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Secondly, an alternative account of clitic orderings exploiting hierarchical partitions of pronominal forms and a comprehensive and systematic organization of the pronominal system of Taqbaylit Berber focusing on the syntax and semantics/pragmatics of clitics and non-clitic related pro-forms is given. Within the frameworks aforementioned, clitic placements in CP and DP are argued to be derived in two steps. At the syntactic level, clitics are argued to move as phrases to the highest functional projection realized by the lexical head they are associated with. At PF, clitics are argued to incorporate into an adjacent preceding prosodic head or if no such head is available to the following lexical head. Enclitic orders with nominal and verbal heads are further derived by a clitic-host inversion.

From the point of view of typology, it is shown that the pronominal organization of Taqbaylit conforms to independently proposed hierarchical classifications of pronominal forms into different classes or categories (e.g. Cardinaletti & Starke, 1999 and Déchaine & Witschko, 2002).
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PRONOMINAL AND CLITIC SYSTEMS IN TAQBAYLIT BERBER

Aïcha Belkadi
School of Oriental and African Studies, University of London

Submitted in partial fulfilment of the requirements for the degree of PhD
Abstract

This dissertation investigates pronominal and clitic systems in Taqbaylit Berber (Afro-asiatic) from the point of view of their syntactic, semantic and interpretative properties. The thesis’s contribution to current research is two-fold.

First, a detailed analysis of Taqbaylit as used in spoken discourse is provided along with an exploration of clausal and nominal structures. In particular, the TAM system is explored and arranged within an extended event structure as proposed by Tenny (2000). An in-depth analysis of the various orders in which DP elements are placed and a proposal on the internal structure of the constituent, based on Cinque’s universal DP template (1996; 2000; 2005) is also proposed. Secondly, an alternative account of clitic orderings exploiting hierarchical partitions of pronominal forms and a comprehensive and systematic organization of the pronominal system of Taqbaylit Berber focusing on the syntax and semantics/pragmatics of clitics and non-clitic related pro-forms is given.

Within these frameworks, clitic placements in CP and DP are argued to be derived in two steps. At the syntactic level, clitics are argued to move as phrases to the highest functional projection realized by the lexical head they are associated with. At PF, clitics are argued to incorporate into an adjacent preceding prosodic head or if no such head is available to the following lexical head. Enclitic orders with nominal and verbal heads are further derived by a clitic-host inversion.

From the point of view of typology, it is shown that the pronominal organization of Taqbaylit conforms to independently proposed hierarchical classifications of pronominal forms into different classes or categories (e.g. Cardinaletti & Starke, 1999 and Déchaine & Witlschko, 2002).
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List of Abbreviations

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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<td>NEG</td>
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1.1 Overview of the dissertation

1.1.1 Research focus

Pronominal cliticization has been the topic of an extensive amount of research in Berber linguistics. Yet, for the most part, accounts of the phenomenon have exclusively focused on the purely syntactic issue of clitic placement within the clause. This dissertation seeks to contribute to current research on the subject by investigating clitic systems in Taqbaylit, a variety of Berber spoken in northwestern Algeria, from the point of view of their syntactic, referential and interpretative properties in comparison to other pronominal forms.

The general perspective of the present study develops from recent approaches which explore pronominal systems and the variations that characterize them, appealing to the interface between morphology, syntax and semantics/pragmatics, such as Cardinaletti & Starke (1999), Cardinaletti (1998) and Déchaine & Wiltschko (2002). In this context, I seek to provide an alternative account of clitic orderings in Berber exploiting hierarchical partitions of pronominal forms depending on their morphological complexity, syntactic and semantic behaviours, and aim to give a comprehensive and systematic organization of the pronominal system of Taqbaylit Berber focusing on the syntax and semantics/pragmatics of clitics and non-clitic related pro-forms. Another major goal is also to demonstrate that the differences between clitics and other pronominal forms that exist in Taqbaylit and possibly more generally in Berber correlate with those in other languages as predicted by the hierarchical frameworks above.
1.1.2 Issues of clitic placement and hierarchical CP and DP templates

In Taqbaylit and most Berber languages, pronominal clitics occur in the clausal domain, where they can replace the internal arguments of the lexical verb; in the nominal domain, where they replace possessor arguments of the noun; and finally, in the prepositional domain where they replace DP complements of prepositions. The following examples illustrate the repartition of clitics in these various domains:

(1) a. hemle-γ [yanis]
live_{pre-1SG} Yanis
*I love Yanis.*

b. hemle-γ =[t]
live_{pre-1SG} =CL.3SGM; ACC
*I love him.*

(2) a. sawle-γ i [yanis]
call_{pre-1SG} to_{DAT} Yanis
*I called Yanis.*

b. sawl-γ =[as]
call_{pre-1SG} =CL.3SG; DAT
*I called him.*

(3) a. axxam [u yanis]
house OF Yanis
*Yanis’s house*

b. axxam =[is]
house =CL.3SG; POSS
*His house*

(4) a. ad ruhe-γ γur [yanis]
prt go_{pre-1SG} to_{DIR} Yanis
*I will go to Yanis’ (house).*

b. ad ruhe-γ γur =[es]
prt go_{pre-1SG} to_{DIR} =CL.3SG; OBL
*I will go to his (house).*
In this thesis, although I will discuss cliticization in the prepositional domain where relevant, I will focus exclusively on issues of clitic placement inside the clausal and nominal domains. It is well known that the main properties of clitics cross-linguistically are that they are found in special locations, from which non-clitic counterparts, such as lexical DP’s or independent pronominal forms, are usually banned, and that their particular placement in a given context depends on the particular internal structure of the constituent in which they occur.

In Taqbaylit and Berber in general, clitics which occur in the clausal domain display these two properties. Thus, they usually occur as enclitics on the verb they are associated with, but if the verb is preceded by a functional head, clitics attach to the latter and are actually found in pre-verbal position. Lexical DP’s and corresponding pronominal systems can follow the verb they are arguments of. However, they are never allowed in the pre-verbal positions where clitics occur. Consider, for instance, the following sentences:

(5) a. sawle-γ  i  [yanis]/ [netta] 
callPRF-1SG  toDAT  Yanis / PRN.3SGM 
*I called Yanis/him.*  

b. sawle-γ  = [as]  
callPRF-1SG  = CL.3SG; DAT  
*I called him.*  

(6) a. ad  sawle-γ  i  [yanis]/ [netta]  
PRT  callAOR-1SG  toDAT  Yanis / PRN.3SGM  
*I will call Yanis/him.*  

b. *ad  [yanis]/[netta]  sawle-γ  
c. a(d)  = [(a)s]  sawle-γ  
PRT  = CL.3SG; DAT  callAOR-1SG  
*I will call him.*  

d. *a(d)  sawl-γ  = [as]  

In example (5) above, the 3rd person singular dative clitic = (a)s occurs after the verb similarly to the DP it replaces Yanis or the independent pronoun netta ‘him’.
In (6), however, the verb is preceded by the TAM particle ad, overtly realizing a functional head, and the clitic now must occur right before the verb (cf. the ungrammaticality of (6c)), a position from which a lexical DP and other pro-form are banned (cf. the ungrammaticality of (6b)).

There are a number of functional heads which, when they are overtly realized in the clause give rise to such pre-verbal orders. As shown in the following examples, they include all the TAM particles which, depending on the variety, overtly occur to express aspect, tense or mood, the negation head ur and complementizers, such as the one used in cleft constructions, i:

(7) a. \( \text{la} \) \( [\text{t}] \)  
\( \text{PRT} \) =\( \text{CL.3SGM; ACC} \)  
\( \text{i-tett} \) \( *[\text{t}] \)  
\( 3\text{GM-eat}_{\text{PRF}} \)  
\( \text{He is eating it.} \)

b. \( \text{ur} \) \( [\text{t}] \)  
\( \text{NEG} \) =\( \text{CL.3SGM; ACC} \)  
\( \text{čči-γ} \) \( \text{ara} \) \( *[\text{t}] \)  
\( \text{eat}_{\text{PRF}}-1\text{SG} \) \( \text{NEG2} \)  
\( \text{I didn't eat it.} \)

c. \( \text{ella} \) \( \text{i} \) \( [\text{t}] \)  
\( \text{COP} \) \( \text{Ella} \) \( \text{COMP} \)  
\( \text{ččan} \) \( *[\text{t}] \)  
\( \text{eat}_{\text{PTCP}} \)  
\( \text{It is Ella who ate it.} \)

Given the interaction of clitic orderings and clausal structure, I provide in Chapter 2 an analysis of clausal structure in Taqbaylit which I tentatively extend to a number of other Berber languages. The proposed CP template is developed within the Universal Hierarchy of functional projections hypothesis (Cinque, 1997, 2006), and following Tenny (2000), portioned into Semantic Zones. Based on the order in which they occur in the clause and their associated semantic interpretation, the functional heads occurring with or realized by the verb (e.g. T, Asp, Mood (...)) are argued to be hierarchically organized into these semantic zones. Within this structure, I suggest that lexical verbs move as far as the Higher Aspect semantic zone, represented in the syntactic structure by the functional projection h-AspP, where they get their aspecual semantics and morphology realized. I further argue that other elements which precede the verb and can be clitic hosts realize the range of functional heads which dominates h-AspP.
The issue of clitic placement within this CP template is discussed in Chapter 4. The account developed is based on Cardinaletti & Starke (1999)'s (henceforth C&S) analysis of structural deficiency and incorporates proposals from two previous studies on the phenomenon in Berber, Boukhris (1998) and Ouhalla (2005a). I argue that clitic orderings are derived by two operations occurring at two distinct levels of the grammar. First, clitics undergo syntactic phrasal movement to the Specifier position of h-AspP, the highest extended projection of VP realized by the verb. Secondly, clitics incorporate at PF into an adjacent prosodic head, which must be contained within the lower CP domain. Particles, the negation ur and the complementizer i, when they overtly realize relevant functional heads dominating the clitic projection, are such prosodic heads. In contexts where none of these are overtly realized, clitics incorporate into the verbal head in h-Asp. Post-verbal orders are argued to be derived by a clitic-host inversion occurring because clitics cannot be first in their minimal domain (Ouhalla, 2005a).

Clitic placement inside the nominal constituent is argued to be similarly derived in Chapter 4. Clitics in the DP always occur on the nominal head they modify, can never be hosted by other DP modifiers, such as demonstratives or adjectives, and are not accessible to heads occurring outside of DP such as quantifiers occurring in QPs, as shown by the following examples.

(8)  a. axxam =\{is\} amectuh nni
     house =CL.3SG;POSS small DEM\_AMB
     **This small house of his**

     b. *axxam amectuh =\{is\} nni

     c. *axxam amectuh nni =\{is\}

(9)  a. kul axxam =\{is\}
     each house =CL.3SG;POSS
     **Each of his houses**

     b. *kul =\{is\} axxam
I argue in this dissertation that clitic placement in the nominal domain is also derived by two operations, at two levels of the grammar. At the syntactic level, DP clitics move as phrases to the Specifier position of DP, which is the highest extended projection of NP realized by the nominal head. At PF, clitic incorporates into the closest prosodic head occurring within their domain of cliticization which I take to be DP, namely the noun in D.

Because of the interaction of clitics and the internal structure of the constituents within which they surface, I provide in Chapter 3 an in-depth analysis of the internal structure of Taqbaylit DP's. The DP template I develop is, similarly to the CP template, based on the Universal Hierarchy of functional projections hypothesis proposed by Cinque (1996, 2000 and 2005) to account for typological orderings inside DP's. Adopting his proposal, I argue that modifiers occurring within DP are merged in a fixed order in the Specifier positions of functional phrases, which are hierarchically projected above NP. Each of these functional phrases also merges an agreement head, which is licensed by either N-movement to its head position or NP-movement to its Specifier positions. Whether N-movement or NP-movement occurs and whether NP-movement is of the Roll-up kind (i.e. with pied-piping of the remnant AgrP) give rise to various orderings inside the Taqbaylit DP.

1.1.3 Organizing the pronominal category in Taqbaylit

The clitics described above all have non-clitic pronominal counterparts; i.e. pronominal forms carrying the same types of Φ-features, but with the ability to occur independently:

\[(10) \quad \text{a. hemle-γ = [i]}\]
\[\text{love}_\text{PERF-1SG} = \text{CL.3SGM; ACC} \]
\[\text{I love him.}\]
Although they overall carry the same Φ-features and can refer in principle to the same entities, as shown in the examples above, these forms differ from one another. In Chapter 5 mainly, but also in the second part of Chapter 3, I will show that clitics and their corresponding independent pro-forms contrast along several dimensions of the grammar.

The most obvious differences between analogous pronominal and clitic systems are those occurring at the morphological level. Formally clitics and independent pronouns contrast with, as can be observed from the previous examples, clitics being morphologically reduced forms of independent counterparts. These issues and the morphological internal structures of pronominal and clitic systems are covered in details in the second part of Chapter 3.

In addition, clitics and non-clitic pro-forms also contrast at the semantic and pragmatic levels, particularly on their interpretative and referential properties.

---

1 In Taqbaylit and other Berber languages, non-clitic pro-forms are only grammatical in object position in restricted semantic contexts (cf. Chapter 5). This particular example is grammatical if the independent pronoun is construed as contrasted.
But rather than being in parallel distributions, the two systems are in complementary distributions. For instance, pronominal clitics cannot introduce new referents into the discourse contexts, but independent pronouns can. In the following examples, the pronoun *netta* introduces new information (the answer part to a question) without any problems. The ungrammaticality of (14b), on the other hand, demonstrates that clitics do not hold these referential properties.

(13) Q:  
\[ \text{anta} \ i=d \ i-ruh-n? \]
\[ \text{who} \ \text{COMP}=\text{D} \ 3\text{SGM}-\text{gOpRF}-\text{PTCP} \]
\[ \text{Who came?} \]

A:  
\[ d \ [\text{netta}] \ (i=d \ i-ruh-n) \]
\[ \text{COP} \ \text{PRN.3SG} \ \text{COMP}=\text{D} \ 3\text{SGM}-\text{gOpRF}-\text{PTCP} \]
\[ \text{It's him (who came).} \]

(14) Q:  
\[ \text{anta} \ i \ t-wala-d? \]
\[ \text{who} \ \text{COMP} \ 2\text{SG}-\text{see}_{\text{PRF}}-\text{2SG} \]
\[ \text{Who did you see?} \]

A:  
\[ \# \ \text{wala-γ} \ =[^{[f]}] \]
\[ \text{see}_{\text{PRF}}-\text{1SG} \ =\text{CL.3SGM;ACC} \]
\[ \text{I saw him.} \]

Another referential contrast between the two systems is demonstrated in the following examples where the pronominal dative clitic *=as* can be construed as bound by the quantifier phrase *kul aqcic* ‘every boy’, but not the independent pro-form *netta*.

(15) a.  
\[ [\text{kul aqcic}] \ i-zra \ beli \]
\[ \text{every boy} \ 3\text{SGM}-\text{know}_{\text{PRF}} \ \text{COMP} \]
\[ t-sawl \ =[^{[as]}] \ Miriam \]
\[ 3\text{SGF-call}_{\text{PRF}} \ =\text{CL.3SGM;DAT} \]
\[ Every \ boy \ knows \ that \ Miriam \ called \ him. \]
\[ \forall (x) [\text{boy}(x) \rightarrow \text{knows(Miriam, call, x)}] \]
\[ \forall (x) [\text{boy}(x) \rightarrow \exists (y) [\text{male(y)} \land \text{knows(Miriam, call, y)}]] \]
b. [\textit{kul aqcic}] i-zra beli every boy 3SGM-know\textsubscript{PRF} COMP
t-sawl Miriam i =\textit{netta} 3SGF-see\textsubscript{PRF} Miriam to\textsubscript{DAT} =\textit{PRN.3GM}

\textit{Every boy knows that Miriam saw him.}

\[
\forall (x) \ [\text{boy (x) \rightarrow x knows Miriam call x}]
\]
\[
\forall (x) \ [\text{boy (x) \rightarrow 3(y) [male (y) \land x knows Miriam call y]}
\]

At the syntactic level, the two systems interact differently with the clausal and nominal structures in which they occur but, again appear to be, in some respects, in complementary distributions. For instance, while clitics cannot be coordinated, overtly contrasted or occur in peripheral positions, their independent counterparts in the clausal and nominal domains can and actually mostly occur in such distributions. These properties are illustrated below with the possessive clitics and independent pro-forms.

\begin{enumerate}
\item (16) a. *i-\textit{cveh} uxxam =\textit{[iw]} mačēi n wergaz
\textit{3SGM-be.beautiful\textsubscript{PRF} house =CL.1SG;POSS not OF man}
\textit{My house is beautiful, not the man's.}

b. * i-\textit{cveh} uxxam =\textit{[iw]} aq n wergaz
\textit{3SGM-be.beautiful\textsubscript{PRF} house =CL.1SG;POSS and OF man}
\textit{My and the man's house is beautiful.}

\item (17) a. i-\textit{cveh} uxxam [\textit{inu}] mačēi n wergaz
\textit{3SGM-be.beautiful\textsubscript{PRF} house POSS.1SG not OF man}
\textit{MY house is beautiful, not the man's.}

b. i-\textit{cveh} uxxam [\textit{inu}] aq n wergaz
\textit{3SGM-be.beautiful\textsubscript{PRF} house POSS.1SG and OF man}
\textit{My and the man's house is beautiful.}
\end{enumerate}

These syntactic and semantic/pragmatic differences between pronominal and clitic systems are described and accounted for in Chapter 5. There, adopting the typological classification of pronouns proposed by Cardinaletti & Starke (1999) and Déchaine & Wiltschko (2002), I argue that Taqbaylit (and possibly other Berber) personal pronouns and possessives can be classified into strong and
deficient classes. Depending on whether they are strong or deficient, pro-forms will have different internal structures which in turn give rise to the contrastive syntactic behaviours and differences in their referential and interpretative properties. In terms of their internal structure, I propose that strong pronouns correspond to DPs or PPs (i.e. possessives) while, deficient clitics and covert pro correspond to ΦPs. I show that, as predicted by Cardinaletti & Starke (1999), clitic and their strong counterparts occur in complementary distributions. Thus, clitics are chosen over strong pronouns in all the contexts where they are available. Strong pronouns occur in syntactic and semantic contexts where clitics are not allowed.

The two frameworks from which the classification of the pronominal system of Taqbaylit is developed make the same kinds of predictions: pronominal variations can be captured in terms of the type of maximal projection pronominals occur in. However, they focus on different aspects of pronominal variation. I will demonstrate, although briefly, that Taqbaylit pronominals allow a clear correlation to be made between the two frameworks.

A detailed description of how the issues covered in this dissertation are organized is given in section 1.3. In the next section, I give a brief description of the language on which the dissertation is based.

1.2 Language background

1.2.1 Berber origins and classification

Berber is a term used to refer to a number of languages spoken across various regions of North Africa: Egypt, the Maghreb countries — Morocco, Algeria, Tunisia and Libya —, and countries of northern Sahara, such as Mauritania, Niger, Mali and Burkina Faso (Hayward, 2000; Austin, 2008; Lewis, 2009). Long referred to as Hamito-Semitic, Berber is now universally accepted as

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2 Berber is also spoken in Israel. Known as Judeo-Berber, the language bears similarities with Moroccan Berber (Lewis, 2009).
a branch of the Afroasiatic phylum along with Semitic and Chadic languages (and others presented in Figure (1) below) (Greenberg, 1963 and much subsequent work).

