSG.CL} R. **be-PFV.3FSG** hair.MSG-3FSG.CL long.MSG
Because Rania had long hair. Tunisian

In this case, cross-referencing of the thematic subject 'hair' is impossible, which is expected given that the highest element moves to [Spec, CLP]. The same facts obtain with &P subjects: We saw in §4.3 that if a a BROAD SUBJECT is merged onto a sentence, agreement with it is obligatory (6.64).

(6.64) a. Seːmi$_i$ {**mʃe** / *mʃeː-w} [howwa$_i$ w-Raːnia]
S. {**go.PFV.3MSG** / *go.PFV-3PL} [3MSG.PRON and-R.]
Sami, he and Rania left. Tunisian
b. Raːnia$_i$ {**raːħ-at** / *raːħ-u} [hijje$_i$ w-Saːmi]
R. {**go-PFV.3FSG** / *go.PFV-3PL} [3FSG.PRON and-S.]
Rania, she and Sami left. Palestinian

When (6.64) is embedded under a complementizer, the result is the same as in (6.63) above: Only the BROAD SUBJECT can be cross-referenced by a the complementizer clitic (6.65).

27.

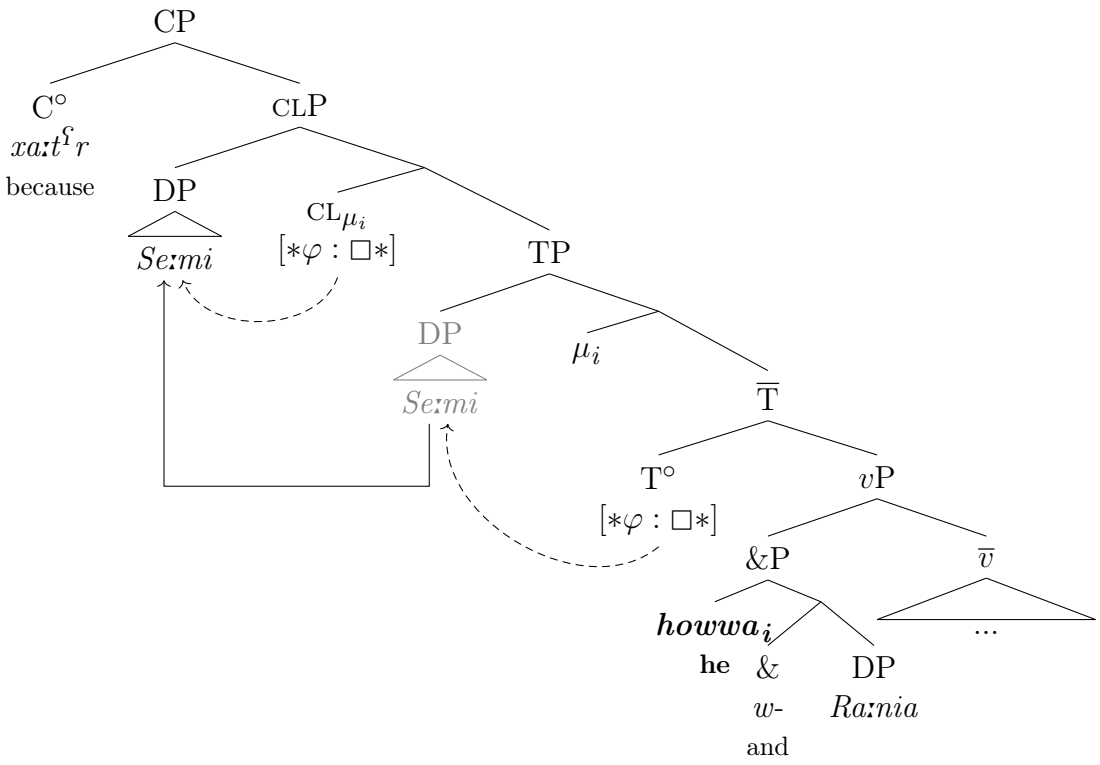
(i) **Spec-Head agreement under Binding:**
A given head with a ϕ-probe probes downwards for AGREE, except if that head carries a binder, in which case it agrees with the element in its specifier.

(6.65) a. ʔ xaːtˁr{-**u$_i$** / *-hom$_{i+j}$} **Seːmi$_i$** **mʃe** [howwa$_i$
because{**-3MSG.CL** / *-3PL.CL} S. go.PFV.3MSG [3MSG.PRON
w-Raːnia]$_{i+j}$
and-R.]
(*lit.*) Because Sami, him and Rania left. Tunisian

b. ʔ Aħmad ʔal-li ʔinn{-**ha$_i$** / *-hom$_{i+j}$} Raːnia$_i$ **raːħ-at**
A. say.PFV.3MSG COMP{**-3FSG.CL** / *-3PL.CL} R. **go-PFV.3FSG**
[hijje$_i$ w-Saːmi]
[3FSG.PRON and-S.]
Ahmad told me that Rania, she and Sami left. Palestinian

In (6.65a), the BROAD SUBJECT *Sami* is the highest element that can move to [Spec, CLP]. In this sentence, we know that *Sami* must be a broad subject in the specifier of T° because it controls agreement on that head (6.66).

(6.66)



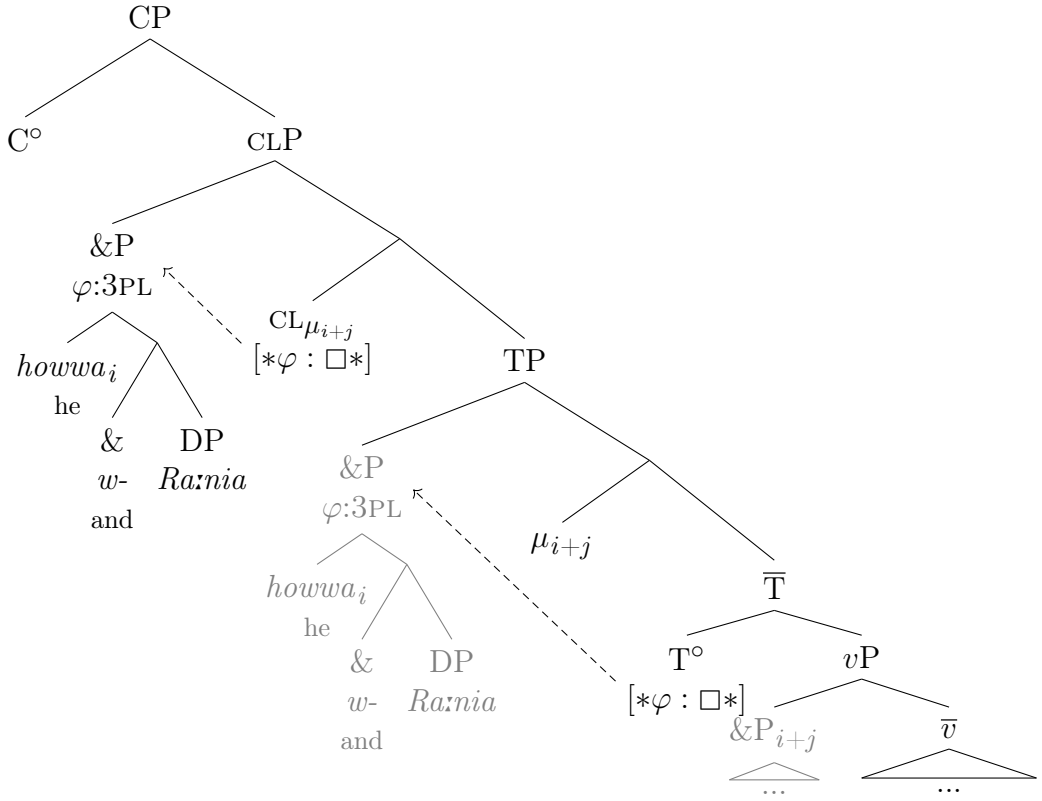
Thus, the BROAD SUBJECT is the only candidate that can move to the specifier of CL° in order to satisfy the requirement of this head, *i.e.*, for its specifier to be filled to bind a trace in this case.

We can further test the interaction between complementizer clitics and broad subjects in cases where there is no broad subject in the clause, *i.e.,* when the thematic &P subject moves to [Spec, TP] and resolved agreement obligatorily obtains on the verb (cf. §3.6). In this case, both a singular and a plural clitic are possible (6.67).

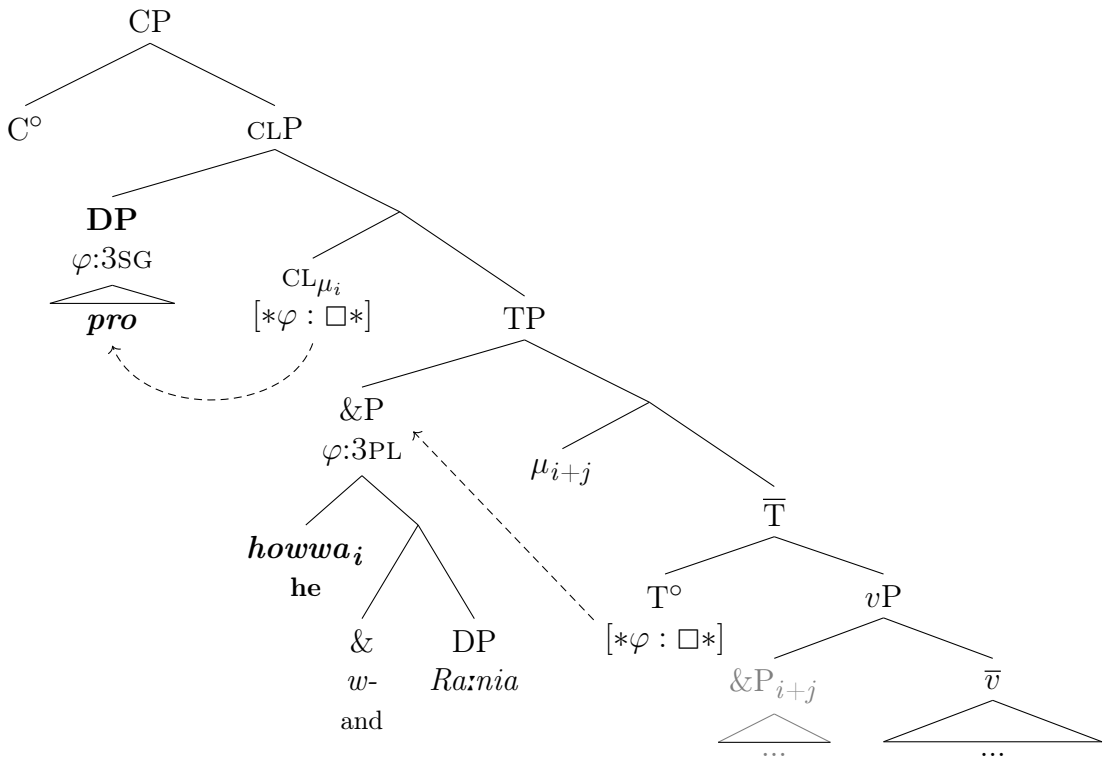
(6.67) xaːtˤr{-u$_i$ / -hom$_{i+j}$} [howwa$_i$ w-Raːnia]$_{i+j}$ mʃeː-w
because{-3MSG.CL / -3PL.CL} [3MSG.PRON and-R.] go.PFV-3PL
Because he and Rania left. Tunisian

The plural clitic is the result of movement of the &P subject to [Spec, CLP] (6.68), while the singular clitic is the result of base-generating a BROAD SUBJECT directly in that position (6.69).

(6.68) *Deriving a plural clitic in* (6.67)



(6.69) *Deriving a singular clitic in* (6.67)



Thus, there are three possible options for complementizer clitics in clauses with &P thematic subjects. If the thematic subject moves to [Spec, TP], then the complementizer clitic can either cross-reference the thematic subject, or a BROAD SUBJECT merged in [Spec, CLP] (6.67). If the thematic subject remains low and a BROAD SUBJECT is in [Spec, TP] (detectable through agreement on T°), then the complementizer clitic must cross-reference the BROAD SUBJECT (6.65). This makes a testable prediction for sentences with covert BROAD SUBJECTS (*i.e.,* those sentences with illusory agreement with a first conjunct pronoun), whereby the complementizer clitic should only be able to cross-reference this covert element. I now show that this prediction is borne out.

Recall that in examples like (6.70), I analyze the optionality between singular and plural agreement on the verb as the result of two different underlying structures (cf. §4.3.1).

(6.70) {mʃiː-t / mʃiː-tu} [ənti w-l-muʕallm-a]
{go.PFV-2SG / go.PFV-2PL} [PRON.2SG and-DEF-teacher-F]
You and the teacher left. Tunisian

Singular agreement (illusory FCA) in (6.70) is agreement with a covert BROAD SUBJECT binding the pronominal conjunct (6.71a), while plural agreement is the result of agreement with the thematic &P subject (6.71b).

(6.71) *Two different derivations for "FCA" and resolved agreement in* (6.70)

a. *pro*$_i$ mʃiː-t ənti$_i$ w-l-muʕallm-a
pro go.PFV-2SG PRON.2SG and-DEF-teacher-F
You and the teacher left.

b. mʃiː-tu [$_{\&P}$ ənti$_i$ w-l-muʕallm-a]$_{\phi 2PL}$
come.PFV-3PL PRON.2SG and-DEF-teacher-F
You and the teacher left.

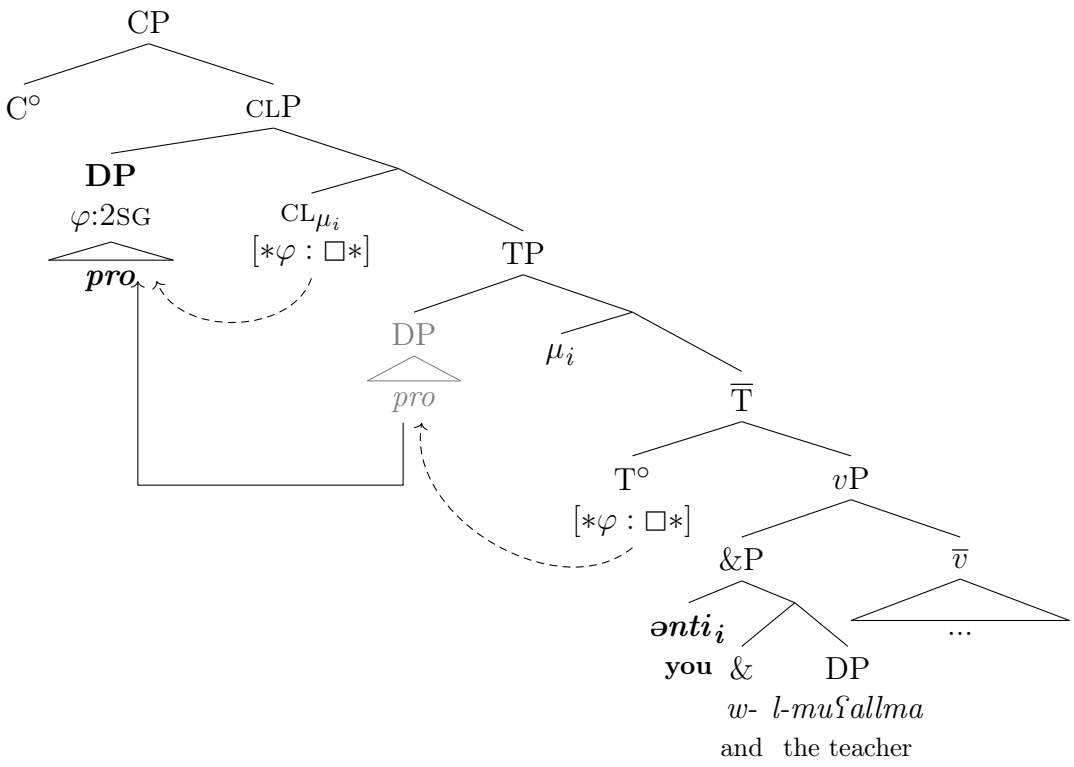
This means that if (6.70) is embedded under a complementizer, we predict that if agreement is singular, only a singular clitic can surface on the complementizer, because we are dealing with the configuration in (6.71a), where the covert BROAD SUBJECT is the highest element that can move to [Spec, CLP]. This is indeed what we find in both dialects ((6.72)–(6.73)).

(6.72) xaːtˤr{**-ək$_i$** / *-kom$_{i+j}$} **mʃiː-t** [ənti$_i$ w-l-muʕallm-a]$_{i+j}$
because{**2SG.CL** / *-2PL.CL} **go.PFV-2SG** [PRON.2SG and-DEF-teacher-F]
Because you and the teacher left. Tunisian

(6.73) Saːmi ʔal-li ʔinn{**-ak$_i$** / *-kom$_{i+j}$} **roħ-t**
S. say.PFV.3MSG-1SG.DAT.CL COMP{**-2SG.CL** / *-2PL.CL} **go-PFV.2SG**
[ʔinta w-Raːnia]$_{i+j}$ ʕa-l-ħafle
[PRON.2MSG and-R.] to-DEF-party
Sami told me that you and Rania went to the party. Palestinian

In both (6.72) and (6.73), the verb agrees with a covert BROAD SUBJECT binding the pronominal first conjunct and in both cases, only a clitic cross-referencing that BROAD SUBJECT is possible (6.74).

(6.74)



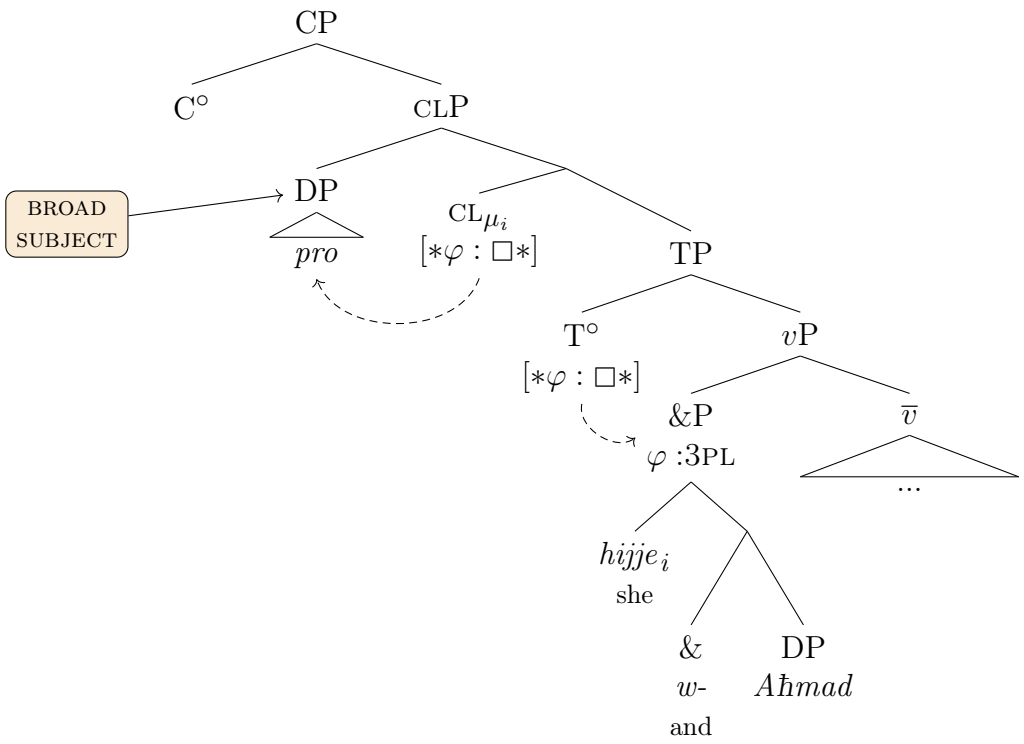
The last pattern to test is one where a sentence like (6.71b)—with resolved agreement on the verb—is embedded under a complementizer. In this case, in both dialects, only a resolved clitic is possible (6.75),(6.76).

(6.75) xaːtˤr{*-ha$_i$ / **-hom$_{i+j}$**} **mʃeː-w** [hijja$_i$ w-Aħməd]$_{i+j}$
because{*-3FSG.CL / **-3PL.CL**} **go.PFV-3PL** [PRON.3FSG and-A.]
Because she and Ahmad left Tunisian

(6.76) Saːmi ʔal-li ʔinn{*-ha$_i$ / **-hom$_{i+j}$**} **raːħ-u**
S. say.PFV.3MSG-1SG.DAT.CL COMP{*-3FSG.CL / **-3PL.CL**} **go.PFV-3PL**
[hijje$_i$ w-Aħmad]$_{i+j}$
[PRON.3FSG and-A.]
Sami told me that she and Ahmad left. Palestinian

This isn't directly predicted by the analysis, insofar as it should be possible to base-generate a BROAD SUBJECT in [Spec, CLP], in a configuration like (6.77).

(6.77) *



This configuration, however, is unacceptable. In both dialects, if there is an overt BROAD SUBJECT right after the complementizer, both the complementizer clitic and the main verb must agree in features with that BROAD SUBJECT,[28] as discussed at the beginning of this subsection (see (6.65) above).

(6.78) ʔ xaːtˤr{**-ha$_i$** / *-hom$_{i+j}$} Raːnia$_i$ {**mʃeː-t** / *mʃeː-w}
because{**-3FSG.CL** / *-3PL.CL} R. {**go.PFV-3FSG** / *go.PFV-3PL}
[hijja$_i$ w-Aħməd]$_{i+j}$
[3FSG.PRON and-A.]
Because Rania, she and Ahmad left Tunisian

(6.79) ʔ Saːmi ʔal-li ʔinn{**-ha$_i$** / *-hom$_{i+j}$} Raːnia$_i$
S. say.PFV.3MSG-1SG.DAT.CL COMP{*-3FSG.CL / -3PL.CL} R.
{**raːħ-at** / *raːħ-u} [hijje$_i$ w-Aħmad]$_{i+j}$
{**go.PFV-3FSG** / *go.PFV-3PL} [3FSG.PRON and-A.]
Sami told me that Rania, she and Ahmad left. Palestinian

In other words, a configuration like (6.77), with a BROAD SUBJECT merged in [Spec, CLP] while [Spec, TP] is empty is bad: For whatever reason, either the thematic subject must

28. (6.78) and (6.79) get a ? diacritic due to being judged as relatively marked compared to the sentences with a covert broad subject.

move to [Spec, TP], in which case we get the configuration that we have in (6.69), or a BROAD SUBJECT is merged in [Spec, TP], in which case we get the configuration we have in (6.66). This is very much reminiscent of the sandwiched agreement configurations investigated in §4.4.2, where [Spec, AspP] had to be filled by either the thematic subject or a BROAD SUBJECT. In §4.4.2, this was independently motivated by an EPP feature on Asp° in Arabic in general (Tucker 2011; Crone 2017). It is unclear, however, that T° has an obligatory EPP feature in Arabic (see Aoun, Benmamoun, and Choueiri 2010:66–9; Tucker 2011:190f.). So, something else may be ruling out the configuration in (6.77), and I tentatively propose that there is a more general restriction on BROAD SUBJECTS, whereby if they are part of a derivation, they must be merged in the lowest possible position. Thus, if [Spec, AspP] is open, the BROAD SUBJECT must be merged there, if not then [Spec, TP] and then [Spec, CLP], where applicable. As discussed at length in §4.7, BROAD SUBJECTS have many poorly understood elusive properties that are beyond the scope of this dissertation. My preliminary investigations of this category do point to a restriction on them being merged as low as possible, but I leave a full investigation of this for future research (see also Hewett (2024) who proposes that BROAD SUBJECTS are merged below T, in [Spec, AspP], although he has a different analysis of the agreement facts).

6.5.3 Summary

In this section, I extended the analysis of doubling clitics to complementizer clitics, arguing that there is a higher CLP above TP. In this case, the highest element in the clause (usually the subject) moves to the specifier of CL°. The clitic then moves to C, leading to the clitics we see on complementizers. Because it is the same head that is responsible for both object clitics and complementizer clitics, the restricted distribution of these two types of doubling clitics naturally follows. I have also shown that there are predictable interactions between subject-verb agreement and complementizer clitics that my analysis derives straightforwardly.

6.6 Conclusion

The focus of this chapter was doubling clitics and how the analysis I advocate for in the dissertation can account for their distribution. I proposed that this distribution is mostly due to the historical development of doubling clitics from pronominal clitics, first as doubling only pronouns (§6.2), then as extending their domain to familiar DPs through the grammaticalization of right dislocation (§6.3). This diachronic development, in addition to two other independent properties (individuation and DOM), explain the current distribution of clitic doubling (§6.4). Because of the parallelism between the VP-periphery and the left periphery, I proposed that once the grammaticalization from right dislocation to clitic doubling happens, the CLP projection is able to be merged higher in the clause, between TP and CP (§6.5), thus explaining why doubling clitics are only found with verbs and complementizers.

CHAPTER 7

AGREEMENT CLITICS, COPULAS, AND AUXILIARIES

7.1 Introduction

This chapter's focus is *wh*-clitics and negation clitics, that is *agreement clitics*. In Chapter 5, I showed that these clitics have a different distribution than that of doubling clitics. They act like subject-verb agreement in most respects: They can cross-reference a wider range of DPs than doubling clitics and they are not pragmatically conditioned, they can cross-reference a first conjunct lexical DP, and they can surface as default. This type of behavior is typical of a ϕ-probe like T°, not the discourse-regulated CL head.

An important characteristic of agreement clitics uncovered in Chapter 5 is their complementary distribution with verbs (§5.3.3). Both *wh*-clitics (7.1) and negation clitics (7.2) were found to be incompatible with the presence of a verb.

(7.1) wh-*clitics are in complementary distribution with verbs...*

a. *... in Palestinian*

i. weːn**-kom**
where**-2PL.CL**
Where are you?

ii. weːn(***-kom**) roħ-tu
where(***-2PL.CL**) go.PFV-2PL
Where did you go?

b. *... in Tunisian*

i. wiːn**-ək**
where**-2SG.CL**
Where are you?

ii. wiːn(***-ək**) mʃiː-t
where(***-2SG.CL**) go.PFV-2SG
Where did you go?

(7.2) *Negation clitics are in complementary distribution with verbs in Tunisian*

a. sħaːb-i ma**-hom-**ʃ f-l-qahwa
friends-1SG.CL NEG**-3PL.CL-**NEG in-DEF-cafe
My friends are not at the cafe.

b. sħaːb-i {ma-**mʃeː-w-**ʃ / *ma**-hom-**ʃ mʃeː-w}
friends-1SG.CL {NEG-**go.PFV-3PL**-NEG / NEG-**3PL.CL**-NEG go.PFV-3PL}
l-l-qahwa
to-DEF-cafe
My friends did not go to the cafe.

In §5.3.3, I alluded to the fact that while *wh*-clitics are always incompatible with verbs, negation clitics have a more complex distribution. In this chapter, I investigate this distribution in more detail and argue that despite surface differences, both *wh*-clitics and negation clitics are a contextual realization of T°. The key context for these clitics to surface is one where no verb has moved to T°. Thus, they contrast with the Prefix and Suffix Conjugation morphemes, which are the realization of ϕ-bearing T°/Asp° when these heads form a complex head with a verb. Looking at agreement clitics from this perspective not only allows us to propose a unified analysis for them, it also provides us with insights on the Arabic clause structure, including the position of negation in the clause and the location of ϕ-probes, two topics that have garnered considerable attention in the literature on Arabic syntax.

The remainder of this chapter is organized as follows: In §7.2, I lay out the empirical generalizations that suggest that agreement clitics are the realization of T°. In §7.3, I focus on verb movement and the location of NegP in the clause, showing what the necessary conditions are for agreement clitics to surface. Then, in §7.4, I move on to the topic of loci of ϕ-probes in the clause. Because I claim that agreement clitics are the realization of a T° with a ϕ-probe, I show that previous approaches to Arabic agreement are inadequate and propose a novel analysis whereby every tense/aspect head bears a ϕ-probe. Finally, I provide a synchronic analysis of agreement clitics in §7.5 and a diachronic one in §7.6. §7.7 concludes.

7.2 Empirical Generalizations

In this section, I provide the key empirical generalizations regarding agreement clitics, showing why both *wh*-clitics and negation clitics should be understood as the realization of the same underlying head (T°), despite differences in their surface distribution. The main difference I focus on is the following: *Wh*-clitics are in perfect complementary distribution with verbs (7.3), no matter their tense/aspect.

(7.3) *Verbal Sentences* Tunisian

a. *Simple imperfective*
wiːn(*-u) j-kuːn
where(*-3MSG.CL) IPFV.3MSG-be
Where will he be? / Where is he (habitually)?

b. *Simple Perfective*
wiːn(*-u) mʃe
where(*-3MSG.CL) go.PFV.3MSG
Where did he go?

c. *Complex Past Imperfective*
wiːn(*-u) kːen j-əmʃi
where(*-3MSG.CL) be.PFV.3MSG IPFV.3MSG-go
Where did he used to go?

d. *Preverbal Future*
wiːn(*-u) bʃ j-kuːn
where(*-3MSG.CL) FUT IPFV.3MSG-be
Where will he be?

If there is any type of verb in the clause, the clitic cannot surface: It can only surface, in fact it must, in verbless sentences like (7.4) (*i.e.,* present tense copular sentences).[1]

1. I describe *wh*-clitics as obligatory in verbless clauses, which is true in neutral contexts with *wh*-movement, like (7.4). It is possible to construct these sentences without apparent *wh*-movement, in which case the clitic does not seem to be obligatory (i).

(i) Seːmi wiːn(-u)
S. where(-3MSG.CL)

A question like (i) is not neutral from an information structure standpoint, especially in the absence of the clitic, though the pragmatic effect is hard to identify here (hence the lack of translation). I suspect that there are possibly two derivations for (i): One with *wh*-movement and topicalization of the subject, in which case the clitic surfaces, and one where the *wh*-word remains in-situ, in which case the clitic does not surface.

(7.4) *Verbless Sentence*
wiːn*(-u) Seːmi?
where*(-3MSG.CL) S.
Where is Sami?

By contrast, negation clitics are incompatible with only those verbs that show up *inside* circumfixal negation. So for instance, the clitic cannot surface when the verb is in the simple imperfective (7.5), or perfective (7.6), or even the compound past imperfective (7.7), but it can surface if the verb is in the preverbal future (7.8), the one context where the verb cannot surface inside negation (7.8b).[2]

(7.5) *Simple imperfective*
a. * ma(-hu-)ʃ j-kuːn f-d-daːr
NEG-3MSG.CL-NEG IPFV.3MSG-be in-DEF-house
b. ma-j-kuːn-ʃ f-d-daːr
NEG-be.IPFV.3SG-NEG in-DEF-house
He is not (habitually)/ will not be in the house.

(7.6) *Simple Perfective*
a. * ma(-hu-)ʃ mʃe
NEG-3MSG.CL-NEG go.PFV.3MSG
b. ma-mʃe-ʃ
NEG-go.PFV.3MSG-NEG

Although I exclude this type of example and leave it for future research, the fact that there's evidence that the clitic does not surface when the *wh*-word does not move plays a role in the analysis.

2. Note that the clitic is optional with negation, so it is always in parentheses. Negation can surface as a continuous morpheme *muʃ*, in those contexts where it cannot host a verb. Whenever negation can host a clitic, it can also surface as *muʃ*, without the clitic. Note that this seems to be a difference between Tunisian and other dialects of Arabic where negation clitics are reportedly not able to surface in contexts like (7.8). For example, in Egyptian Arabic, an imperfective verb may not merge with negation (i), but Benmamoun et al. (2014) report that a pronoun cannot be inserted in that position (ii) (the equivalent of negation clitics in Egyptian are strong pronouns).

(i) mi-ʃ bi-j-iktib
NEG-NEG IND-IPFV.3MSG-write
He isn't writing. (Jelinek 1981:20,(31))

(ii) ma(*-huwaː-)ʃ bi-ji-ktib
NEG(*-PRON.3MSG-)NEG IND-3MSG.IPFV-write
He doesn't write. (Benmamoun et al. 2014:136,(21b))

I focus on the realization of the clitic for most of this chapter, but I talk about its optionality when discussing other analyses at the end of §7.5.

He did not go.

(7.7) *Complex Past Imperfective*

a. * ma(-hu-)ʃ keːn j-əmʃi
NEG(-3MSG.CL-)NEG be.PFV.3MSG IPFV.3MSG-go

b. ma-keːn-ʃ j-əmʃi
NEG-be.PFV.3MSG-NEG IPFV.3MSG-go
He didn't use to go.

(7.8) *Preverbal Future*

a. ma(-hu-)ʃ bʃ j-kuːn f-d-daːr
NEG(-3MSG.CL-)NEG FUT IPFV.3MSG-be in-DEF-house
He will not be in the house

b. i. * ma-bʃ j-kuːn-ʃ f-d-daːr
NEG-FUT IPFV.3MSG-be-NEG in-DEF-house

ii. * ma-bʃ-ʃ j-kuːn f-d-daːr
NEG-FUT-NEG IPFV.3MSG-be in-DEF-house

Just like *wh*-clitics, negation clitics are also characteristic of verbless sentences like (7.9) (Eid 1983; Aoun, Benmamoun, and Choueiri 2010:108; Abdel Razaq and Mahameed 2017, *a.o.*), which earned them the name of "negative copula" (Cowell 1964:387f.; Brustad 2000:296; Benmamoun et al. 2014).

(7.9) *Verbless sentence*
ma(-hu-)ʃ f-d-daːr
NEG(-3MSG.CL-)NEG in-DEF-house
He isn't in the house.

While both *wh*-clitics and negation clitics are found in verbless environments, there is a crucial contrast between them, seen in (7.3d) and (7.8a): If it is true that both clitics there would be the realization of a verbless T, as I claim, then we need to explain why this T could not surface in (7.3d) but can in (7.8a). In the remainder of this section, I propose that this difference is due to the properties of the *wh*-word and negation, rather than a property of the clitic itself. In a nutshell, *wh*-questions have T-to-C movement, which means that whichever element is in T (verb or clitic) moves to C (§7.2.1). Negation circumfixes around T, but it has restrictions on which kinds of elements it can host, and if it can host an element then it must do so, otherwise a clitic can surface (§7.2.2). In §7.2.3, I further support my

claim that *wh*-clitics and negation clitics are the realization of the same head by showing that in contexts where both a *wh*-clitic and a negation clitic could potentially surface, only the negation clitic is available.

7.2.1 Wh-clitics

As we just saw, *wh*-clitics are in perfect complementary distribution with verbs (7.3), which means they can never surface if there is any verb in the clause. In order to better understand what causes this distribution, I look at two uses of the *wh*-word *wiːn* 'where'—questions and free relatives—which impose different restrictions on clitic presence and word order.

First, the complementary distribution between clitics and verbs is also characteristic of indirect questions, as in (7.10).

(7.10) a. sʔəl-ni wiːn-ək
ask.3MSG.PFV-1SG.CL where-2SG.CL
He asked me where you are.

b. sʔəl-ni wiːn*(-ək) kon-t
ask.PFV.3MSG-1SG.CL where*(-2SG.CL) be.PFV-2SG
He asked me where you were.

By contrast to questions, these *wh*-clitics cannot surface in free relatives headed by *wiːn* (7.11).

(7.11) taw n-ʒi wiːn {*-ək / ʔənti}
FUT 1.IPFV-come where {*-2SG.CL / 2SG.PRON}
I will come where you are.

An additional difference between questions and free relatives in this context is the word order. In questions, whether direct (7.12) or indirect (7.13), the verb must immediately follow the *wh*-word: Not even the subject can separate them.[3]

3. This description holds in neutral contexts, and judgements here should be understood to be limited to those contexts only. There are pragmatically marked contexts where sentences like (7.12b) and (7.13b) may be acceptable, but they fall outside of the scope of this research (see fn.1 above as well).

(7.12) a. wiːn {j-kawwr-u / kawwr-u} l-uleːd ?
where {IPFV.3-play_soccer-PL / play_soccer.PFV-PL} DEF-boys

b. * wiːn l-uleːd {j-kawwr-u / kawwr-u} ?
where DEF-boys {IPFV.3-play_soccer-PL / play_soccer.PFV-PL}
Where do the boys play soccer?

(7.13) a. sʔəl-ni wiːn {j-kawwr-u / kawwr-u}
ask.PFV.3MSG-1SG.CL where {IPFV.3-play_soccer-PL / play_soccer.PFV-PL}
l-uleːd
DEF-boys

b. * sʔəl-ni wiːn l-uleːd {j-kawwr-u /
ask.PFV.3MSG-1SG.CL where DEF-boys {IPFV.3-play_soccer-PL /
kawwr-u}
play_soccer.PFV-PL}
He asked me where the boys play soccer.

In free relatives, no such restriction applies: Both S-V and V-S word orders are acceptable in this context.[4]

(7.14) a. taw n-əmʃi wiːn {j-kawwr-u / kawwr-u}
FUT IPFV.1SG-go where {IPFV.3-play_soccer-PL / play_soccer.PFV-PL}
l-uleːd
DEF-boys

b. taw n-əmʃi wiːn l-uleːd {j-kawwr-u / kawwr-u}
FUT IPFV.1SG-go where DEF-boys {IPFV.3-play_soccer-PL / play_soccer.PFV-PL}
I will go where the boys play soccer.

Although the possible word orders can vary depending on the *wh*-word and certain pragmatic conditions, many varieties of Arabic seem to have a strong preference for WH-V-S word-order in *wh*-questions. For instance, Sulaiman (2016) reports that subject-verb inversion is obligatory in most *wh*-questions in Syrian Arabic, including direct (7.15a) and indirect (7.15b) questions.

(7.15) Wh-*questions in Syrian Arabic*

a. i. wen raħ Tamer
where go.PFV.3MSG Tamer

4. Srire (2023:43) reports the availability of this same word order for free relatives in the closely related Libyan dialect.

ii. * wen Tamer raħ
where Tamer go.PFV.3MSG
Where did Tamer go? Sulaiman (2016:32,(44))

b. i. ma b-aʕref ʃw ħaka Basem
NEG IND-1SG.IPFV.know what say.PFV.3MSG Basem

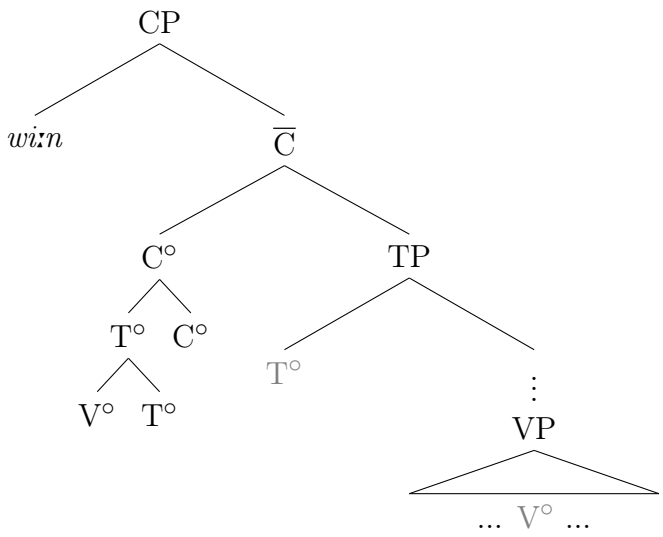
ii. * ma b-aʕref ʃw Basem ħaka
NEG IND-1SG.IPFV.know what Basem say.PFV.3MSG
I don't know what Basem said. Sulaiman (2016:33,(48))

Similar data is reported for *e.g.*, Standard Arabic (Fassi Fehri 1993:64f. Soltan 2006:249), Najdi Arabic (Alshammari 2019:72–86), among others. I take the unavailability of the SV word order in questions like (7.12) and (7.13) as evidence that the *wh*-word and the verb in such sentences are in a Spec-Head relation. Conversely, the availability of that same order in free relatives is indicative of the absence of such relation in that context. We can thus make the following generalization.

(7.16) **T-to-C movement is obligatory in *wiːn* questions.**

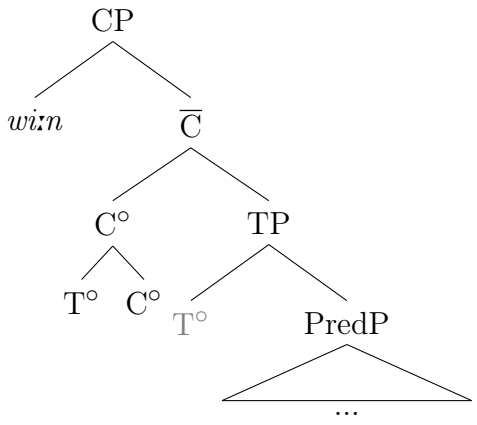
For now, let's assume that V-to-T movement is obligatory in Arabic, an assumption that I justify in detail in §7.3. If (7.16) holds, then in *wiːn* questions containing a verb like (7.3), we have a configuration like the one in (7.17), with the verb moving to T, followed by T-to-C movement. The verb thus ends up in C, in a Spec-Head relation with *wiːn*, with no possible intervenor, accounting for the rigid word order in questions reported above.

(7.17)



By contrast, assuming that verbless sentences like (7.4) and (7.10a) do not contain a VP layer (M. Bahloul 1993; Benmamoun 2000; Aoun, Benmamoun, and Choueiri 2010; Alharbi 2017), then T-to-C movement happens in those sentences without a verb having moved to T prior (7.18).

(7.18)



I propose that this is exactly where we see *wh*-clitics surface. In configurations like (7.18), T° does not form a complex head with a verb, the clitic is the surface realization of verbless T°. This verbless T° moves to (null) C° following (7.16), and we end up with *wi:n* followed by a clitic.

Thus, we either get a a verb or a clitic in C, following *wi:n*, depending on the kind of T° that moves there, leading to the observed complementary distribution between verbs and clitics.

7.2.2 Negation clitics

Negation clitics differ from *wh*-clitics in that the presence of a verb in the clause does not immediately disqualify the clitic from surfacing. Rather, clitics compete with verbs for a spot inside the circumfixal negation. Looking at examples (7.19)–(7.22) (repeated from (7.5)–(7.8)), we see that if a verb can surface inside negation, then it must do so (7.19),(7.20),(7.21). But if it can't, a clitic is able to surface in that same spot (7.22).

(7.19) *Simple imperfective*

a. * ma(-hu-)ʃ j-kuːn f-d-daːr
NEG-3MSG.CL-NEG IPFV.3MSG-be in-DEF-house

b. ma-j-kuːn-ʃ f-d-daːr
NEG-be.IPFV.3SG-NEG in-DEF-house
He is not (habitually)/ will not be in the house.

(7.20) *Simple Perfective*

a. * ma(-hu-)ʃ mʃe
NEG-3MSG.CL-NEG go.PFV.3MSG

b. ma-mʃe-ʃ
NEG-go.PFV.3MSG-NEG
He did not go.

(7.21) *Complex Past Imperfective*

a. * ma(-hu-)ʃ keːn j-əmʃi
NEG(-3MSG.CL-)NEG be.PFV.3MSG IPFV.3MSG-go

b. ma-keːn-ʃ j-əmʃi
NEG-be.PFV.3MSG-NEG IPFV.3MSG-go
He didn't use to go.

(7.22) *Preverbal Future*

a. ma(-hu-)ʃ bʃ j-kuːn f-d-daːr
NEG(-3MSG.CL-)NEG FUT IPFV.3MSG-be in-DEF-house
He will not be in the house

b. i. * ma-bʃ j-kuːn-ʃ f-d-daːr
NEG-FUT IPFV.3MSG-be-NEG in-DEF-house

ii. * ma-bʃ-ʃ j-kuːn f-d-daːr
NEG-FUT-NEG IPFV.3MSG-be in-DEF-house

We have evidence that at minimum, Arabic perfective verbs are in T° (Aoun, Benmamoun, and Choueiri 2010:28–35; Soltan 2011:245) and that a perfective auxiliary in a compound

tense is also in T° (Bjorkman 2011:65; Soltan 2011:246). Based on this information and the data in (7.19)–(7.21), it is plausible that negation in Arabic cirumfixes around T° (see Shlonsky (1997:Chap. 6) for similar proposal). If the clitic is the realization of T°, as I claim it to be, then it makes sense that it cannot surface in those environments that already have a verb in T°, like (7.20) where the main verb moves to T° and (7.21) where the auxiliary is in T°. I will also extend the V-to-T movement generalization to all tenses in §7.3, including simple imperfective as in (7.19) (*pace* Aoun, Benmamoun, and Choueiri 2010 and Soltan 2011). In (7.19) then, the clitic is also ruled out because there is a verb in T°.

However, the clitic can surface in (7.22a) exactly because V-to-T movement does not occur there. I argue in §7.3 that this movement usually does happen, but that it is blocked by negation which is below T° and which cannot host this particular verb form (among other verb forms). When Neg° moves to T°, it can circumfix around the clitic, which is the realization of verbless T°. This explains the distribution of the clitic: It is able to surface in exactly those contexts where no verb has moved to T°, and in the context of negation, certain verb forms cannot move to Neg°, in which case they cannot end up in T°.

7.2.3 Only one agreement clitic per clause

The last piece of evidence showing that both negation clitics and *wh*-clitics are the same underlying morpheme and precisely the realization of T° is in configurations combining *wiːn* and negation, like (7.23). When there is room for a clitic, it surfaces with negation (7.23b).

(7.23) *Combining* wh*-clitics with negation clitics...*

a. *... with a perfective verb*
   wiːn(*-ək) ma-mʃiː-t-ʃ
   where(*-2SG.CL) NEG-go.PFV-2SG-NEG
   Where did you not go?

b. *... with a preverbal future verb*
   wiːn(*-ək) ma(-k-)ʃ bʃ t-əmʃi
   where(*-2SG.CL) NEG(-2SG.CL-)NEG FUT 2SG-IPFVgo
   Where will you not go?

In the non-negative counterparts of (7.23a) and (7.23b), the *wh*-clitic cannot surface, as we have already observed above: *Wh*-clitics are in complementary distribution with perfective (7.24a) and future (7.24b) verbs.

(7.24) a. wiːn(*-ək) mʃiː-t
where(*-2SG.CL) go.PFV-2SG
Where did you go?
b. wiːn(*-ək) bʃ t-əmʃi
where(*-2SG.CL) FUT 2SG-IPFV.go
Where will you go?

Whether a clitic surfaces at all in (7.23) is completely tied to whether negation can host a verb (7.23a) or not (7.23b). If *wh*-clitics were the realization of some other head, perhaps an agreeing C°, then we would expect these clitics to be possible in examples like (7.23). This is especially plausible in light of evidence that there is on principle no ban on two clitics cross-referencing the same argument in the same clause as we saw in Chapter 5. The relevant example is (7.25) (repeated from (5.19)), where both a complementizer clitic and a negation clitic cross-reference the subject.

(7.25) l-proːf fraħ xaːtˤər-**ha**$_i$ t-təlmiːð-a$_i$ ma-**ha**$_i$-ʃ
DEF-professor was_happy.3MSG because-**3FSG.CL** DEF-student-F NEG-**3FSG.CL**-NEG
mʕaːwd-a lʕaːm
repeat.PTCP-F DEF-year
The professor was happy because the student is not repeating the year. Tunisian

Based on my claims that the negation clitic is the realization of T° and that the complementizer clitic is the realization of a high CL° (§6.5), the grammaticality of (7.25) is expected: T° and CL° are different heads and should not interfere with each other. Conversely, based on my claim that both *wh*-clitics and negation clitics are the realization of T°, and knowing that there is only one T° in the clause, it makes sense that in (7.23), only one clitic can surface. Furthermore, this clitic must surface on negation and not on *wiːn*. Assuming that Neg° is closer to T° than C° is, and that negation circumfixes around T° as discussed in

§7.2.2, the whole T°+Neg° complex moves to C° following obligatory T°-to-C° movement (7.16). In (7.23a) the T°+Neg° complex contains a verb, and in (7.23b), it doesn't, hence T° being able to surface as a clitic.

7.2.4 Summary

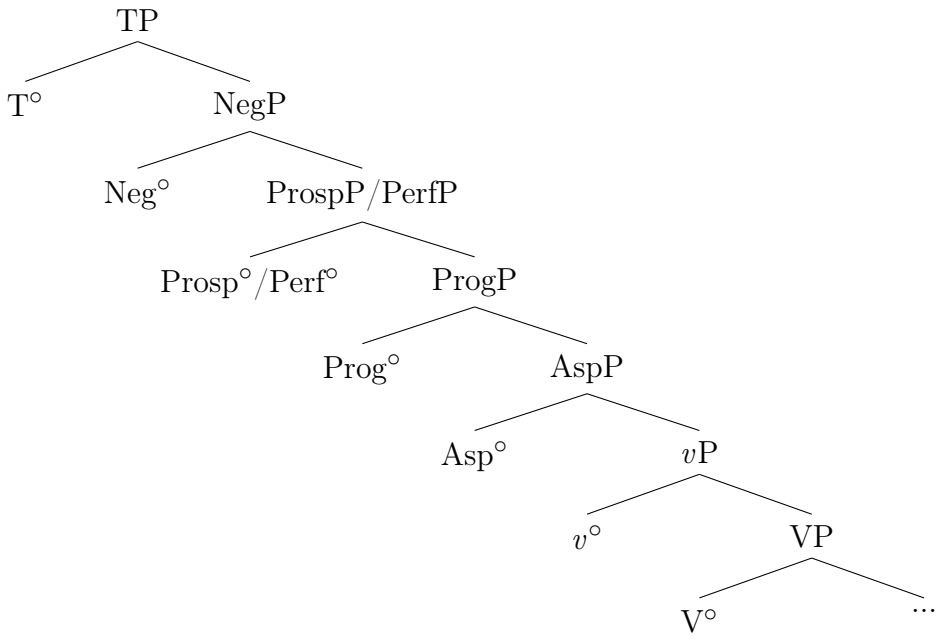
In this section, I provided the empirical picture for agreement clitics, showing how descriptively, they seem to be the realization of the same head: Both negation clitics and *wh*-clitics are in complementary distribution with verbs, and in particular, they are in complementary distribution with elements that are usually associated with T° in the Arabic syntactic literature (perfective verbs, the auxiliary BE). Plus, only one of them can surface in a given clause, further supporting the claim that they are the surface realization of the same head. Following evidence that there is T°-to-C° movement in questions and that negation must host T° in Tunisian, I propose that agreement clitics are the realization of T°. When making descriptive generalizations and giving my proposal, I relied on some assumptions, in particular that NegP is below TP and that V°-to-T° movement is obligatory in Arabic. In the following sections, I justify these assumptions, as they are part of a bigger debate in Arabic linguistics and not at all uncontroversial, and I show how these ideas successfully derive the distribution of agreement clitics.

7.3 Verb movement and the position of NegP in the clause

In this section, I talk about verb movement and the location of NegP together not only because both are relevant to agreement clitics, but also because they are generally discussed in relation to one another. In particular, assumptions about either of them will inform analyses about the other (see for instance Shlonsky 1997:Chap. 6 and Aoun, Benmamoun, and Choueiri 2010:Chap. 5). There are two main analyses of Arabic negation: The *low-Neg* analysis, which places NegP below TP (Benmamoun 2000; Ouhalla 2002; Aoun, Benmamoun,

and Choueiri 2010; Alqassas 2012; Albuarabi 2021), and the *high-Neg* analysis, which places NegP above TP (Shlonsky 1997; Soltan 2007b, 2011; Benmamoun et al. 2014; Benmamoun and Al-Asbahi 2014). Here, I focus on the *low-Neg* proposal, how the evidence provided for it is inadequate, and how the empirical generalizations made in §7.2 give us better arguments in support for it. The goal is to ultimately justify the Hierarchy of Projections proposed in (7.26), which has NegP below TP but above all other tense/aspect projections.

(7.26) *The hierarchy of projections in Arabic*



I assume that both AspP and TP are obligatorily found in the extended projection of the verb, with everything between them being optional. Below Neg and above Asp, there are three optional projections: ProspP, PerfP and ProgP, encoding prospective, perfect and progressive aspect respectively. This ordering of projections is consistent with proposed hierarchies cross-linguistically (*e.g.*, the *perfect over progressive* generalization in English (Ramchand and Svenonius 2014), or the more general *Perfect-over-Asp*, see Pietraszko (2017:36) and references therein).

In §7.3.1, I start by discussing the proposal that NegP is below TP, which is not new (Ben-

mamoun 2000:Chap. 5; Aoun, Benmamoun, and Choueiri 2010:Chap. 5). After evaluating the evidence previously provided to support it, I show how the empirical generalizations made in §7.2 are better suited as evidence for the *low-Neg* proposal: I propose that all verbs can potentially move to T°, and that the presence of Neg° below that head can prevent some elements from reaching T°, precisely because they cannot move to Neg°. Those are the cases where agreement clitics surface. In §7.3.2, I discuss why certain heads may or may not move to T°.

7.3.1 Evidence for the low-Neg Proposal

Within the *low-Neg* proposal, the fact that a perfective verb must show up inside negation (7.27) is the result of V°-to-T° movement not being able to skip over Neg°, *i.e.*, it is due to the Head Movement Constraint (Travis 1984).