Figure 1: THE AFROASIATIC BRANCH OF LANGUAGES

Afroasiatic languages

Berber | Chadic | Cushitic | Egyptian | Omotic | Semitic
----- | ------ | -------- | -------- | ------ | -----
Hausa, Kera | Somali, Burunge | Coptic | Bambassi Arabic, Hebrew

Like other Afroasiatic members, the language descends from proto-Afroasiatic, almost certainly spoken in the Horn region of Northeastern Africa around 15000 years ago (cf. Ehret et al., 2004). Proto-Berber, the common ancestor of Modern Berber is thought to have first emerged somewhere in North Africa approximately 11000 years ago as the language of Ancient Libyans, accepted by most as the indigenous people of the region (Galand, 2002; Dugoujon & Philipsson, 2005; Decret & Fantar, 1998; Smith, 2003). The profound differences between Berber and (reconstructed) proto-Afroasiatic (Ehret, 1995) and the little linguistic variation between today’s varieties have led to suggestions that the development from proto-Berber to Modern Berber probably occurred in two stages. A proto-Berber emerging in around 2500 BC from the more ancient Berber is now strongly believed to be the closest ancestor of Modern Berber (Dugoujon & Philipsson, 2005). Figure (2) below, slightly adapted from Dugoujon & Philipsson illustrates the probable historical development of Berber from proto-Afroasiatic.

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2 Sallust and Herodotus mention the people of Libya as the inhabitants of the region in their writings while Phoenician inscriptions from this period referring to the people of Libya have also been discovered in Algeria and Tunisia. (Decret & Fantar, 1998)
Modern Berber languages are generally argued not to display major linguistic variation\(^5\). However, they are traditionally divided into four groups according to the regions where they are spoken: (after Hayward, 2000; Lewis, 2009)

(i) **Eastern Berber** languages are spoken in the north east of Africa in Egypt (e.g. Siwi), Libya (e.g. Awijilah, Ghadames, and Nafusi) and Tunisia (e.g. Shilha, Sened).

(ii) **Southern Berber** languages are found in Sub-Saharan countries such as Niger, Mali, southem Algeria and Burkina Faso. They include southern varieties of Touareg such as Tamajaq and Tamasheq.

\(^5\)There is a clash between the little variations revealed by the (very rare) typological studies of Berber languages and the perception of these variations by speakers of different dialects. Thus, although no great divergences are found between different varieties of Berber, speakers do not easily understand each other and are for the majority very adamant on the fact that they speak different languages.
Mauritanian Berber (e.g. Zenaga) is mostly spoken in Mauritania but can also be found in Senegal.

Northern Berber languages are spoken in Morocco (e.g. Tarifit, Tashelhit, Tamazight), Niger (e.g. Northern varieties of Touareg) and Algeria (e.g. Tachawit, Taqbaylit and varieties of Touareg).

1.2.2 Linguistic research

Interest in the Berber language is not recent and dates back to at least the second part of the nineteenth century when a vast amount of research on its origin, grammar and speakers emerged. The oldest found works on the language are mainly dictionaries and brief descriptions of varieties spoken in Morocco and Algeria. For the most part these early works were carried out by missionaries and members of the French military during the very first stages of the French colonisation of North Africa (Chaker, 1983), however various works from this period by American and British diplomats in the region can also be found (e.g. Hodson’s 1835 translation of Berber manuscripts).

The earliest actual linguistic research on Berber consists of brief descriptions of a number of dialects and their grammar (Malden, 1844; ibn Khauwas, 1881; Basset, 1883 amongst others). The most influential investigations from this period are contributions made by French linguist Andre Basset on Berber dialectology and morphosyntax of the language. References to his writings are found in almost all recent works on Berber, independently of the framework. Basset’s classification of the aspectual system of Berber (1952), for instance, is still the main one used in most of the recent research on the topic.

Descriptive grammars are still being written up; grammars of Tarifit, Tashlehit and Tamazight varieties (Kossman, 1997; 2000; Quitout, 1998), Touareg (Heath, 2005), Taqbaylit (Rabdi, 2004; Nait-Zerrad, 2003; Chaker, 1985; 1988; 1989 and much subsequent work) are just some examples of the recent descriptive work published on Berber. In addition, since the second part of the twentieth
century, a large part of research has also been theoretical. The focus is, now, on analyzing specific aspects of the language using the tools provided by generative theories, mainly GB and the Minimalist frameworks. The principle topics of research on Berber reflect the theoretical interests and issues independently raised within those frameworks in recent years. Thus, most of these investigations have centred on the phonetics, morphosyntax, phonology of the language, while lexical semantics contributions have been rarer (Alalou & Farell, 1993; Guersell, 1987; 1992; 1995; Ouhalla, 1988; 1993; 2005a, b; Dell & Elmadlaoui, 1989; Ouali, 2006; Achab, 2007; etc...).

Having now given some background on Berber, in the next section I will provide more information on Taqbaylit, the language which this dissertation is based on.

1.2.3 Taqbaylit Berber

As briefly mentioned in section 1.1, Taqbaylit⁶ belongs to the Northern branch of Berber languages whose numbers of speakers are estimated to vary between 7 and 14 millions (Chaker 1984). Taqbaylit alone is believed to have between 3 to 7 millions speakers around the world (Austin, 2008; Lewis, 2009), mainly in Algeria and Western Europe countries such as France and Belgium. The majority of Taqbaylit speakers, approximately two and a half millions (Lewis, Ibid), are however concentrated in Kabylie, a mountainous region situated on the northeastern coast of Algeria (cf. Map in (3) below). Its high number of speakers makes Taqbaylit the second most spoken language of Algeria, after Algerian Arabic the country’s official language.

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⁶ The language is also often referred to as Kabyle (the French translation of Taqbaylit).
Despite its privileged position in terms of number of speakers and small political steps in acknowledging the existence of the language — a High Commission for Berber Identity was created in 1997 and Berber recognized as a language of Algeria in 2002 —, Taqbaylit does not have any real official status in Algeria. It is, for instance, not taught in schools or universities outside of Kabylie and is almost never used in official contexts, where Standard Algerian Arabic and, in some contexts, French are preferred. Compared to other Berber languages, however, Taqbaylit is in a privileged situation. The incessant efforts made by its speakers in protecting and promoting their culture and language since at least the second part of the 20th century, not only have prevented its decline to Arabic but have also contributed to its expansion. Today, Taqbaylit is still very much acquired as a first language in and outside of Kabylie, and is taught as a second
language in other regions and even outside of Algeria (Chaker, 1997; Goodman, 2005).

Traditionally, the language is further sub-classified into different varieties. Mainly the distinction is two-fold and contrasts Higher Taqbaylit, which includes a number of dialects spoken in the northern parts of Kabylie, to Lesser Taqbaylit which includes dialects spoken in southern parts of Kabylie (Lewis, 2009). However, more sub-varieties, such as Maritime and Oriental Taqbaylit, have also been suggested (Rabdi, 2004). It is not always clear whether these distinctions repose on clear linguistic criteria or on historical and existing geographical partitions. And even though speakers indeed often acknowledge and insist on the differences that exist between their particular dialect and others, the divergences that are found are not important enough to justify further classifications of Taqbaylit. In this dissertation, thus, even though it present a number of small specificities not found in other varieties, in general the data presented is to be taken as representative of Taqbaylit and, in most cases also of Berber (particularly Northern varieties). In the following section, I give more details about the data used in the present dissertation.

1.2.4 Corpus and methodology

The work presented in the following chapters, unless stated otherwise, is based on a corpus of Taqbaylit collected during my field trip in summer 2007 and shorter elicitation sessions in London and Algiers between 2006 and 2009. The people who participated in its compiling are all native speakers of Taqbaylit. For the most part, they speak a variety spoken in two neighbouring villages, Tigmunin and Tikiçurt located in the northern part of the Higher Kabylie region (approximately 50 kilometers south of Tizi Ouzou). However, other people from the southern part of Kabylie (i.e. Oriental Kabylie) have also indirectly participated in the collection of the data presented here. Informants are based either in London or in Algeria.
In London, the informant is a 35 years old male from the region of Algiers whose mother tongue is Taqbaylit. He was schooled in Algeria in standard Arabic but also speaks French and English fluently. In Algeria, the group of informants was composed of both male and female speakers living in Algiers and Bouira, from different age groups and language backgrounds.

The main informant is a university student from Bouira, aged 20 at the time. She was schooled in standard Arabic, as most of the other informants but, she was also formally taught standard Taqbaylit in high school. As well as Arabic and Taqbaylit, she also speaks French fluently, which again is the case for most of the other informants.

The second main informant is a female native speaker in her sixties. Originally from Kabylie, she has been living in the region of Algiers for more than thirty years. Having not been schooled, she does not speak Arabic and Taqbaylit is her only language. The rest of the informant group has either directly or indirectly participated in the compilation of the corpus. For the main part, it is composed of adult native speakers, also fluent in both Arabic and French whose ages range from 16 years old to approximately 45 years old.

The fieldwork corpus consists of a collection of recorded texts, questionnaires and elicited data. Recorded texts include free narratives and stimuli-based descriptions. Principally, free narratives correspond to small stories of not more than 10 minutes portraying events in their life chosen by the informants themselves (e.g. the birth of one of their child or a wedding they had attended a few days before). However, on very rare occasions, stories were elicited by the researcher’s questions (e.g. Can you tell me about your childhood?). Two of these narratives are given as examples in the Appendix section.

For stimuli-based descriptions, two kinds of stimuli were used: (i) Bowerman’s topological relation pictures (1992) and (ii) the ‘Pear Stories’ movie (Chafe, 1977). The main goal of Bowerman’s pictures is to elicit expressions of topological relations in a language. The stimulus consists of 43 pictures

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7 The story is available in the appendix section of this dissertation.
representing various locational relations, i.e. on, under, inside etc (...), between objects but also between objects and animate entities (human and non human)\(^8\). Three pictures from Bowerman’s set are given in (18) below as representative examples.

(18) **Bowerman’s topological relation pictures**

![Bowerman's Topological Relation Pictures](image_url)

The ‘Pear Stories’ is a short movie depicting the journey of a boy after he has stolen pears from a farmer and a number of events happening to him. The movie is used across various disciplines of cognitive sciences for different aims. Primarily, it is used to investigate and compare story-telling strategies in different languages (Chafe, 1980; Erbaugh, 2001). In this study, the movie was used mainly to investigate Information Structure related constructions and strategies in the expression of definiteness and indefiniteness in Taqbaylit.

In addition, questionnaires and elicitations were employed for in-depth investigations of particular morphosyntactic and semantic objects. Given the topic of the whole dissertation, attention was particularly given to pronominal systems, Tense-Aspect-Mood systems and interpretation as well as to other structure internal constructions (e.g. negation etc ...). Two questionnaires were submitted to my main consultant: (i) the Anaphora in African Languages questionnaire (Safir, 2003) and (ii) van den Berg & Kahrel’s negation questionnaire (1989). When needed some parts of the Lingua Descriptive Studies Questionnaire (MPI EVA) were also used. Follow-up elicitation sessions occurred over a period of three years from 2006 to 2009 in London and Algiers.

\(^8\) The primary goal of a presentation of these pictures was to identify the type of prepositions or topological expressions which occurred in Construct State-type constructions (cf. Chapter 3).
1.3 Structure of the dissertation

The overall architecture of the dissertation is developed from the basic focus of research: pronominal and clitic systems in Taqbaylit from the point of view of their syntactic, semantic and interpretative properties. The dissertation can be thought as containing two main parts. The first part, formed by Chapters 2 and 3, contains preliminary and necessary background to the research on pronominal and clitic systems. Indeed, given the interaction of clitics and pronouns with the various levels of structure in which they occur, detailed explorations of the internal structures of CP and DP constituents are necessary. The second part, formed by Chapters 4 and 5, is the analysis part of the thesis. The dissertation is overall organized as follows.

In Chapter 2, I present an overview of Berber clausal and verbal structures. The first part of the chapter focuses on the structure of the overall clause, including peripheral constructions. Alternative word orders and their link to Information Structure are discussed in details and a description of question formation and complex clauses in comparison to constructions linked to Topic and Focus is also provided. The second part of the chapter focuses on verb related structures and presents an extensive analysis of the Berber TAM system, including an account of TAM particles. Based on the interpretations associated with these various elements, a representation of the Berber clause adopting an extended event structure partitioned into various semantic zones such as that proposed by Tenny (2000) (after Cinque 1997) is given.

Chapter 3 is devoted to nominal and pronominal structures. There, I describe the various modifiers found within DP and the relative word orders in which they occur. I show that the internal DP orders can be straightforwardly accounted for by Cinque’s hierarchical DP template (1996; 2000; 2005) and that Berber nouns move out of the position from which they are merged (cf. also Ouahalla, 1988; Ennaji, 2001) in two fashions: either as (i) N-movement or (ii) as NP-movement. In this chapter, I also discuss the Berber Construct State in details and, based on a number of arguments, suggest that although it presents some
similarities with its Semitic counterpart the Berber CS should not be analyzed as an instance of case. Although, I do not discuss the proposal in very much detail, I suggest that such constructions in Berber could be best described as predicative structures such as those put forward by Den Dikken (2007). In the second part of chapter 3, I offer an initial description of the internal structure of Berber pronominal forms adopting the feature geometrical framework proposed by Harley & Ritter (2002) and show that such a framework can also apply to Berber pronouns.

In Chapter 4, I focus on the issue of clitic placement within the clausal and nominal domains. As an exhaustive definition of cliticization, I give there a typological description of the morpho-syntactic properties and distributions of clitics. Based on their morphosyntactic distributions, I suggest that cross-linguistic clitic systems can be classified into (i) Edge-oriented systems (ii) V-TAM oriented systems and (iii) Head-oriented systems. Berber clitics, I demonstrate, display properties of the three systems. Based partly on these similarities, I develop an account of clitic placement in CP and DP, adapting from Cardinaletti & Starke (1999)'s derivation and adopting aspects of Ouhalla (2005a) and Boukhris (1998)'s proposals. I conclude Chapter 4 by a discussion of the locational clitic =d and its various interpretations.

Finally, in Chapter 5 I focus on the morphosyntactic and semantic properties of pronominal clitics and independent personal and possessive pronouns. I apply typological classifications of pronouns such as those proposed by Cardinaletti & Starke (1999) and Déchaine & Wiltschko (2002) to the system of Taqbaylit. I show that as Romance and a range of other languages, Taqbaylit pronominal systems (at least personal pronouns and possessives) rely on a basic morphosyntactic opposition between strong and deficient classes. This morphosyntactic opposition is shown to correlate with a number of typologically attested semantic and distributional differences, as those predicted by Cardinaletti & Starke (1999). I also show that, in terms of their internal structures, strong pronouns correspond to DPs while, weak pronouns such as clitics and covert pro correspond to ΦPs.
Chapter 2

Verbal and Clausal Structures

Introduction

Pro-forms, particularly pronominal clitics, are well known in linguistics for their interaction with the structure of clauses and, depending on the grammatical category they belong to, various elements within it. Berber clitics occurring in the CP domain, as overviewed in Chapter 1, are associated with the verbal projection and higher level projections which give rise to clausal structure. Given these connections, a thorough understanding of verbal and clausal structures presents itself as fundamental to any investigation of the system. The aim of the present chapter is, precisely, to give a descriptive overview of these linguistic objects and provide an analysis of the structure of clauses— a template which will be much useful in our discussion of verbal clitics in Chapter 4.

Although, the description that follows centrally focuses on a particular variety of Taqbaylit (cf. Chapter 1) references to other Berber languages are necessary. Variations across Berber, particularly those correlated to syntax and morphosyntax, are fairly weak. However, an account of how and where grammars differ is crucial.

The chapter is organized as follows. I start by an account of clause structure in 2.1, including a concise outline of the pragmatics and syntax of Information Structure. Then, a very brief but, necessary glance at the morphological composition of verb stems is given in section 2.2. In section 2.3, I provide an investigation of the basic aspectual system of Berber, based on Taqbaylit. There, I propose an initial hierarchical clausal template for Berber adapted from Tenny’s (2000) extended-event structure where the functional heads
occurring with or realized by the verb (e.g. T, Asp, Mood (...)) are taken to be hierarchically organized into semantic zones. The template laid out is extended in section 2.4 where I focus on the TAM semantics and the syntactic status of particles which co-occur with verb stems in the language and propose an account of their distributions. Finally, the chapter concludes with a brief overview of how modality is expressed in Taqbaylit in section 2.5.

2.1 Clause structure

2.1.1 Canonical word order

Most Berber languages have a canonical VSO word order. As illustrated in (1-2), Taqbaylit follows a similar VSO order, with PP modifiers (e.g. locative PPs) occurring after the object. In ditransitive constructions, dative PPs optionally precede direct object.

(1) a. ye-swa yanis lqahwa
    3SG-drinkP R F
    Yanis coffee
    Yanis drank the coffee.

    b. *i-degr yanis abalu yur lhid
    3SGM-throwP R F
    Yanis ball to wall
    *He threw the ball to the wall.

    c. i-degr yanis yur lhid abalu
    3SGM-throwP R F
    *Yanis to wall ball

(2) a. i-fka yanis akadu i hanna
    3SGM-giveP R F
    Yanis present toD AT hanna
    Yanis gave a present to Hanna.

    b. i-fka yanis i hanna akadu
    3SGM-giveP R F
    Yanis toD AT Hanna present
    Yanis gave a present to Hanna.

It is well known that Berber subject DPs are not obligatory and a large number of sentences display a VO order. In such ‘pro-drop’ constructions, the
subject agreement marker affixed onto the verb is sufficient to determine a particular referent in the discourse context, as shown in (3a-b) below where the prefixes \( y- \) and \( t- \) mark reference respectively to Yanis and Hanna.

(3) a. \( i\text{-ruh}=d \text{ yanis. } y\text{-swa lqahwa} \) [pro-drop]
\( \text{3SGM-go}_{\text{PRF}}=D \text{ Yanis. } 3\text{SGM-drink}_{\text{PRF}} \text{ coffee} \)
Yanis came. He drank a coffee.

b. Q: \( \text{anida}=tt \text{ Hanna?} \)
\( \text{where}=\text{CL.}3\text{SGF};\text{ACC} \text{ Hanna} \)
Where is Hanna?

A: \( \text{te-fey} \)
\( \text{3SGF-exit}_{\text{PRF}} \)
She went out.

Pro-drop constructions, although very frequent, are semantically constrained. Hence, only subjects associated with a previous antecedent can be dropped. Subjects such as indefinite DPs (e.g. someone, a boy), deictic demonstratives (e.g. that girl over there, this one) and deictic pronouns\(^9\) (e.g. deictic her) which introduce a new discourse referent must be overtly realized, as illustrated in (4).

(4) a. \( ye\text{-ruh }=d \ [\text{viwen}] / \ *[\text{pro}] \)
\( \text{3SGM-go}_{\text{PRF}}=D \text{ one } / \text{ pro} \)
Someone came.

b. \( ye\text{-ruh }=d \ [\text{viwen aqcie}]/ *[\text{pro}] \)
\( \text{3SGM-go}_{\text{PRF}}=D \text{ one } \text{ boy } \text{ pro} \)
A boy came.

c. \( i\text{-ceveh} \)
\( \text{3SGM-be.beautiful}_{\text{PRF}} \)
\( \text{[wagi]/ } *[\text{pro}]^{10} \)
DEM\text{PRX } \text{ pro} 
This is beautiful (pointing).

---

9 1\(^{st}\) and 2\(^{nd}\) person singular pronouns, unless semantically marked, can always be dropped.