(7.27) *Negated Simple Perfective*
ma-mʃe-ʃ
NEG-go.PFV.3MSG-NEG
He did not go.

If the verb moved to T° by skipping Neg°, we would get the ungrammatical result in (7.28), but since the verb must move through Neg°, then the verb is predicted to surface with negation (7.27), and not above (7.28) or below it (7.29)

(7.28) * mʃe mu-ʃ
go.PFV.3MSG NEG-NEG

(7.29) * ma(-hu-)ʃ mʃe
NEG-3MSG.CL-NEG go.PFV.3MSG

Aoun, Benmamoun, and Choueiri (2010) propose that the verb must move to T° in the perfective because $T_{[+past]}$ is in need of a host: In Benmamoun's (2000) terms, it bears a [+V] feature. By contrast, in the imperfective, the relevant head is $T_{[-past]}$, which does not require verb movement to it. If NegP is below TP, then perfective verbs must move

through negation to get to T, explaining the obligatory circumfixal pattern in (7.27), while imperfective verbs may remain low in the clause and not move to T°, and thus need not move to Neg°. This is meant to account for data like Egyptian (7.30), where the verb doesn't have to surface inside negation (Aoun, Benmamoun, and Choueiri 2010:29f.).

(7.30) mi-ʃ bi-j-iktib
NEG-NEG IND-IPFV.3MSG-write
He isn't writing. (Jelinek 1981:20,(31))

In reality, it isn't the case that an imperfective verb can optionally surface inside or outside negation, at least not in Tunisian. The relevant contrast in this dialect is actually one where affixation of an imperfective verb to negation or lack thereof leads to different aspectual readings. If we take a simple imperfective verb in Tunisian, it can have either a general habitual reading or a progressive reading (7.31). These readings are contextually determined.[5]

(7.31) t-eːkəl
IPFV.2SG-eat
You eat / You are eating. HABITUAL/PROGRESSIVE READING

If we take this exact same verb and negate it, we see that each reading is restricted to a pattern.

(7.32) a. ma-t-eːkəl-ʃ
NEG-IPFV.2SG-eat-NEG
You don't eat. HABITUAL READING ONLY

b. ma(-k-)ʃ t-eːkəl
NEG(-2SG.CL-)NEG IPFV.2SG-eat
You are not eating. PROGRESSIVE READING ONLY

When the verb surfaces inside negation, only the habitual reading is available (7.32a), and

5. The progressive reading in this type of affirmative clause is generally less available (except in specific contexts), as the language has progressive encoding strategies that compete with the simple imperfective in such contexts (McNeil 2017; Sellami 2022b), such that the progressive reading is often blocked in those cases (Deo 2015b:5). However, with negation, there is no doubt as to which pattern corresponds to which reading.

when it surfaces outside of negation, only the progressive reading is available (7.32b).[6]

The idea that the imperfective verb may optionally move to Neg, but need not to because it doesn't have to go as high as T—as suggested by Aoun, Benmamoun, and Choueiri (2010)—predicts that the difference between (7.32a) and (7.32b) is insignificant and subject to variation. However, there is a clear distinction in meaning between an imperfective verb that moves to Neg and one that doesn't, which I take to be evidence that something must be constraining this movement. I propose that in the progressive reading, the verb actually moves to Prog°, and Prog° is one of those heads that cannot head-move to negation. Evidence of this not only comes from examples like (7.32b), where the verb being outside negation must have a progressive reading, it is also clear when the progressive marker is overt. In fact, the Tunisian progressive can be unmarked as I have been showing it, or, more often than not, it is be marked with the active participle *qaːʕəd* 'sitting' (7.33a), which I assume is in Prog° and which I gloss as PROG here. When it is overt, the progressive cannot be inside negation (7.33b), it must surface after it (7.33c), leaving room for a clitic to surface inside negation.

(7.33) a. qaːʕəd t-eːkəl
PROG IPFV.2SG-eat
You are eating.

b. i. * ma-qaːʕəd-ʃ t-eːkəl
NEG-PROG-NEG IPFV.2SG-eat

6. Aoun, Benmamoun, and Choueiri (2010:30) seem to indicate this difference in their translations of the Egyptian examples like I do here for Tunisian, but they do not comment on it. However, both Eid (1983:199,(3c)) and Soltan (2011:243,(8c-d)) give the following examples, without noting any difference between their translations. Both (ia) and (ib) seem to be able to have either aspectual reading, and thus the situation in Egyptian may very well be different.

(i) a. maː-bi-j-iktib-ʃ
NEG-IND-IPFV.3MSG-write-NEG
He doesn't write / He isn't writing.

b. mi-ʃ bi-j-iktib
NEG IND-IPFV.3MSG-write
He doesn't write / He isn't writing.

ii. * ma-qaːʕəd-t-eːkəl-ʃ
NEG-PROGIPFV.2SG-eat-NEG

c. ma(-k-)ʃ qaːʕəd t-eːkəl
NEG(-2SG.CL-)NEG PROG IPFV.2SG-eat
You're not eating.

Even with the other progressive strategy of Tunisian, which is restricted to transitive verbs and consists in marking the object of the verb with the preposition *fi* 'in' as in (7.34a), the verb cannot merge with negation (7.34b), it must surface outside of it, once again leaving room for the clitic to surface inside negation (7.34c) (see also McNeil 2017:184; Pallottino 2016:294).

(7.34) a. Seːmi j-eːkəl f-əl-kosksi
S. IPFV.3MSG-eat in-DEF-couscous
Sami is eating the couscous Pallottino (2016:288,(2a))

b. * Seːmi ma-j-eːkəl-ʃ f-əl-kosksi
S. NEG-IPFV.3MSG-eat-NEG in-DEF-couscous

c. Seːmi ma(-hu-)ʃ j-eːkəl f-əl-kosksi
S. NEG(-3MSG.CL-)NEG IPFV.3MSG-eat in-DEF-couscous
Sami is not eating the couscous. (adapted from Pallottino (2016:294,(16a,b))

So, no matter if the progressive head is overt or not, or if the progressive reading is expressed by adding a preposition to the object, whenever there is an imperfective verb with a progressive reading, that verb cannot surface inside negation: I take this to be an indication that Prog° cannot move to Neg°.

By contrast, the non-progressive habitual is in Asp°, a head that can move to Neg° and then to T° with no issues, surfacing inside the circumfixal negation. The minimality argument for the *low-Neg* proposal can thus be dismissed for Tunisian, and in particular the Aoun, Benmamoun, and Choueiri (2010) version of it, which only predicts perfective verbs to move to negation cannot work in the face of data like (7.32a).

My evidence for the *low-Neg* analysis has nothing to do with whether a verb needs to move

to T° or not, in fact, I assume that if not prevented, a verb always moves to the highest T° (see Shlonsky 1997:102 and Tucker 2011:188ff. for similar proposals). What I take to be evidence of the *low-Neg* analysis is exactly the incompatibility of certain aspectual categories with Neg°, all the while these same categories seem to be able to move all the way to C° (and thus through T°) in the absence of negation: It seems that movement of certain verbs hinges on whether negation can host them, and not whether they need to reach T°.

Recall the discussion on T-to-C movement in questions in §7.2.1 above, and in particular examples (7.12) and (7.13), where the verb had to immediately follow the *wh*-word whether in the imperfective or the perfective. Let's now look at similar examples with our simple imperfective verb from (7.31). In *wh*-questions like (7.35a), this verb must be adjacent to the *wh*-word as evidenced by the ungrammaticality of (7.35b) (compare to the S-V order in (7.34a) above). In these *wh*-questions too, the unmarked imperfective verb keeps both of its general habitual and progressive readings, which are again determined contextually.

(7.35) a. i. Se:mi ʃ(nowwa)-j-e:kəl
S. what-IPFV.3SG-eat

ii. ʃ(nowwa)-j-e:kəl Se:mi
what-IPFV.3SG-eat S.

What does Sami (habitually) eat? / What is Sami eating?

b. * ʃ(nowwa) Se:mi j-e:kəl
what S. IPFV.3SG-eat

Tunisian

If this verb must move to C°, then it must go through T° to do that: This means that nothing in principle prevents a head like Prog° to move to T° and then C°. In fact, Aoun, Benmamoun, and Choueiri's (2010) idea that no V-to-T movement occurs in the present tense under-generates, as it doesn't predict movement of any imperfective verb all the way to C°, contrary to fact (7.35a). We find the same effect with the overtly marked progressive, whether with *qa:ʕəd* (7.36a) or with object marking (7.36b).[7]

7. Note the pied piping of the entire prepositional object to an initial position in (7.36b).

(7.36) a. (Seːmi) ʃ(nowwa)-qaːʕəd (*Seːmi) j-eːkəl (Seːmi)
(S.) what-PROG (*S.) IPFV.3SG-eat (S.)

b. (Seːmi) {feː-ʃ / fi-ʃnowwa} (*Seːmi) j-eːkəl (Seːmi)
(S.) {in-what / in-what} (*S.) IPFV.2SG-eat (S.)
What is Sami eating?

So, an imperfective verb with a progressive reading, whether overtly marked or not, can move to T°, as it can move to C° (7.35a)–(7.36), but it can't be hosted by negation (7.32b) and in fact must stay below it. A *low-Neg* analysis easily accounts for this: In the presence of negation, a progressive verb can't move to Neg and therefore can't move to T, but in the absence of negation, it can move all the way to T.

Additional evidence for this view comes from incorporating negation into these *wh*-questions. There are two possible negative counterparts to (7.35a): The one where negation circumfixes around the verb (7.37a) has a habitual reading, with the question being appropriate in a context where the speaker is asking about food preferences, while the one where the verb surfaces outside negation (7.37b) can only be uttered in a context where the speaker is asking which foods the person is not eating at the time of utterance (*e.g.,* on their plate).

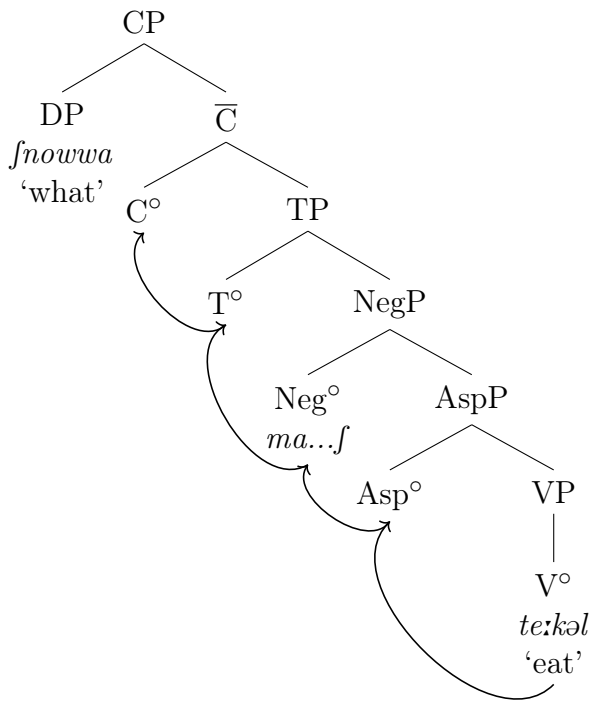
(7.37) a. ʃnowwa ma-t-eːkəl-ʃ
what NEG-IPFV.2SG-eat-NEG
What don't you eat? HABITUAL READING ONLY

b. (f-)ʃnowwa ma(-k-)ʃ t-eːkəl
(in-)what NEG(-2SG.CL-)NEG IPFV.2SG-eat
What are you not eating? PROGRESSIVE READING ONLY

In (7.37a), the verb moves to Neg°, which moves to T° then C° (7.38).[8]

8. For the sake of simplicity and because it's not immediately relevant here, in both (7.38) and (7.39), I represent the verb as already containing the prefix conjugation agreement morpheme, even though this morpheme is the realization of Asp° on the verb. I expand more on this in §7.4.

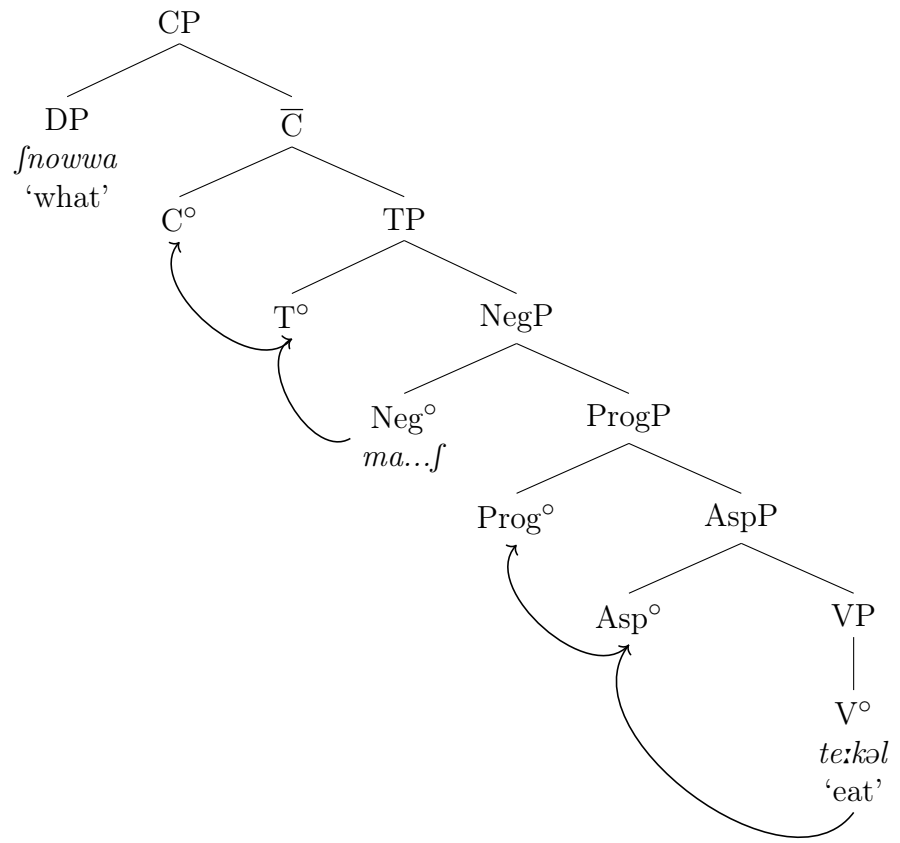
(7.38)



By contrast, in (7.37b), the verb stays in Prog° as it is unable to move to Neg°, while Neg° moves to T° which moves to C° (7.39).[9]

9. Note that I represent the two negative morphemes as a discontinuous head, following Benmamoun (2000) and Aoun, Benmamoun, and Choueiri (2010). The representation of negation is a complicated issue and there are different proposals on where each negative morpheme is. I do not necessarily take a stance on this issue as I want to focus on verb movement patterns and realization of agreement clitics. I only use this representation as one among many possible others.

(7.39)



In (7.38), verb movement to Neg° then to T° results in a complex T° that contains a verb, while in (7.39) verb movement stops in Prog°. In the latter case, T° forms a complex head with Neg° but there is no verb in that head, hence the ability of T° to surface as a clitic following my claim that agreement clitics are the realization of T° when it is not in a complex head with a verb.

7.3.2 Justifying constraints on movement to Neg

A potential problem that my analysis faces is justifying what may or may not move to Neg°. In the Tunisian case, why is it that progressive verbs (7.32b) and future verbs (7.22) cannot move to Neg°, but other verbs not only can but must do so? We find the same distribution

in Palestinian,[10] where simple perfective (7.40a) and imperfective (7.40b) verbs must surface inside negation, but progressive (7.40c) and future (7.40d) verbs may not. In these latter cases, the two negative morphemes surface as one word, with no element—verb or clitic[11]—in between (*miʃ*).

(7.40) *Verbs and circumfixal negation in Palestinian Arabic*

a. *Negated perfective*

i. ma-daras-t-əʃ
NEG-study-PFV.1SG-NEG
I did not study.

ii. * miʃ daras-ət
NEG study-PFV.1SG
Intended: I did not study.

b. *Negated imperfective*

i. ma-b-a-ʃtiɣl-əʃ
NEG-IND-IPFV.1SG-work-NEG
I don't work.

ii. * miʃ b-a-ʃtiɣəl
NEG IND-IPFV.1SG-work
Intended: I don't work.

c. *Negated progressive*

i. * ma-ʕam-b-a-ʃtiɣl-əʃ
NEG-PROG-IND-IPFV.1SG-work-NEG
Intended: I am not working.

ii. miʃ ʕam-b-aʃtiɣəl
NEG PROG-IND-IPFV.1SG-work
I am not working.

d. *Negated future*

i. * ma-raħ-a-ʃtiɣl-əʃ
NEG-FUT-IPFV.1SG-work-NEG
Intended: I will not work.

ii. miʃ raħ-a-ʃtiɣəl
NEG FUT-IPFV.1SG-work
I will not work.

10. Note that I only talk about circumfixal negation here. Palestinian has another, non circumfixal negation strategy, using only the proclitic *ma*, that I suspect may have a different syntax.

11. Recall that the dialect of Palestinian that I am documenting does not have negation clitics.

The fact that this distribution isn't limited to Tunisian and is in fact found in other dialects indicates that it is more of a general property of circumfixal negation. One plausible reason for negation to not host these particular categories is that aspectual preverbs like the future *bʃ* (Tunisian) and the progressive *raħ* (Palestinian) and the progressive *ʕam* (Palestinian) are historically derived from active participles[12] (see Benmamoun et al. (2014:129, fn.13) for a similar suggestion). Active participles, like other non-verbal predicates in these dialects, cannot be hosted by negation (7.41a) and must appear outside of it (7.41b) (See Mohammad (2014:143) for a similar claim on Palestinian Arabic).

(7.41) *Negated participle in Tunisian*

a. * ma-xaːrəʒ-ʃ
NEG-go_out.PTCP.MSG-NEG

b. (howwa) ma(-hu-)ʃ xaːrəʒ
(3MSG.PRON) NEG(-3MSG.CL-)NEG go_out.PTCP.MSG
He's not going out.

Conversely, non-verbal predicates like *fəllaħ* 'farmer' in (7.42) can be hosted by negation in Moroccan Arabic (Caubet 1996:82; Adila 1996:104; Benmamoun et al. 2013:99) and unsurprisingly, the future preverb, which is derived from an active participle merges with negation in that dialect (7.43b).

(7.42) *Negated non-verbal predicate in Moroccan Arabic*

howwa ma-fəllaħ-ʃ
3MSG.PRON NEG-farmer-NEG
He is not a farmer. Aoun, Benmamoun, and Choueiri (2010:101,(iib))

(7.43) *The future in Moroccan*

a. ʁadi t-ʒi
FUT IPFV.3FSG-come
She's going to come. Caubet (2022:111,(6))

12. Tunisian *bʃ* is historically derived from the active participle *maːʃi* 'walking' (it becomes *bʃ* through merging with the phonetically similar purpose conjunction *baːʃ*, which has a different origin, see Vanhove 2003:151). Palestinian *raħ* is derived from the active participle *raːjaħ* (Zack 2011; Ouali 2017:97) with the same meaning, and *ʕam* is derived from the agent noun *ʕammaːl* 'doing/working' (Al-Wer 2011; Rosenhouse 2011).

b. ma-ʏadi-ʃ n-ʒi
NEG-FUT-NEG IPFV.1SG-come
I'm not going to come. Caubet (2022:100)

I tentatively take this to be indicative of the Moroccan prospective head[13] ʏ*adi* to be able to move to negation. The opposite is true for the Tunisian Prosp°, which cannot move to negation.

Note also that Moroccan has a more grammaticalized form of this participle— ʏa (7.44a)— which ends up with the verb inside circumfixal negation as shown in (7.44b).

(7.44) *The grammaticalized future preverb in Moroccan* Caubet (2022:115)
a. ʏa-tə-mʃi
FUT-IPFV.2SG-go
You'll go.
b. ma-ʏa-tə-mʃi-ʃ
NEG-FUT-IPFV.2SG-go-NEG
You won't go.

Compared to the negated future in Palestinian (7.40d) and Tunisian (7.22), this further shows that there is a correlation between the ability of negation to host these participles and its ability to host the entire verbal complex at a later stage of grammaticalization: The preverb+verb complex may move to Neg° if in previous stages the participle (which becomes a preverb) can move to Neg°. If not, then the grammaticalized preverb+verb stays outside of negation (lower than it, in my analysis).

Within his *high-Neg* analysis, Soltan (2011:266; 2014:104) proposes that the locus of dialectal variation with regards to which categories may be affixed by negation can be captured via a morphological algorithm, whereby if Neg is adjacent to a "hosting head", then this head

13. This not only gels well with the hierarchy of projections proposed in (7.26) above, in that I posit a ProspP whose head hosts the future preverbs, it also is the kind of analysis suggested by Aoun, Benmamoun, and Choueiri (2010:32).

moves to Neg.[14] Thus, it all depends on the dialect what counts as a hosting head for purposes of movement to negation. Soltan's insight may be used in my *low-Neg* proposal by saying that Prog° and Prosp° are not hosting heads in the dialects we are concerned with. Although at the synchronic level, this may just be a restating of the facts, namely that Prog° and Prosp° can't move to negation, the amount of dialectal variation in the types of heads may or may not host negation seems to require some sort of Soltan-style algorithm to be able to account for. The insight here is that certain heads cannot move to negation due to their diachronic development from categories that could not move to negation either.

The *low-Neg* analysis that I propose thus requires that the trigger for head-movement be on both heads, that is, the features of both Neg° and whatever head is below it are made reference to for head-movement. This is not a trivial argument to make, as it is not just the features of the higher head that cause movement (as in *e.g.,* Matushansky 2006; Aoun, Benmamoun, and Choueiri 2010; Arregi and Pietraszko 2021 among many others). Rather, movement is conditioned by the requirements of both the moving element and the target of movement (much like Lasnik's (1995) "Enlightened Self-Interest"). Neg° usually attracts tense-aspect heads below it, but some of those heads (like Prog° and Prosp°) cannot move to Neg°. Thus, the trigger for movement in this case must be on Neg° and the tense-aspect head.[15]

To summarize, the main argument I advance for the position of NegP below TP is the following: When negation is absent, the verb must be able to move from its base position all the way to T, and then move to C when T-to-C movement is required. By contrast, when negation is present, some verbs (perfective, imperfective) move to T while others (progressive,

14. The analysis is a bit more complex, with Soltan proposing that the two negation morphemes are two separate heads. The enclitic *ʃ* is Neg° and the proclitic *ma* is Pol°. If a head H moves to Neg, H+Neg then move to Pol, leading to the *ma-H-ʃ* pattern. Otherwise Neg incorporates into Pol, leading to the *miʃ* pattern. He doesn't really discuss negation clitics, which are my focus here.

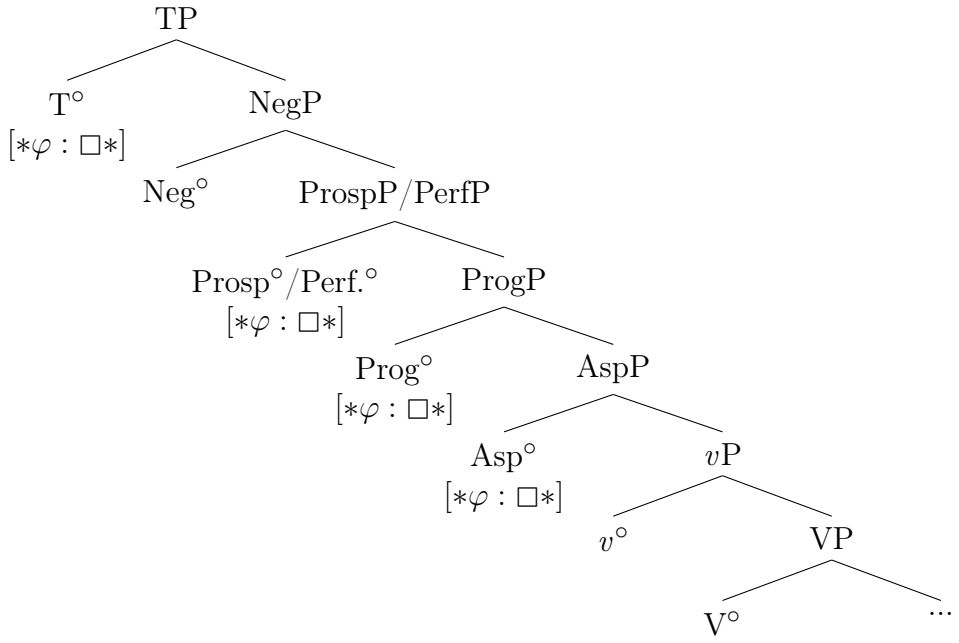
15. On the issue of whether movement (especially phrasal movement) should be analyzed as "Greed" or "Enlightened Self-Interest", see Zyman (2018) and references therein.

prospective) cannot and must surface *after* negation. I take this to be evidence that negation is below T and that it can block some verbs from moving to T because it cannot host them or be hosted by them. This argument also works against the generally accepted idea that perfective verbs are higher than imperfective verbs in the Arabic clause structure (Aoun, Benmamoun, and Choueiri 2010; Soltan 2011; Bjorkman 2011). In fact, if T-to-C movement occurs and we know that it does and results in a main verb or auxiliary in C, then all verbs must be able to move to T, no matter their tense-aspect specification. Verbs remaining low, I will argue in more detail in the following section, are the result of higher heads being filled by other elements, as in a past imperfective compound tense where the verb remains in Asp° and an auxiliary is in T°.

7.4 The loci of ϕ-probes in the clause

Given that the ability of agreement clitics to surface depends on whether a verb has moved to T° or not, and thus my argument that agreement clitics are a contextual realization of T°, I dedicate this section to the relation between T° and other tense/aspect marking heads. Assuming that there is at least another tense/aspect layer in addition to TP (AspP), and knowing that verbal agreement morphemes are tense/aspect-sensitive in Arabic, what exactly regulates the distribution of prefix conjugation (imperfective) and suffix conjugation (perfective) agreement morphemes? Answering this question is necessary in order to understand agreement clitics as the realization of T°, *i.e.,* a contextual allomorph of perfective and imperfective conjugation affixes. After showing the limitations of previous proposals on the location of ϕ-probes in the Arabic clause in §7.4.1, I lay out a novel idea in §7.4.2 whereby every tense/aspect head in my proposed hierarchy of projections bears a ϕ-probe (7.45).

(7.45) *The distribution of ϕ-probes*



7.4.1 The limits of ϕ-activity and invisible heads

In §7.3, I argued that it is hard to maintain the idea defended by *e.g.*, Aoun, Benmamoun, and Choueiri (2010) and Soltan (2011) that perfective verbs are higher than imperfective verbs in the syntax, mainly due to the fact that both types of verbs can move all the way to C°. Because both perfective and imperfective verb morphology is sensitive to tense/aspect, this idea of difference in verb height also comes with other assumptions and predictions about ϕ-agreement in Arabic. For instance, Soltan (2011:245ff.) proposes that the difference between perfective and imperfective verb forms is whether a given head is ϕ-active or ϕ-inert (see also Ouali 2017:95ff.). In this system, perfective morphology is the result of a $\text{T}^{\circ}_{[+\text{PAST}]}$ and $\text{T}^{\circ}_{[+\text{PAST}]}$ is ϕ-active. By contrast, imperfective morphology is the result of an $\text{Asp}^{\circ}_{[+\text{IPFV}]}$[16] that is ϕ-active (see also Bjorkman 2011:63–68).[17] According to Soltan

16. I am explicit here by marking Asp° as bearing an imperfective feature. Soltan does not make such a claim, as Asp° in his system seems to always lead to the imperfective morphology, if anything. I indicate the [+IPFV] feature to be explicit and to differentiate it from my upcoming proposal where Asp° bears the [±past] feature.

17. Note that Bjorkman is concerned with deriving the *overflow pattern* (see fn. 21) of auxiliary use, not the occurrence of ϕ-agreement. That being said, because the agreement morphemes are tense/aspect sensitive

(2011), this difference in ϕ-activity derives the following facts.

First, present-tense copular sentences are verbless in Arabic (7.46).

(7.46) Raːnia ∅ {təʕbeːn-a / muʕallm-a / f-əl-xədma}
R. ∅ {tired-FSG / teacher-FSG / in-DEF-work}
Rania is {tired / a teacher / at work} Tunisian

Soltan argues that because $T^{\circ}_{[-\text{PAST}]}$ is ϕ-inert, and there is no aspectual layer in a small clause, no copula needs to be inserted in either Asp° or T°. Conversely, past-tense copular clauses have a copula in the perfective (7.47).

(7.47) Raːnia **keːn-ət** {təʕbeːn-a / muʕallm-a / f-l-xədma}
R. **be.PFV-3FSG** {tired-FSG / teacher-FSG / in-DEF-work}
Rania **was** {tired / a teacher / at work}

This copula is inserted in $T^{\circ}_{[+\text{PAST}]*\varphi*}$,[18] which is realized as the feminine singular perfective agreement morpheme *ət*. Similarly, future or habitual copular clauses have a copula in the imperfective (7.48).

(7.48) Raːnia **t-kuːn** təʕbeːn-a ki-t-rawwaħ m-əl-xədma
R. **3FSG-be.IPFV** tired-FSG when-3FSG-go_home.IPFV from-DEF-work
Rania **is** [usually] tired when she comes home from work.

This copula is inserted in $\text{Asp}^{\circ}_{[+\text{IPFV}]*\varphi*}$, while $T^{\circ}_{[\text{-PAST}]}$ remains ϕ-inert (and consequently in no need of a verb to host any features). Finally, the past imperfective compound tense as in (7.49a) can be derived by having two ϕ-active heads: $T^{\circ}_{[+\text{PAST}]*\varphi*}$ and an $\text{Asp}^{\circ}_{[+\text{IPFV}]*\varphi*}$. The former hosts the auxiliary and the latter the main verb (7.49b).[19]

in Arabic, we can imagine a reasonable extension of her system incorporating ϕ-agreement.

18. $*\varphi*$ indicates that the head is ϕ-active.

19. (7.49b) corresponds to Soltan's (2011:246) example (13), where there is a projection hosting the auxiliary verb. This is for illustrative purposes only and is not indicative of my stance on the syntax of auxiliaries, which, while interesting in its own right, is orthogonal to the issue of location of ϕ-probes. In Bjorkman's (2011:65) analysis of the same facts, there is no Aux head and the auxiliary is inserted directly in $T^{\circ}_{[+\text{PAST}]}$

(7.49) a. Raːnia **keːn-ət** **t-əxdəm** m-əd-daːr
R. **be.PFV-3FSG** **3FSG-work.IPFV** from-DEF-home
Rania {was working / used to work} from home.

b. $[_{\text{TP}}\ \text{T}_{[+\text{PAST}]*\varphi*}\ [_{\text{AuxP}}\ \text{Aux}\ [_{\text{AspP}}\ \text{Asp}_{[+\text{IPFV}]*\varphi*}\ [_{\text{VP}}\ \text{V}\ \ldots\ ]]]]$

When the verb is in the plain imperfective, the verb moves to the ϕ-active Asp° and T° has no ϕ-probe, just like in (7.48).

While this view of Arabic tense and agreement can derive a fair number of facts, it runs into a few problems. For example, for compound tenses where both the auxiliary and the main verb are in the imperfective (7.50), it is not immediately clear where the imperfective morphology on the auxiliary comes from within this system.

(7.50) Raːnia **t-kuːn** **t-əxdəm** fi fraːnsa waqtha
R. **3FSG-be.IPFV** **3FSG-work.IPFV** in France then
Rania will be working in France by then.

A possible way to get around this issue is analyzing the auxiliary as being in Prosp° (see (7.26), (7.45)), which contributes a prospective meaning. This is plausible given that this kind of prospective sentence (7.50) can further be embedded under a perfective auxiliary (Ouali 2017:95), which is in T° in the proposed hierarchy of projections (7.26),(7.45). Assuming that imperfective morphology is default in Arabic (Benmamoun 1999; Hallman 2015), this is the morphology that is found on a head like Prosp°. This get-around, however, already departs from the idea that imperfective morphology resides in Asp° and perfective morphology in T°, though it still maintains the idea of verb height. Even more problematic for this theory are examples where the auxiliary is in the imperfective and the main verb is in the perfective (7.51).

to host the stranded inflectional features on it. See Arregi and Pietraszko (2024) on how both the AuxP analysis and the auxiliary insertion analysis make wrong predictions, and why a combination of the two is ultimately needed to account for periphrastic constructions cross-linguistically.

(7.51) beːʃ n-əmʃiː qbal ma-**n-kuːn ʃbaʕ-t**
FUT IPFV.1SG-go before that-**IPFV.1SG-be have_enough-PFV.1SG**
b-bleːd-i
with-country-1SG.CL
I will leave before I have enjoyed my country to the fullest. (TC:text 4561)

In such cases, the claim that "perfective verb forms seem to occupy a higher position than the imperfectives" (Soltan 2011:245) cannot hold. It is unclear how a ϕ-inert $T^{\circ}_{[-\text{PAST}]}$ and a ϕ-inert $Asp^{\circ}_{[-\text{IPFV}]}$[20] would derive such a compound tense. In fact, we would predict that both heads would be ϕ-less, contrary to fact.[21]

7.4.2 A novel proposal: A ϕ-probe on every Tense/Aspect head

Given that the idea of ϕ-inertness of certain heads makes wrong predictions, I propose something radically different, which is that every tense/aspect head always has a ϕ-probe. No T/Asp head that is merged is invisible or ϕ-inert. This proposal may seem like it would derive too many agreement morphemes, so I show in this subsection how such a wrong outcome can be avoided, first by focusing on multi-verb constructions in Arabic, which have as many agreement morphemes as they have verbs, then by showing how to extend the proposal to sentences with only one verb.

20. In Bjorkman's (2011) analysis, Perfective Asp is invisible as it is the default aspect in Arabic. For past tense sentences, $T^{\circ}_{[+\text{PAST}]}$ establishes a relation with the verb directly, skipping over invisible Asp. It is also unclear how her system would derive future perfect examples like (7.51).

21. Ouali and Fortin's (2007) analysis would circumvent this issue by analyzing the complex tense as underlyingly biclausal (very similar to the so-called VP approach to auxiliary use, see Pietraszko (2017:26ff.) and references therein). However, this approach has its own problems, the most important one of them being that it does not have a satisfactory account of the *overflow pattern* of auxiliary use (Bjorkman 2011), which we find in Arabic. The overflow pattern is one where the presence of auxiliaries is not tied to a specific tense or aspect, but it is rather tied to certain combinations of those. Thus, in Arabic, neither past tense nor imperfective aspect requires an auxiliary, but the combination of those two categories results in a periphrastic construction. The biclausal account cannot explain this distribution of auxiliaries, predicting an aspectual category to always or never require an auxiliary. See Pietraszko (2017:25–68) for a review of the problems posed by the VP analysis of auxiliaries.

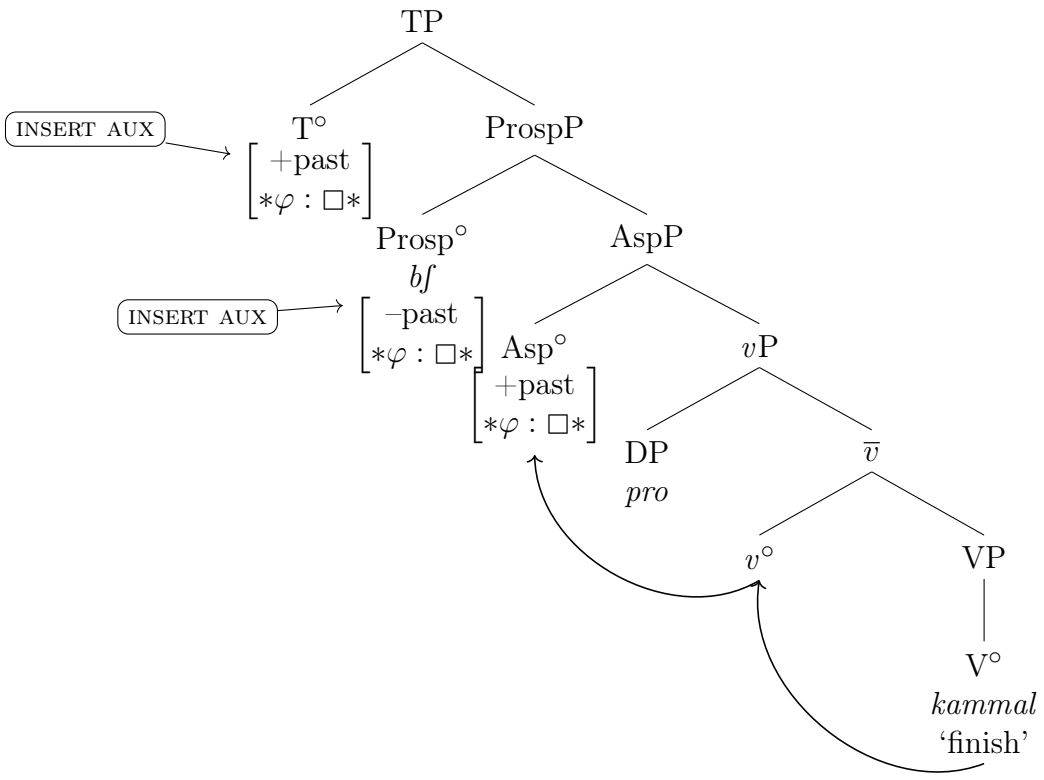
Deriving as many agreement morphemes as there are verbs

Let's start with the relevant generalization for Arabic agreement: There are at *at least*[22] as many agreement morphemes as there are verbal elements in a sentence. So, in a sentence like (7.52) where there are three verbs, we can see that there are three agreement morphemes.

(7.52) kon-**t** bʃ-**n**-kuːn kammal-**t** waqt-ha
be-**PFV.1SG** FUT-**IPFV.1SG**-be finish-**PFV.1SG** time-DEM
I was going to be done at that time.

In my analysis, (7.52) is derived as in (7.53): The verb moves to Asp°, while an auxiliary is inserted in both Prosp° and T°, following a head-movement approach to the derivation of periphrastic tenses (cf. Embick 2000).[23]

(7.53)



22. When there is a negation clitic or a *wh*-clitic, there is an additional agreement morpheme, hence the *at least*.

23. See Arregi and Pietraszko (2024:10f.) and references therein for a review of this and other approaches to deriving periphrastic tenses.

I assume that all tense/aspect heads in Arabic are specified for the [±past] feature: This is the crucial feature for the choice between prefix ([–past]) and suffix ([+past]) conjugation morphemes during Vocabulary Insertion.[24] Furthermore, I propose that when two adjacent heads have different values for this feature—like Asp° and Prosp° in (7.53)—an auxiliary is inserted in the higher head, and verb movement stops at the lower head. So in (7.53), both T° and Prosp° have the default auxiliary *keːn* 'be' inserted, because the head below them has a different value for the [±past] feature, and the main verb stops in Asp°.

In (7.53) all three ϕ-probes agree with the null external argument in [Spec, vP]. Asp° and Prosp° are realized as the 1st person prefix conjugation affix *n*, while T° is realized as the 1st person suffix conjugation affix *t*.

An advantage of this type of analysis is that it can derive sentences like (7.54) (repeated from (7.51)), where the main verb is in the perfective and the auxiliary in the imperfective.

(7.54) beːʃ n-əmʃiː qbal ma-**n-kuːn** **ʃbaʕ-t**
FUT IPFV.1SG-go before that-**IPFV.1SG-be** **have_enough-PFV.1SG**
b-bleːd-i
with-country-1SG.CL
I will leave before I have enjoyed my country to the fullest. (TC:text 4561)

In this kind of sentence, Asp° is [+past] and realized as the 1st person suffix conjugation affix *t*, while T° is [–past] and realized as the 1st person prefix conjugation affix *n*.

Avoiding generating too many agreement morphemes

The problem with an analysis that assumes that there is a ϕ-probe on every tense/aspect head is that it might predict that there would be more than one agreement morpheme when

24. This doesn't preclude more fine-grained aspectual distinctions, *e.g.,* in the semantic component. Here, I am only talking about morphosyntactic features: [+past] is a shorthand for past/perfective and [–past] is a shorthand for non-past/imperfective. This is a crucial part of the analysis, because it relies on heads bearing the same value for head movement to occur (resulting in a synthetic verbal expression), and different values for this feature bleed head movement (resulting in a periphrastic verbal construction).

there is only one verb in the clause. How then, do we derive mono-verbal sentences in an analysis where T° and Asp° are obligatory heads that both have ϕ-probes? Incorporating the insights from the previous section, namely that verb movement to T° is always possible except if Neg° prevents it, I propose that in all sentences, including mono-verbal ones, both Asp° and T° have ϕ-probes. However, in this case, following the approach used above for auxiliary insertion, when Asp° and T° form a complex head with one other, they are identical in features: They both bear the same value for the [±past] feature. They are also expected to have the exact same ϕ-features as they both agree with the subject of the verb. The solution to this problem is the following: If in a given complex head, two heads have the same exponent, only the innermost head is targeted by Vocabulary Insertion, bleeding Vocabulary Insertion of the outer head, following the **Uniqueness Constraint** (7.55a) on Vocabulary Insertion proposed by Hewett and Kramer (2024:4,(16)).

(7.55) a. **The Uniqueness Constraint (on Insert)**
In an M-word, the exponent associated with a vocabulary entry α is Inserted no more than once.

b. **M-word** (Arregi and Nevins 2012:239,(4))
An M-word is a 0-level node that is not dominated by any other 0-level node.

It is important that we use a mechanism like the **Uniqueness Constraint**, and not say, a more general rule stating that only one ϕ-bundle may be exponed per complex head, because the rule must only target agreement affixes. In §6.2.2, I argued that object clitics are merged right above VP, and when they are present, the verb moves with them to Asp and T. This means that a given complex head may have multiple *distinct* ϕ-bundles, in which case we wouldn't want to delete the one associated with the clitic (see Chapter 8 for a more detailed analysis of these facts).

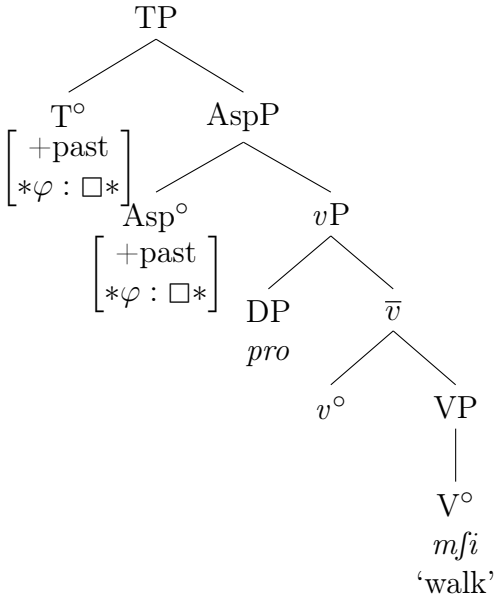
The **Uniqueness Constraint** prevents the insertion of two homophonous exponents on the same complex head, which is exactly what we want for a mono-verbal sentence where the verb moves to Asp° then T°, if both of these heads bear ϕ-probes. We can illustrate how

this constraint leads to the attested data with both a perfective and an imperfective verb in Tunisian.

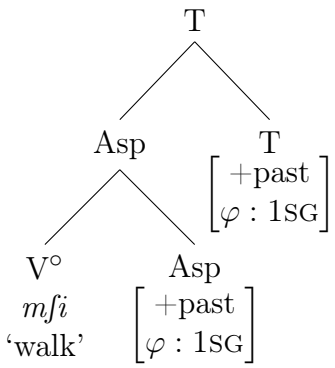
For a simple perfective verb (7.56a) and a simple imperfective verb (7.57a), both Asp$^\circ$ and T$^\circ$ have ϕ-probes, and both verbs move to Asp$^\circ$ then T$^\circ$ (7.56b),(7.57b), leading in both cases to a complex T$^\circ$ (7.56c),(7.57c).

(7.56) a. mʃiː-t
walk-PFV.1SG
I walked.

b.

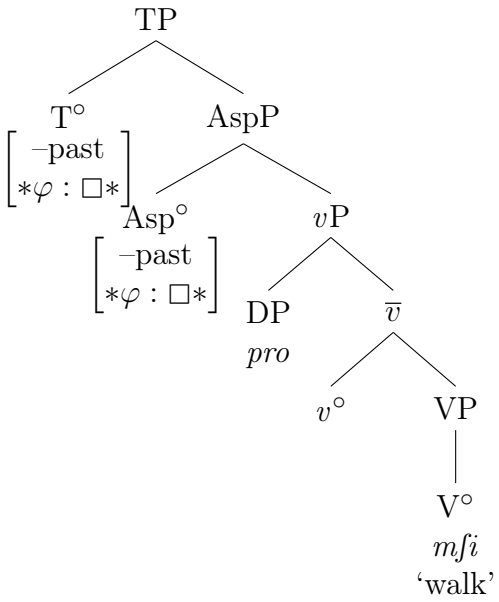


c.

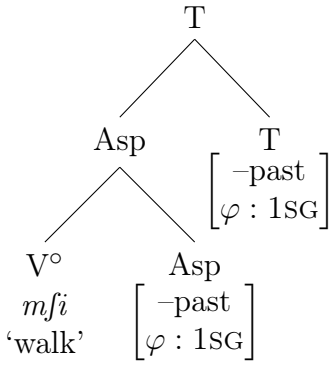


(7.57) a. n-əmʃi
IPFV.1SG-walk
I walk.

b.



c.



Following Hewett (2020, 2023a, 2023b), the vocabulary entries for the Asp and T heads in (7.56c),(7.57c).[25]

(7.58) *Vocabulary entries for perfective/ past affixes* (Hewett 2020:36,(75))

a. *Vocabulary entry for Asp° in* (7.56c)

$$\begin{bmatrix} +\text{author} \\ +\text{participant} \\ +\text{singular} \\ +\text{past} \end{bmatrix} \leftrightarrow \textit{-t}$$

b. *Vocabulary entry for T° in* (7.56c)

$$\begin{bmatrix} +\text{author} \\ +\text{participant} \\ +\text{singular} \\ +\text{past} \end{bmatrix} \leftrightarrow \textit{-t}$$

(7.59) *Vocabulary entries for imperfective / non-past affixes* (Hewett 2023a:171,(70))

a. *Vocabulary entry for Asp° in* (7.57c)

$$\begin{bmatrix} +\text{author} \\ +\text{participant} \\ -\text{past} \end{bmatrix} \leftrightarrow \textit{n-}$$

b. *Vocabulary entry for T° in* (7.57c)

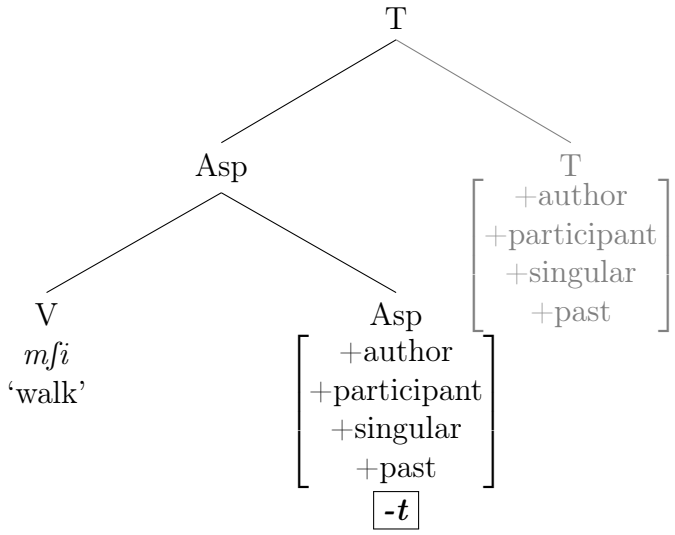
$$\begin{bmatrix} +\text{author} \\ +\text{participant} \\ -\text{past} \end{bmatrix} \leftrightarrow \textit{n-}$$

Thus, given the vocabulary entries in (7.58), a complex head like (7.56c), undergoes the following steps during Vocabulary Insertion, which proceeds bottom-up and is sub-divided in two steps (see Hewett and Kramer (2024) and references therein). The first step is the *selection* of the appropriate vocabulary entry for the lowest or innermost head, Asp, followed by the *insertion* of the vocabulary item *-t* (7.60).[26]

25. I abstract away from the fact that the perfective affixes are suffixes while the imperfective ones are prefixes and suffixes. Given the resulting complex heads in (7.56c) and (7.57c), we would expect all agreement affixes to be suffixal, contrary to fact. Hewett (2023b:1109–1114) proposes a morphological metathesis analysis to account for the presence of prefixes in the imperfective. To keep the derivations simpler here, I illustrate my application of the Uniqueness Constraint only with the perfective conjugation below, even though the same principles apply to the imperfective, in addition to the step of metathesis (which precedes vocabulary insertion).

26. I follow the stylistic conventions used by Hewett and Kramer (2024), where the head not yet targeted by Vocabulary Insertion is grayed out, and where the inserted vocabulary item is boxed under the feature matrix.

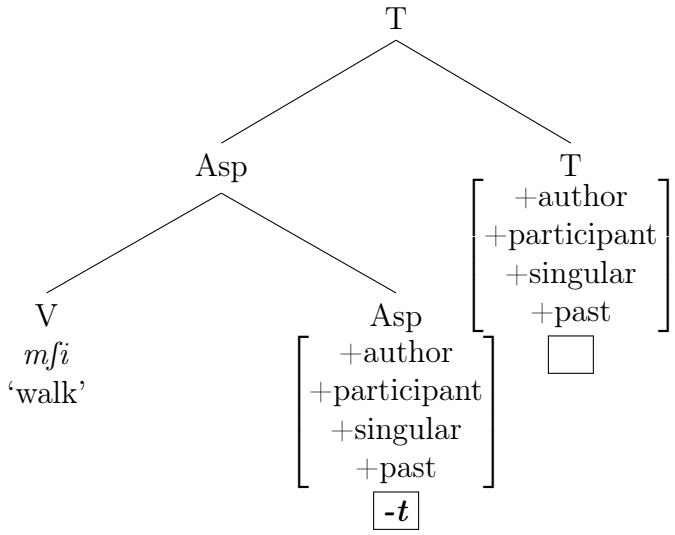
(7.60) ✓*Select and* ✓*Insert for Asp*



In the second cycle of Vocabulary Insertion, however, while selection occurs for T (7.62) (it selects (7.58)), insertion is blocked by the Uniqueness Constraint (7.61) (repeated from (7.55a)).

(7.61) **The Uniqueness Constraint (on Insert)**
In an M-word, the exponent associated with a vocabulary entry α is Inserted no more than once.

(7.62) ✓*Select and* ✗*Insert for T*



Thus, although there are two feature bundles on the complex head in T, only the inner-most one is realized.

The advantage of this type of analysis over one that relies on ϕ-inertness of different heads is that each tense/aspect head has a ϕ-probe no matter the configuration. This leads to multiple agreement morphemes in multi-verb constructions, which is exactly what we want. Additionally, those heads do not change when there is only one verb in the clause, the limit of one ϕ-morpheme per verb is accounted for by the Uniqueness Constraint which blocks the insertion of higher a homophonous agreement morpheme on the same M-word. Note also that the limitation of the Uniqueness Constraint to the M-word predicts that insertion won't be blocked in multi-verb constructions like (7.51) or (7.52) because in those cases, each head forms an M-word with one verbal element.

To summarize, in this section, I have focused on the distribution of ϕ-probes in the Arabic clause, proposing that each tense/aspect head bears one. I showed that proposals tying ϕ-probes to specific tense/aspect specifications (Soltan 2011) fail to predict certain tense/aspect combinations such as a perfective aspect embedded under a future tense, which are clearly attested. This discussion on the loci of ϕ-probes is not only crucial to derive agreement clitics, as non-past T must be ϕ-active for them to surface, it is also a novel contribution to the syntax of tense and agreement in Arabic more generally, regardless of clitics.

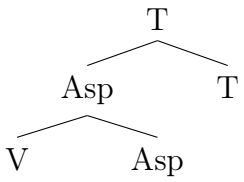
7.5 Agreement clitics as the surface realization of T

Throughout this chapter, I placed my main claim that agreement clitics are the surface realization of T° within the larger context of tense/aspect sensitive ϕ-agreement in Arabic and how to derive it. In this section, I focus on implementing my proposal in more detail, showing how it derives *wh*-clitics and negation clitics. Note that this section focuses exclusively on the syntax of agreement clitics and as such the analysis presented below is not complete. This analysis is expanded in §8.2, where I show a complete derivation of agreement clitics.

The main claim of this chapter is that agreement clitics are the surface realization of T° when no verb has moved to that head. In previous sections, I provided three main pieces of evidence for this claim. (i) Negation clitics only surface on negation when a verb could not move to Neg°. (ii) *wh*-clitics surface on *wiːn* only when no verb has moved to T then C. (iii) It is only possible to have one agreement clitic per clause, and if so, it always surfaces on negation, which is lower than C (and T) in the clause.