10 Note that dropping of the demonstrative is possible here if the referent has not been explicitly mentioned before but is prominent in the discourse context (e.g. the discourse participants are looking at two trousers in a shop, the speaker can point at one and say:

i. \( i\text{-ceveh} \)
\( \text{3SGM-be.beautiful}_{\text{PRF}} \)
This one is beautiful

34 | P a g e
Additionally, non VSO word orders are also frequently found. Alternative word orders in Berber are mainly linked to Information Structure categories such as Focus and Topic (Shlonsky, 1987; Ouali, 2006 amongst others). In Taqbaylit, this is also the case. In the next section, I give a descriptive overview of Information structure and its relation to word order.

2.1.2 Information structure and alternative word orders

In a nutshell, Information Structure can be defined as the relation between Pragmatics and Syntax or how the presupposed knowledge of discourse participants (part of pragmatic knowledge) affects the grammatical realization of an utterance\(^\text{12}\) (Büring 1999; 2007; Lambrecht, 1996; Rooth, 2007). Depending on how the information conveyed relates to the knowledge assumed to be held by the hearer, speakers can shape utterances differently, by a specific intonation or by optional syntactic re-positioning of relevant constituents for instance (Lambrecht, 1996; Büring, 2007).

In general, two components of information which, contrast in the way they relate to the notion of presupposition or assumed knowledge, are distinguished: Topic and Focus (given and new (Prince, 1981)). Topic is commonly characterized as old information but can be more formally identified as ‘part of the pragmatic presupposition’ (Lambrecht, 1996). That is Topic is that part of the information assumed to already be known by the hearer, either because it has already been mentioned or because it is given by the discourse context (Büring, 1995)\(^\text{13}\). Focus is, by contrast defined as contributing new information or information which contrasts, in some way or another, from the pragmatic

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11 Same as previous sentence (see footnote 9).
12 Following Lambrecht, I use the term ‘grammatical realization’ to refer to the morpho-syntactic side as well as the prosodic side of sentence realization.
13 Note that not all utterances necessarily contain Topic elements.
presupposition, i.e. focus elements are not provided or ‘recoverable’ by the context (Ibid).

In Taqbaylit and most Berber languages, Topic and Focus elements may occur in positions different from their canonical ones — essentially on the left edge of the canonical clause — resulting in various (non-canonical) word orders, such as SVO, OVS and VOS. In the next subsections, I give a descriptive overview of the syntax and pragmatics of Information Structure in the language. I start, below, with Topic.

**Topic and dislocation**

Topic is manifested syntactically by left-dislocation and right-dislocation, i.e. by placement of the relevant constituent to the left or right periphery of the clause, giving the structures in (5).

\[
\begin{align*}
(5) & \\
a. & \text{Topic } [CP C [TP T [VP V]]] \\
b. & [CP C [TP T [VP V]]] \text{Topic}
\end{align*}
\]

In Taqbaylit, dislocation follows the same pattern as in other Berber languages (e.g. Shlonsky, 1987 and Ouali, 2006 for Tamazight Berber (Morocco)):

(i) Dislocation of direct objects and indirect objects must be obligatorily accompanied by clitic doubling.\(^{14}\)

(ii) Only arguments of the verb — Subjects, Objects and Indirect Objects — can be dislocated.

Examples (6-7) below which involve left-dislocations illustrate these constructions in Taqbaylit.

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\(^{14}\) Guerssel (1995) (cf. also Ahab, 2007) argues that subject agreement markers in Berber are clitics. Hence, subject dislocation, like direct object and indirect object dislocations, must occur with clitic-doubling. In the present work, I follow the more common view that the Berber pronominal clitic system includes only accusative and dative clitics (Dell & Elmadiaoui, 1989; Ouhalla, 2005a; Ouali, 2006) and subject agreement markers are affixes.
(6) a. i-fka yanis tatefaht i hanna
   3SGM-givePRS Yanis apple toDAT Hanna
   Yanis gave the apple to Hanna.

b. [yanis], i-fka tatefaht i hanna SUBJ
   Yanis 3SGM-givePRS apple toDAT Hanna
   Yanis, he gave the apple to Hanna.

c. [tatefaht], i-fka=tt/*0 i hanna OBJ
   apple 3SGM-givePRS=CL.3SG;ACC toDAT Hanna
   The apple, he gave it to Hanna.

d. [(i) hanna], i-fka=yas/*0 tatefaht 1.OBJ
   toDAT Hanna 3SGM-givePRS=CL.3SG;DAT apple
   Hanna, Yanis gave her the apple.

(7) a. i-degr yanis abalu yur lhid ADJUNCT
   3SGM-throwPRS Yanis ball to wall
   Yanis threw the ball to the wall.

b. * [yur lhid], i-degr yanis abalu *ADJUNCT
   to wall 3SGM-throwPRS Yanis ball
   To the wall, Yanis threw the ball.

Consider now example (8) below, extracted from a narration of the Pear stories, which illustrates the uses of Topic in contexts:\footnote{For clarity, the relevant Topic elements are bolded and bracketed. Elements which appear for the first time and then become Topicalized are underlined.}

(8) a. y-uryal=d yiwen n wenqcic sufela uvelo [...]  
   3SGM-returnPRS=D one of boy on bicycle

b. cwit akka, [aqcic nni], ye-tef averid=i-s  
   then like.this, DEM 3SGM-takePRS way=POSS-3SG

c. ada-n=d telata n warac [...]  
   pass-3PLM=D three of boys

d. [aqcic nni], y-uli sufela uvelo  
   boy DEM 3SGM-go.upPRS on bicycle

\footnote{For clarity, the relevant Topic elements are bolded and bracketed. Elements which appear for the first time and then become Topicalized are underlined.}
In the previous extract, one can observe that Topic elements in Taqbaylit, as expected, correspond to given information (here, because they have previously been introduced in the narratives). For instance, the entity referred to by the NP *aqcic nni* (that boy) is a Topic (8, b-d), after being introduced in (8-a). Topic elements, as can be observed in (8) can have different roles. Fundamentally, they show what the proposition uttered is about (Lambrecht, 1996), as in (8, b-d) but additionally can promote an entity in the context over another (i.e. contrastive Topic in Buring’s terms (2007)), as in (8-e).

**Focus and clefts**

Focus elements correspond to new information in some way or another. In Berber, Focus can be syntactically marked by cleft constructions\(^\text{16}\) (Shlonsky, 1987; Elouazizi, 2005). Focus constituents, like left-dislocated constituents, occur on the left periphery of the clause (9a) but, occur embedded between the optional copula *d* (which can be thought of as the counterpart of *that* in English cleft constructions) and the complementizer *l*\(^\text{17}\) (9b). This is illustrated in (10) below with examples from Taqbaylit.

---

\(^{16}\) Naturally, there is a debate as to how cleft constructions in Berber are derived. They are, in general, argued to involve either movement or extraction of the relevant constituent from its canonical position (Guerssel, 1979; Shlonsky, 1986; Ouhalla, 1993; Ouali, 2006) or a base-generation of the said constituent in its final position (Elouazizi, 2005). Here I will assume the general view that clefting in Berber involves movement of the relevant constituent from its merge position.

\(^{17}\) The complementizer involved in cleft constructions varies from Berber languages to others. In Moroccan Berber (Tamazight for instance), the complementizer involved is *ny* (see Ouali, 2006; Shlonsky, 1986 for more details). Note that the complementizer involved in cleft-type constructions is also involved in Relative clauses and wh-interrogatives.
Additionally, cleft constructions differ from topic peripheral dislocations in the following ways:

(i) Argument as well as non-argument constituents can be focused.

(ii) Focus does not require clitic-doubling. \(^{19}\)

(iii) Subject clefting induces so-called anti-agreement effects on the verb, which occurs in the participial form [V-n] and the default agreement 3rd person masculine \(^{20}\) (Ouhalla, 1993; Guerssel, 1995).

---

\(^{18}\) When a verb follows the Focus complementizer i, the 3rd person singular masculine marker is realized as /g/ instead of /y/. Since, other agreement markers are not affected by this, the /y – g/ alternation can be analyzed as phonological. The y-g alternation is found in other contexts but Ouhalla (1988) considers the /g/ to belong to the complementizer.

\(^{19}\) Clefted focus elements which are extracted from embedded clauses occur obligatorily doubled by a clitic if they are direct or indirect objects. Consider, for instance, the following sentences:

a. \[\text{ARGAZ} \] \text{m} \text{ni-y bel-i wala-y=t} \\
man COMP=CL.2SGF;DAT tellPRF-1SG that seePRF-1SG=CL.3SGM;ACC

*This is the man who I told you I saw*

b. *\text{argaz m ni-y beli wala-y=0}*

Shlonsky ((1986) after Guerzset 1979) proposes that clitic-doubling occurs here because long distance Clefting is preceded by left-dislocation, the strategy used in Berber to respect locality conditions on movement (i.e. left-dislocation keeps movement local).

\(^{20}\) Anti-agreement is a well known and frequently discussed phenomena. It occurs famously in Arabic where verbs are in the anti-agreement form, the default 3rd person singular, if their subject is realized post-verbally (i.e. in VSO orders), as shown in the following example from Ouhalla (1994:43).

i. l-tullaab-u wasal-uu \\
the-students-NOM arrived-3PL

ii. wasal-u l-tullaab-u \\
arrived-3SG the-students-NOM

*The students arrived The students arrived*
Consider, for instance, the following examples:

(11) \[[\text{IDELI}]_{F} \ i \ g\text{-}fka \ \text{tatefaht} \ i \ \text{hanna}\]

\text{yesterday} \ \text{COMP} \ 3\text{SGM}\text{-}\text{give} \ \text{apple} \ \text{to}\text{DAT} \ \text{Hanna}

\text{It was yesterday that he gave an apple to Hanna.}

(12) a. \text{uye-}\gamma \ \text{snat} \ n \ \text{tiktabin}

\text{buy}\text{PRF}\text{-}1\text{SG} \ \text{two} \ \text{PREP} \ \text{books}

\text{I bought two books.}

b. \text{[NEKKINI]}_{F} \ i \ g\text{-}uy\text{-}n \ \text{snat} \ n \ \text{tiktabin}

\text{PRO.1SG} \ \text{COMP} \ 3\text{SGM}\text{-}\text{buy}\text{PRF}\text{-}\text{PTCP} \ \text{two} \ \text{PREP} \ \text{books}

\text{It is me who bought two books.}

c. \text{*NEKKINI]}_{F} \ i \ uye-\gamma \ \text{snat} \ n \ \text{tiktabin}

Sentence (11), where the adverb \text{ideli} ‘yesterday’ is focused, illustrates the fact that non-argument constituents can also be clefted. The sentences in (12) demonstrate that verbs occur in a special form (i.e. the anti-agreement form) in contexts where the constituent that is clefted is a subject. Thus, in (12b), the verb does not agree with its subject but instead occurs in the participial form and is affixed with the default 3\text{rd} person singular agreement morpheme. (12c), in which the verb agrees with a clefted subject is ungrammatical.

Consider, now examples (13, a-b) which illustrate the pragmatic uses of Focus\textsuperscript{21}. Utterances preceding the utterance containing the relevant Focus elements are provided here as context.

---

But most commonly, anti-agreement is found in cleft constructions and other related subject extractions. For instance, Halkomelem Salish (Elouazizi & Wiltschko, 2006), Somali (Frascarelli & Puglicchi, 2003), Kinande (Schneider-Zioga, 2007) and in some respect even English all exhibit anti-agreement effects in such constructions. As shown below, in English Person agreement is also suppressed in cleft-type constructions.

\begin{itemize}
  \item \text{iii. You are eating an apple}
  \item \text{iv. It is you who is eating the apple}
  \item \text{v. ?It is you who are eating the apple}
\end{itemize}

\textsuperscript{21} Focus elements are bracketed and italicized.
God gave me a fiancé. This fiancé (and his family), when they asked for my hand in marriage, my heart didn’t want them. It was TEARS that I was crying it was not JOY that I was feeling.

Samiya and Nunu came in. They gave me a knife. I cut the boy’s navel string. It was SAMIYA NATTAYED who bandaged him. That day, I didn’t have the courage.
contrast between what is expected from the hearer (or assumed by the speaker to be expected) — ‘the speaker bandaged the boy’ — and what is actually asserted — ‘somebody else bandaged the boy’.

Note that Focus and Topic constructions can co-occur in one single clause. In those contexts, as illustrated in (14b–c), the Topic element obligatorily precedes the Focus element, giving the order in (14a).

\[(14)\]
\[
a. \quad \text{TOPIC} < \text{FOCUS} < \text{COMP} i
\]
\[
b. \quad [\text{argaz nni}]_T (d) \quad [\text{tametut}=	ext{is}]_r \quad i \quad \text{g-mut-n}
\]
\[
\quad \text{man DEM COP wife=CL.3SG;POSS COMP 3SGM-die\text{past}-PTCP}
\]
\[
\quad \text{That man, it is his wife who died.}
\]
\[
c. \quad *([\text{tametut}=	ext{is}]_r \quad i \quad [\text{argaz nni}]_T \quad \text{g-mut-n})
\]
\[
\quad \text{COP wife=CL.3SG;POSS COMP man DEM 3SGM-die\text{past}-PTCP}
\]

Across Berber, the syntax of Information Structure is, in many ways, similar to other types of constructions such as the syntax of interrogative constructions. That a relation exists between the two structures is not surprising since it has long been observed that WH-questions and Focus constructions share syntactic similarities across languages (Chomsky, 1995; Rizzi, 1997). Next, I look at questions in Taqbaylit and their similarities with Information structure related constructions.

2.1.3 Questions

In Taqbaylit, predominantly, WH-constructions directly correspond to Focus cleft constructions, while YES-NO questions can, in some contexts, be similar to left-dislocations. In this section, I provide a brief overview of question-constructions in Taqbaylit. I start by an overview of WH-questions, followed by a description of YES-NO questions (i.e. direct questions).
WHi-questions

WHi-words which, as in English can correspond to arguments as well as adjunct elements occur in the left periphery of the clause with the complementizer i, as focus constituents do. Unlike cleft constructions though, WHi-interrogations do not involve, even optionally, the non-verbal copula d. I provide examples of WHi-constructions in (15) below.

(15) a. te-fka amira tatefat i tametut
    3SGF-giveprf Amira apple toDat woman
    Amira gave an apple to the woman.

b. [dâu]wHi i te-fka i tametut? OBJ
    what COMP 3SGF-giveprf toDat woman
    What did she give to the woman?

c. [twumi]wHi i te-fka tatefaht? IND OBJ
    who COMP 3SGF-giveprf apple
    To whom did she give an apple?

d. [milmi]wHi i te-fka tatefaht i tametut ADJ
    when COMP 3SGF-giveprf apple toDat woman
    When did she give an apple to the woman?

d. [acuyer]wHi i te-fka tatefaht i tametut? ADJ
    why COMP 3SGF-giveprf apple toDat woman
    Why did she give an apple to the woman?

As subject clefts, subject WHi-movement has anti-agreement effects on the verb22, as shown in the following example. Recall that anti-agreement is marked by the participial form [V-n] and a default agreement marker corresponding to the 3rd person singular masculine.

22 Like in long-distance clefting direct and indirect WHi-elements extracted from embedded clauses must be doubled by clitics, as shown below, a hint that long-distance WHi-interrogation involves left-dislocation too.

a. [ānwə]wHi i t-eni-d beli te-wala-d=d? who COMP 2SG-sayprf=2SG that 2SG-seeprf=2SG=CL.3SGM;ACC
    Who did you say that you saw yesterday?

b. *[ānwə] i t-eni-d beli te-wala-d=d?

43 | P a g e
(16)  
[\textit{anta}]_{wh} i \text{ g-fka-n} \text{ tatefah}_i \text{ tametut}? \text{ subj} \\
who \text{ comp} 3\text{sgm-giv}_{prf}-\text{ptcp} \text{ apple to}_{dat} \text{ woman} \\
Who gave an apple to the woman?

**Yes-no questions**

Canonical YES-NO questions do not syntactically differ from declarative clauses. The contrast between the two types of sentences comes exclusively from the intonation pattern; questions are marked by an interrogative intonation, not declarative sentences, as shown in (17a-d) below.

(17)  
\begin{enumerate}
  \item \text{cča-n} \\
  \text{eat}_{prf}-3\text{plm} \\
  They ate. \\
  \item \text{cča-n}? \\
  \text{eat}_{prf}-3\text{plm} \\
  Did they eat? \\
  \item \text{te-ruh} =d \text{ amira} s \text{ axxam} \\
 3\text{sgfr-go}_{prf} =D \text{ Amira to}_{dir} \text{ house} \\
  Amira came home. \\
  \item \text{te-ruh} =d \text{ amira} s \text{ axxam?} \\
 3\text{sgfr-go}_{prf} =D \text{ Amira to}_{dir} \text{ house} \\
  Did Amira come home?
\end{enumerate}

Additionally, direct questions can be marked by left-dislocation or right-dislocation. Again, these only differ from non-interrogative dislocations in intonation.

(18)  
\begin{enumerate}
  \item \text{[amira]} \text{ te-ruh} =d \\
  \text{Amira} 3\text{sgfr-go}_{prf} =D \\
  Amira, she came. \\
  \item \text{[amira]} \text{ te-ruh} =d? \\
  \text{Amira} 3\text{sgfr-go}_{prf} =D \\
  Amira, did she come? \\
  \item \text{ye-cča} =\text{tt} \\
 3\text{sgm-eat}_{raf} =\text{cl}\text{.3sgfr};\text{acc} \text{ apple} \\
  The apple, he ate it.
\end{enumerate}
So far, I have provided descriptions of the canonical sentence, as well as the various alternatives to this canonical order and their relation to pragmatics in the shape of, amongst others, Information structure. All those issues were covered from the perspective of simple clausal structures. In the next section, I give a brief overview of how more complex structures are realized in Taqbaylit.

2.1.4 Embedded Clauses

Two main types of embedded clauses are found in Taqbaylit, as in most Berber languages: relative clauses and complement clauses. As is the case in many languages, relative clauses are the syntactic parallels of cleft-constructions and WH-interrogatives within the nominal domain (relative clauses occur within NP and modify the head noun).

Thus, consider the following examples:

(19) a. ye-γli weqcic mni [i g-uker-n aqcwal]RC
    3SGM-fallPRF boy DEM COMP 3SGM-robPRF-PTCP basket
    The boy who had robbed the basket fell.

b. a=tt i-zuyur si lexid [i g-urz-n
    PRT=CL.3SGF;ACC 3SGM-dragIMPREF with rope COMP 3SGM-tiePRF-PTCP
di temgart=is]RC
    in neck=CL.3SG;POSS
    He was dragging her by the rope which was tied around her neck.

c. ye-refed aqecwal [i g-eččur-n tifar]RC
    3SGM-carryPRF basket COMP 3SGM-fillPRF-PTCP pears
    He carried the basket which was filled with pears.

d. t-qim nettat d tilawin [i =d i-gran]RC
    3SGF-sitPRF PRN.3SGF with women COMP =D 3sgm-stayPRF-PTCP
    She sat with the women who had stayed.
As can be observed from the previous examples, relative clauses directly follow the noun which they modify which in turn occurs on the right and strictly adjacent to the now familiar complementizer *i*. In the same contexts as with clefts and *wh-*interrogatives, verbs which occur inside relative clauses take default agreement. Hence in (19, a-d), all verbs are in the anti-agreement form since their subjects (the head nouns in all sentences), are extracted from their canonical position. Verbs whose subjects occur within the relative clause take standard agreement (cf. (19') below).