Based on all this, I propose that there are three possible realizations for T/Asp: The first two possible realizations are the suffix and prefix conjugation affixes (see tables 2.2 and 2.3), which are the realization of T/Asp when it forms a complex head with a verb, as in (7.63).[27]

(7.63)



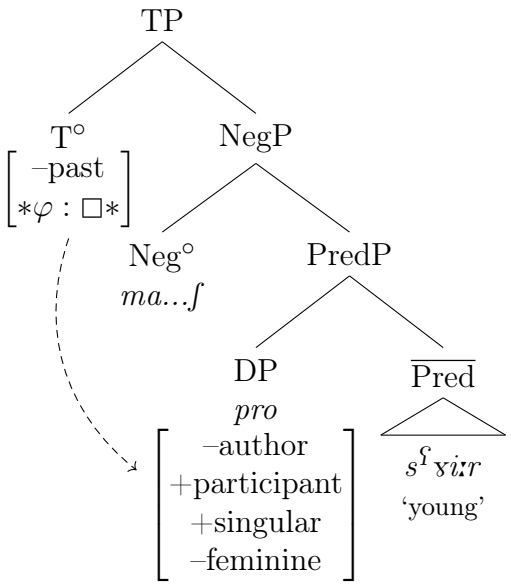
By contrast, when T/Asp does not form a complex head with a verbal element it is realized as a clitic (see tables 2.4 and 2.5).

So, in verbless sentences like the ones in (7.64a) and (7.65a), there is no verb in the clause, and thus T° does not form a complex head with a verb in either case ((7.64b), (7.65b)).

(7.64) a. ma-k-ʃ sˤɣiːr
NEG-2SG.CL-NEG young.MSG
You're not young. Tunisian: TC:text 1462

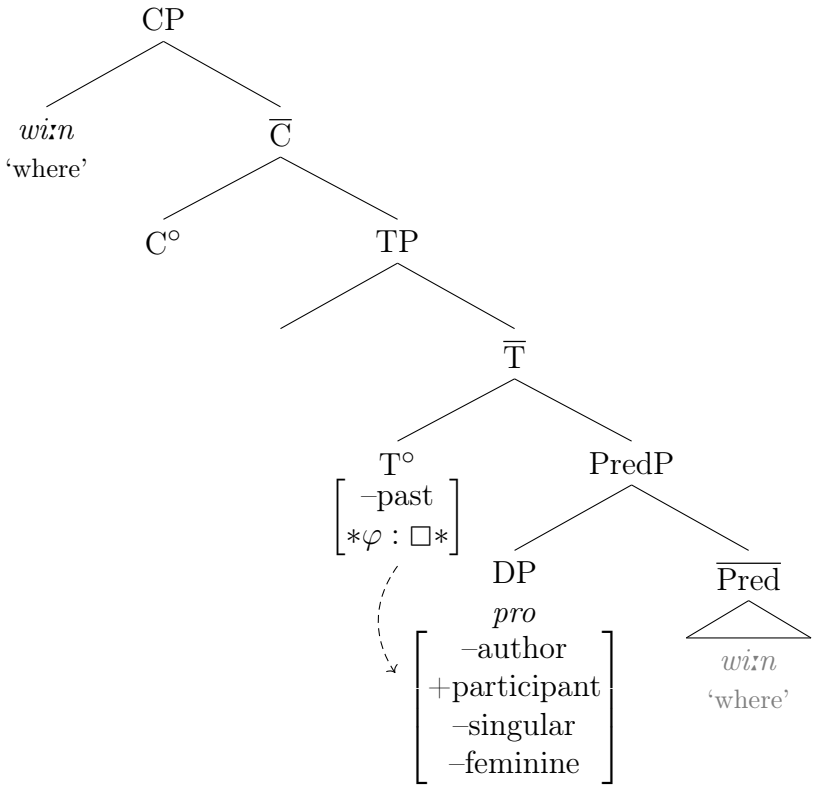
27. Although technically, in my analysis, T° per se ends up not being realized on the surface when it forms a complex head with a verb because Asp° is always closer to the verb (§7.4.2), this head is still present in the derivation and is taken into account during vocabulary insertion.

b.



(7.65) a. wiːn-kom
where-2PL.CL
Where are you? Tunisian

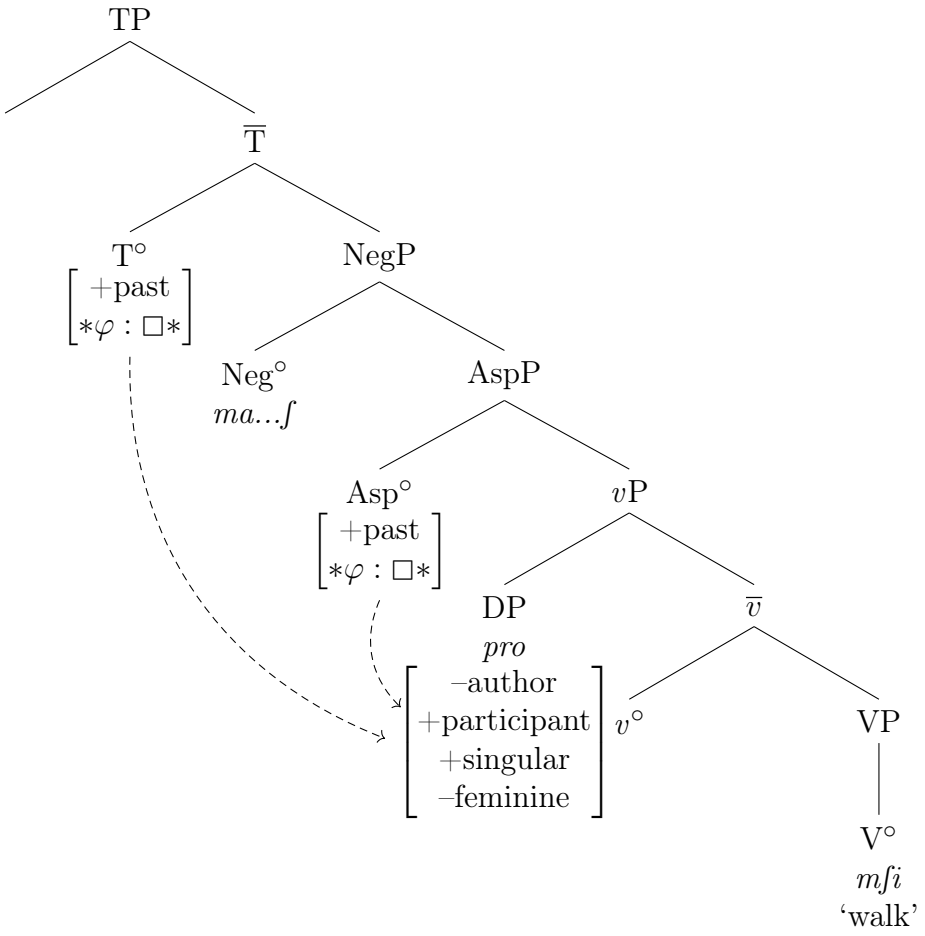
b.



By contrast, in verbal sentences in which a verb moves to T° ((7.66a) and (7.67a)), the resulting complex head is exactly like the one in (7.63), with both Asp° and V° being in T°.

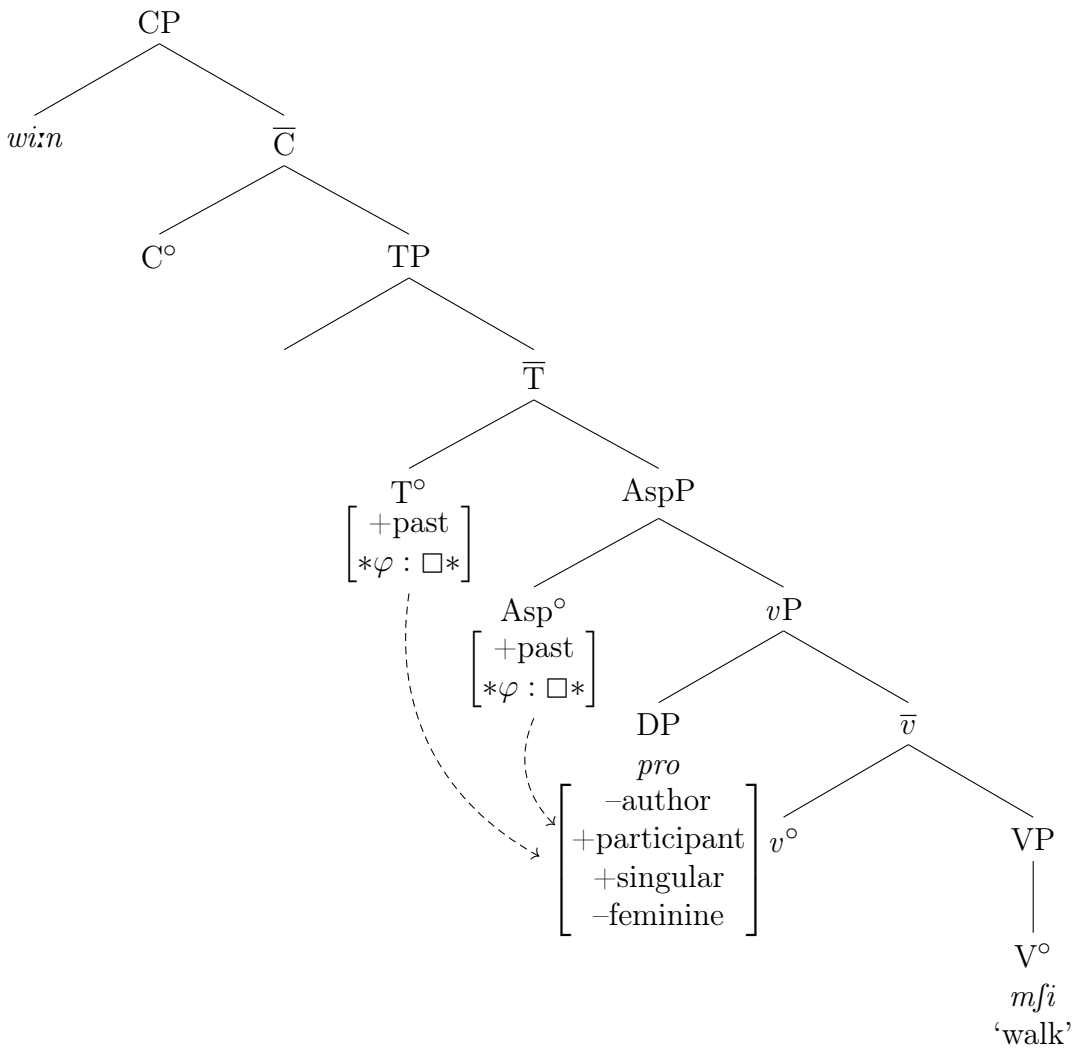
(7.66) a. ma-mʃiː-t-ʃ
NEG-go-2SG.PFV-NEG
You didn't go.

b.



(7.67) a. wiːn mʃiː-t
where go-2SG.PFV
Where did you go?

b.



In this case, the relevant suffix conjugation morphemes are selected and inserted in Asp°, but not inserted in T° due to the Uniqueness Constraint (§7.4.2). No agreement clitic surfaces because T is in a complex head with a verb.

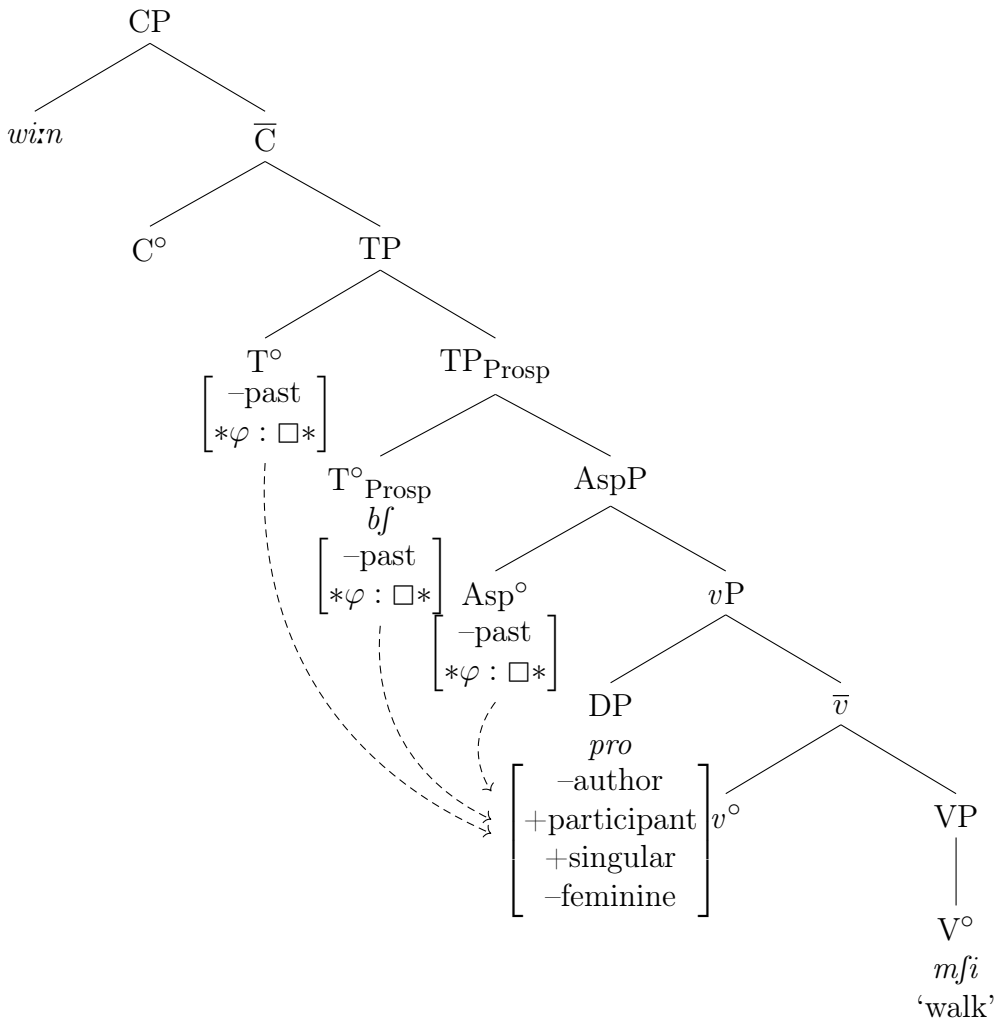
Finally, in sentences like (7.68a) and (7.68b), which contain a head (Prosp°) that cannot move to Neg° but can move to T° in the absence of Neg°, we also obtain the correct distribution of affixes.

(7.68) a. wiːn(*-ək) bʃ-t-əmʃi
where(*-2SG.CL) FUT-IPFV.2SG-go
Where will you go?

b. wiːn(*-ək) ma(-k-)ʃ bʃ-t-əmʃi
where(*-2SG.CL) NEG(-2SG.CL-)NEG FUT-IPFV.2SG-go
Where will you not go?

In the case of (7.68a), the derivation proceeds as in (7.69), with the three tense/aspect heads bearing ϕ-probes, all agreeing with the subject, in addition to verb movement all the way to C°.

(7.69)

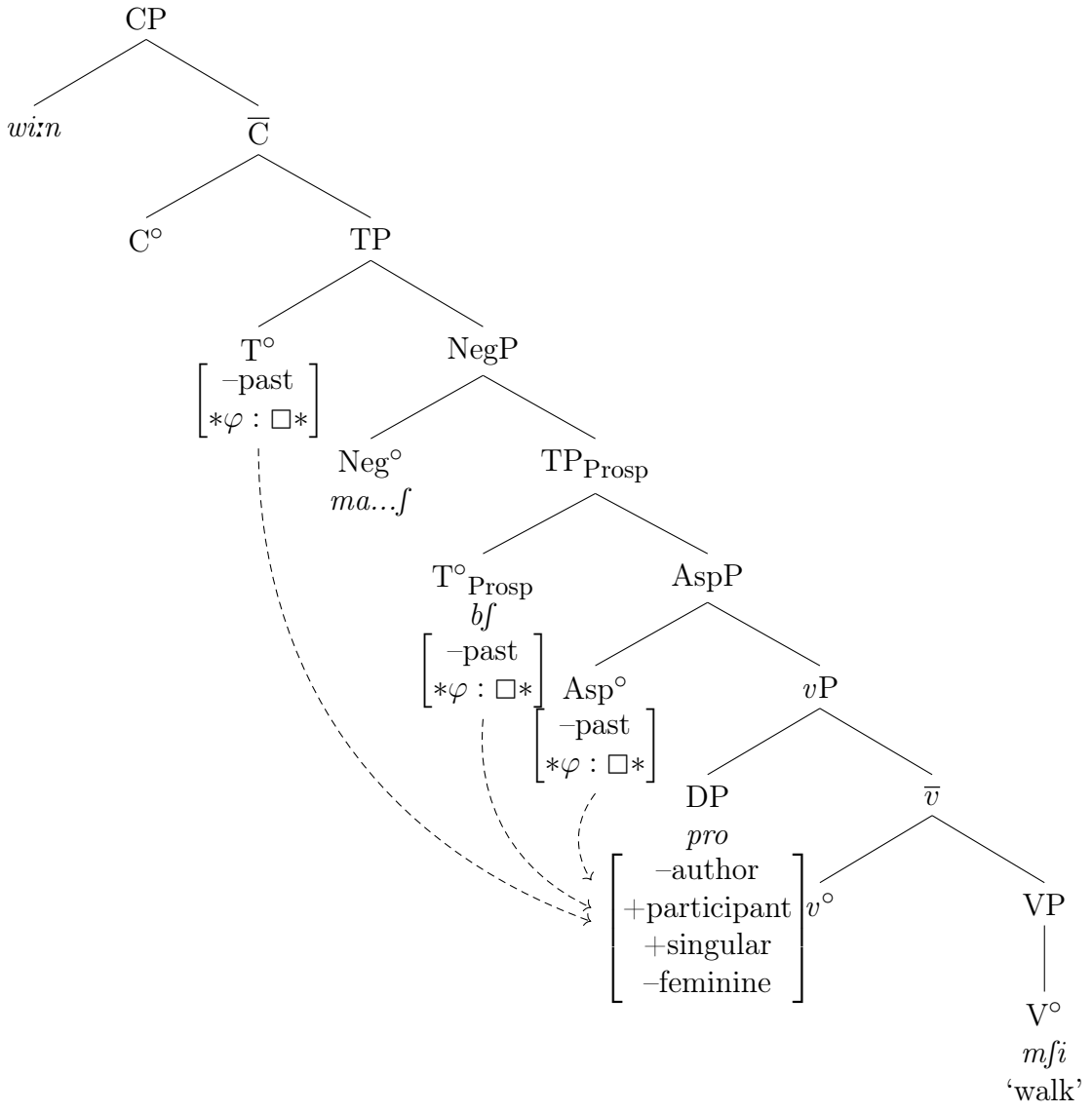


This results in a complex head containing a verb, which will lead to the insertion of the relevant vocabulary entries in Asp° and their non-insertion in Prosp° or T°, due to the Uniqueness Constraint.

However, in (7.68b), there is an intervening NegP, for which Prosp° is not an appropri-

ate host. So, although all heads bearing ϕ-probes agree with the subject in (7.70), head movement of the verb stops at Prosp°, and Neg° moves to T° then C°.

(7.70)



Note that because T° and Prosp° have the same value for the [past] feature, no auxiliary insertion occurs in T° (recall that auxiliary insertion occurs on a given tense/aspect head when the tense/aspect head below it has a different feature value for the [±past] feature, see §7.4.2). The result of this derivation are two complex heads, one with a verb and one without a verb. The one with a verb has vocabulary insertion apply on Asp° but blocked on Prosp° due to the Uniqueness Constraint. As for the complex head with Neg°, T°, and C°,

no verb is there, which means that the appropriate exponent for T° is a clitic.

Thus, the proposal that agreement clitics are the surface realization of T°, taken together with a *low*-Neg approach (§7.3) and a one-to-one correspondence between tense/aspect heads and ϕ-probes (§7.4) allows us to derive the distribution of agreement clitics. At this point, the reader may notice that the analysis seems to predict that any verbless T° should be realized as a clitic, but we know from the data that clitics only expone T°s that form a complex head with negation or certain *wh*-words, otherwise, verbless T° is null in Arabic. In this chapter, I have been focused on the *syntax* of agreement clitics. I consider the issue of where agreement clitics surface as an *exponence* issue, which I tackle in Chapter 8, where I provide a detailed analysis for the exponence of both agreement clitics and doubling clitics.

Before concluding this section, I would like to situate my analysis within the larger context of the literature on negation clitics (as far as I know, *wh*-clitics have not been investigated, neither on their own nor with other types of clitics). My proposal that negation clitics are agreement morphemes is not novel in and of itself: It has been suggested that these so-called negative pronouns are agreement affixes by *e.g.,* Benmamoun and Al-Asbahi (2014). However, to the best of my knowledge, my analysis of these clitics as the surface realization of T° is novel (although see Eid (1991:52) for an important precedent). In particular, the investigation of negation clitics alongside *wh*-clitics has proven to be insightful: We came to the conclusion that the fact that these clitics behave in a very similar way, as uncovered in Chapter 5, is not an accident: They are the surface realization of the same head. Other analyses of negation clitics as a pronominal element merging with negation (Aoun, Benmamoun, and Choueiri 2010; Benmamoun and Al-Asbahi 2014; Pallottino 2016) may very well be correct for other dialects: At minimum, I think this is correct *diachronically* for Tunisian, a view which I expand on in the next section.

7.6 The diachronic path of agreement clitics

In this section, I propose a grammaticalization path for agreement clitics, showing what kinds of steps could have led to the current situation, where agreement clitics can be analyzed as the surface realization of T°. Despite both negation and *wh*-clitics having the same analysis synchronically, it is likely that they evolved separately.

7.6.1 Negation clitics

Based on evidence from other dialects and older forms of Arabic, we find that agreement clitics were historically independent strong pronouns merged in subject position (Benmamoun et al. 2014; Leddy-Cecere 2023). Through both syntactic changes driven by economy principles and formal changes driven by paradigmatic leveling, these strong pronouns came to be clitics and came to have the distribution they have today, which is not a distribution typical of strong pronouns. Agreement clitics thus have a different grammaticalization path from doubling clitics, which I analyzed in Chapter 6 as historically pronominal clitics becoming CL°.

Let's start by looking at a sample of paradigms of negation clitics/pronouns in different dialects, organized from West to East in table 7.1. In this table, we see that the paradigms in most of the dialects contain at least one clitic[28] form: 1st person (see Alluhaybi 2019:236). Dialects diverge in the number of forms that are clitics *vs.* the ones that are strong pronouns, with Moroccan, Egyptian, Palestinian[29] and Yemeni Arabic having a paradigm containing strong pronouns almost entirely, and with Tunisian, Algerian and Lebanese having paradigms almost entirely made up of clitics. Other dialects, like Hassaniya, have strong pronouns for the third persons and clitics for the other persons.

28. Clitic forms are underlined in the table, while strong pronouns are not.

29. Note that the Palestinian variety documented in this dissertation does not have this paradigm at all, neither with clitics nor strong pronouns. However, it is reported in other parts of Palestine, as in the rural dialect spoken in Bir Zeit.

	Hassaniya[a]	Moroccan[b]	Algerian[c]	Tunisian	Libyan[d]	Egyptian[e]	Lebanese[f]	Palestinian[g]	Yemeni[h]
1SG	maːn-i̱	ma-{naː/ni̱}-ʃ	maː-ni̱ː-ʃ	ma-ni̱ː-ʃ	maː-ni̱ː-ʃ	ma-ni̱ː-ʃ	man-ni̱(ʃ)	ma-ni̱ː-ʃ	miʃ-ana
2MSG	maːn-aːk	ma-nta-ʃ	maː-k̲-ʃ	ma-k̲-ʃ	maː-k̲-ʃ	ma-ntaː-ʃ	man-nak̲(ʃ)	ma-nti-ʃ	miʃ-ant
2FSG		ma-nti-ʃ	maː-ki̱ː-ʃ			ma-ntiː-ʃ	man-nik̲(ʃ)	ma-ntiː-ʃ	miʃ-anti
3MSG	maː-hu	ma-huwa-ʃ	maː-h(uː)-ʃ	ma-huː-ʃ	maː-huː-ʃ	ma-huwwaː-ʃ	man-nu̱(ʃ)	ma hu	miʃ-ʃu
3FSG	maː-hi	ma-hija-ʃ	maː-hiː-ʃ	maː-{ha̱ː/hiː}-ʃ	maː-hiː-ʃ	ma-hijjaː-ʃ	man-na̱(ʃ)	ma-hiː-ʃ	miʃ-ʃi
1PL	maːn-na̱	ma-hna-ʃ	maː-naː-ʃ	ma-naː-ʃ	maː-naː-ʃ	ma-hnaː-ʃ	man-naː(ʃ)	–	miʃ-eħne
2MPL	maːn-kum	ma-ntuma-ʃ	maː-kum-ʃ	ma-kom-ʃ	maː-kum-ʃ	ma-ntuː-ʃ	man-nkum(ʃ)	ma-ntu	miʃ-antum
2FPL								–	miʃ-antan
3MPL	maː-hum	ma-huma-ʃ	maː-hum-ʃ	ma-hum-ʃ	maː-hum-ʃ	ma-hummaː-ʃ	man-nun(ʃ)	ma-himm	miʃ-ʃum
3FPL								–	miʃ-ʃan

[a]Tantan: Iaaich (1996). [b]Benmamoun and Al-Asbahi (2014:88); Benmamoun et al. (2014:133). [c]Mazouna: Elhalimi (1996:140). [d]Tripoli: Pereira (2008:251); Stumme (1898:283f.). [e]Eid (1991:50,(36)). [f]Choueiri (2016:124,(39)). [g]Rural, Bir Zeit: Hoyt (2005:4). [h]Sana'a: Benmamoun and Al-Asbahi (2014).

Table 7.1: The paradigms of negation pronouns/clitics in Arabic dialects

This variation can seem hard to make sense of: Because negation clitics cross-reference the subject in all of these dialects, the presence of strong pronouns is expected, but one wonders how the clitics came to fill that position to varying degrees depending on the dialect. Leddy-Cecere (2023)[30] explains that the kind of variation we see in table 7.1 is the result of partial or total paradigmatic leveling based on the first person singular form *manif*. He argues that the paradigm must have been entirely nominative (*i.e.,* made up of only strong pronouns), at a pre-diasporic time where there was considerable variation between two possible 1st person singular forms: *ʔanaː* and *ʔaniː* (cf. Isaksson 1990:59f.).[31] The form *maː-ʔaniː* NEG-PRON.1SG was reanalyzed as *maː-niː* NEG-CL.1SG. For some dialects like Palestinian and Egyptian, this was the extent of the reanalysis. For other dialects, the entire paradigm changes from NEG-PRON to NEG-CL.

The change from strong pronoun to clitic is a formal one, although I suspect it might have precipitated the grammaticalization of these forms as agreement clitics in Tunisian, in a way that they are perhaps not at that stage in Egyptian or Moroccan, where they remain (i) strong pronouns,[32] as seen in table 7.1 (ii) have a more limited distribution, as far as I can tell from the literature.[33]

30. Many thanks to Thomas Leddy-Cecere for sharing his slides and taking the time to share his insights on this topic with me, as I write this chapter before the publication of the paper version of his presentation (Leddy-Cecere 2023).

31. Note that the 1st person form *ʔaniː* is alive and well in Tunisia (pronounced *ʔeːni*), though it is geographically limited to the Sahel region.

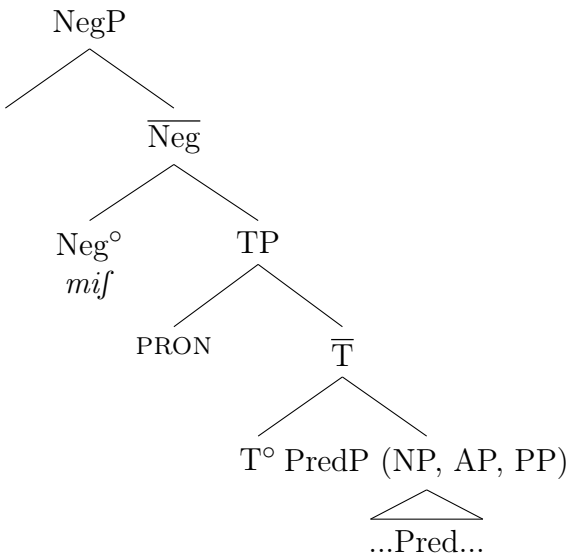
32. Their being a strong pronoun does not entail that they cannot function as agreement in the syntax, and conversely, dialects that have clitic forms like Tunisian does should not be understood to necessarily have agreement clitics (negation clitics could be pronominal clitics in those dialects). That being said, it is reasonable to expect grammaticalization of pronouns into agreement to display some degree of phonological erosion. For example, in Tunisian and Hassaniya, the 3rd person singular forms that are historically *huw(w)a* and *hij(j)a* are shortened to *hu* and *hi* respectively, which isn't the case for Egyptian (see table 7.1). Despite them being strong pronouns then, Eid (1991:52) proposes that the properties of negative pronouns in Egyptian suggest that they are "AGR features in INFL." These properties include their ability to surface inside discontinuous negation, their functioning as non-arguments, and their ability to co-occur with pro-drop.

33. Benmamoun et al. (2014) report that in Egyptian Arabic, while it is possible for a present tense verb not to merge with negation, as in (7.30) above, negation cannot host a a pronoun in that context (i).

(i) ma(*-huwaː-)ʃ bi-ji-ktib
NEG(*-PRON.3MSG-)NEG IND-3MSG.IPFV-write

Benmamoun et al. (2014:133–136) propose that the negative copula in Arabic dialects is the result of a merger between negation and a subject pronoun in the specifier of T°, within a *high-Neg* approach (7.71).[34]

(7.71)



(slightly adapted from Benmamoun et al. (2014:134,(16)))

The development of agreement clitics in Tunisian probably started out in a very similar fashion, but with some changes, including my proposal that NegP is below TP. I contend that agreement clitics developed in Tunisian *via* the rebracketing of a resumptive dependency, where the external argument resumptive (strong) pronoun came to form a complex head with T°, lost its referential features and ended up as the realization of agreement on T°. Here, I incorporate insights from proposals on the grammaticalization of subject agreement (Givón 1976; Fuss 2005; van Gelderen 2011) and on the pronominal copula cycle (van Gelderen 2011; Tan, to appear). Although I contend that negation clitics are not copulas due to their distribution being much wider than that of copulas,[35] the pronominal copula cycle is

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He doesn't write.

Given Eid's (1991) observations (fn.32), it could be the case that the inability of the Egyptian negative pronouns to surface when there is a verb lower in the clause is due to some other constraint, unlike what we see in Tunisian, which is that negation clitics can surface whenever there isn't a verb inside negation.

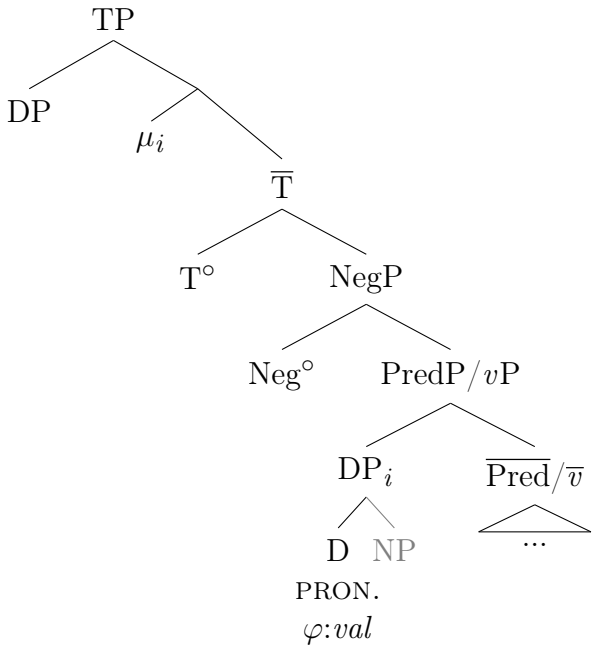
34. They propose the same development for the inflected negator *laysa* in Standard Arabic, which takes the suffix conjugation affixes, themselves historically derived from pronouns.

35. Within Arabic, the pronominal copula and the negation clitics are different on multiple levels: The

relevant here as the the grammaticalization of pronominal copulas into predicative agreement as described by Tan (to appear) is similar to what I propose happens with negation in Arabic, with an important difference: Negation clitics are the realization of a higher head than a pronominal copula would be, which is analyzed as Pred° in Tan (to appear).

The first stage of the grammaticalization of negation clitics is a resumptive dependency like the one sketched in (7.72).

(7.72) *Stage 1: A resumptive dependency*



This resumptive dependency may have had a sentence-initial DP in [Spec, CP], or, given the evidence that it is possible to base-generate an element in [Spec, TP] (cf. Broad Subjects, Chapter 4, see also Hewett 2023d, 2024), this DP may have been in this lower position. This sentence initial DP binds a resumptive pronoun in the base position of the external argument *via* the μ binder prefix. The resumptive pronoun, following Hewett (2023c) and

pronominal copula is only possible with equational sentences while negation clitics are possible with both equational and predicational sentences (Choueiri 2016). Additionally, the pronominal copula is always a 3rd person, displaying agreement in gender and number, but not in person, while negation clitics agree in gender, number and person. The difference between the pronominal copula and negation clitics can be accounted for if the former is *not* the realization of T°, but a head lower than that (Eid 1991; Choueiri 2016).

consistent with previous chapters of this dissertation, is a pronominal D° whose complement is an elided NP (Elbourne 2001, 2013).

Assuming that Neg° and T° form a complex head at this reconstructed early stage,[36] then (7.72) results in a surface structure like that in (7.73), with the order NEG-T-PRON with a null T, given that this is a verbless sentence.[37] Note the absence of an Asp layer in (7.72) and (7.73): I assume AspP is only part of the extended projection of the verb. Verbless sentences only have a TP (see Aoun, Benmamoun, and Choueiri 2010; Soltan 2011).

(7.73) $[_{\text{TP}}\ \text{DP}_i\ [_{\text{T}^\circ}\ ma\text{:}_1\text{-}\varnothing\ [_{\text{NegP}}\ [_{\text{Neg}^\circ}\ \text{—}1\ [_{\text{PredP}/v\text{P}}\ [_{\text{DP}}\ [_{\text{D}^\circ}\ \text{PRON}_i\ \text{NP}\ \ldots\ ]\ ]\ ]\ ]\ ]\ ]\ ]$

The surface structure in (7.73) is the input to Stage 2 of the grammaticalization cline, which I contend happens alongside the paradigm change from strong pronouns to clitics as proposed by Leddy-Cecere (2023). In Stage 2, due to the order in (7.73), where the negation morpheme is immediately followed by the pronominal head, this pronominal head becomes tied to T.

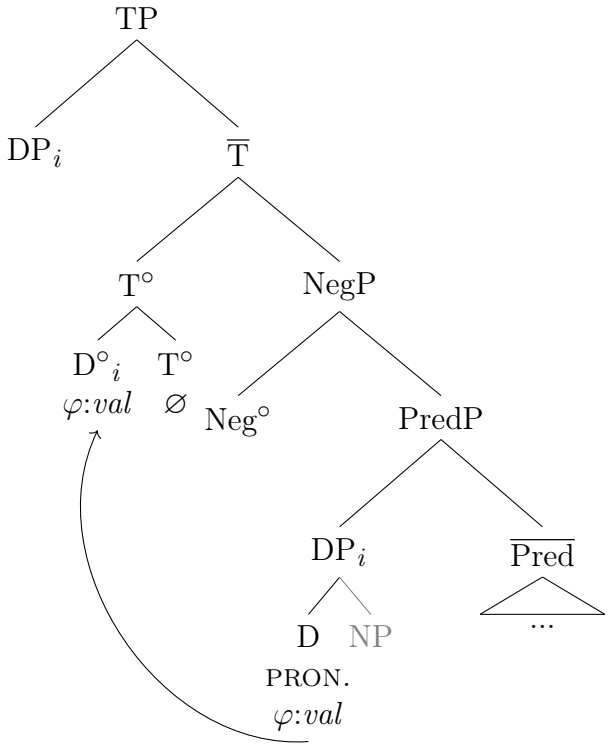
(7.74) **Head Preference Principle (HPP)**
Be a head, rather than a phrase. van Gelderen (2004:18)

Following the Head Preference Principle (7.74) (repeated from (6.10)), and given the fact that pronouns are already heads with elided complements, and that in this particular kind of structure (7.72), they surface immediately after a null T°, it is not a stretch for them to be reinterpreted as forming a complex head with T, in those outputs where no verb is in T, as sketched in (7.75).

36. This is plausible given that in *e.g.,* Standard Arabic, the verb immediately follows negative *ma:* with verbal predicates, and with non verbal predicates, the order is *ma:*-Subject-Predicate (Aoun, Benmamoun, and Choueiri 2010:116f.). Additionally, as argued at length in §7.2 and §7.3, V-to-T movement is synchronically obligatory in Tunisian. If at this earlier stage, verb movement to T occurs as well, then these two orders are predicted: With verbal predicates, V moves to Neg then to T, and with non verbal predicates, Neg moves to null T with the subject remaining in its base position.

37. In verbal sentences like (7.72), the order is the same, but T is not null as there is a verb that presumably moves there. Verbal sentences are irrelevant as an input for the grammaticalization of agreement clitics. It is probably the case that negation clitics grammaticalized in verbless sentences and their presence was then generalized to all sentences where the verb cannot move to Neg°.

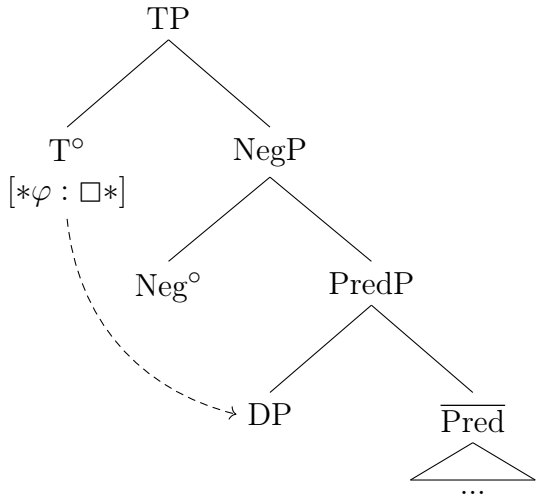
(7.75) *Stage 2: Pronominal head cliticizes to T*



At stage 2, the pronominal head D°, becoming a pronominal clitic, moves to T° during the derivation (similar to the first stage of grammaticalization of doubling clitics, see §6.2). At this stage, all else remaining equal, Neg° moves to T°, leading to a complex head NEG-D-T in which T is null.

This brings us to the 3rd stage, where the clitic D° is reanalyzed as the result of agreement on T (van Gelderen 2011:41), not as forming a complex head with T. This progression is likely precipitated by the fact that T is null in this context, such that the complex head can be simplified (7.76).

(7.76) *Stage 3: Agreement clitics are the surface realization of T*



Thus, a resumptive dependency in which the resumptive pronoun was reinterpreted pronominal clitic in T, accompanied by a paradigm change from strong pronouns to clitics, leads to the current distribution of negation clitics as the realization of agreement on verbless T in the context of negation.

7.6.2 Wh-clitics

Although I propose that *wh*-clitics, like negation clitics, are synchronically the surface realization of verbless T°, their grammaticalization path is not necessarily related to the negation clitics one: What I mean by this is that *wh*-clitics and negation clitics came to be agreement clitics in different contexts at different times for each dialect. It is unlikely that they grammaticalized into agreement morphemes in one context then extended to the other, especially in light of the fact that the negation paradigm displays a lot of inter-dialectal variation between strong pronouns and clitics (table 7.1) while the *wiːn*-paradigm does not (table 7.2).[38,39]

38. Here again, clitic forms are underlined in table 7.2. For some reason, Emirati has a preference for the use of strong pronoun only with the 1st person plural according to Leung, Ntelitheos, and Al Kaabi (2021:343).

39. I thank Ola Aldulaimy for generously providing the Iraqi pradigm in Table 7.2.

	Tunisian	Palestinian	Emirati[a]	Iraqi
1SG	wiːn-i	weːn-i	weːn-i	weːn-(n)i
2MSG	wiːn-ək	weːn-ak	weːn-ək	weːn-ak
2FSG		weːn-ək	weːn-ətʃ	weːn-itʃ
3MSG	wiːn-u	weːn-o	weːn-a	weːn-a
3FSG	wiːn-i/-ha	weːn-ha	weːn-ha	weːn-ha
1PL	wiːn-na	weːn-na	nəħən weːn	weːn-na
2PL	wiːn-kom	weːn-kom	weːn-kum[b]	weːn-kum
3PL	wiːn-hom	weːn-hom	weːn-hum	weːn-hum

[a] Leung, Ntelitheos, and Al Kaabi (2021:343). [b] Khalifa et al. (2018).

Table 7.2: Paradigms of *wh*-clitics

Furthermore, dialects that do not have negation clitics, like Iraqi, Emirati, and the variety of Urban Palestinian documented in this dissertation, still have *wh*-clitics. These facts suggest that this type of agreement clitics evolved separately, though probably in a similar way to negation clitics, whereby subject pronouns in a specifier position were reanalyzed as agreement on T° in verbless sentences. It is unclear under this view however, how *wh*-clitics end up as clitics with little to no trace of their history as strong pronouns (the paradigmatic change proposed by Leddy-Cecere (2023) for negation would not work here). One possible explanation to this is that the grammaticalization of *wh*-clitics starts with the 3rd person masculine strong pronoun *huw(w)a*, which phonologically reduces and attaches to the *wh*-word, coming to look very much like its clitic counterpart *-u*. Given the evidence of short forms of third person pronouns in *e.g.,* Maltese (Soltz and Saade 2016), it is not unexpected that these phonologically reduced forms are the first ones to be reinterpreted as clitic forms. This process likely started with other *wh*-words like *ʃinu* 'what', which do not have the entire person paradigm like 'where' does.[40]

40. This kind of process starting with 3rd person makes sense in the context of a *wh*-word like 'what',

Many dialects of Arabic have innovated *wh*-words that involved the merger of an interrogative word and a 3rd person pronoun. The Tunisian interrogative *ʃnowwa/ʃnijja* 'what' is clearly the reflex of a form like †*ʔajju ʃayʔin huwa/hija*[41] (what thing PRON.3MSG/PRON.3FSG)[42] 'What thing is it?' (Versteegh 2004:246; Behnstedt and Woidich 2021:41). The same goes for its Libyan counterparts *ʃinu/ʃini* (Pereira 2008:266) and other cognates found all over the Arabic speaking world (see Behnstedt and Woidich 2021:77). Another example of the merger of an interrogative word and a 3rd person pronoun is the form *man(h)u/man(h)i* 'who', derived from †*man huwa/hija* (who PRON.3MSG/PRON.3FSG) 'who is it?' (Versteegh 2004:245). This form and its cognates are found in Southern Tunisia,[43] parts of the Levant, Iraq, and in the Arabian Peninsula (Behnstedt and Woidich 2021:16). In all of these examples, we are dealing with verbless clauses whose pronominal subject loses its independence, cliticizes to the *wh*-word, and eventually becomes part of it. Due to how common this pattern is, it is not surprising that the *wh*-word *wiːn* (<†*ʔajna*) would also have the same development, from †*ʔajna huwa* to *wiːn-hu* to *wiːn-u*,[44] though for *wiːn*, the clitic does not become part of an invariant *wh-word* and keeps its semi-independent status: It is generalized as a kind of predicative agreement[45] which only surfaces in these verbless questions, hence its strict complementary distribution with verbs (as opposed to negation clitics which have a wider distribution).

Wiːn is not the only *wh*-word for which the clitic paradigm has been generalized. Although

which is expected to be mostly used for inanimates.

41. Reconstructed forms are marked with † instead of the conventional ∗ to not confuse them with acceptability judgements.

42. Although a grammaticalization of 3rd person singular and feminine pronouns respectively, Tunisian *ʃnowwa* and *ʃnijja* are not segmentable into interrogative+pronoun and are not gendered in the synchronic grammar, as they are used interchangeably.

43. It is not productive in the Tunisian dialect documented in this dissertation.

44. See Behnstedt and Woidich (2021:126) and references therein for more details on these forms.

45. Predicative agreement would be expected to be on a lower head, *e.g.,* Pred° (Tan, to appear). It might be the case that these *wh*-clitics were the realization of Pred° at some point in the past, but at least for Tunisian, a unified analysis as verbless T° makes sense in light of the parallel that we find between negation clitics and *wh*-clitics.

most dialects have grammaticalized the form *man(h)u/man(h)i* as 'who' as discussed above, Jiha (1964:128) reports that the Lebanese variety spoken in Bishmizzine adds the pronominal suffixes to the *wh*-word *mi:n*, describing them as a subject/copula. He also reports that the clitic forms are used for 1st and 2nd person, while the 3rd person forms (*mi:nu* and *mi:ni*) are derived from strong pronouns. This gives support to the idea that the process starts with 3rd person strong pronouns, and then the clitic series is generalized to the rest of the paradigm. In Tunisian and Palestinian, even the third persons on 'where' are also clitics, except for the *i* variant for the 3rd feminine singular in Tunisian which is a retention from the older strong pronoun form *hijja*.

As a final descriptive note, this type of agreement clitic on *wh*-words is relatively productive: For example, many Levantine dialects add the clitic series to the *wh*-word *kif* 'how' as in Palestinian or Lebanese *kif-ak* (how-2MSG.CL) 'how are you?'.

Thus, despite the development of *wh*-clitics being different from that of negation clitics, it is reasonable to analyze both of them as the surface realization of verbless T° synchronically. Due to the independent historical development of *wh*-clitics, their form across dialects are less varied, and their syntactic distribution more limited.

7.7 Conclusion

In this chapter, I have investigated the category of *agreement* clitics, which are *wh*-clitics and negation clitics. I showed that descriptively, they seem to be the surface realization of T° when this head is verbless, that is when there is no verb in the clause, or when no verb has moved to it. By looking at both negation and *wh*-clitics together for the first time, I was able to show how much in common they have and proposed a unified analysis for them synchronically, despite the likely different diachronic paths I suggest in §7.6.

In addition, in attempting to understand the syntax of agreement clitics, I contributed to

our knowledge on Arabic clause structure, verb movement, and agreement. Based on the distribution of agreement clitics, I made a case for V-to-T movement in Arabic, provided evidence for the *low*-Neg proposal, and brought forth a novel proposal on the distribution of ϕ-probes in the clause.

CHAPTER 8

DERIVING THE DISTRIBUTION OF AGREEMENT AND DOUBLING CLITICS

8.1 Introduction

Throughout the dissertation, I have shown that there are two kinds of clitics: doubling clitics (object (8.1a) and complementizer (8.1b) clitics), and agreement clitics (*wh*-clitics (8.1c) and negation (8.1d) clitics).

(8.1) a. *Object clitic*

ʃof-t-**ha$_i$** [Ra:nia$_i$] lbe:raħ
see.PFV-1SG-**3FSG.CL** R.F yesterday

I saw Rania yesterday. Tunisian

b. *Complementizer clitic*

ħaka ʔinn-**ha$_i$** [tˤ-tˤa:lb-e$_i$] xallasˤ-at l-imtiħa:n
say.PFV.3MSG COMP-**3FSG.CL** DEF-student-F finish-PFV.3FSG DEF-exam

He said that the student finished the exam. Palestinian

c. Wh-*clitic*

we:n-**ha$_i$** [tˤ-tˤa:lb-e$_i$]
where-**3FSG.CL** DEF-student-F

Where is the student? Palestinian

d. *Negation clitic*

[t-tәlmi:ð-a$_i$] ma-**ha:$_i$**-ʃ f-l-qasm
DEF-student-F NEG-**3FSG.CL**-NEG in-DEF-class

The student is not in the class. Tunisian

In Chapters 6 and 7, I focused on the syntax of these clitics, *i.e.,* what conditions their distribution? Which heads are they the realization of? In this chapter, I focus on their exponence, *i.e.,* why do all these clitics have the same exponent in different contexts and how do we derive that?

There are three main issues that our analysis of clitics must address (8.2).

(8.2) **Desiderata for an analysis of clitics**

a. Agreement clitics and doubling clitics are the same exponent on the surface.
b. Agreement clitics are restricted to negation and certain *wh*-words.
c. Object clitics are always rightmost within the verbal complex.

The remainder of this chapter is organized as follows: §8.2 addresses desiderata (8.2a) and (8.2b), §8.3 addresses desideratum (8.2c), §8.4 puts these final analytical pieces in perspective, drawing an explicit link between them and the diagnostic tests that I used throughout the dissertation. §8.5 concludes.

8.2 Same surface morpheme, different syntax

In this section, I focus on desiderata (8.2a) and (8.2b), by using the paradigm of the 2nd person in Tunisian as an illustration.

I propose that the 2nd person in Tunisian has the paradigm of ϕ-morphemes in (8.3). The prefix and suffix conjugation morphemes are the verbal agreement morphemes, while the clitic morphemes are just that (not specified for whether they are agreement or doubling clitics). This is a crucial component of the analysis: Whatever vocabulary entries we have for clitics, they must be general enough to be able to be exponents of both agreement and doubling clitics.

(8.3) *2nd person ϕ-morphemes paradigm in Tunisian*

	2SG	2PL
Prefix Conj.	VERB-**t-**∅	VERB-**t-u**
Suffix Conj.	**t**-VERB-∅	**t**-VERB-**u**
Clitic	X°**-k-**∅	X°**-k-om**

Note that in (8.3), I decompose not only the conjugation morphemes into separate person and number affixes (following Hewett 2020, 2023b), I also do the same for the clitics. Thus, I propose the following vocabulary entries for 2nd person agreement morphemes in Tunisian (extending Hewett's framework to clitics).

Within the paradigm in (8.3), we can see that the prefix and suffix conjugation have two exponents in common: *t* for 2nd person, and *u* for plural. Both are restricted to verbs. Thus, their vocabulary entries have a contextual restriction: V°.

(8.4) *Vocabulary entries that are contextually restricted to verbs*

a. 2nd person
$$\begin{bmatrix} \text{–author} \\ \text{+participant} \\ \pm \text{ past} \end{bmatrix} \leftrightarrow t \ / \ \text{V}^\circ$$

b. Plural
$$\begin{bmatrix} \text{–singular} \\ \pm \text{ past} \end{bmatrix} \leftrightarrow u \ / \ \text{V}^\circ$$

Furthermore, these vocabulary entries are possible for heads bearing the [±past] feature. As discussed in §7.4.2, this is the crucial feature for the verbal agreement affixes.[1]

As for the vocabulary entries that are not restricted to verbs, we have three. The singular exponent, which is null, (8.5c) is an elsewhere.

(8.5) *Entries that are not contextually restricted to verbs*

a. 2nd person
$$\begin{bmatrix} \text{–author} \\ \text{+participant} \end{bmatrix} \leftrightarrow k \ / \ [\text{🏠}]$$

b. Plural
$$\big[\text{–singular}\big] \leftrightarrow om \ / \ [\text{🏠}]$$

c. Singular
$$\big[\text{+singular}\big] \leftrightarrow \varnothing$$

The two specifically clitic exponents *-k* and *-om* must be contextually restricted in some way, because they don't always surface: Crucially, as agreement clitics, they only surface when they are in a complex head with negation and *wi:n*, and thus we must prevent their insertion in contexts where no agreement clitic surfaces, *i.e.,* all affirmative declarative verbless sentences. Additionally, these entries must be general enough that they are also appropriate for realizing the head CL: They can be doubling clitics.[2] Doubling clitics are also restricted, to

1. It is not enough to have the [±past] feature, the contextual restriction to V° is crucial because an agreement clitic will still surface on T° bearing [–past], but only if this head doesn't also contain a verb.

2. This is why none of the vocabulary entries in the dissertation have any head specification, they only contain features so as to be compatible with any head bearing those features. The vocabulary entries in (8.4) are compatible with any tense-aspect head, and the entries in (8.4a) are compatible with CL° or T°.

verbs and certain complementizers. Because all of these lexical items don't have something specific in common, there must be some idiosyncratic rule for their surface distribution. I represent this as a diacritic (🏠)—the house symbolizing the ability of the item to be a clitic host—borne by some complementizers, certain *wh*-words, and all verbs (since verbs can host doubling clitics). This captures the fact that agreement clitics and doubling clitics are the same exponent on the surface.

The reason for having a diacritic limiting the distribution of clitics is to make sure that agreement clitics are the exponents of T° in sentences like (8.6b) and (8.6c), but crucially not in sentences like (8.6a).