(19')

```
(19')
tilawin ahi kul yiwet [i] g-qrev
women DEM each one COMP 3SGM-be.next

wexxam=is]rc a te-qim a t-ens
house=CL.3SG;POSS PRT 3SGF-sitAOR PRT 3SGF-sleepAOR

Those women, each one who was near her house stayed to sleep over.
```

Complement clauses are different from relative clauses. They occur in the complement position of verbs such as *tell, think* or *remember*. Many Berber languages have a specific complementizer for that type of construction such as *is* (see Ouali, 2006 for more details), however the variety of Taqbaylit under study uses the optional complementizer *beli*, borrowed from Algerian Arabic, as shown in (20) below.

(20)

```
(20)
a. cfi-γ (beli) te-ruh amira f tnach
   rememberPRF-1SG that 3SGF-goPRF Amira at 12
   I remember that Amira left at 12 o'clock.

b. ril-γ (beli) te-ruh amira f tnach
   thinkPRF-1SG that 3SGF-goPRF Amira at 12
   I think that Amira left at 12 o'clock.

c. i-na =d (beli) te-ruh f tnach
   3SGM-sayPRF =D that 3SGF-goPRF at 12
   He said that she left at 12 o'clock.
```
In addition, there are two distributional differences between the two complementizers described here worth noticing. First, the complementizer *i* obligatorily occurs adjacent to the verb or the aspectual particle which directly precedes it\textsuperscript{23}. The complementizer *beli*, on the other hand, can occur farther away from the verbal head and often precedes Topic and Focus constituents. Thus, in (21c) below, a Topic constituent can occur between *beli* and the particle *a*. By contrast, in (21b), the occurrence of the Topic constituent Mohand between *i* and the verb leads to ungrammaticality.

(21) a. ad i-ruh anega *i* g-xeddem
   PRT 3SGM- GOAOR where COMP 3SGM-work\textsubscript{IMPRF}
   He will go where he works.

b. *ad i-ruh anega i [Mohand]- i-xxdem
   PRT 3SGM- GOAOR where COMP Mohand 3SGM-work\textsubscript{IMPRF}

c. te-\textsuperscript{yil} *beli a =tt
   3SGF-think\textsubscript{PRF} COMP PRT =CL.3SGF;ACC
   n-zur azeka
   2PL-visit\textsubscript{AOR} tomorrow
   She thinks that we will visit her tomorrow.

d. te-\textsuperscript{yil} *beli [nek d weltma]\textsubscript{T} a =tt
   3SGF-think\textsubscript{PRF} COMP PRN.1SG with sister PRT =CL.3SGF;ACC
   n-zur azeka
   2PL-visit\textsubscript{AOR} tomorrow
   She thinks that my sister and I will visit her tomorrow.

Second, while *beli* can freely occur with any of the two aspectual particles co-occurring with verbal heads *la* and *ad*\textsuperscript{24}, the complementizer *i* can never co-occur with the *ad* particle. This is illustrated in (21').

(21') a. i-na =d beli ad i-ruh
   3SGM-say\textsubscript{pref} =D COMP PRT 3SGM-go\textsubscript{AOR}
   He said that he would leave.

\textsuperscript{23} Note that *i* is a clitic host in Berber. Thus, in some clitic contexts the complementizer does not appear to be adjacent to the verbal head or its aspectual satellites. I leave this issue until Chapter 4 where I discuss Berber clitic systems in more details.

\textsuperscript{24} Particles are covered in sections 2.3.2, 2.3.3 and in more details in 2.4.1
b. i-na =d beli  la i-truHu
   3SGM-sayPRF =D COMP PRT 3SGM-goAOR
He said that he was leaving.

c. d nekk i la i-ttazal-n atas
   PRT PRN.1SG COMP PRT 3sgm-runIMPRT-PTCP a.lot
It is me who runs the fastest.

d. d nekk ad y-azzl atas
   PRT PRN.1SG COMP 3SGM-runAOR a.lot
It is me who will run the fastest.

f. *d nekk i ad y-azzl-n atas
   PRT PRN.1SG COMP PRT 3SGM-runAOR-PTCP a.lot

These distributional differences suggest that the two complementizers occur in
distinct positions and that the Berber CP contains two C positions, each
containing one of the complementizers. The fact that only the beli
complementizer can precede Topic and Focus constituents demonstrates that it is
located higher in the clause than the i complementizer. Given these assumptions,
the order in the upper clausal periphery of Taqbaylit can be assumed to be as
follows25:

(22) [C beli [TOPIC [FOCUS [C i [TP T [VP V]]]]]

Having now looked at the overall syntactic structure of simple and
complex clauses, I move on in the next sections to more specific elements within
the clause. As we will see in chapter 4, clitics in Taqbaylit (and Berber) gravitate
around the verb and, amongst other things, related heads such as the TAM
particles. But before investigating the notion of aspect in more details and to fully
understand aspect marking in the language, a brief overview of the morphology of
verbal stems is in order.

25 The structure is further developed in section 2.4
2.2 Verb stems

Like the well-known Semitic triliteral roots, many Berber verb roots are consonantal (Chaker, 1983, Louali & Philippson, 2004). As can be seen from Table 1 with Taqbaylit verbs, the majority of roots are monoliteral, biliteral or triliteral. Roots of more than three consonants are rarer but are, nonetheless found.

Table 1: Taqbaylit consonantal verb roots

<table>
<thead>
<tr>
<th>MONOLITERAL ROOTS</th>
<th>BILITERAL ROOTS</th>
<th>TRILITERAL ROOTS</th>
<th>QUADRILITERAL ROOTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>y &lt;to buy&gt;</td>
<td>zl &lt;to run&gt;</td>
<td>dgr &lt;to throw&gt;</td>
<td>mryj &lt;to throw away&gt;</td>
</tr>
<tr>
<td>l &lt;to open&gt;</td>
<td>rh &lt;to go&gt;</td>
<td>sfr &lt;to whistle&gt;</td>
<td></td>
</tr>
<tr>
<td>d &lt;to pass&gt;</td>
<td>wm &lt;to swim&gt;</td>
<td>qrh &lt;to hurt&gt;</td>
<td></td>
</tr>
<tr>
<td>n &lt;to tell&gt;</td>
<td>kr = &lt;to stand&gt;</td>
<td>srs &lt;to put&gt;</td>
<td></td>
</tr>
</tbody>
</table>

As in Semitic, consonantal roots are realized with different vocalic patterns which indicate aspect and verbal agreement, as shown in (23) below with the verb zl (to run).

(23) ROOT ASPECT AGREEMENT

| zl | → | u-z-e-l | → | y-uzel |
| run | run | he ran |

The aspectual vocalic pattern in Berber is quite complex, primarily due to its apparent irregularity. In the next section, I describe the Berber aspecual system and how aspect is marked in more details. Agreement markers which, as we see in

26 Roots of five consonants are found across Berber languages (Chaker, 1983; Louali & Philippson, 2004). However, these are not instantiated in our corpus.
are incorporated into the overall verbal form are treated in chapter 3 with other pronominal forms.

2.3 Aspectual realizations

Although there is variation between Berber languages, most of them do not seem to have grammatical tense markers, while the few that do have a grammaticalized tense opposition tend to predominantly use aspect or mood related particles, suggesting that tense marking in Berber is an innovation (as also observed by Ouhalla, 2005 for Tarit Berber and Chaker, 1989, 1995, 1997 for various dialects). The notion of tense and its expression is covered in more details in section 2.4. In this section, I will thus only focus on aspect.

Like in Slavic and Greek languages, the basic opposition between verb forms in Berber is aspectual (Basset, 1952; Chaker, 1983; Prasse, 1986 and many others). Several classifications of the Berber aspectual system have been proposed. Although they contrast in both terminology and other details discussed below, they all seem to be describable in terms of a three-way aspectual distinction which, adopting the terminology of Dell & Elmedlaoui (1989), I will refer to as perfective, imperfective and aorist:

**Perfective** mainly describes states and events which are completed or over at the time of discourse.

(24)  
\[
\begin{array}{c|c}
\text{t-uzel} & \text{rachil} \\
3SGM-run & \text{Rachel ran}
\end{array}
\]

**Aorist** can be associated with a range of interpretations. The terminology is analogous to the one used to refer to the Greek Aorist but the Berber verb form occurs in distributions quite distinct from those of the Greek Aorist. Thus, used in isolation, it might be said to describe future events but, given the right context,
other readings are available. For instance, sentence (25a) can be interpreted by default as describing a future event. However, depending on the context, an additional reading such as ‘Rachel used to run’ can become available. Verbs in the aorist always occur with the particle *ad,* except in imperative constructions of the type given in (25c) and very rare narrative contexts discussed in 2.4.

(25)  a.  ad  t-azel  rachil
      PRT  3SGF-run$_{AOR}$  Rachel
     *Rachel will run.*
     *Rachel used to run.*

     b.  akas  ad  te-kat  lehwa  di  meyres
        always  PRT  3SGF-rain$_{AOR}$  rain  in  March
     *It often rains in March.*

     c.  awi  =d
        bring$_{AOR}$  =D
       *Bring!* 

**Imperfective** describes progressive and habitual events. Verbs in the imperfective are often accompanied by the particles *a* and *la,* but can also occur alone.

(26)  (la)/ (a)  t-ttzel  rachil
      PRT  3SGF-run  Rachel
     *Rachel is running.*
     *Rachel runs. (habitual)*
     *Rachel was running.*
     *Rachel ran. (habitual)*

Previous studies referred to these aspectual forms in different terms summarized in table 2 below. Hence, perfective and imperfective are, respectively, also referred to as accompli and non accompli (‘Inaccompli’ in French) (Cadi, 1987; Mettouchi, 2000; Galand, 2003), as perfect and intensive imperfect (Prasse, 1986) or as preterit and intensive aorist (Basset, 1952; Chaker,

---

28 The habitual interpretations associated with the Aorist are found in specific contexts discussed in section 2.3.3

Table 2: A SUMMARY OF ASPECTUAL TERMINOLOGIES

<table>
<thead>
<tr>
<th>PERFECTIVE STEM</th>
<th>IMPERFECTIVE STEM</th>
<th>AORIST STEM</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accompli</td>
<td>non Accompli</td>
<td>Accompli</td>
<td>Cadi (1987); (2000); Galand (2003)</td>
</tr>
<tr>
<td>Perfect</td>
<td>Intensive</td>
<td>Imperfect</td>
<td>Prasse (1986)</td>
</tr>
</tbody>
</table>

In addition, proposals also diverge as to which of these three aspects form the fundamental aspectual opposition in Berber. Thus, the aspectual system of Berber is either argued to be ternary (opposition between three fundamental aspects) or binary (opposition between two fundamental aspects). Overall, a ternary system involving perfective, imperfective and aorist is widely accepted (Chaker, 1997; Mettouchi, 2000; Ouali, 2006 amongst others). Binary systems are more marginal: Basset (1952), Chaker (1983) and Prasse (1986) suggest a distinction between perfective and aorist, with imperfective as a subclass while Galand (2003) argues that Berber only has two aspects, perfective and imperfective and aorist is outside of the aspectual system. I come back to Galand’s proposal in more details in section 2.3.3.
Aspect in Berber is essentially marked by vocalic alternations. As a result of these aspectual vocalic alternations, verbs can in principal take three forms\textsuperscript{29}. In general, they often take less than three forms, as shown in Table 3 below.

Table 3: \textit{Taqbaylit aspectual verb forms}

<table>
<thead>
<tr>
<th>ROOT</th>
<th>AORIST STEM</th>
<th>PERFECTIVE STEM</th>
<th>IMPERFECTIVE STEM</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>(zl)</td>
<td>azel</td>
<td>uzel</td>
<td>ttazel</td>
<td>\textit{run}</td>
</tr>
<tr>
<td>(f)</td>
<td>af</td>
<td>ufa</td>
<td>ttaf</td>
<td>\textit{find}</td>
</tr>
<tr>
<td>(wl)</td>
<td>wali</td>
<td>waLa</td>
<td>ttwali</td>
<td>\textit{see}</td>
</tr>
<tr>
<td>xdm</td>
<td>xdem</td>
<td>xdem</td>
<td>xeddem</td>
<td>\textit{work}</td>
</tr>
<tr>
<td>k\textit{e}m</td>
<td>k\textit{cem}</td>
<td>k\textit{cem}</td>
<td>k\textit{cem}</td>
<td>\textit{enter}</td>
</tr>
<tr>
<td>dgr</td>
<td>deger</td>
<td>deger</td>
<td>deger</td>
<td>\textit{throw}</td>
</tr>
</tbody>
</table>

How the different aspectual stems are derived from verb roots and why not all verbs display a three-stem alternation is outside the scope of this study. However, the data supports proposals that at least some parts of the derivation are lexical. Evidence is mainly provided by the irregular vocalization patterns found within and across aspectual stems.

Indeed, perfective stems can be derived by different sets of vocalizations: \(/u - a/\) (e.g. \(zl \rightarrow uzel\), \(/u - a/\) (e.g. \(f \rightarrow ufa\)), \(/a - a/\) (\(wl \rightarrow wali\)) or \(/a - a/\) (e.g. \(dgr \rightarrow deger\)). Aorist stems show the same divergent vocalic patterns: \(/a - a/\) (e.g. \(zl \rightarrow azel\), \(/a - i/\) (e.g. \(wl \rightarrow wali\)) and \(/a - a/\) (e.g. \(dgr \rightarrow deger\)). The imperfective is more regularly marked, generally by the prefix \textit{it}, which seems to

\textsuperscript{29} Across Berber languages some verbs take a fourth form — the ‘negative preterit’ (Benjaballah, 2000) — which is found with the negation \textit{ur} and other negative operators.

i. \(i\)-k\textit{e}m Seddik
\(3\text{SGM-enter}_{PBF}\) Seddik
\textit{Seddik entered}

ii. \(ur\) \(i\)-k\textit{e}m ara Seddik
\textit{NEG 3SGM-enter}_{PBF} \textit{NEG Seddik}
\textit{Seddik didn't enter}

Some Berber languages (e.g. Touareg Berber) also have an additional aspectual form referred to as the intensive preterit (Prasse, 1986; Chaker, 1997).
be the productive form since it is also used with French and English borrowings (see examples 27, a-b) or gemination of a consonant (Louali & Philippson, 2004). Like the other two types of aspect, the imperfective can also be marked by vocalic alternations (e.g. $kčm \rightarrow kčem$).

(27) a. (la) \textit{tpilombe-γ} $^{30}$ turumst=iw  
PRT fill$_{IMP}$=1SG tooth=CL.1SG;POSS  
\textit{I am filling my tooth.}

b. (la) \textit{tskype-γ} $^{31}$  
PRT skype$_{IMP}$=1SG  
\textit{I am skyping.}

An increasingly popular and quite convincing account in Berber linguistics has the aorist stem as the only lexicalized stem from which perfective and imperfective stems are derived$^{32}$ (Benjaballah, 2000; Louali & Philippson, 2004). The patterns of vocalic alternations are too complex to be discussed here, but the productive form of the imperfective is indeed regularly derived from the aorist stem — that is the stem on which \textit{tt} is prefixed often corresponds to the aorist stem (cf. Table 3). Note also that imperfective and perfective stems are similar only when the verb does not otherwise show stem-alternations. Table (4), which follows, provides a summary of these various relations between verb stems.

$^{30}$ Borrowed from French \textit{plumer} 'to fill a tooth'.

$^{31}$ This 'borrowing' is very new and very rare. Furthermore, most speakers prefer to use the complex expression:

i. \textit{a=m sawl-γ di Iskype}  
PRT=CL.2SGF call$_{IMP}$=1SG in skype  
\textit{I am calling you on skype}

$^{32}$ Benjaballah (2000) argues that only Aorist stems are lexicalized. Perfective and Imperfective stems are derived from the lexicalized Aorist stem. Specific vocalic derivations are attributed to the Apophonic Path: $Ø \rightarrow 1 \rightarrow A \rightarrow U \rightarrow U$, so that an I vowel (/i/) in the Aorist stem will change into an A vowel (/a/) in the Perfective. Likewise, an A vowel (/a/) will change into a U vowel (/u/) and so on and so forth.
As mentioned above, a few Berber languages seem to have a grammaticalized opposition between tenses marked by particles. In the variety of Taqbaylit on which this dissertation is based, however, the basic opposition is aspectual and eventualities are primarily described in aspectual terms. Temporal reference is derived from the interaction between aspect, discourse context and adverbial modifiers. In this section, I provide a description of aspectual semantics, the different uses that each type of aspect has in the dialect and their relation to temporality or modality. Before doing so, a definition of the category of Aspect and how it contrasts with the category of Tense is necessary. The two categories can be defined as follows (after Comrie, 1976; Smith, 1997; Androutsopoulos, 2002):

(i) Temporal descriptions of eventualities involve a deictic relation between the eventuality and the time of sentence production (or the time of a reference event).

(ii) Aspectual descriptions of eventualities focus on the internal temporal structures of events and depend on what part(s) of this event structure are made ‘visible’ by the speaker (Smith, 1997: 62).

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The symbol √ is used to show similarity with another stem, the ≠ symbol is used to show that a stem is different from the others.

33 The symbol √ is used to show similarity with another stem, the ≠ symbol is used to show that a stem is different from the others.
Commonly, two types of aspects are distinguished: perfective and imperfective. The perfective describes a situation as a single entity, without referring to any specific part(s) of its internal structure (Comrie, 1976; Smith, 1997). For instance, in the sentence *John read the book* the event of reading the book is expressed as a complete event (Comrie, Ibid: 6); that is to say, the whole situation of John’s reading a book, including its end, is taken as relevant. The imperfective aspect, by contrast, refers to specific parts of a situation, except its endpoints (Smith, Ibid). In the sentence, *John was reading a book when the postman came* only a specific part of the situation is relevant; the part corresponding to the arrival of the postman (Comrie, Ibid: 4). Note that contrary to the sentence *John read a book*, here the existence of an endpoint is not linguistically expressed, but can be inferred (Smith, 1997).

Given their referential properties, perfective and imperfective relate differently to the notions of completion and continuity (two notions relevant for our discussion on aspect in Taqbaylit). As observed in Smith (Ibid), the perfective aspect inherently expresses endpoints and, therefore is incompatible with continuity and incompleteness. Across languages (Slavic, Romance and Berber), it tends to describe events as completed at the time of utterance or with respect to some reference time (Filip, 2007). The imperfective aspect, on the other hand, does not inherently express endpoints, although it can be associated with one by inference and is more easily associated with continuity (Smith, Ibid). In the following two sections, I give an explanatory overview of the perfective and imperfective uses in Taqbaylit.
2.3.1 Perfective forms

In Taqbaylit, the perfective behaves differently depending on the type of verb it co-occurs with. With dynamic verbs, the aspect indicates termination or completion of an event with respect to the time of utterance (28a-b) or some other reference time (28c).

(28) a. t-uzel Marwa
   3SGF-run\textsubscript{PRF} Marwa
   Marwa ran.

b. ṝāi-γ
eat\textsubscript{PRF}-1SG
I ate.

c. t-aya claxaterc te-seder atas
   3SGF-be.tired because 3SGF-catwalk\textsubscript{PRF} many
   te-
   lha tiselit d sexana dayen ulahed aklimatisur
   3SGF-walk\textsubscript{PRF} bride COP heat also no air-conditioning
   She was tired because she had cat-walked a lot (for a long time).
   The bride had walked in the heat and (there was) no air-conditioning.

Sentences (28a&b) are representative examples of perfective uses in the language: the two events described, \textit{Marwa’s running} and \textit{I eating}, are interpreted as terminated at the time of utterance (although, two different events of \textit{Marwa running} or \textit{I eating} can, of course, occur simultaneously to the utterances of each sentence). In example (28c), two eventualities are described, one is a state (\textit{the bride is tired}), the other, an event (\textit{the bride cat-walked}). The state of the bride which directly results from the walking event is, here, the reference point, by which the event of the bride’s walking is interpreted as completed.