(8.6) a. Raːnia$_i$ {∅ /***-ha$_i$**} f-l-maktəb
R. {∅ /***-3FSG.CL**} in-DEF-school
Rania is at school.

b. Raːnia$_i$ ma-**ha$_i$**-ʃ f-l-maktəb
R. NEG-**3FSG.CL**-NEG in-DEF-school
Rania is not at school.

c. wiːn-**ha$_i$** Raːnia$_i$
where-**3FSG.CL** R.
Where is Rania?

Thus, negation and *wiːn* bear the 🏠 diacritic, leading to the surface realization of clitics in those contexts, while no element in (8.6a) bears such a diacritic. This might seem inadequate from a synchronic point of view.[3] However, as argued at length in Chapter 7, agreement clitics developed diachronically in the two restricted contexts of negation and *wh*-words, due to the grammaticalization of subject pronouns as agreement in addition to a paradigmatic leveling from strong pronouns to pronominal clitics (see §7.6 and Leddy-Cecere 2023). It is in those environments that these pronominal elements were able to have a host to cliticize to, and not in environments like (8.6a). All of these factors together lead to a contextual restriction for agreement clitics, which must be synchronically captured in some way. Taking

3. The other option, which is to have identical feature matrices for both CL° and T° is also inadequate, as it doesn't say anything about the fact that these forms are the same: They would be accidentally homophonous.

into account that these are the same morphemes we see on complementizers and verbs, I propose that this diacritic is also borne by some complementizers and all verbs. Thus, whenever CL° or T° is part of a complex head containing a 🏠-bearing element, the relevant vocabulary entries (*i.e.,* those inserting clitics, no matter their type) will apply. In the remainder of this section, I focus on how agreement clitics can be derived, and leave the derivation of doubling clitics to §8.3 where I also take into account their surface position.

In addition to making sure that both CL° and T° have the same exponents in certain contexts, we need to derive the fact that no ϕ-morpheme surfaces at all in verbless sentences like (8.6a), although presumably, this kind of sentence has a ϕ-bearing T° (assuming that all T°s are ϕ-probes). I assume that the entries in (8.4) have duplicates without contextual restrictions, leading to null exponents ((8.7a) and (8.7b), repeating the entry (8.5c) for singular—which is already not restricted—as (8.7c)).[4]

(8.7) a. 2nd person $\begin{bmatrix} \text{–author} \\ \text{+participant} \\ \pm \text{ past} \end{bmatrix} \leftrightarrow \varnothing$ b. Plural $\begin{bmatrix} \text{–singular} \\ \pm\text{past} \end{bmatrix} \leftrightarrow \varnothing$ c. Singular $\big[\text{+singular}\big] \leftrightarrow \varnothing$

We are now able to derive the presence of agreement clitics (8.8b) or lack thereof (8.8a) in verbless sentences.

(8.8) a. ʔənti f-d-daːr
PRON.2SG in-DEF-house
You're in the house.

4. Another solution is to propose an obliteration (Arregi and Nevins 2012) rule in (i), whereby T° is only realized if it is part of a complex head. The constraint behind this rule is a PF requirement that T° must have a host.

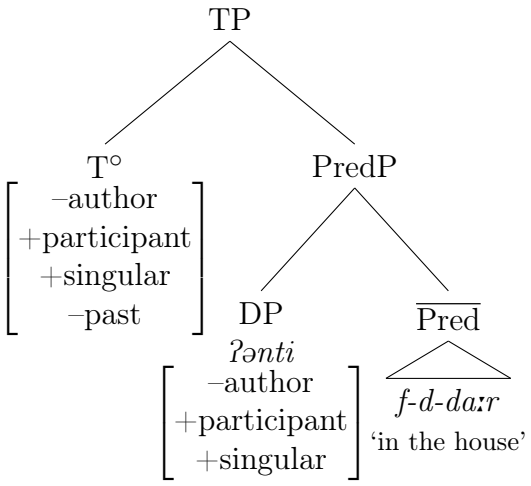
(i) **T° Obliteration**
a. Structural Description: T° is at the same time a terminal node and an M-word.[5]
b. Structural Change: Delete T°.

Thus, when T° forms a complex head with V°, or any other 🏠-bearing element, it ends up being realized. When it is by itself, which we expect to be the case in verbless sentences, it is obliterated, hence not realized.

b. ʔənti ma-k-ʃ f-d-daːr
PRON.2SG NEG-2SG.CL-NEG in-DEF-house
You're not in the house.

In (8.8a), I assume that there is no VP layer (see Aoun, Benmamoun, and Choueiri 2010:35–45), with T° probing for the subject in [Spec, PredP], and copying its features (8.9).

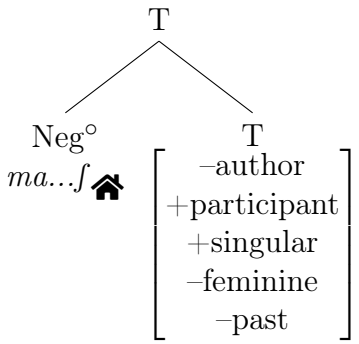
(8.9)



The result of this derivation is a head T° without any verb or 🏠-bearing element, meaning that the relevant vocabulary entry following the subset principle is (8.7a), leading to no visible exponent for T.

As for the derivation of (8.8b), Neg° moves to T° (§7.3), which has copied the features of the subject in [Spec, PredP]. The resulting complex head (8.10) contains negation, a 🏠-bearing element.

(8.10)

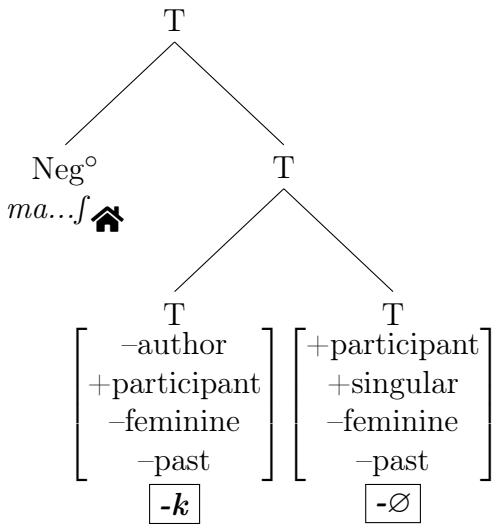


Before vocabulary insertion of the relevant exponents, usual post-syntactic rules apply. Recall the order of post-syntactic rules we have used in previous chapters (8.11).[6]

(8.11) **Order of post-syntactic operations** (non-final)
Impoverishment ≺ Fission ≺ Vocabulary Insertion

The relevant rule for (8.10) is non-author fission.[7] It applies on T° and it is followed by Vocabulary Insertion of (8.5a) and (8.5b).[8]

(8.12)



Note that the discontinuous head Neg° must have a linearization rule such that it wraps around its sister, leading to the order of morphemes in (8.8b).

As for a sentence with the *wh*-word *wi:n* such as (8.13) (repeated from (7.65a)), let's begin by showing how the diacritic interferes with vocabulary insertion.

(8.13) wi:n-kom
where-2PL.CL
Where are you?

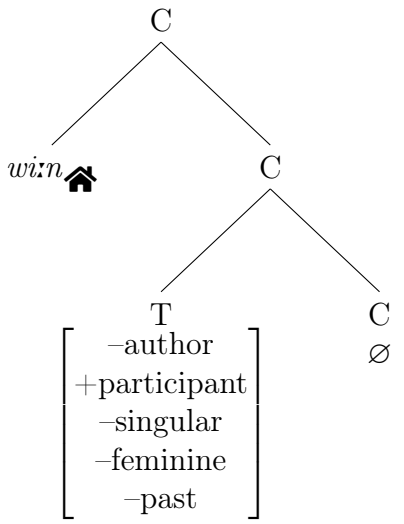
6. I mark the order as non-final here because I introduce an additional operation in §8.3.

7. Non-author fission is a rule proposed by Hewett (2020, 2023b) which splits the features [–author] and [α-singular] into two positions, copying all other orthogonal features (see §3.4.2).

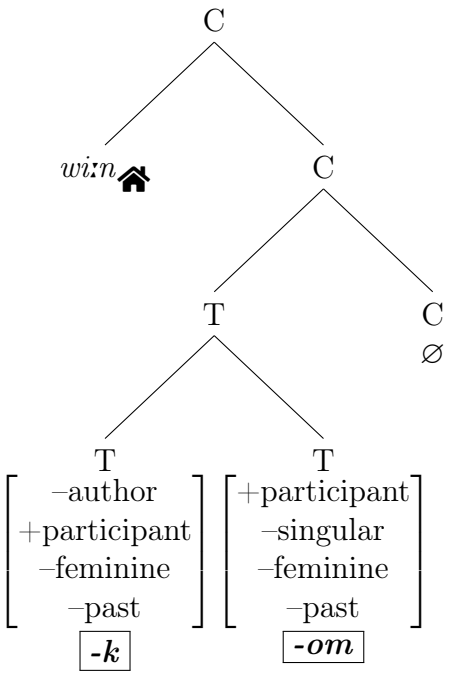
8. I assume that Vocabulary Insertion is still split into 2 steps, Select and Insert, but I only refer to this division explicitly when it is relevant, *i.e.,* when the Uniqueness Constraint comes into play (see §7.4.2).

Unlike negation, for *wiːn* and *wh*-words like it, it is the *wh*-word that bears the 🏠-diacritic, not the the C° head. Based on this, the diacritic is not expected to be part of the complex head containing T° (which moves to C°, cf. §7.2.1, (7.16)). That being said, after movement of *wiːn* to [Spec, CP] the *wh*-word and C° meet the adjacency requirement for Matushansky's (2006) *m-merger* operation to apply. After *m-merger*, the *wh*-word ends up within the complex head where T° is, as T° has moved to C° (8.14).

(8.14)



(8.15)



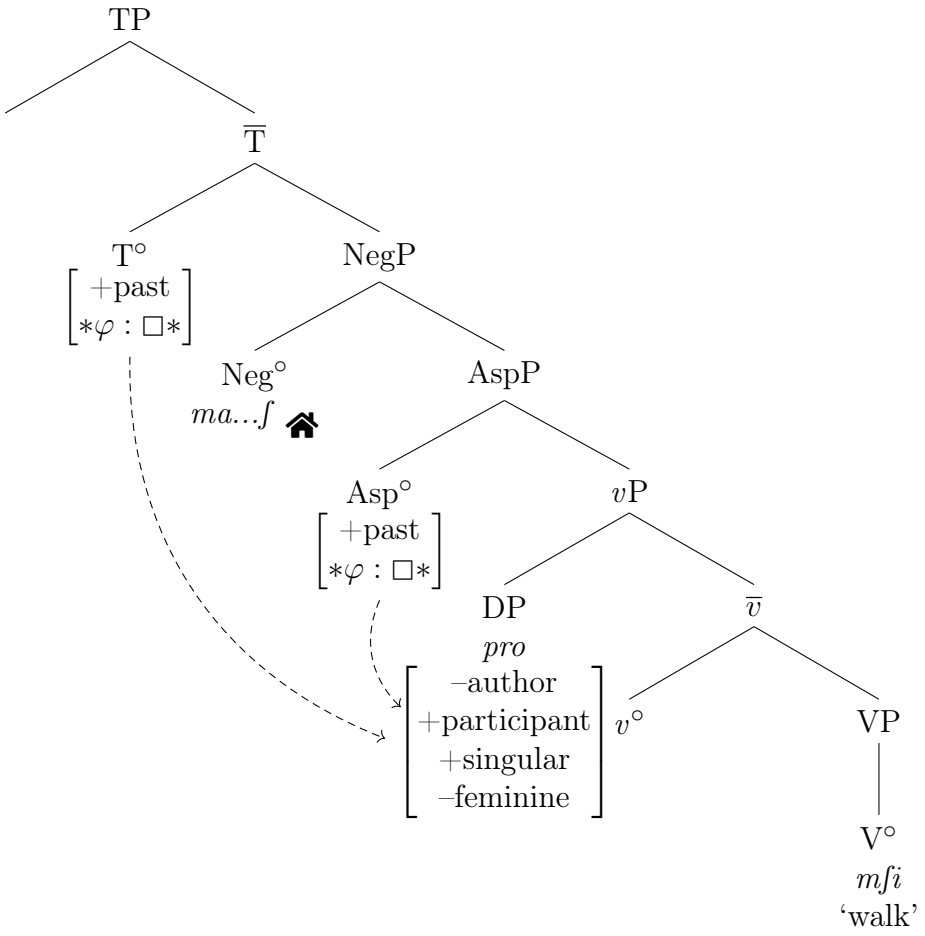
This leads to the Vocabulary Insertion of (8.5a) and (8.5b).

Thus, thanks to the restriction of agreement clitics to 🏠-bearing elements, we are able to derive agreement clitics where applicable, and keep them from surfacing where we don't see them.

Before concluding this section, I illustrate an additional sentence, showing how we obtain verbal agreement morphemes on a verb in the context of negation. Recall (7.66), repeated here as (8.16).

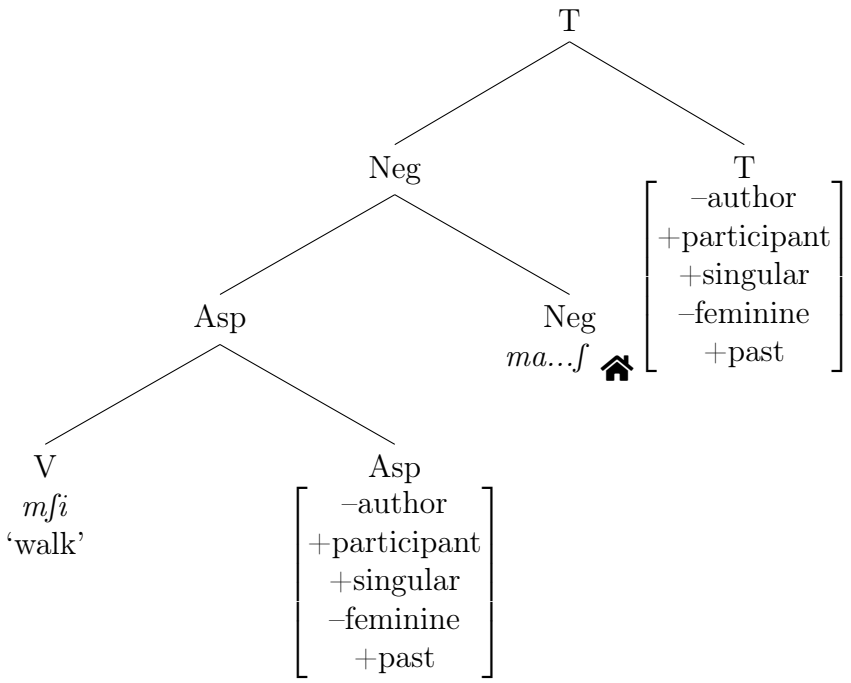
(8.16) a. ma-mʃiː-t-ʃ
NEG-go-2SG.PFV-NEG
You didn't go.

b.



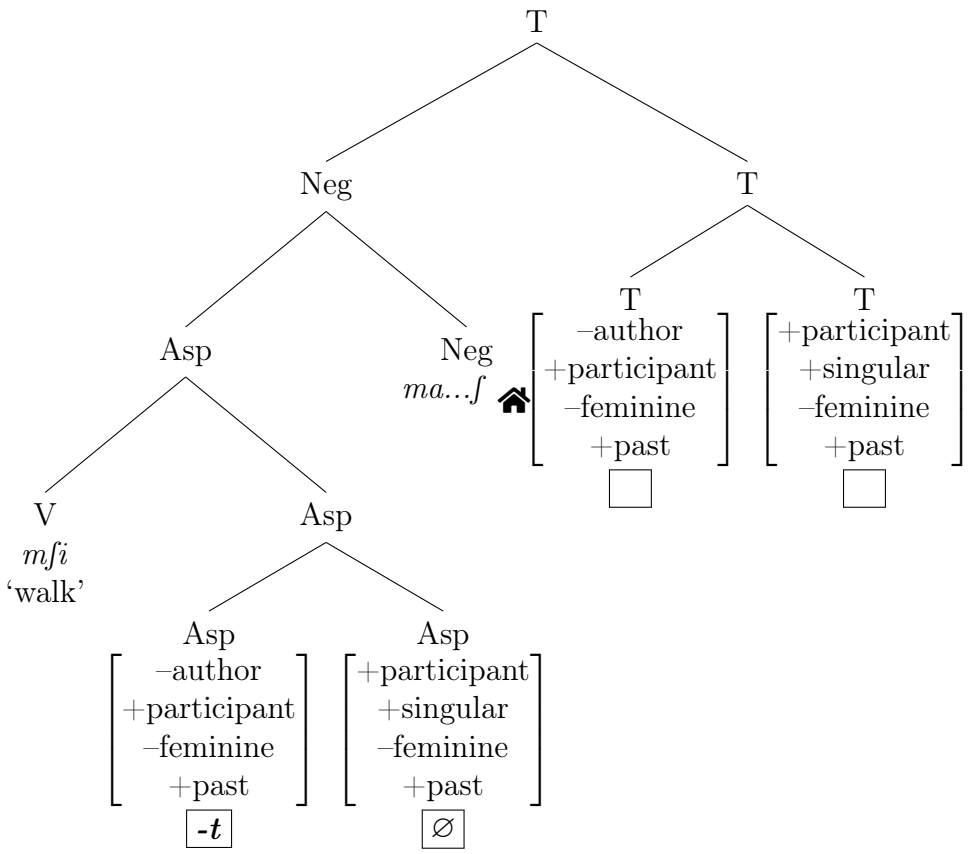
We end up with a complex head containing the verb, Asp, Neg, and T (8.17).

(8.17)



Just like in previous examples, non-author fission applies on Asp° and T° (8.18).

(8.18)



For Asp°, the relevant vocabulary entries are (8.4a) and (8.4b), as this terminal is in the context of V°. These same vocabulary entries would apply for T°, as it is also in the context of V°, but in this case vocabulary insertion is blocked for this head due to the Uniqueness Constraint (8.19) (repeated from (7.55a)).

(8.19) **The Uniqueness Constraint (on Insert)**
In an M-word, the exponent associated with a vocabulary entry α is Inserted no more than once.

Note that we do not expect agreement clitics to be inserted for T° in (8.18), despite being in a context with a 🏠-bearing element, because in this case T° is still in a the context of V°, and it bears a [+past] feature, making (8.4a) and (8.4b) the most specific vocabulary entries that should be selected following the subset principle.

In this section, I addressed two out of the three desiderata set in the introduction, namely how we can account for agreement clitics and doubling clitics being the same morpheme on the surface (8.2a), and how we can restrict agreement clitics to negation and certain *wh*-words (8.2b). I argued that these are issues of exponence. I accounted for (8.2a) by proposing vocabulary entries that could be used in either context (not specifically for a head like T° or Asp° or CL°) . As for (8.2b), I proposed that elements that can host clitics bear the 🏠-diacritic, and that certain vocabulary entries are contextually restricted to 🏠-bearing elements, so as to only insert clitics in those contexts.

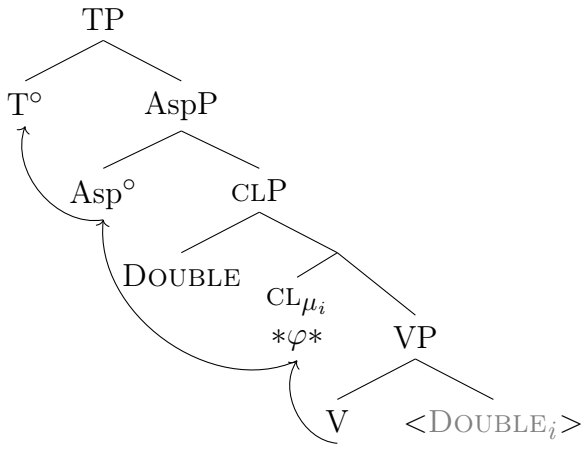
8.3 The position of object clitics

While the surface position of agreement clitics is quite unproblematic, that of doubling clitics is much trickier. Thus far, I have not discussed the surface position of object clitics, especially with respect to the verbal stem and agreement affixes. This is desideratum (8.2c). In this section, I propose my solution to this issue in terms of Local Dislocation (Embick and Noyer 2001), then provide a sample derivation of a verbal complex with a doubling clitic,

showing how and in which order all the post-syntactic rules that have so far been presented in different parts of the dissertation apply.

In §6.2.2, I justified the location of CLP right above VP, saying that CL° is part of the head movement chain of the verb (8.20). This is important because Arabic, as opposed to *e.g.,* Romance languages, does not have clitic climbing: An object clitic always surfaces with the main verb, hence the tight relation between CL° and V°, no matter where the verb ends up.

(8.20) *Object clitic is part of the head movement chain of the verb*



So, if there is an auxiliary in T°, the verb is in Asp° and that is also where the clitic is. If the verb moves to T°, then the clitic is also in T°. However, kept as is, the analysis in (8.20) makes a very wrong prediction in terms of affix/clitic ordering: It predicts that the object clitic would always surface inside subject agreement, contrary to fact. The object clitic is always to the right of subject agreement in Arabic (8.21) (and Semitic more generally).

(8.21) a. ʃof-**t-u**
see-**PFV.1SG-3MSG.CL**
I saw him.

b. * ʃof-**u-t**
see-**3MSG.CL-PFV.1SG**

In the context of the analysis of subject-verb agreement proposed in §7.4.2, the relevant characterization of this generalization is rather that the object clitic is always to the right of

Asp°, which is always the closest tense/aspect head to the verb (8.20). If other tense/aspect heads above Asp° are part of this complex head, the relevant Vocabulary Entries will end up not being inserted due to the Uniqueness Constraint (8.19). This means that in order to derive the surface position of object clitics, we only need to worry about Asp°: A higher tense/aspect head will either not have Vocabulary Insertion or be in a complex head with some other element (*e.g.,* an auxiliary).

Thus, we can formulate a rule of Local Dislocation (Embick and Noyer 2001),[9] which applies after vocabulary insertion, and which essentially flips the position of CL to the right of Asp (8.22).[10]

(8.22) **Local Dislocation of CL in Arabic**
[CL ∗ Asp] → [Asp ∗ CL]

In (8.22) $a * b$ means that a linearly precedes b and is adjacent to it (Embick and Noyer 2001:562).

Now that we have all the necessary rules, we can see how a sample derivation for a verb in the suffix conjugation with an object clitic (8.23) would proceed.[11]

(8.23) ʃeːf-kom
see.PFV.3SG-2PL.CL
He saw you.

Let us begin with stating the assumed order of post-syntactic operations (8.24), which now

9. I chose to formalize post-syntactic displacement in terms of Local Dislocation here. Note however, that this proposal can easily be modified within the analysis of morphological metathesis (Arregi and Nevins 2012, 2018), which can apply before or after Vocabulary Insertion. Hewett (2020, 2023b) proposes that the prefixes in the prefix conjugation in Arabic are the result of metathesis applying *before* vocabulary insertion, and thus we could also analyze the displacement of clitics to the right of Asp as a process of metathesis.

10. See Tucker (2013:217ff.) for a solution to this problem in Maltese, where he proposes that linearization of a complex head is based on the lexical properties of the exponents involved in the structure.

11. A verb in the prefix conjugation with an object clitic would have a very similar derivation, except with the added step of Metathesis of (the leftmost) Asp node to an initial position (see Hewett 2020:40–5; 2023b:1109–14).

takes into account the operations introduced in previous chapters, in addition to the newly introduced Local Dislocation.

(8.24) **Order of post-syntactic operations** (final)
Impoverishment $\prec$ Fission $\prec$ Vocabulary Insertion $\prec$ Local Dislocation.

In order to do show how the derivation proceeds, we need to have the Vocabulary Entries for the relevant 3rd person and 2nd person ϕ-morphemes. These are shown in (8.25) and (8.26).

(8.25) *Vocabulary entries for 3rd person masculine singular agreement affixes in Tunisian*

a. 3rd person prefix conjugation
$[\text{–past}] \leftrightarrow j$ / V°

b. 3rd person suffix conjugation
$[\text{+past}] \leftrightarrow \varnothing$ / V°

c. Masculine singular
$\begin{bmatrix} \text{+ singular} \\ \pm\text{past} \end{bmatrix} \leftrightarrow \varnothing$

(slightly adapted from Hewett 2020)

(8.26) *Vocabulary entries for 2nd person clitics in Tunisian* (repeated from (8.5))

a. 2nd person
$\begin{bmatrix} \text{–author} \\ \text{+participant} \end{bmatrix} \leftrightarrow k$ / [🏠]

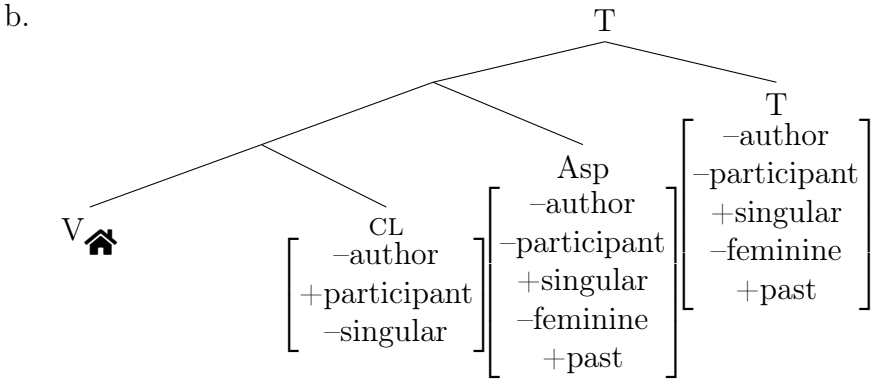
b. Plural
$[\text{–singular}] \leftrightarrow om$ / [🏠]

c. Singular
$[\text{+singular}] \leftrightarrow \varnothing$

Let's begin with (8.27a) (repeated from (8.23)), and the output of syntax for such a sentence (8.27b). Assuming that T and Asp are both [+past] (cf. §7.4.2) in this context, and that they both probe for the external argument *Sami*, and assuming that CL probes for the object *pro* (cf. §6.2), we get the output in (8.27b) after feature copying on the relevant heads.

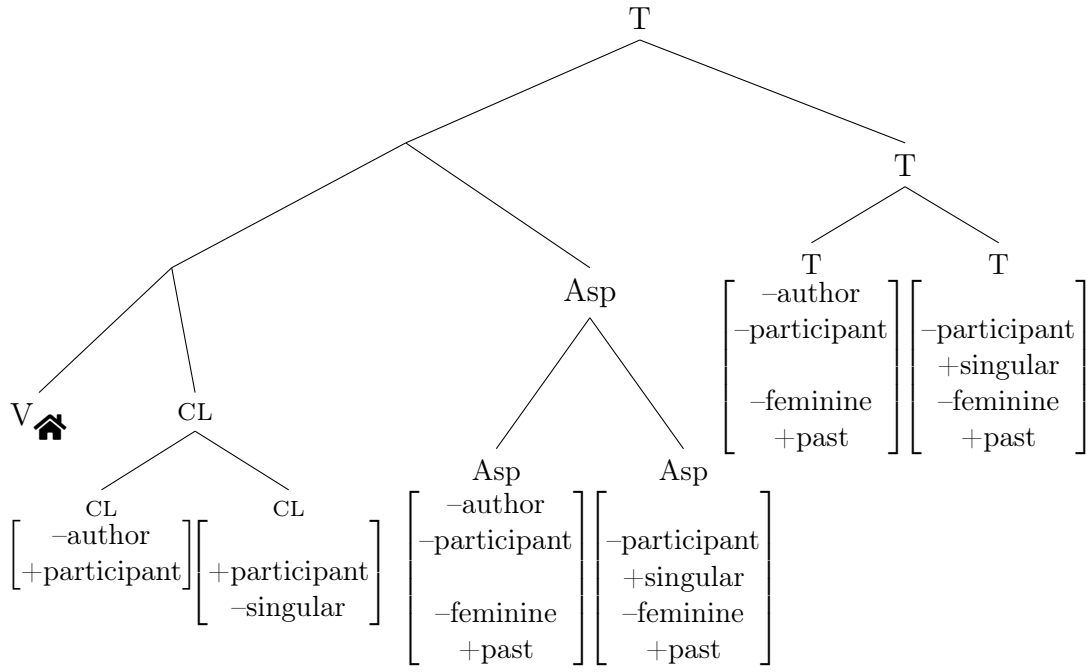
(8.27) a. Se:mi ʃe:f-kom
S.M see.PFV.3SG-2PL.CL
Sami saw you.

b.



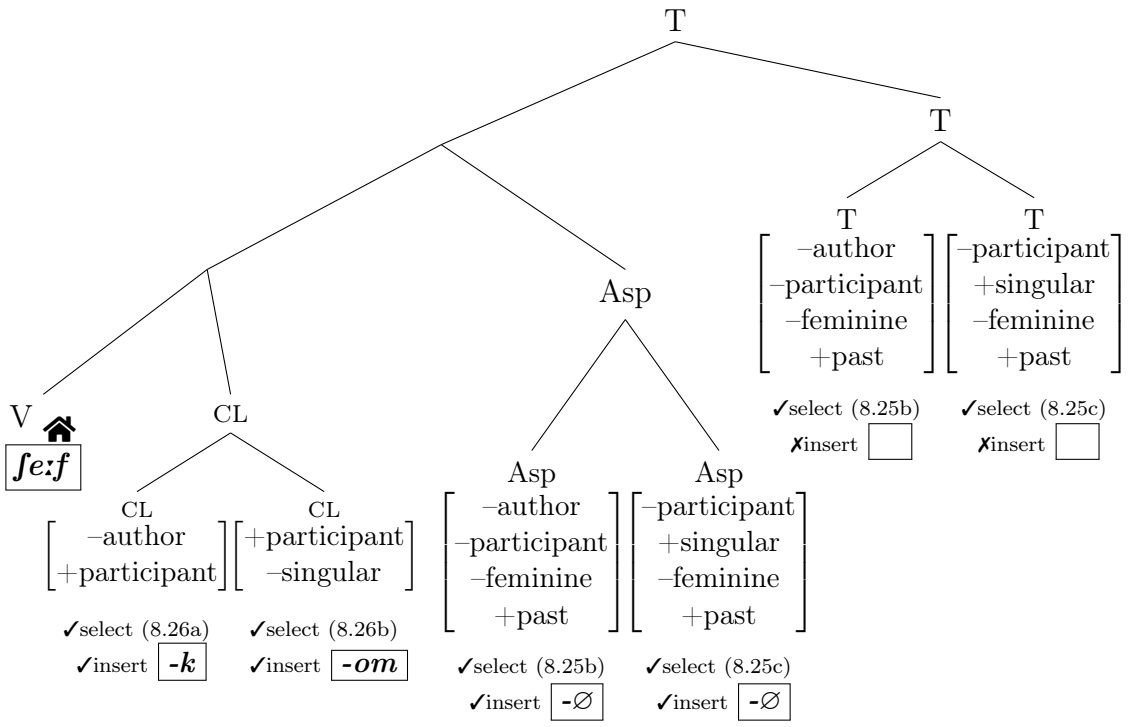
The first operation to apply on the complex head in (8.27b) is fission (no impoverishment occurs here), specifically Hewett's (2023b:1102) non-author fission rule, splitting the features [– author] and [α singular] (see fn. 7). So far in the dissertation, we have only seen this rule apply on heads like T° or Asp°, but I contend that it also applies on CL°. Just like the Vocabulary Entries for ϕ-morphemes are not head-sensitive (they can realize any Asp/T and CL), the post-syntactic rules aren't either. Thus, non-author fission applies on all the terminals in (8.27b), leading to (8.28).

(8.28)



At this point, Vocabulary Insertion applies (8.29). VI proceeds bottom-up and is subdivided in two steps, Select and Insert, following Hewett and Kramer (2024).

(8.29)



The relevant vocabulary entries for CL° according to the subset principle are (8.26a) and (8.26b). Note that despite CL° being in the context of V, we do not predict the insertion of the verbal agreement morphemes (8.4a) and (8.4b) because the vocabulary entries for these exponents contain the [±past] feature, and as such would not be appropriate entries for the two CL terminal nodes in (8.29). Only (8.26a) and (8.26b) are in this case, as they each contain a subset of the features on the relevant CL terminals, and they are contextually restricted to 🏠-bearing elements, hence they apply here.

As for Asp, the relevant vocabulary entries are (8.25b) and (8.25c) following the subset principle, since the two Asp terminals are in the same complex head as V and bear the [+past] feature. Note that all exponents are inserted, except for those in T°, because the two terminal nodes T select the same vocabulary entries as Asp. The **Uniqueness constraint** (8.19) prevents the insertion of those exponents, hence the non-realization of T° in this context.

It is now time for Local Dislocation (8.22) to apply. This rule applies on adjacent strings *after*

Vocabulary Insertion, and in our context here, it targets terminal nodes within a given M-word (subwords within a morphosyntactic word in Embick and Noyer's (2001) terminology). Thus taking the M-word T, we obtain the following order of terminals (ignoring the non-inserted Ts).

(8.30) [V ∗ CL ∗ CL ∗ Asp ∗ Asp]
[ʃe:f ∗ -k ∗ -om ∗ ∅ ∗ ∅]

Local Dislocation (8.31) (repeated from (8.22)) will apply on (8.30) as many times as needed, until there are no exponents of CL that are not to the right of Asp.

(8.31) **Local Dislocation of CL in Arabic**
[CL ∗ Asp] → [Asp ∗ CL]

Thus, it applies four times (8.32), leading to the output in (8.32d), where the clitic exponents are to the right of the (here null) tense/aspect exponents.

(8.32) a. [V ∗ CL ∗ Asp ∗ CL ∗ Asp]
[ʃe:f ∗ -k ∗ ∅ ∗ -om ∗ ∅]
b. [V ∗ CL ∗ Asp ∗ Asp ∗ CL]
[ʃe:f ∗ -k ∗ ∅ ∗ ∅ ∗ -om]
c. [V ∗ Asp ∗ CL ∗ Asp ∗ CL]
[ʃe:f ∗ ∅ ∗ -k ∗ ∅ ∗ -om]
d. [V ∗ Asp ∗ Asp ∗ CL ∗ CL]
[ʃe:f ∗ ∅ ∗ ∅ ∗ -k ∗ -om]

In contexts where neither CL nor Asp undergo fission, (8.32) applies only once, and in contexts where only one of them undergoes fission, it applies twice.

Thanks to CL always being part of the head-movement chain of the verb, and to the post-syntactic Local Dislocation rule, we can derive the surface position of object clitics.

8.4 The link between the analysis and the diagnostic tests

In part I of the dissertation, I incrementally applied diagnostic tests teasing apart the difference between subject-verb agreement and object clitic doubling. I then extended the

empirical ground to complementizer clitics, negation clitics and *wh*-clitics in part II. In this section, I summarize these diagnostic tests and comment on their relevance to the overall analysis of clitics I propose in the dissertation. Table 8.1 contains all of the tests found in the dissertation and their results, including ones that were not explicitly applied in Part II.

	Doubling Clitics		**Agreement Clitics**		
Diagnostic Test	Object clitics	Comp. clitics	Negation clitics†	*wh* clitics	Subj–V Agreement
Tense variance	✗	✗	✓	✓	✓
Obligatoriness	✗	✗	✗	✓	✓
Cross-referencing of 1st conj. lexical DP	✗	✗	N/A	✓	✓
Sensitivity to controller	✓	✓	✗	✗	✗
Pragmatic restrictions	✓	✓	✗	N/A	✗
Complementary distribution w/ verbs	✗	✗	✓	✓	N/A
3rd fem. sg. Allomorphy†	✗	✗	✓	✓	N/A
Deflected agreement	✗/ **?**†	✗/ **?**†	✓	✓	✓
Presence of default	✗	✗	✓	N/A	✓

† marks things that are exclusive to Tunisian

Table 8.1: Summary of diagnostic tests

With regards to tense variance, a diagnostic that I introduced in Chapter 2 (§2.3.3) but have not expanded on in part II, we can see that this test is not limited to agreement affixes and object clitics. It is clear that complementizer clitics are not tense variant, since they cliticize to complementizers and are not sensitive to the tense of the clause. Since I analyze both object clitics and complementizer clitics as the surface realization of CL°, an optional head that does not bear any tense feature, this is predicted by the analysis. By contrast, negation clitics and *wh*-clitics, as I argue in Chapter 7, are the surface realization of T° when no verb has moved to that head. This is only the case when T° is [–past]. As discussed at length in §7.3, and as illustrated in §8.2, when T° is [+past], the verb always moves to T°, thus never leading to an agreement clitic in this configuration. Hence, agreement clitics are tense variant, since they only surface in non-past contexts.

As for obligatoriness, complementizer clitics, just like object clitics, are optional and *wh*-clitics, just like subject-verb agreement, are obligatory. Negation clitics are an outlier here, being optional. This optionality may be due to two negative heads, one with the 🏠-diacritic

and one without it. The latter results in the discontinuous negation surfacing as one element *muſ*, since in that case, T° would not be in the context of a 🏠-bearing element. This isn't just a synchronic hack: The fact that we have two types of negation makes sense from a diachronic perspective. The *muſ* form is the result of the grammaticalization of the discontinuous negation morpheme with the 3rd person masculine singular clitic *-hu* (see Lucas 2013:406; Alluhaybi 2019:237f.; Lucas and Alluhaybi 2022:618; Joukhadar 2023:30). It is plausible that this clitic was the realization of T° at some point. Being the default form, it gets reinterpreted as absence of agreement. This leads to the surface continuous negation *muſ*, which does not bear a 🏠-diacritic, in addition to the discontinuous negation *ma...ſ*, which does bear a 🏠-diacritic and thus has agreement clitics surface inside it. So, in a sense, agreement clitics are obligatory with 🏠-bearing *ma...ſ*, and do not surface with *muſ*.

The coordination diagnostic, developed in Chapters 3 and 5 (§5.2), states that only agreement morphemes can cross-reference a first conjunct lexical DP. This follows form our analysis: ϕ-bearing tense-aspect heads may probe for a subject downward and copy the uninterpretable features of the &P (Tunisian: §3.4), or even the features of the closest conjunct (Palestinian: §3.5). This predicts that agreement clitics are also able to cross-reference a first conjunct lexical DP, since the probe responsible for them is on T° (see §5.2). By contrast, both object clitics and complementizer clitics are the surface realization of CL°, a head that requires movement of the double to its specifier, predicting only a resolved clitic in that context (see §3.7 and §6.5.2).

Regarding the semantic/pragmatic restrictions and sensitivity to the controller, both of these tests pattern in the expected way following the analysis. Recall that I analyze doubling clitics as the result of the grammaticalization of a right dislocation structure. This diachronic development restricts the kinds of DPs that CL° is able to host in its specifier to those DPs that were historically able to be right dislocated, *i.e.,* definite, backgrounded DPs. By contrast, agreement clitics aren't expected to be restricted this way given that they are the

realization of T°, a probe that generally agrees with all types of DPs (see §5.3.1, §5.3.2).

The fact that agreement clitics are in complementary distribution with verbs is the main driver for the analysis of these clitics as the surface realization of T°. Conversely, object clitics and complementizer clitics, being the surface realization of CL°, are not expected to interact with verbs at all.

In Chapter 5 (§5.4.1), I mentioned that Tunisian has two forms for the 3rd feminine singular agreement clitic: *-ha* and *-hi*. However, only *-ha* can function as a doubling clitic. The allomorph *-hi* is derived from the strong pronoun *hijja* while *-ha* is the historically oblique pronominal clitic. In §7.6, I explained that agreement clitics, though they are synchronically almost identical to doubling clitics, are historically derived from the paradigm of strong pronouns which undergoes a shift such that all of its forms become those of the pronominal clitics (Leddy-Cecere 2023). The *-hi* form is a relic of the older paradigm. Synchronically, there must be an additional Vocabulary Insertion rule for the 3rd feminine singular agreement clitic *hi* that is contextually restricted to 🏠-bearing elements, in instances where the terminal node is specified for [–past]. I propose that this additional rule is (8.33a), with optionality between *hi* and *ha* in this context.

(8.33) *Vocabulary entries for 3rd person feminine singular φ-morphemes*

a. $\begin{bmatrix} \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \text{–past} \end{bmatrix} \leftrightarrow hi \sim ha \;/\; [🏠]$

b. $\begin{bmatrix} \text{–participant} \\ \text{+singular} \\ \text{+feminine} \\ \pm \text{ past} \end{bmatrix} \leftrightarrow t \;/\; \text{V}^\circ$

c. $\begin{bmatrix} \text{–participant} \\ \text{+singular} \\ \text{+feminine} \end{bmatrix} \leftrightarrow ha \;/\; [🏠]$

By contrast, the *t* exponent, which is the prefix (for [–past]) and suffix (for [+past]) conjugation morpheme, is contextually restricted to V° (8.33b), much like the verbal agreement

morphemes for 2nd ((8.4a),(8.4b)) and 3rd ((8.25a),(8.25b)) persons above. The last entry, (8.33c) can only realize CL°.

As for deflected agreement, recall that I analyze its degraded status with doubling clitics as an independent development of clitic doubling, which came to be restricted to individuated elements as it evolved as its own construction distinct from right dislocation (§6.4.3).

Finally, the presence of a default diagnostic, as discussed in §2.3.3 and §5.4.2, also follows from the analysis: Default morphology arises in cases where agreement fails to obtain for obligatory heads like T°, not for optional, discourse-regulated heads like CL°. When certain DPs are incompatible with CL°, there is an alternative grammatical derivation without CL°, hence no default in case of no valuation.

8.5 Conclusion

Let us repeat the three main issues we set out to address in this final chapter (8.34).

(8.34) **Desiderata for an analysis of clitics**
- a. Agreement clitics and doubling clitics are the same exponent on the surface.
- b. Agreement clitics are restricted to negation and certain *wh*-words.
- c. Object clitics are always rightmost within the verbal complex.

In §8.2, I focused on desiderata (8.34a) and (8.34b), proposing an analysis in terms of contextually restricted vocabulary entries for different types of ϕ-morphemes in Tunisian. Then in §8.3, I focused on desideratum (8.34c), where I showed a complete derivation of a verbal complex containing agreement morphemes and doubling clitics. This derivation not only contained an explicit account of the surface position of object clitics in terms of post-syntactic displacement, it also brought this issue together with desideratum (8.34a), showing how doubling clitics are exponed with the same vocabulary entries used for agreement clitics. Finally, in §8.4, I made the relation between the analysis and the empirical observations made throughout the dissertation explicit, commenting on each diagnostic test individually.

Overall, this chapter showed how the syntactic analyses that I proposed in Chapters 6 and 7, taken together with an explicit post-syntactic analysis, make the right predictions regarding the derivation of agreement clitics and doubling clitics.

CHAPTER 9

CONCLUSION

9.1 Introduction

In this dissertation I have argued that the same set of surface clitics in Tunisian and Palestinian are underlyingly of two types: Doubling clitics and agreement clitics. The primary contribution of the dissertation has been to show how the same piece of morphology can perform two distinct functions depending on the context and how we can tease apart these functions for a single surface morpheme within the same grammar. This is a novel contribution to the literature on clitic doubling and agreement, which usually compares the same (or a historically related) paradigm across different languages or dialects (*e.g.,* Yuan 2021), or different paradigms of ϕ-morphemes within the same language or dialect (*e.g.,* Arregi and Nevins 2012). In the remainder of this chapter I summarize the main contributions of the dissertation (§9.2, §9.3) and discuss open questions for further research (§9.4).

9.2 Empirical Contributions

9.2.1 Documentation of clitic doubling in a non-Kayne compliant variety of Arabic

I have provided a detailed description of clitic doubling in Tunisian Arabic, which is an underrepresented dialect in the syntactic literature. In particular, our understanding of clitic doubling in Arabic has been skewed by Levantine representing a well documented, Kayne-compliant set of dialects, such that clitic doubling without Differential Object Marking in Arabic has largely gone unnoticed. Yet I have shown that Tunisian Arabic does have clitic doubling despite lacking DOM, that it surfaces in different contexts from right dislocation, and that it has a general pragmatic function similar to the one reported for Levantine

varieties, *i.e.,* that of recalling a topic into active registry (Brustad 2000:355). I suspect that clitic doubling of the Tunisian type is much more common in Arabic than previously acknowledged, an intuition shared by Hallman and Al-Balushi (2022:1317).

9.2.2 The asymmetry between pronouns and lexical DPs with regard to first conjunct agreement in Arabic

To the best of my knowledge, this dissertation documents for the first time an asymmetry between pronouns and lexical DPs with regard to first conjunct agreement in spoken varieties of Arabic. First conjunct agreement with lexical DPs is restricted in different ways depending on the dialect (the gender-matching requirement in Tunisian, the incompatibility with certain plural-seeking elements in Palestinian), but first conjunct pronouns lift all of these restrictions. I have shown that first conjunct agreement is not as available as it seems based on prior literature. The special role that pronominal conjuncts play in this context is a crucial finding of this dissertation and an important contribution to the field of Arabic syntax. While the asymmetry between pronouns and lexical DPs in Standard Arabic is well documented, insofar as post-verbal lexical DPs trigger so-called partial agreement (only in person and gender) while pronouns trigger full agreement (in person, gender, and number), completely novel are the data reported in Chapter 3 and 4, where such an asymmetry is only found in the context of first conjunct agreement in Tunisian and Palestinian.

9.2.3 Broad subjects and objects

Crucial in understanding the asymmetry between lexical DPs and pronouns for first conjunct agreement is my proposal that pronominal conjuncts are bound by a covert BROAD SUBJECT, the true agreement controller in such configurations. This proposal served as an opportunity to document the properties of BROAD SUBJECTS—however elusive they may be—inside and outside the context of coordination. Additionally, I put forward the idea that there is a mirror

category to BROAD SUBJECTS in the realm of object clitic doubling: BROAD OBJECTS. Just like their subject counterparts, BROAD OBJECTS are base-generated in the specifier of a ϕ-probe (CL$^{\circ}$) and bind a resumptive pronoun.

9.3 Theoretical Contributions

9.3.1 A new dimension to the coordination diagnostic

In addition to the asymmetry between lexical DPs and pronouns in agreement configurations, I document a similar asymmetry in clitic doubling configurations. Up to now, the coordination diagnostic on agreement and doubling has been understood as either a evidence that movement is involved in clitic doubling when doubling of a single conjunct is impossible (Ostrove 2018:93–97; Harizanov 2014:1061,fn.29), or as evidence that movement is not involved, when doubling of a single conjunct is possible (Paparounas and Salzmann 2023b). In Arabic, the diagnostic is not whether a first conjunct can be doubled or not, rather, it is that only first conjunct pronouns can be doubled. This asymmetry leads me to maintain the movement analysis of clitic doubling, deriving the special status of pronouns from their independently motivated property of being able to be interpreted as variables. So, the existence of a context in which first conjunct clitic doubling is possible need not be taken to mean that movement is not involved in clitic doubling. On the contrary, movement is crucial in deriving obligatory resolved doubling with coordinated lexical DPs.

9.3.2 Doubling clitics as neither pronouns nor agreement

This dissertation corroborates Saab's (2024) tripartite taxonomy of clitics, in which doubling clitics are neither pronouns nor agreement. I have shown that this tripartite taxonomy as applied to Arabic outperforms bipartite ones in being more accurately able to capture the observed properties of clitic doubling. This is because under Saab's analysis clitics are treated as heads in the extended verbal projection, and these heads are λ-abstractors. Crucially, my

modification of Saab's analysis makes these heads explicitly μ-binders, thereby capturing the doubling of pronominal first conjuncts *without* any movement, while requiring movement in all other cases. Furthermore, I have shown that Saab's analysis can be minimally modified to accommodate the Arabic data by proposing that the clitic projection is merged lower than it is in other languages (*e.g.,* Rioplatense Spanish) such that binding relations are not affected (no expected Weak Crossover amelioration effects).

9.3.3 In defense of Broad Subjects

BROAD SUBJECTS have been a matter of contention within the literature on Arabic and Semitic syntax. In particular, scholars have argued whether BROAD SUBJECTS are truly distinct from clitic left dislocated elements. I have adduced a decisive piece of evidence that helps decide this matter once and for all: Only BROAD SUBJECTS are able to control agreement on T/Asp. As such, they must must be merged low enough in the clause and crucially not in a peripheral position, since elements base-generated in peripheral positions are not able to control agreement on T/Asp.[1]

9.4 Open Questions

9.4.1 The cross-linguistic manifestations of first conjunct agreement

Agreement with coordinate structures displays a large degree of variation between languages and between speakers of the same language. The first conjunct agreement data presented in Chapter 3 were by far the hardest to get clear judgements for, and the analysis that I proposed is very much language-specific. In order to account for restrictions on first conjunct agreement, I argued that there is some reference made to the features of the entire &P when agreement is concerned, even if "peeking" (Marušič, Nevins, and Badecker 2015) into the

1. For a similar and just as recent proposal, see Hewett (2023d, 2024), who describes broad subjects as instances of A-resumption.

&P to agree with the closest conjunct is possible. This raises several questions, such as how exactly peeking is restricted, what decides whether a derivation with or without peeking is chosen,[2] why certain grammars would be peeking vs. non-peeking, etc.

By no means trivial is my proposal that certain collective predicates have different requirements (viz. semantic plurality alone or syntactic and semantic plurality at the same time) depending on the language. It remains unclear why such variation would exist.

Finally, I did not explore all possible patterns of first conjunct agreement in Tunisian and Palestinian. In particular, I have excluded coordinations of inanimate nouns in my investigation. These patterns must be taken into account in order to test the predictions of the analysis and to better understand how the feature calculus at the &P level obtains depending on whether the DP has interpretable features or not, especially in an analysis where inanimate DPs do not bear interpretable features.

9.4.2 Broad Subjects and the relation between binding and agreement

Although I provide strong evidence for the existence of BROAD SUBJECTS as a distinct category from clitic left dislocated elements, there remains many questions concerning their analysis and the prediction of their occurrence.

The most pressing question is what exactly governs the ability of a BROAD SUBJECT to be merged. In Chapter 4, I showed that binding was a necessary but not sufficient condition for a BROAD SUBJECT to be acceptable. Intuitively, BROAD SUBJECTS are only possible when they fulfill some affectedness threshold (Yoon's (2015) "characteristic property"). This is a very nebulous condition, since this affectedness threshold, whatever it is, must be context-dependent.

2. The system I propose for Palestinian is not as constrained as the one proposed by Marušič, Nevins, and Badecker (2015) for the different grammars of conjunct agreement in Slovenian.

Related to this nebulous condition is the fact that a BROAD SUBJECT binding a pronominal conjunct can only bind one that is ordered first within the &P: Second conjunct pronouns, while marginally being able to be bound by elements in $\overline{\text{A}}$-positions, cannot be bound by BROAD SUBJECTS, which are lower in the clause.

All of these restrictions on BROAD SUBJECTS make it hard to understand when they are possible or impossible, and much more data needs to be gathered to better understand their properties. I suspect that the distribution of BROAD SUBJECTS is difficult to pin down because it arises from a conspiracy of factors, both syntactic and pragmatic.

9.4.3 The relation between head movement and periphrasis

My analysis of agreement clitics relies heavily on (i) lack of verb movement to T blocked by intervening negation and (ii) auxiliary insertion in certain tense/aspect heads when no verb has moved to that head. This is the head-movement analysis of periphrastic constructions, which states that a verb must move to T or else an auxiliary is inserted in that head. I make additional stipulations in order to adapt the head-movement analysis to the Arabic data. In particular, I propose that there are two conditions on auxiliary insertion. The first is that a verb cannot have moved to T, and the second is that the head below T must have a different value for the [±past] feature. In general, these conditions coincide (the verb stops moving if the head above has a different value for the [±past] feature). However, when NegP is in the clause, we need both of them. The two conditions are essential to derive negation clitics, which occur exclusively in contexts where T is [–past] and the tense/aspect head below it is also [–past], while NegP intervenes between them (or there is no tense/aspect head below it, which is the case in verbless sentences). If we were to insert an auxiliary whenever there is no verb in T, then we would predict auxiliary insertion where negation clitics surface. These stipulations complicate the analysis and render it Arabic-specific.

Because patterns of auxiliary insertion have a lot in common cross-linguistically, it is desirable

to refine this analysis so as to make it more generalizable. As Arregi and Pietraszko (2024) note, the head-movement analysis of periphrasis has an important shortcoming: It fails to predict that in certain languages such as Swahili, a synthetic verbal expression does not necessarily require V-to-T movement. To remedy this problem, Arregi and Pietraszko propose an analysis in terms of selection and head-movement, where auxiliaries are base-generated as specifiers of T°. It is important to look more carefully at the distribution of auxiliaries in Arabic and see whether Arregi and Pietraszko's analysis makes the right predictions for this language.

ABBREVIATIONS

TC *See* McNeil, Karen, and Miled Faiza. 2010–.

TCI *See* Younes, Jihene, Hadhemi Achour, and Emna Souissi. 2015.

TuniCo *See* Dallaji, Ines, Ines Gabsi, Karlheinz Mörth, Stephan Procházka, and Omar Siam. 2016.

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