Given the nature of its focus, the perfective is mainly interpreted with past tense reference. Yet, perfective cannot be regarded as inherently expressing past
tense (as suggested by Ouali, 2006 and Chaker, 1989; 1995). Empirical support comes from stative verbs, which in the perfective can either be re-interpreted as inchoatives or describe states, in the past as well as in the present.

(29) a. te-li tpurt
3SGF-openP R F door
The door is open.
The door was open.
The door opened.

b. te-hma lkahwa
3SGF-be.hotP R F coffee
The coffee is hot.
The coffee was hot.
The coffee heated.

Whether a perfective stative is interpreted as true in the past or in the present depends on the discourse context. Examples (30, a-b) below are translated as past states because they have been uttered in narratives focusing on past events: (30a) is part of a narrative in which a girl tells the story of a wedding she has attended a

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34 Ouali (2006) argues that the perfective aspect, in association with a covert past tense marker in the T position of the clause, marks the simple past in Berber. As for Chaker (1989, 2005), he claims that the aspectual opposition has evolved into a temporal opposition between Past (Perfective), Present (Imperfective) and Futur (Aorist) in many Berber languages (including Taqbaylit).

35 As frequently observed (Chaker, 1993; Mettouchi, 2004), not all statives eventualities can be reanalyzed as inchoatives, as illustrated by the following examples from Chaker (1993:103-104)

a. y-krez yiger
3SGM-ploughPRF field
The field is ploughed
b. t-bzeg akk
3SGF-be.wetPRF all
She is soaked

"The field got ploughed *She got soaked"

36 This is compatible with Smith’s proposal (1997: 69) that typologically, perfective aspect and stative situations enter into three types of relations:

(i) Perfective expresses an endpoint for the state (e.g. French)
   a. Marie a vécu à Paris (*et elle y vit toujours)
   Mary lived in Paris (*and still lives there)
(ii) Perfective does not express an endpoint for the state (e.g. English)
   b. Jennifer knew Turkish (and she still knows it)
(iii) Perfective aspect and stative situations are incompatible (e.g Chinese)
   c. Mali bing-le
   Mali sick-LE
   Mali got sick
   *Mali is sick

In this typology, Berber belongs to the second type of languages.
few weeks before the discourse event, (30b) is extracted from a narrative in which a woman recalls her childhood.37

(30) a. **te-ceveh** **ani_y** **te-cemt**
   3SGF-be.beautifu_{ref} or 3SGF-be.ugly_{ref}
   ‘She was beautiful or she was ugly’.

b. **nekkini di lamr =iw mectuhe-γ**
   PRN.1SG in age =CL.1SG;POSS be.small_{ref}-1SG
   *Me, at my age, I was young.*

2.3.2 Imperfective forms

The imperfective only refers to dynamic situations. Although statives verbs can occur in the imperfective, the situations described then can only be interpreted as change of states.

(31) **la y-ttli taq**
   PRT 3SGM-open{imprf} window
   *The window is opening.*

The aspect, as expected, refers to situations as continuous — progressive or habitual — in the present or the past. Consider examples (32, a-c):

(32) a. **tura a ye-xeddem** Kinzo
   now PRT 3SGM-work{imprf} Kinzo
   *Now, Kinzo is working.*

b. **a ye-xeddem** Kinzo daiman
   PRT 3SGM-work{imprf} Kinzo daiman
   *Kinzo is always working.*
   *Kinzo always worked.*

c. **wala-γ argaz sufela uselum,a ye-ttkas ttefah.**
   see_{ref}-1SG man on ladder PRT 3SGM-pick{imprf} apples
   *I saw a man on a ladder, he was picking up apples.*

---

37 The two narratives from which these sentences are extracted are available in the Appendix section.
Temporality and whether the event is understood as habitual or progressive depend on the context. In (32a), the adverbial *tura* ‘now’ induces a present progressive interpretation. (32b) is ambiguous between a present or past interpretation but, the adverbial *daiman* ‘always’ restricts the situation described to a habitual one. In (32c), the whole sentence within which the event is described provides a clue as to how it is to be interpreted: perfective aspect on the main verb expresses completion while the simultaneity between the two events respectively described by ‘see’ and ‘pick up’ points to a progressive reading of the latter.

In addition to these interpretations, the imperfective can also be used to describe repetitive events, as shown in (33) below. Note that the repetitive situations are very similar to the habitual ones; the main difference between the two, in Taqbaylit, is that repetitive events can be additionally expressed by repetition of the relevant verbs. Semantically, repetitive events also differ from habitual ones in that the time interval at which they occur is often smaller than that of habitual events.

(33) a. *ttruhu*-n *ttuyal*-n
gō₃MIMP₃PLM come.back₃MIMP₃PLM
*ttruhu*-n *ttuyal*-n
gō₃MIMP₃PLM come.back₃MIMP₃PLM
They were going and coming back, going and coming back.

b. a te-*ttruhu* ṣar texxamt=is
PRT 3SGF-gō₃MIMP₃PLM to room=CL.3SG;POSS
She was going to her room.

a =d te-*ttuyal* anida dahi
PRT =D 3SGF-return₃MIMP₃PLM where there
i nejema-ntag yarek tilawin
COMP group₃MIMP₃PLFM all women
She was going to her room, she was coming back to where all the women were grouped.

As one might have noticed, verbs in the imperfective aspect can occur alone or accompanied by the particles *la* and *a*. Thus, while the imperfective
verbs occur without particles in (33a), they co-occur with a in (33b) and la in (31). The role of these particles is covered in section 2.4. In the next sub-section I discuss the aorist verb form which, following a long line of tradition is added as a third type of aspect available in the language (Basset, 1952; Chaker, 1983; 1989; 1995; Nait-Zerrad, 2001; Quitout, 1998; Rabdi, 2004; Kossman, 1997; 2000 (etc...)).

2.3.3 Aorist forms

As well documented in the Berber literature, the aorist uniquely occurs in a range of different contexts but is canonically associated with future tense interpretations

(34)  a. ad i-feγ si lexma=s f tenac
    PRT 3sgm-exit,AOR from work=CL.3SG;POSS at twelve
    *He will get out from work at twelve.

       b. a(d) te-z"edj Miriam azeka
         PRT 3SGF-marry,AOR Miriam tomorrow
         Miriam will get married tomorrow.

In addition, the aorist also occurs in contexts in which the imperfective is found such as repetitive and habitual events in the past, as shown in examples (35-36). (35) is extracted from a narrative about a woman giving birth and (36) is extracted from a narrative in which a woman talks about her childhood and the things she used to do as a child.

38 Aorist uses in the dialect under study are very similar to Aorist uses found in other varieties of Taqbaylit (cf. Chaker, 1989; 1995) and other Berber languages (Touareg, Moroccan Berber) (cf. Prasse, 1986; Quitout, 1997; Galand, 2003).
39 Note that the use of the Aorist in those contexts, unlike that of the imperfective, is restricted. Thus a 'habitual Aorist' cannot be construed at the start of a narrative or out of context.
(35) a. a $=iy$ $=id$ te-qereh
   PRT $=CL.1SG;ACC=D$ 3SGF-hurt$_{AOR}$

   a $=iy$ $=id$ te-kes
   PRT $=CL.1SG;ACC=D$ 3SGF-calm$_{AOR}$

   a $=iy$ $=id$ te-qereh
   PRT $=CL.1SG;ACC=D$ 3SGF-hurt$_{AOR}$

   [my stomach] hurt and calmed.

b. a tefey-γ a kečm-γ γar ladic
   PRT exit$_{AOR}-1SG$ PRT enter$_{AOR}-1SG$ to$_{DIR}$ bathroom

   alami d iyen peverid, dayen
   until COP one time nothing

   I went in and out of the toilets until one time, that's it!

(36) a n-essird lehwal
   PRT 1PL-wash$_{AOR}$ dishes

   a n-nenyel iduman s agudu d
   PRT 1PL-throw.away$_{AOR}$ rubbish to bin COP

   iqecwalen f izugar=ney
   baskets on backs=$CL.1PL;POSS$

   a n-ruh lawan n zit
   PRT 1PL-go$_{AOR}$ time OF oil

   a n-ruh a n-lqed azemur
   PRT 1PL-go$_{AOR}$ PRT 1PL-pick.up$_{AOR}$ olives

   a n-ečcar iqecwalen n uzemur
   PRT 1PL-fill$_{AOR}$ baskets OF olives

   We would wash the dishes. We would throw the rubbish in the bin, (carrying) the baskets on our backs. [...] We would go, at the time of oil, we would go pick-up olives. We would fill up baskets of olives.

Out of the three verb stems commonly found in Berber it is without doubts the most controversial. Recall from the introductory part of this section that
opinions diverge as to its status in the aspectual system of Berber; but also as to whether it belongs to the domain of aspect at all. And since the aorist is, apart from very rare contexts (cf. section 2.4.1) always coupled with the particle ad, many discussions have focused on the particle and its role. This is the approach mainly followed by Chaker (1989; 1995) who argues that the aorist is an aspect which takes on temporal and modal meanings from its co-occurrence with ad (without otherwise assigning to the particle a non-aspectual function, cf. section 2.4.1 for more details).

However, the [ad+ aorist] complex is also frequently argued to mark modality (Bentolila, 1974; 1981; Prasse, 1986; Galand, 1977; 2003; Ouali, 2006)\textsuperscript{40}. Galand (2003), for instance, observes that the aorist, contrary to perfective and imperfective, very rarely occurs without the particle, takes its aspectual value solely from the (aspectual) context and expresses modality more often than it expresses aspect. Galand does not mention the type of modality that would be expressed by the complex [ad + aorist], but Bentolila (1981) proposes a split of the Berber system between real vs. non-real\textsuperscript{41}, with the [ad + aorist] corresponding to non-real.

Along the same lines as Galand (2003) and Bentolila (1981), I take the [ad + aorist] complex not to be associated with aspect. However, I take it to be associated, in most contexts, with the expression of mood. Indeed, although disagreement exists on the category to which the complex belongs to, there is common agreement that it consistently expresses the non-existence or non-actuality of the event under description. Factual vs. non-factual distinctions of this sort belong to the domain of mood rather than to the domain of aspect which refers to the temporal structure of events or to the domain of modality more closely linked to the speaker's or agent's attitude towards the proposition or situation described (Kroeger, 2004). Principally, in those contexts, I take the

\textsuperscript{40} Ouali (2006 after Ouhalla, 1988) defines ad as a non-finite marker, and hence the [ad+aorist] complex as the counterpart of the English infinitives. But, Tamazight, the language he studies, differs from Taqbaylit in that it has two different particles which fulfill the role of ad in Taqbaylit:

(i) ad, which is used in 'non-finite' contexts (e.g. embedded clauses).
(ii) da, which is used to mark future tense.

Both particles occur with the Aorist.

\textsuperscript{41} Real vs. non-real
aorist (along with its ad particle) to be associated with Irrealis\(^2\), which can be
defined as a mood referring to events or situations which are non-factual or unreal
(Lynch, 1998; Shankara Bhat, 1999; Cinque, 1999).

Across languages where it is grammatically marked, as observed by
Palmer (2001: 145-185) (see also Shankara Bhat, Ibid), Irrealis is found in the
expression of future (e.g. Muyuw: Papuan language, Naga: Tibeto-Burman) but
also in the expression of moods such as Conditional (e.g. Caddo; Central Pomo)
and Imperative (e.g. Nakanai; Jamul Diego: Yuman; Romance languages such as
Spanish and Italian). Interestingly, the aorist in Berber is found in those exact
same contexts.

Thus, it is found in the description of future events (as a default, the
reference time from which the future is interpreted corresponds to the time of
utterance (37, a-b), but if enough contextual information is provided, a past event
can be taken as reference time (37c-d)).

\[(37)\]
\[
\begin{align*}
a. & \quad a \quad =gen \quad dehku-\gamma \quad dacu \quad i \quad wala-\gamma \\
& \quad \text{PRT} \quad =\text{CL.2PL;DAT} \quad \text{tell}_{\text{AOR}-\text{1SG}} \quad \text{what} \quad \text{COMP} \quad \text{see}_{\text{PREF}-\text{1SG}} \\
& \quad \text{I will tell you what I saw.} \\
b. & \quad ad \quad y-\text{azel} \quad \text{Mohand} \quad \text{azeka} \\
& \quad \text{PRT} \quad \text{3SGM-run}_{\text{AOR}} \quad \text{Mohand} \quad \text{tomorrow} \\
& \quad \text{Mohand will run tomorrow.} \\
c. & \quad n-qim \quad a \quad n-\text{traçu} \quad \text{milmi} \quad a \quad =d \quad t-as \\
& \quad \text{1PL-sit}_{\text{PREF}} \quad \text{PRT} \quad \text{1PL-wait}_{\text{IMPREF}} \quad \text{when} \quad \text{PRT} \quad =D \quad \text{3SGF-come}_{\text{AOR}} \\
& \quad \text{Yemma} \quad \text{mother} \\
& \quad \text{We were waiting for mother to come.} \\
d. & \quad \text{azeka} \quad yahi \quad a \quad \text{xedm-n} \quad \text{iftur} \quad n \quad \text{teslit} \\
& \quad \text{tomorrow} \quad \text{DEM} \quad \text{PRT} \quad \text{work}_{\text{AOR}-\text{3PLM}} \quad \text{lunch} \quad \text{OF} \quad \text{bride} \\
& \quad \text{The following day, they also prepared the bride's meal.}
\]

\(^2\) The present analysis diverges from Ouali (2006) who takes Irrealis mood to correspond to
Negative constructions.
Furthermore, the aorist is found in the expression of moods, generally considered to belong to the Irrealis category (Palmer, Ibid; Kroeger, 2004):

(i) **Infinitive**

(38) a. imaren ruh-n ad =d awi-n tislit
    after goPRF-3PLM PRT =D bringAOR-3.PLM bride
    *Then, they went to bring the bride.*

b. nukni n-sub s asalu aken a n-tes
    PRN.1PL 1PL-go.downPREF to living room for PRT 1PL-sleepAOR
    *Us, we went down to the living room to sleep.*

(ii) **Imperative**

(39) ičč!
    eatAOR
    *Eat!*

(iii) **Conditional**

(40) i-lukan cucfe-γ svah ad ili-γ trankil tura
    if washRPF-1SG morning PRT beAOR-1SG free now
    *If I had showered this morning, I would be free now.*

(iv) **Optative** (Chaker, 1989: 975)

(41) ad i-quš
    PRT 3SGM-be.destroyedAOR
    *May he be destroyed!*

(v) **Potentiality** (Chaker, Ibid)

(42) ad t-afe-d degg wexxam
    PRT 2SG-findAOR-2SG in house
    *You may find him in the house.*
Quite interestingly, similarly to the aorist in Berber (cf. example 35&36), the Irrealis is also frequently used in the description of habituality in the past (e.g. Bargam, Papua). According to Palmer (2001: 179), the use of Irrealis in the description of past habitual events is not uncommon and probably results from the fact that habitual past does not necessarily describe or pinpoint to a particular action but, rather to a ‘tendency to act’ (i.e. habitual past often describes action that would have been done in the past). I come back to the aorist and the particle *ad* in section 2.4 which covers the semantics and syntactic distributions of particles in more details.

2.3.4 Aspect in Taqbaylit: a summary

Given the proposed association between the aorist complex and Irrealis mood, I take the Berber aspectual system to mostly rely on a binary opposition between perfective and imperfective (as Galand, 2003). As in other languages where the distinction exists, perfective corresponds to complete descriptions of events (i.e. descriptions that do not portray the internal temporal structure of an event) while imperfective descriptions portray specific internal parts of the event’s temporal structure. Furthermore, Taqbaylit (and possibly other Berber languages, cf. Bentolila, 1981) has an opposition between Realis and Irrealis although only the Irrealis mood is specially marked (realized as the *ad* + Aorist stem). Figure (3) below summarizes the semantic interpretations of verb forms in Taqbaylit.
It is evident from the previous discussion that the Berber TAM system is quite complex and not easy to sort out. Part of the complexity comes from the ambivalence of the aorist which can also be associated with temporal and aspectual interpretations. Another source of complexity comes from the particles occurring with certain verb stems, whose meanings and interpretations vary across the Berber dialects where they are found and, depending on the context, sometimes within a particular variety. However, one way in which the system can be plausibly described and understood is in terms of a semantic-zone extended event structure, such as that proposed by Tenny (2000) after Cinque (1997). Before describing in more details Tenny’s proposal, I sketch an overview of Cinque’s universal CP hierarchy below.

In much influential work, Cinque (1997, 2006) partitions the CP constituent into sequences of hierarchically ordered functional projections whose
Specifier positions host a range of adverbs cross-linguistically found within CP. Based on the order in which particular functional heads occur cross-linguistically and the typological distributions of adverbs, Cinque proposes a universal CP template such as that presented in (43) where, for instance, speaker-orientated Mood projections and the type of adverbs they host occur higher in clausal structure than Aspect related functional projections and their adverbs.

(43) Cinque's adverb hierarchy (1997)

\[
\begin{align*}
\text{[frankly } \text{Mood}_{\text{speechact}} \text{] [fortunately } \text{Mood}_{\text{evaluative}} \text{] [allegedly } \text{Mood}_{\text{evidential}} \text{] [probably } \text{Mod}_{\text{epistemic}} \text{] [once } \text{T (Past)} \text{] [then } \text{T (Future)} \text{] [perhaps } \text{Mood}_{\text{realsis}} \text{] [necessarily } \text{Mod}_{\text{necessity}} \text{] [possibly } \text{Mod}_{\text{possibility}} \text{] [willingly } \text{Mod}_{\text{volitional}} \text{] [inevitably } \text{Mod}_{\text{obligation}} \text{] [cleverly } \text{Mod}_{\text{ability/permission}} \text{] [usually } \text{Asp}_{\text{habitual}} \text{] [again } \text{Asp}_{\text{repetitive}} \text{] [often } \text{Asp}_{\text{frequentative (I)}} \text{] [quickly } \text{Asp}_{\text{eiterative (I)}} \text{] [already } \text{T (anterior)} \text{] [no longer } \text{Asp}_{\text{terminative}} \text{] [still } \text{Asp}_{\text{continuative}} \text{] [always } \text{Asp}_{\text{perfect(?)}} \text{] [just } \text{Asp}_{\text{retrospective}} \text{] [soon } \text{Asp}_{\text{proximate}} \text{] [briefly } \text{Asp}_{\text{durative}} \text{] [characteristically(?)} \text{Asp}_{\text{generic/progressive}} \text{] [almost } \text{Asp}_{\text{prospective}} \text{] [completely } \text{Asp}_{\text{completive (I)}} \text{] [tutto } \text{Asp}_{\text{completive (II)}} \text{] [well } \text{Voice} \text{] [fast/early } \text{Asp}_{\text{eiterative (II)}} \text{] [completely } \text{Asp}_{\text{sgcompletive (II)}} \text{] [again } \text{Asp}_{\text{repetitive (II)}} \text{] [often } \text{Asp}_{\text{frequentative (II)}} \text{]}
\end{align*}
\]

Building on the semantic properties of the materials described in (43), Tenny (2000: 316-329) proposes a number of semantic zones, each associated with different syntactic functional projections. The labels of these semantic zones are as described below:

(i) **Point of View** [PoV] is the locus of mood and modality materials, including adverbs, associated with the speaker’s judgment or point of view and which ‘introduce the speaker as a deictic argument’ (p. 319). Within this semantic zone, are found Speech Act items (e.g. the adverb ‘frankly’) but also those linked to Evaluative (e.g. fortunately), Evidential (e.g. allegedly) and Epistemic (e.g. probably) interpretations.
(ii) **Deictic Time** involves elements expressing deictic relations between the eventuality described and some reference time. Temporal markers such as Past and Future and the time-related adverbials ‘once’ and ‘then’ occur within this zone.

(iii) **Truth value** [Tv] involves mood and modality projections not directly introducing the speaker as a participant. Cinque’s lower items such as Irrealis mood, Necessity and Possibility modalities which can be construed as Truth-Value expressions are located within this zone.

(iv) **Higher Aspect** involves viewpoint aspectual material such as perfective and Imperfective aspects. Higher Aspect material modifies the temporal extent of the whole event but, crucially, does not have access to sub-event components. That is they cannot participate in the VP internal aspectual composition.

(v) **Lower Focus** contains elements linked to focus and presupposition but, occurring within lower parts of clausal structure. This zone is taken as the locus of negative adverbs such as *almost* and *nearly* (and the negation ‘not’ in English).

(vi) **Subject-Oriented** roughly corresponds to the syntactic vP shell projection and contains agentive subjects, causative subjects and other agent-oriented items such as the adverbs ‘willingly’ and ‘knowingly’ (etc...).

(vii) **Middle Aspect** involves aspectual materials which modify and take scope over the whole event. Adverbs such as the restitutive ‘again’ or celerative ‘quickly’ are argued to occur within this zone.

(viii) Finally, **Core Event** contains the inner VP and materials which can take internal scope and participate in the composition of the core event. It
includes elements adding an endpoint to or measuring the event such as delimitated goal PPs, resultative predicates and other Incremental Theme arguments. Cinque’s lower aspe ctual adverbs (e.g. (completive) ‘completely’) occur within this zone.

The previous semantic zones are taken to reflect the semantic composition of the event while the functional projections (of the type proposed by Cinque) they are associated with reflect the syntactic composition of the event. Tenny proposes an extended event structure where the interaction between syntactic and semantic imports in event composition is mediated. The two domains participating in structuring events are taken to come together at relevant interface points (PoVP, TP, TvP (etc...), as represented in (44) below. Note that Tenny takes only the interface points given in (44) to be universally ordered. Thus, functional projections occurring within semantic zones may occur in different orders cross-linguistically.
I propose here to extend and adapt the template in (44) to derive the structure of Taqbaylit (and other Berber languages) clauses. Even though Tenny’s framework primarily aims at accounting for typological adverb distributions and, thus, relies on adverbs and the orders in which they occur, I will not discuss, here, the issue of adverb placement. The main reason for this is that adverbs in Taqbaylit are not allowed to occur in the portion of the clause which is relevant
here, that is between the verb and the lowest complementizer head. Given the behaviour of adverbs, I will rely principally on the semantic meanings and syntactic functions of the functional heads occurring in the extended projections of VP to derive the clausal structure of Taqbaylit and other Berber languages. Before a complete extended event structure is proposed, a discussion of the verb particles and their associated interpretations is crucial. For now, I provide the partial structure in (45) (where elements not relevant to the present discussion are grayed out).

In the proposed structure, an additional zone, the Upper Clausal Periphery zone, is projected to accommodate Topic and Focus elements which after Rizzi (1997) can be assumed to occur within their own projections TopP and FocP. The two complementizers identified in section 2.1.4, beli and i, occur within this zone. And given their divergent distributions, I propose that they occur within distinct CP projections, one occurring higher that TopP and FocP, the second occurring just below. Out of the three upper semantic zones proposed by Tenny, Point of View, Deictic Tense and Truth Value, only the latter is represented in (45). This is because Taqbaylit, as discussed in more details in the following sections, does not have a syntactic head associated with the expression of tense. Irrealis mood realized by the aorist verb and its particle ad occurs in this zone. The Higher Aspect zone (h-AspP) is realized and contains imperfective and perfective aspects.

Although, I will not focus on it, I assume that materials related to lexical semantics occur within the vP constituent and the lower semantic zones. Morphological elements which affect the valence of verbs such as passive or causative morphemes occur there. Arguments of verbs also occur within the lower semantic zones. As suggested by Tenny (2000) and a number of authors before

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43 This is generally the case across Berber languages. Note that some Berber languages, such as Tashelhit, have adverbial clitics (Dell & Elmedlaoui, 1989). They are allowed to occur between the verb and the functional heads which are projected below the lowest complementizer head in Tashelhit. Overall, they display the same distributional behaviour as other clitics. Hence, they attach to the functional head which directly precedes the verb and when no such head occurs before the verb, they follow the verb (cf. Chapter 4).

44 Note that the same methodology is used by Cinque (2006).

45 As suggested by Tenny herself (2000: 320)
her (Hale & Keyser, 1993; Chomsky, 1995), I will take transitive verbs to occur within a vP shell constituent and their agentive subjects to be merged in the specifier of vP. I will further assume that intransitive subjects and other types of arguments are merged inside VP. After Ouhalla (1988; 1991), Boukhris (1998) and Ouali (2006), I will further assume that lexical verbs which are merged inside VP, move to higher functional projections where they get their TAM semantics and morphology realized.
(45) An extended event structure of Taqbaylit and Berber (Version 1)
2.4 TAM particles

In the previous section, I provided an overview of verb realizations in Berber and their connection to aspect and mood, focusing on the Tabaylit variety. From this discussion, it can be observed that despite the variety of terminologies used to refer to these verb realizations, overall, their range of TAM interpretations are fairly constant across Berber languages. In this section, I look at particles and their roles in the TAM system of the language. Unlike verb forms, these elements can be associated with distinct semantic meanings and thus, syntactic projections depending on the Berber language focused on. Here, I will mainly concentrate on their uses in Taqbaylit but cross-dialectal variations will be discussed as relevant. Before discussing particular particles and their associated semantics and syntax in sections 2.4.2 and 2.4.3, I give an overview of their distribution in Taqbaylit in section 2.4.1.

2.4.1 Overview

In the variety of Taqbaylit under scope here, three particles associated with TAM semantics are found, namely ad, la and a, and they are similar in many respects. First, in terms of their surface position, they all occur before and in strict adjacency with the verb they accompany. For instance, as shown in (46), no adverb can intervene between the verb and its particles.

(46) a. la/a i-ttazel atas
   PRT 3SGM-runBPRF fast
   He is running fast.

b. *la/a atas i-ttazel

c. ad y-azel atas
   PRT 3SGM-runAOR fast
   He will run.

d. *ad atas y-azel
Second, particles are akin when it comes to cliticization and they all host clitics instead of the verb they precede (cf. 47). Given that only independent functional heads occurring before the verb can host clitics in Berber (cf. Chapter 4), this also shows that particles are independent of the verbs they modify.

(47) a. \( \text{la/a} =d \ i-\text{truhu} *=d \)  
\( \text{PRT} =D \ 3\text{SGM}-\text{gO}_{\text{IMPF}} \)  
He is coming.

b. \( \text{a(d)} =d \ i-\text{ruh} *=d \)  
\( \text{PRT} =D \ 3\text{SGM}-\text{gO}_{\text{AOR}} \)  
He will come.

Finally, even though all three particles are associated with TAM projections, none of them carry finite inflections otherwise associated with the verb (such as auxiliaries in English or Romance languages for instance) and, unlike verb stems, they cannot be affixed with subject agreement markers.

Yet, except these obvious similarities, their syntactic and semantic behaviours are overall very different. Hence, \( \text{la} \) and \( \text{a} \) occur exclusively with imperfective verb forms and are, in most contexts, optional. The particle \( \text{ad} \), on the other hand, is found mostly with aorist verb forms and is in the quasi totality of contexts obligatory. The contrasts in their distributions suggest that underlying structural differences between the particles exist. And, indeed \( \text{ad} \) and the imperfective particles have been overall analyzed as realizations of different syntactic and semantic categories, respectively aspect modality or tense and aspect or tense. In the following sub-sections, I will discuss the meanings associated with the particles and propose an account within the extended-event structure tree I presented in the previous section. I start by a discussion of the particle \( \text{ad} \) and conclude with a description of the particles \( \text{la} \) and \( \text{a} \).
2.4.2 The particle *ad* and the aorist

As mentioned in the introduction to this section and in various parts previously, the particle *ad* occurs mostly with the aorist verb stem. Unlike the other TAM particles found in Taqbaylit, it is one that is common to almost all Berber languages\(^4\) and its associated meanings seem to be overall similar (Chaker, 1995; Kossman, 2007). In the following discussion, I will therefore discuss its distribution beyond Taqbaylit.

The fact that *ad* obligatorily occurs with the aorist stem has resulted in many of its accounts focusing on the complex [ad + aorist] (cf. section 2.3.3). Depending on the category which the aorist is argued to belong to, the particle has been described as a marker of modality, tense or aspect. Chaker (1989; 1995), remember, assigns an aspectual meaning to the aorist and argues that, although the particle can be associated with tense and modality, it is best described as an aspectual particle. He suggests an aspectual system based on a double opposition between progressive and non-progressive\(^7\) on the one hand and between effective and non-effective on the other. The particle, in this system, is a marker of non-effective aspect which describes events that are considered not to have ‘concrete existence’. Galand (1977; 2003 and similarly Bentolila (1981)), by contrast, argues that *ad* is a modal particle that serves to specify the modal meaning of the aorist verb it co-occurs with (see also Chaker, 1983). Finally, Boukhris (1998) analyses it as a marker of future tense which, depending on the value assigned to the aorist complex by the syntactic context, can also be associated with a modal meaning.

In line with the previous authors, I take the particle to carry the same semantic meaning as the aorist complex it occurs in. As argued in section 2.3.3 for the [ad + aorist] category, I therefore propose that *ad* is a marker of Irrealis mood (cf. Kossman, 2007 for a similar proposal). Evidence that *ad* is indeed associated with Irrealis semantics comes from its distributions across Berber. First, the particle is found, in many varieties, co-occurring with imperfective

\(^{46}\) Siwi Berber (Egypt) and some varieties of Taqbaylit seem not to use the particle (Chaker, 1997).

\(^{47}\) In French: *extensif* vs. *non-extensif*
verbs and, in such contexts, adds an Irrealis meaning to the description of the event (Chaker, 1983; Kossman, 2007). Consider, for instance, the following sentence from a variety of Taqbaylit discussed by Chaker (Ibid: 223):

(48) ma y-whs \textit{ad} y-gan yur \textit{=ny} if 3SGM-be.scared$_{PREF}$ PRT 3SGM-sleep$_{IMPREF}$ to$_{DER}$ =CL.1PL,OBL

*If he is scared, he will sleep at ours (habitually).*

In (48) above, the imperfective verb \textit{ygan} ‘he sleeps’, which individually describes a habitual event of sleeping, is preceded by the particle \textit{ad} and a semantic interpretation of non-factuality is derived.

The second piece of evidence comes from the languages where, in addition to \textit{ad}, aorist stems can co-occur with another particle (e.g. \textit{rad} in Tashelhit or \textit{da} in Tamazight (cf. Chaker, 1995; Ouali, 2006; Kossman, 2007). In such languages the distributions of the two particles always follow this pattern: the additional particle is restricted to the expression of future tense while \textit{ad} is used in the expression of moods (Ouhalla, 1988; Chaker, 1995).

The analysis of the particle as the marker of Irrealis in the complex \textit{[ad + aorist]}, raises the issue of what the status of the aorist stem is. Similarly to Galand (2003), the aorist stem could be argued to also be a marker of mood. It seems to indeed be the case in some contexts, where the aorist stem occurs independently of \textit{ad} and still carries Irrealis mood semantics. Consider for instance the following examples:

(49) a. mi=d t-ers tbaqit y-e\cacute{c}\cacute{e} n\textit{e}y ye-q\textit{qim}
when=\textit{D} 3SGF-put dish 3SGM-eat$_{AOR}$ or 3SGM sit$_{AOR}$

*When the dish is served, one eats or one sits!*

(Nait-Zerrad, 2001: 10)

b. q\textit{im}!
sit$_{AOR}$

*Sit!*

In (49a), the aorist verbs \textit{ye-e\cacute{c}\cacute{e}} ‘one eats’ and \textit{ye-q\textit{qim}} ‘one stays’ describe non-actual, hypothetical events while in (49b) the bare aorist form (i.e. without subject
agreement affix) is used for the imperative, generally categorized as a type of Irrealis mood (Palmer, 2001).

However, even though such examples show that the aorist stem can also be linked to the expression of mood, they are, across Berber, overall extremely rare. Non-imperative contexts in which the aorist form carries this type of meaning, such as in (49a), consist only of archaic expressions (Cadi, 1987). As for the occurrence of the aorist stem without the particle in imperative clauses (cf. (49b)), it is most common across languages for imperative verbs to surface as bare forms without agreement or particles (Kroeger, 2004).

Given that the aorist stem is inseparable from the particle *ad* in the majority of contexts in which it occurs, it seems unlikely that it carries Irrealis semantics independently of *ad* and thus, that it belongs to the categories of mood or modality. Adopting Chaker's categorization (1995; 1997), I propose instead that the aorist stem still belongs syntactically to the category of aspect but, is not anymore semantically relevant in the basic aspectual opposition of Berber. Before discussing this proposal in more details below and in light of the conclusion just reached on the aspectual status of the aorist, I give a modified version of the relevant part of the extended-event structure of Berber provided in (45) of the previous section. In (50) below, the particle *ad* is taken to occur as the head of TrvP while the aorist verb occurs in h-AspP.

\[
(50) \quad \text{TV}_{\text{IRR}} \quad \text{h-AspP}
\]

\[
\text{TV}_{\text{IRR}} \quad \text{h-Asp} \quad \text{vP}
\]

The argument that the aorist category carries no mood semantics, and that, although an aspectual category, it does not enter into the aspectual opposition of
Berber resembles the proposal made by Boukhris (1998), but the structure in (50) differs from the structure she puts forward in one crucial way. Next, I describe her analysis and discuss how and why the account developed above departs from it.

Building on the dependence of the aorist stem on preceding verbs and particles, Boukhris (1998) argues that the category carries no inherent aspectual, temporal or modal meanings and acquires its interpretations by either the external syntactic context or the particle *ad*. From the context, which in her proposal is a c-commanding verb, the aorist acquires an aspectual or modal meaning while it acquires a future meaning from the particle. Consider the following sentences (Boukhris, 1998: 67 & 116):

(51) a. t-ukm t-sw aman
    3SGF-enterPRF 3SGF-drinkAOR water
    *She entered and drank water.*

   b. ad i-ddu
    PRT 3SGM-gOAOR
    *He will go.*

   c. ay škka-x ad i-ddu
    COMP doubtPRF-1SG PRT 3SGM-gOAOR
    *I doubt that he will go.*

According to Boukhris, the aorist verb *tsw* ‘she drank’ in (51a) acquires a perfective interpretation by the perfective verb which c-commands it, *tukm* ‘she entered’. In (51b), the verb *iddu* ‘he will go’ acquires a future tense interpretation from the particle *ad*. Finally, in (51c), the verb acquires a modal interpretation from the modal verb *škkak* ‘I doubt’.

Because it carries no inherent TAM semantics, she proposes that the aorist verb stem remains in the vP shell within which it is merged and does not move to higher functional projection such as AspP or TP. Part of her structure is illustrated in (52).
Leaving aside the characterization of *ad* as a marker of future tense, there are two main arguments for why the structure in (50) is to be favoured over the one in (52). The first argument has to do with word order. Thus, in the previous section, it was proposed that agentive subjects (i.e. subjects of transitive verbs) occur in the Specifier of vP. VSO word orders were assumed to be derived by movement of lexical verbs into higher clausal projections. Now, given that aorist verbs induce the same VSO word orders as perfective and imperfective verbs, it has to be assumed that they too move out of the vP shell into higher positions.

The second type of argument comes from the historical status of the aorist in proto-Berber. As discussed by Chaker (1995 after Galand (1977); 1997), the basic aspectual system of proto-Berber relied on an opposition between aorist and perfective aspects. In this system, it is believed, the aorist carried the same type of meaning as that carried by the non-progressive imperfective of modern Berber. Assuming that functional heads or morphemes (such as Asp or Mood) can reanalyze into other functional heads but that such a process occurs in a strictly upward order within a hierarchical clause (e.g. Asp > Mood > T) (Roberts & Roussou, 2003), it is unlikely that the aorist has been reanalyzed in the way implied by Boukhris’s treatment of the category.

Yet, her argument has the advantage that it accounts for the lack of independence of aorist verbs and their lack of aspectual semantics. Because they carry no inherent meaning and maximally occur within vP, they cannot, on their own, make up a grammatical clause. In the remainder of this sub-section, I propose a possible account of the dependence of the aorist and its non-aspectual semantics compatible with the structure in (50).
Although it can, rarely and only in some Berber varieties, occur independently and inherit an aspectual interpretation from a preceding verb (as in (51a)), the essential context in which the aorist is found is with the particle ad. Even in languages where a future particle has emerged and occurs in complementary distribution with ad, it often corresponds to a variant of ad (e.g. the ad of Ghadames (Kossman (2007)) or to a grammaticalized verb including the particle (e.g. the rad of Tashelhit formed by a grammaticalized form of the verb ira ‘want’ and ad (Chaker, 1997)). One plausible account for the obligatory occurrence of the aorist with ad and its ‘unmarked’ aspectual value (Kossman, Ibid), I believe, relies on historical change.

As mentioned above, the aorist along with the perfective is believed to have constituted the basic aspectual opposition of proto-Berber with the imperfective aspect and the particle ad both emerging later as innovations (Chaker, 1989; 2005; Galand, 2003). As explained by Chaker (Ibid), the imperfective developed from the aorist with a more specified durative and iterative meaning and became used over the aorist in more contexts. The imperfective stem being found consistently across Berber, its emergence is believed to have occurred in proto-Berber. In parallel, the aorist became to be associated with the particle ad to express Irrealis mood. Because the particle and the apparently fixed [ad + aorist] complex are also consistently found across Berber, the construction can be similarly taken to have emerged in proto-Berber. As the imperfective aspect developed as the main counterpart of the perfective aspect, the aorist lost its primary aspectual meaning in favour of the imperfective. With no role in the aspectual opposition of the Berber system, it can be imagined that the main use of the aorist became in the [ad + aorist] construction for Irrealis mood. Despite its association with Irrealis mood, however, the aorist stem still syntactically belongs, as partly argued by Chaker (1995) and Heath (2005), to the domain of aspect.

48 This proposal (largely based on Chaker, 1995) contrasts with Chaker (1997) who argues that the [ad+aorist] should be assumed to be a more recent innovation because the particle is not found in Siwi Berber and one variety of Taqbaylit. It is possible, however, that, in these two languages, the particle has been lost.
2.4.3 The imperfective particles

In Taqbaylit, as observed in various places above, *la* and *a* optionally occur with verbs carrying imperfective aspect. Although the two particles can in principal receive the same interpretations, in spoken discourse, there seems to be a difference in choice between the two. The *a* particle is more frequently chosen and used than the *la* particle and tends to be chosen for more numerous semantic interpretations. This is shown in (53), where the complex [*a* + imperfective] is employed to refer to a progressive event in the present or past, a frequentative/habitual event, an anterior frequentative event or as a generic event.

\[(53)\begin{align*}
a \quad i-ttru \quad & \quad Islam \\
PRT \quad 3SGM-cry\text{IMPF} \\
Islam & \quad is \quad crying. \\
Islam & \quad was \quad crying. \\
Islam & \quad often \quad cries. \\
Islam & \quad used \quad to \quad cry. \\
Islam & \quad cries \quad (a \quad lot).
\end{align*}\]

The [*la* + imperfective] complex, by contrast, tends to be primarily associated with progressive meaning\(^{49}\) in the present or the past, in contexts such as (54) below.

\[(54)\begin{align*}
a. \quad i-ruh \quad \gamma ur \quad lhanut \quad la \quad i-ttazel \\
3sgm-go \quad toDIR \quad shop \quad PRT \quad 3SGM-run\text{IMPF} \\
He & \quad ran \quad to \quad the \quad shop. \quad (Lit. \quad He \quad went \quad to \quad the \quad shop \quad he \quad was \quad running). \\
b. \quad mi \quad pde-\gamma \quad ideli \quad la \quad i-ttawam \\
when \quad arrive\text{IMPF}-1sg \quad yesterday \quad PRT \quad 3SGM-swim\text{IMPF} \\
When & \quad I \quad arrived \quad yesterday, \quad he \quad was \quad swimming. \\
c. \quad d \quad imetawen \quad i \quad la \quad ttru-\gamma \\
COP \quad tears \quad COMP \quad PRT \quad cry\text{IMPF}-1SG \\
It & \quad was \quad tears \quad that \quad I \quad was \quad crying.
\end{align*}\]

\(^{49}\) Recall that the progressive is only one possible meaning associated with the imperfective and that the aspect can also refer to habitual and repetitive events (cf. section 2.3.2).
Then, I entered the room where I was sleeping.

The fact that the a particle can be construable from a wider range of meanings readily accessible suggests that it is less specified and less associated with the basic continuative meaning of the imperfective. I come back to the particle a in some details at the end of this section but for now I concentrate on the particle la, which seems to be emerging as a marker of progressive.

The suggestion that la is associated with a more specific meaning in Taqbaylit can be supported by other Berber languages where it is found to carry the same continuative and progressive meaning (Boukhris, 1998) or different tense meanings.

In Tamazight, the particle is associated with a present tense reference while it is associated with a past tense reference in Tarifit (Ouhalla 2005a; Ouali, 2006).

(55) la =t i-ssa
PRT =CL.3SGM;ACC 3SGM-drink\_IMPREF
He is drinking.
(Tamazight Berber: Ouhalla (2005a: 4))

(56) a. ila\textsuperscript{50} ttari-n =t
PRT write\_IMPREF-3PLM =CL.3SGM;ACC
They were writing it.
(Tarifit Berber: Ouhalla (2005a: 4))

b. ila tressnenna-n =t
PRT cook\_IMPREF-3PLM =CL.3SGM;ACC
They were cooking it.
(Tarifit Berber: Ouhalla (2005a: 4))

\textsuperscript{50} Although la and ila are formally different, I take them to be the realization of the same particle. I explain the different forms that the particle take later in this section.
Given the range of meanings it can encode, the particle has been concurrently argued to carry an aspectual semantics (Dell & Elmadlaoui, 1989, Boukhris, 1998 and implicitly Nait-Zerrad, 2001) or a temporal one (Ouhalla, 1988; 2005; Ouali, 2006). Because of this variation, in the remainder of this sub-section, I discuss the particle *la* in more details. I propose an account of the various interpretations it is associated with across Berber based on Ouhalla (2005a)'s grammaticalization hypothesis.

Ouhalla (2005a) relies on the process of grammaticalization to account for the distribution of the particle in Tarifit and Tamazight. In particular, he argues that *la* is an auxiliary which has grammaticalized from the imperfective form of the lexical verb *ili* (to be). Given that imperfective is canonically associated with present tense reference in Berber, the auxiliary has developed into a present tense auxiliary. *ila* is similarly argued to be a past tense auxiliary because it derives from the perfective form of the verb *ili* (to be), as shown by the following examples (p.4):

(57) a. *la*-n ifruxn g-uxxam  
    be~PST~3PL. boys in-house  
    *The boys are in the house.*  

b. *ila*-n ifruxn g-uxxam  
    be~PERF~3PL. boys in-house  
    *The boys were in the house.*

It seems unlikely that the two particles derive from different aspectual forms of the verb. In fact, the two verb forms given in (57a-b) seem to be both, morphologically, realized in the perfective aspect. Hence, as can be observed from the aspectual paradigms given in (58) below, not only does the particle *la* not share any formal similarities with the imperfective forms taken by *ili* but like *ila*, it is formally similar to the perfective stem.

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51 Given that *ili* is a stative verb, the apparent difference in tense between (60a) and (60-b) may be due to the fact that the Perfective aspect is ambiguous between a present and past tense reference when it co-occurs with stative verbs, as observed in section 2.3.2.
Aspectual paradigms of the verb *ili* in Taqbaylit

<table>
<thead>
<tr>
<th>Case</th>
<th>Imperfective Stem</th>
<th>Perfective Stem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st SG</td>
<td>ttili-γ</td>
<td>li-γ</td>
</tr>
<tr>
<td>2nd SG</td>
<td>te-ttili-d</td>
<td>te-li-d</td>
</tr>
<tr>
<td>3rd SGM</td>
<td>i-ttili</td>
<td>i-la</td>
</tr>
<tr>
<td>1st PL</td>
<td>ne-ttili</td>
<td>ne-la</td>
</tr>
<tr>
<td>2nd PLM</td>
<td>te-ttili-m</td>
<td>te-li-m</td>
</tr>
<tr>
<td>3rd PLM</td>
<td>ttiili-n</td>
<td>la-n</td>
</tr>
</tbody>
</table>

Those similarities suggest that both particles are grammaticalized forms of the perfective stem of *ili*. The slight differences in forms between the two particles may come from different grammaticalization patterns: *ila* may have grammaticalized from the perfective stem with the 3rd person masculine singular agreement marker while *la* may have either grammaticalized from the perfective stem alone or lost the agreement marker in the course of its grammaticalization.

Still, the particle and its different associated meanings can be explained building on from Ouhalla’s proposal. Particularly, it can be argued that the particle has grammaticalized from *ili* “to be”, but has done so from a particular type of construction in which the verb occurs. The range of temporal and aspectual interpretations taken by the particle across Berber languages can, indeed, be understood and explained by looking at so-called ‘complex tense’ constructions (following the terminology of Ouali & Pires, 2005 and Ouali & Fortin, 2007).

Complex tense constructions involve two verbs, including *ili* in its lexical form, each fully inflected with aspectual and agreement markers. Although rarely used in Taqbaylit given that aspect and contexts are sufficient to determine specific temporal references, ‘complex tense’ constructions can occur in a range of contexts including mood, aspectual marking and of course temporal reference.

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52 A similar analysis seems to be implicitly and indirectly proposed by Ouhalla (2005a).
53 Ouali (2006) and Ouali & Pires (2005) argue that complex tense constructions involve two TPs.
Thus, the construction can be associated with the expression of past tense in (59a), with a continuous aspect in (59b) and with Irrealis in (59c).

(59) a. li-γ ruhe-γ 
   be<sub>PRF</sub>-I<sub>SG</sub> go<sub>PRF</sub>-I<sub>SG</sub>
   *I was gone / I had gone.*
   [lit. I was I left]

b. a i-ttii a i-tru 
   PRT 3SGM-be<sub>IMPRF</sub> PRT 3SGM-cry<sub>IMPRF</sub>
   *He has been crying / He had been crying.*
   [lit. he is/was being he is/was crying]

c. ad i-li i-ru 
   PRT 3SGM-be<sub>AOR</sub> 3SGM-cry<sub>PRF</sub>
   *He may have cried.*
   [lit. he will be he cried]

The type of reference (modal, temporal or aspectual) the complex is associated with depends on the aspect or mood assigned to the two verbs involved. Hence, in (59c) the potential meaning of the whole complex comes from the aorist construction in which the verb *ili* occurs while the past tense reference comes from the completion meaning associated with the perfective form of the verb *iru* ‘he cried’. Observe in the previous sentences that the same construction can be ambiguous between different meanings. (59b), for instance, is ambiguous between a present and past tense reference.

Although there are certain restrictions on possible combinations<sup>54</sup>, a range of mood and aspectual combinations can be used to build complex tense constructions. Given that *la* is the grammaticalized form of the perfective stem of the verb *ili* and that it co-occurs with imperfective verb forms, the [la + imperfective] complex can be argued to be a grammaticalized version of the complex construction [lexical BE<sub>PRF</sub> V<sub>IMPRF</sub>]<sup>55</sup>. The range of interpretations

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<sup>54</sup> Hence, if *ili* occurs in the Perfective or Imperfective aspect, the second verb cannot occur in the Aorist.

<sup>55</sup> This proposal is also implicit in Ouhalla (2005a) and Chaker (1997).
associated with the constructions is indeed similar to those associated with the particle. Consider, for instance, the following sentences:

(60) a. i-la  i-tru
    3SGM-be_{PRF}  3SGM-cry_{IMPF}
    He was crying.
    *He is crying.
    He had been crying.
    ?He has been crying.56

b. i-la  i-ttazel
    3SGM-be_{PRF}  3SGM-run_{IMPF}
    He was running.
    *He is running.
    He had been running.
    ?He has been running.

In the previous examples, the complex tense construction is ambiguous between various aspectual and temporal meanings: a past progressive, a past perfect continuous or a present perfect continuous. The ambiguity of the \[\text{lexical BE}_{PRF} \ V_{IMPF}\] construction parallels the ambiguity of the \text{la/ila} particle found across Berber languages. Recall that the particle can restrict the interpretation of the imperfective aspect to a past tense, a present tense or a continuous/progressive aspect reference.

Different Berber languages or varieties may have grammaticalized the particle from different interpretations or semantic functions of the complex tense construction. Thus, in Tamazight Berber, where \text{la} marks present tense, it may have grammaticalized from the present perfect continuous uses of the complex, losing the progressive aspect along the process. Another possibility\(^{57}\) is that the present interpretation associated with \text{la} has developed from the progressive meaning carried by the construction (progressive interpretations tend to be close

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56 Although not accessible to most, a present perfect progressive interpretation can be construed by some speakers. The present interpretation may be possible here because the verb \textit{to be} is stative and, as explained in section 2.3.1, with stative verbs the perfective can be interpreted with present tense reference.

57 Given that the present perfect continuous interpretation is not accepted by all speakers.
to present interpretations). Similarly, in Tarifit Berber the particle may have grammaticalized into a past tense marker from the past progressive interpretation of the complex. In languages like Taqbaylit, the particle which is associated with continuous or progressive aspect may have grammaticalized from the aspectual interpretation of the complex. Assuming, as proposed by Ouhalla (2005a), that grammaticalization and syntactic reanalysis gradually take place along a continuum; it is plausible that the particle occurs within different projections depending on the meaning it is associated with. Thus, along the same lines as Ouhalla (Ibid), the particle can be argued to occur within the Deictic Tense semantic zone: in a past tense projection in Tarifit and in a present tense projection in Tamazight like languages. On the other hand in Taqbaylit-like languages, the particle is grammaticalized into a functional particle but occurs in the Higher Aspect semantic zone as the head position of a functional phrase associated with progressive aspect. The differences between Tarifit, Tamazight and Taqbaylit are illustrated in (61) (omitting irrelevant details):

(61)  

**TARIFIT**  
\[ T_{\text{psp}}P \]  
\[ T_{\text{pst}} \]  
\[ T_{\text{v}} \]  
\[ T_{\text{v}}P \]  
\[ h-\text{AspP} \]  
\[ l_{\text{a}} \]  

**TAMAZIGHT**  
\[ T_{\text{psp}}P \]  
\[ T_{\text{p}} \]  
\[ T_{\text{v}} \]  
\[ T_{\text{v}}P \]  
\[ h-\text{AspP} \]  
\[ l_{\text{a}} \]  

**TAQBAYLIT**  
\[ T_{\text{p}} \]  
\[ T_{\text{v}} \]  
\[ T_{\text{v}}P \]  
\[ h-\text{AspP} \]  
\[ l_{\text{a}} \]
Earlier in this sub-section, I have mentioned the optional occurrence of the particle *a* with imperfective verbs. I have stated there that the particle is employed more often than *la* and seems to be available in more semantic contexts. The example provided there to illustrate its various interpretations is repeated in (62) below for convenience.

(62)  

<table>
<thead>
<tr>
<th>a</th>
<th>i-tru</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRT</td>
<td>3SGM-cry_IMPREF</td>
</tr>
</tbody>
</table>

*He is crying.*

*He was crying.*

*He often cries.*

*He used to cry.*

*He cries (a lot).*

The exact meaning and role of the particle in the variety of Taqbaylit under focus are not clear. On the particle, Chaker (1989; 1995) states that its primary function is to specify the durative aspect of the event described. Boukhris (1998) discusses the uses of a similar particle *ar* in Tamazight whose function is to mark the beginning of an iterative eventuality. Both types of descriptions, durative/progressive and iterative are generally considered as sub-types of the more general imperfective aspectual category (Comrie, 1976). It is possible that *a*, as proposed by Chaker (Ibid), indeed specifies a particular sub-type aspectual meaning of the imperfective. For this reason, I take it to occur, similarly to *la*, in a h-Asp projection (cf. 63 below).

Having discussed in details the semantics and syntactic distributions of the particles which occur with particular verb forms in Taqbaylit and a number of Berber languages, I provide as conclusion to this section a revised extended-event structure for Berber clauses where relevant TAM heads are located.
An extended event structure of Taqbaylit and Berber (version 2)

**KEY**

- **beli**: COMP
- **i**: COMP (relative clauses, clefts, WH-questions)
- **ad**: Irrealis particle which co-occurs with V\text{AOR} and optionally with V\text{IMPRF}
- **da, rad**: Future particle in Tamazight and Tashelhit
- **la\_1**: Present particle or past particle, co-occurs with V\text{IMPRF} (Tamazight, Tarifit)
- **la\_2**: Continuous aspect particle, optionally co-occurs with V\text{IMPRES} (Taqbaylit)
- **a**: Aspectual particle, optionally co-occurs with V\text{IMPRF} (Taqbaylit)
2.5 Other expressions of modality

In this section, I describe some strategies used in Taqbaylit to mark modality. The strategies reviewed here differ from the ones described in previous sections in one important respect: modality is entirely expressed by particular ‘modal’ verbs. Verbs which express modality in Taqbaylit do not form a unified class, i.e. they do display divergent properties which are described below. However, they all take an embedded clause as their syntactic complement. In (64) below, I give examples of what types of modality can be expressed by such [V\_MOD + CP] constructions. Recall from the previous section that verbs which occur in embedded clauses occur in the [ad + aorist].

(64)  

OBLIGATION  

a. ilaq [CP ad y-azzel]  
   must PRT 3SGM-run\textsubscript{AOR}  
   He must run.

CAPACITY  

b. i-zmer [CP ad i-ruh azeka]  
   3SGM-can\textsubscript{PRF} PRT 3SGM-go\textsubscript{AOR} tomorrow  
   He can go tomorrow.

ABILITY  

c. i-ssn [CP ad y-awum]  
   3SGM-know\textsubscript{PRF} PRT 3SGM-swim\textsubscript{AOR}  
   He can swim.

As can be observed from the examples in (64), the modalities of obligation, capacity and ability are respectively marked by the verb forms\textsuperscript{58} ilaq ‘must’, izmer ‘he can’ and isna ‘he knows’ which all take a CP as their complements.

Evidence that these constructions involve two clauses and not just one, as say in

\textsuperscript{58} Recall that most Berber verb stems are underlyingly consonantal and, therefore, do not include vowels. For sake of clarity I use, unless required otherwise, the perfective verb forms inflected with the third person masculine singular as counterparts of the English infinitives.
English clauses involving modals (e.g. I must go, He should have called) comes from wh-question constructions. Recall from section 2.1.3 that wh-elements occur in the left-periphery of the clause. In embedded clauses, the wh-element can either occur in the left-periphery of the embedded CP or in the left-periphery of the main clause, as shown in (65) below.

(65) a. [CP i-na =yi =d [CP beli ad 3SGM-sayPRF =CL.1SG;DAT =D COMP PRT i-ruh azeka]]  
3SGM-goAOR tomorrow  
He told me he would go tomorrow.

b. [CP mimm i-na =yi =d  
when 3SGM-sayPRF =CL.1SG;DAT =D]
[CP ad i-ruh?]]  
PRT 3SGM-goAOR  
When did he told me he would go?

c. [CP i-na =yi =d  
3SGM-sayPRF =CL.1SG;DAT =D]
[CP mimm ad i-ruh?]]  
when PRT 3SGM-goAOR  
He told me when he would go?

In constructions involving modal verbs, wh-elements can occur in these two positions too, suggesting that a second CP is indeed available.

(66) a. ilaq ad ye-čč yivet tatefaht  
must PRT 3SGM-eatAOR one apple  
He must eat an apple.

b. [CP dacu ilaq [CP ad ye-čč]]?  
what must PRT 3SGM-eatAOR  
What must he eat?

c. [CP ilaq [CP dacu ad ye-čč]]?  
must what PRT 3SGM-eatAOR  
What must he eat?
Although, they project the same type of structure, verbs expressing modality differ from each other in terms of the type of inflection they can take. Thus, they can be divided into three categories:
(i) ilaq ‘must’ is defective in both its agreement and TAM paradigms (i.e. does not co-occur with all agreement markers and do not inflect for all aspects or moods). It only occurs with the 3rd person masculine singular agreement marker and is incompatible with the imperfective aspect and irrealis mood.

(69) a. i-laq/ *te-laq-d ad t-azle-d
    3SGM-mustR/2SG-mustR-2SG PRT 2SG-runAOR-2SG
    You must run.

    b. *1a ilaq ad t-azle-d
        *IMPRF

    c. *ad ilaq ad t-azle-d
        *IRREALIS

(ii) ismer ‘he can’ is defective in its TAM paradigm but, can co-occur with all agreement markers. Thus, it is incompatible with the imperfective as well as the Irrealis but inflect with all person markers.

(70) a. zmre-y ad ruh-y azeka
    canR-1SG PRT goAOR-1SG tomorrow
    I can go tomorrow.

    b. *1a zmre-y ad ruh-y azeka
        *IMPRF

    c. *ad zmre-y ad ruh-y azeka
        *IRREALIS

(iii) Finally, isna ‘he knows’ is not defective. Thus, it can inflect with all agreement markers and occur in the perfective aspect and Irrealis mood. However, isna being a pure stative verb, it is always incompatible with the imperfective aspect.59

(71) a. sne-y ad awum-y
    knowR-1SG PRT swimAOR-1SG
    I can swim.

    b. *1a sne-y ad awum-y
        *IMPRF

59 Recall from section 2.3.2 that stative verbs do not co-occur with the imperfective in Taqbaylit.
c. ad sne-γ ad awum-γ IRREALIS
PRT knowAOR-1SG PRT swimAOR-1SG
I will be able to swim

Given that they mostly affect the verb’s TAM and agreement paradigms, the distributional differences between these three verbs can be explained by the process of grammaticalization. Assuming that grammaticalization and syntactic reanalysis occur along a continuum (Simpson & Wu, 2002; Ouhalla, 2005a), these three types of modal verbs can be argued to be at different stages of the process.

Thus, the obligation and necessity verb *ilaq* ‘must’ can be argued to be at a more advanced stage of grammaticalization than the two other verbs because it is defective in both its agreement and aspectual-modal paradigms. The capacity verb *izmer* ‘he can’ can be argued to be at an earlier stage of grammaticalization. The fact that the verb inflects for agreement, indeed, demonstrates that it behaves like a lexical category. On the other hand, the non-occurrence of the verb with imperfective and Irrealis suggests that the verb behaves, on some level, like a functional category. Finally, the verb *isna* ‘he knows’, on the other hand, since it behaves like a lexical verb can be argued not to be in the process of grammaticalization. Its non-occurrence with imperfective can be straightforwardly explained by the fact that it is a pure stative verb and as such is incompatible with the aspect.

Although, the three verbs are at different stages of grammaticalization, they are structurally very similar in involving two-clause structures. Therefore, I propose that all three verbs are generated under a lexical head V in the main CP, as other verbs do and may move to relevant TAM heads.
Conclusion

In this chapter, I have sketched a descriptive overview of the clausal and verbal structures of Taqbaylit, with a possible extension to other Berber languages. In the first part of the chapter, I have discussed word orders and their relation to Information Structure. In the second part of the chapter, I have focused on the Berber TAM system. I have argued that the Berber aspectual system reposes on a basic opposition between perfective and imperfective and the aorist stem, although it still belongs to the domain of aspect, has now lost its role in the aspctual opposition of the language. The aorist is now mainly used in the [ad + aorist] complex which is best analyzed as a strategy that marks Irrealis mood. I have presented possible accounts of the variable meanings of one of the particles co-occurring with imperfective forms, la, across northwestern Berber languages. Finally, adapting from Tenny (2002), I have proposed an extended event structure of Taqbaylit (and Berber) clauses where the various elements which participate in clausal structure are located within semantic zones based on the meanings and interpretations they are associated with. Such a representation allows a clear organization of the TAM system taking into account possible cross-dialectal variations. The proposed representation will be handy in Chapter 4 when cliticization in Berber is discussed but in the next chapter, I focus on nominal and pronominal structures.
Chapter 3
Nominal and Pronominal Structures

Introduction

In the previous chapter I sketched a description of clauses, required in part because of the association of clitics with verbal and higher level CP projections. In the present chapter, I will focus on the structure of the nominal projection and its constituents. The rationale for the descriptive overview provided here is twofold. First, Berber clitics belong, for the most part, to pronominal categories. An investigation of such clitics and their linguistic behaviour hence essentially relies on an understanding of the system within which they originate and how they are classified within it. Second, clitics are also found within nominal projections and, a theory on their placement within the constituent requires an analysis of the configurations in which the noun, its modifiers and dependents occur.

This chapter has two main parts. The first part deals with the overall structure of the DP and is structured as follows. In section 3.1, an overview of the types of elements which occur within the constituent and the orders in which they appear is given. Section 3.2 is an in-depth analysis of the various orders in which modifiers are placed within the structure, based on Cinque’s universal DP template (1996; 2000; 2005). Finally, section 3.3 discusses modifiers which modify the noun in particular types of configurations, such as the Construct State. The second part of this chapter is concerned with pronominal structures. In section 3.4, an inventory of pronominal forms following a traditional partition of pronouns into demonstratives, personal pronouns, possessives and reflexives,
their paradigms and the features they realize is provided. Finally, section 3.5 concentrates on verbal affixes associated with pronominal reference.

### 3.1 Overview of the nominal constituent

Following Abney (1987 and many others after him) I will assume that NPs (projections of nominal heads) occur within a DP structure of the type given in (1).

(1) \[ [\text{DP} \ D \ [\text{NP} \ N ]] \]

According to the DP hypothesis, nominal constituents maximally project onto a DP headed by the functional head D which, corresponds in many languages to the category of determiners. Using a DP structure of the type just outlined, the English noun phrase *the battle of Waterloo*, for instance, can be formally represented as follows:

(2) \[
\begin{array}{c}
\text{DP} \\
\downarrow \\
\text{D} \\
\downarrow \\
\text{the} \\
\downarrow \\
\text{NP} \\
\downarrow \\
\text{N} \\
\downarrow \\
\text{battle} \\
\downarrow \\
\text{PP (…)} \\
\downarrow \\
\text{of Waterloo}
\end{array}
\]

Analogically to the different functional layers found in the CP, various functional projections have been argued to occur within DP, most of which associated with Φ-features or agreement. Ouhalla (1991), for instance, proposes an AgrP, the locus of agreement, Ritter (1991) posits a NumP, the projection of a number feature while Picallo (1991) proposes the existence of a GenP, directly dominating NP, whose head Gen⁰ is linked to the gender feature. Whether these specific functional projections occur as projections within DP are issues I will leave open for now. In this section, I will simply give a description of the types of
modifiers found within the DP and the orders in which they occur with respect to the noun and each other.

In Taqbaylit, and most Berber languages, definiteness and indefiniteness are not grammatically marked by specific determiners60 (El Moujahid, 1997; Guerssel, 1995; Ouhalla, 2005b). Hence, whether a noun has indefinite or definite reference is, in most cases, determined by the discourse context. Given this, the canonical DP consists of the noun occurring alone, as shown in (3).

(3) \( y\)-ada =d \[wergaz\] \( \Rightarrow \)D\ 3SGM-pass\_PRF \( \Rightarrow \)D man

(3) A man walked past.

The man walked past.

Additionally, nouns can occur together with an argument and/or at least one modifier. Although they will be mentioned where relevant, arguments of N will be discussed in section 3.3. This is because they occur in a specific type of structure (i.e. Construct State). Here, I will therefore mostly concentrate on modifiers which occur between D and NP.

3.2.1 Types of nominal modifiers

Categories which canonically co-occur with nouns in Taqbaylit are demonstrative determiners, adjectives, numerals and quantifiers. Quantification is realized via a range of syntactic constructions, some involving the Construct State mentioned above, others involving relative clauses. Those that do not involve specific constructions behave differently from other N-modifiers (e.g. they precede the noun while all others follow it). Given their specific distribution and because they have been argued to occur within their own projection cross-linguistically (cf. Shlonsky, 1991), I will not cover quantifiers in this section but in section 3.3.3. For the same reasons, cardinal numerals are also covered in section 3.3.2. I start the description of N-modifiers with demonstratives below.

---

60 As the grammatical distinction in English between a house and the house.
Taqbaylit has four demonstrative determiners: *agi/aki, ahi, ina* and *nni*. Canonically, the four demonstratives are used deictically. And so, they can all pick up or modify a referent from the discourse spatial context. However, they differ in the type of deictic features they encode:

(i) *aki/agi* is a **proximate demonstrative** and canonically refers to entities spatially located near the location of the discourse participants.

(ii) *ahi* and *ina* are **distal demonstratives** and canonically refer to entities spatially located farther away from the location of the discourse participants.

(iii) *nni* is what I will refer to as an **‘Ambient’ demonstrative**. Although deictic, it can only refer to entities from the discourse common ground. That is, unlike distal and proximal demonstratives, it cannot introduce new elements into the set of discourse referents.

Sentences (4, a-c) are examples of such demonstrative determiners.

(4) a. aqcic aki/agi
   boy DEMPROX
   *This boy*

b. aqcic ahi/ina
   boy DEMDIS
   *That boy*

---

61 These demonstratives can be used as discourse deictics. That is, they can refer to an entity previously mentioned in the discourse rather than to an entity whose location is linked to the context of utterance (Lyons, 1977; Diessel, 1999).

62 These two forms are found in Taqbaylit: *ahi* tend to be used by younger speakers, while *ina* is used by older speakers.

63 Term borrowed from Kiparsky (2002). Nait-Zerrad (2001) and Rabdi (2004) describes it as a ‘particule d’absence’ (absence particle). In the present variety of Taqbaylit, there is no evidence that *nni*’s reference is restricted to absent objects. Like the other demonstratives, it can be used deictically.
Demonstrative determiners do not agree (at least overtly) with the noun they modify, as demonstrated in (5).

(5) a. taqcict aki / ahina / nni
    girl DEMPROX DEMDIS DEMAMB
    This/that girl

b. tullas aki / ahina / nni
    girls DEMPROX DEMDIS DEMAMB
    These/those girls

Turning now to adjectives, across Berber languages, 'adjectival' modification is rarely expressed by means of adjectives (cf. Chaker, 1985 for an overview of adjectives). Principally, it is expressed by stative verbs occurring in the perfective aspect\(^6\). Predicative 'adjectival' constructions (e.g. The house is beautiful) consist of a fully inflected stative verb and its subject (cf. 6a), while attributive constructions (e.g. The beautiful house) consist of the head noun modified by a relative clause containing the stative verb (cf. 6b and 6c).

(6) a. i-čveh uxxam
    3SGM-be.beautifulPRF house
    The house is beautiful.

b. i-lya uxxam nni [(i) i-cevehe-n]RC
    3SGM-burnPRF house DEMAMB COMP 3SGM-be.beautifulPRF-PTCP
    The beautiful house burned.

c. axxam nni [(i) i-cevehe-n]RC i-lya
    house DEMAMB COMP 3SGM-be.beautifulPRF-PTCP 3SGM-burnPRF
    The beautiful house burned.

\(^6\)For more details on Aspect in Berber, cf. Chapter 2.
In Taqbaylit, modification related to size, colour and some qualities can be expressed by adjectives. Adjectives always follow the noun they modify and agree with it in number and gender features, as illustrated in the following examples.

(7) a. asalu **ameqran**
living.roomSGM largeSGM
*A large living room*

b. **ameqran** asalu
largeSGM living.roomSGM

c. isaluyin **imeqranen**
living.roomPLM largePLM
*Large living rooms*

d. villat **tameqranant**
houseSGF largeSGF
*A large house*

e. villat **timeqranin**
housePLF largePLF
*Large houses*

Ordinal numerals (e.g. *the first boy*) are in many respects like adjectives. Indeed, they occur after the head noun in exactly the same positions as other adjectives and can even occur embedded in adjectival sequences (cf. 8).

(8) a. axxam nni **amectuh**
house DEM small
*This small house*

b. axxam nni **amezwaru**
house DEM first
*This first house*

c. axxam **amezwaru** amectuh
house first small
*The first small house*

d. axxam amectuh **amezwaru**
house small first
*The first small house*
Ordinal numerals encoding first and second number also share common number and gender features with the head noun.

(9)  

a.  
axxam  
houseM  
amezwaru  
firstM  
The first house

b.  
taxxamt  
houseF  
tamezwarut  
firstF  
The first bedroom

c.  
taqcict  
girl  
tisnat  
secondF  
The second girl

d.  
argaz  
man  
wisin  
secondM  
The second man

Given these similarities, I will take for granted that they are indeed adjectives. And, in the following sections, ordinal numerals will be discussed along with other members of the adjectival category.65

Having now sketched a brief description of the kinds of modifiers occurring with the noun inside DP, I give next a more detailed description of word orders within the constituent.

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65 Incidentally, notice from (8) that the order within adjective clusters does not appear to be fixed in Berber. Thus, in (8c) the ordinal numeral amezwaru ‘first’ precedes the adjective amectuh ‘small’ but follows it in (8d). Within Cinque’s approach (1994), adjective sequences are also hierarchically ordered within a range of functional projections. For now, however, I will leave these issues of adjective placement for further research.
3.1.2 Ordering

Within DP, modifiers and nominal arguments, which I will refer to here as possessors, appear in a strict order with respect to the head: they all obligatorily follow the noun. Sentences (10, a-d) illustrate these orders.

(10) a. n-ruh s [axxam n temeyra] N > Poss
    1.PL-goPRF to house OF party
    We went to the house of the party.

b. ye-swa [wemyar nni] N > DEM
    3SG-drinkPRF husband DEM
    This old man drank (his coffee).

c. n-ruh s [axxam wayed] N > Adj
    1.PL-goPRF to house other
    We went to the other house.

Although some alternative orders are allowed, the order in which arguments, demonstratives and adjectives occur is overall constrained. Thus:

(i) Where they occur together, demonstratives and adjectives appear canonically as an N > DEM > Adj sequence but can alternatively appear as N > Adj > DEM.

(ii) In constructions containing demonstratives, adjectives and possessors, the order is canonically either N > DEM > Adj > Poss or N > Poss > Adj > DEM.

(iii) Two other orders, N > DEM > Poss > Adj and N > Adj > DEM > Poss are more marked but nonetheless available.

Examples (11-12) illustrate the order of DP modifiers with respect to the noun and each other.

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66 Unless they are quantifiers or cardinal numerals. Cf. sections 3.3.2 and 3.3.3
It is possible that some of these alternative orderings are associated with particular pragmatic interpretations and that, by occurring in certain positions, modifiers are made more or less pragmatically prominent. Whether this is indeed the case is beyond the scope of this work. However, a syntactic analysis of the internal structure of Taqbaylit DPs must be able to explain and derive these various orders. In the next section, I show that adopting a hierarchical DP template such as that proposed by Cinque (1996; 2000; 2005) allows for such an account to develop.
3.2 The internal structure of DP

The previous section was intended as an overview of the types of grammatical objects found within DPs and their placements. This section is dedicated to the internal structure of the constituent and the structural configurations in which the noun and its modifiers are positioned. In what follows, I will present an analysis of the Taqbaylit DP based on Cinque’s hierarchical DP template. In particular, I will adopt his proposal that demonstratives, numerals and adjectives are merged in that order within hierarchically organized functional projections dominating NP and that alternative orders are derived by either N-movement or NP-movement to higher positions.

The alternative sequences found in Taqbaylit DPs, such as N > Poss > Adj > DEM, N > DEM > Poss > Adj and N > Adj > DEM > Poss, are not generally discussed in the literature and the question whether they are also found in other Berber varieties remains unanswered. For that reason, the analysis developed below will be based on and will mainly focus on Taqbaylit. However given that the ‘basic’ word order (the N > DEM > Adj > Poss sequence) is similar to that found across Berber, the canonical DP template for Taqbaylit can be assumed to be extendable to other varieties. Overall, analyses of Berber DP structures have been less abundant that analyses of clausal structures. One major contribution on the topic is offered by El Moujahid’s (1997) analysis of the Tashelhit DP. I start this section with a brief review of his proposal.
3.2.1 El Moujahid’s DP (1997)

Like in Taqbaylit, nominal modifiers in the variety of Tashelhit described by El Moujahid (1997) include quantifiers, demonstratives, adjectives and subject arguments. All modifiers, apart from quantifiers, must strictly follow the noun they modify and occur in the sequence $N > \text{DEM} > \text{Adj} > \text{Poss}$:

(13) ayis ad umil n brahim  N $>$ DEM $>$ Adj $>$ Poss
    horse  DEM  white  OF  Brahim
    This white horse of Brahim

El Moujahid proposes an analysis of the Tashelhit DP adopting analyses brought forward to structurally represent English and Arabic DPs (Abney, 1987; Fassi Ferhi, 1992). According to his proposal, Tashelhit nouns, just like their English and Arabic counterparts, maximally project onto DP’s but, are directly dominated by an agreement projection, AgrP, where gender and number agreement can be mediated (cf. 14).

(14) \[
\begin{array}{c}
\text{DP} \\
\text{D} \quad \text{AGRP} \\
\text{AGR} \\
\text{NP}
\end{array}
\]

Except for quantifiers which are treated as specifiers of D, El Moujahid argues that all nominal modifiers are merged within the lower NP projection as complements of $N$. Thus, demonstratives, which as shown in (13) above are strictly adjacent to the noun, attach to the lowest $N$ while other modifiers such as adjectives (AP), adjectival relative clauses (CP) and possessor arguments (NP) are taken to attach onto a higher $N$ node containing both the head $N$ and the head.

---

67 Modifiers are argued to occur as complements of $N$ in order to render the NP projected specific. That is, NPs in Berber are argued to become specific by modification of $N$ by AP, CP or demonstrative. Specific feature percolates from the modifier onto the nominal head (p.231).
demonstrative. The structure as proposed is represented in (15) below (El Moujahid, 1997: 233).

\[(15)\]
\[
\text{DP} \quad \text{QP} \quad \text{D}' \\
\quad \text{D} \quad \text{AGR} \\
\quad \text{AGR}' \\
\quad \text{AGR} \quad \text{NP} \\
\quad \text{N}' \\
\quad \text{N} \quad \text{XP (NP/AP/CP)} \\
\quad \text{N Dem}
\]

Although his structure can derive the \(N > \text{DEM} > \text{Adj} > \text{Poss}\) word order as it stands, El Moujahid further argues that, like its Arabic counterpart, \(N\) moves and incorporates into a null \(D\), via the Agreement head. But in Berber, the motivation for \(N\)-movement is case: in order to be adjacent to a governor and subsequently receive case, \(N\) moves to the highest head position, namely \(D\). In (16b) below, for instance, the noun \(wfrux\) 'boy' is merged as \(N\), but is subsequently moved to \(D\) to be adjacent to its governor, the head of IP, argued to be occupied by the verb \(idda\) 'he left'.

\[\text{The head of DP is argued to be null because, as mentioned in section 3.1, the language has no D elements whose function is to formally distinguish between definite and indefinite nouns.}\]
(16) a. i-dda wfrux
   3SGM-leaveP R F  boy
   *The boy left.*

b. IP
   | I'
   |   VP
   |   DP
   |       V'
   D       NP
   wfrux3 | N
   tj

(El Moujahid, 1997: 190)

The hypothesis on the placement of DP modifiers just described, which is primarily intended for Tashelhit DP structures, is not straightforwardly extendable to Taqbaylit DPs. The main reason for why this is not the case is that DP modifiers in Taqbaylit can occur in other orders than the N > DEM > Adj > Poss order predicted. For instance, recall that in some contexts adjectives can be preceded by subject or genitive arguments (i.e. N > DEM > Poss > Adj), as illustrated with (12c) of the previous section and repeated in (17) below for convenience.

(17) avelu m la n dada amela!
   bike DEM OF dad white
   *This white bike of dad*

It is not clear how the structures involving both APs and possessor NPs are derived exactly in this analysis, but since they are taken to be complements of N, the orders in which they are merged can be assumed to be fixed. Now, if these modifiers are merged in a strict order, such alternative alignments as (17) should be unexpected. Note that the projections hosting adjectives and possessor arguments could be argued to move around, however the structure as it is does not seem to make this option available.
Turning to demonstratives, which are argued to merge with the lower N node, recall that they can also occur in alternative orders and can be separated from the head in the sequences N > Poss > Adj > DEM and N > Adj > DEM > Poss:

(18) a. avilu n dada amelal nni N > Poss > Adj > DEM
   bike OF dad white DEM
   This white bike of dad
   
b. avilu amelal nni n dada N > Adj > DEM > Poss
   bike white DEM OF dad
   This white bike of dad

Although the N > Adj > DEM > Poss sequence could be derived in El Moujahid’s structure, for example by movement of the projection containing the adjective to the Specifier of AgrP in addition to N-to-D movement, the other sequence in which both the adjective and the possessor NP intervene between N and its demonstrative (18a) is again an option unavailable.

In fact, there are impossible modifier sequences which suggest a particular pattern in the derivation of Taqbaylit DPs. Thus, in constructions involving a demonstrative, an adjective and a possessor, the former cannot precede the demonstrative without the adjective (hence *N > Poss > Adj but N > Poss > Adj > DEM).

(19) a. *avilu n dada nni amectuh
   bike OF dad DEMAMB small
   
b. avilu n dada amectuh nni
   bike OF dad small DEMAMB
   This small bike of dad

Furthermore, when both a genitive argument and an adjective precede the demonstrative, the order in the sequence is obligatorily N > Poss > Adj > DEM (hence *N > Adj > Poss > DEM):

(20) *avilu amectuh n dada nni
    bike small OF dad DEMAMB
In section 3.3.3, I demonstrate that the hypothesis that modifiers are merged in a fixed order in functional projections above NP and that two kinds of nominal movements explains the pattern in Taqbaylit DP’s (as well as the canonical order of DP’s in other Berber languages). Because the DP template I develop is adapted from Cinque (1996; 2000; 2005), I describe his proposal in the next section.

3.2.2 Cinque hierarchical DP Template

As mentioned earlier, for formally representing the Taqbaylit DP, I will adopt a hierarchically organized DP template of the type proposed by Cinque (1994; 1996; 2000; 2005). Below I describe the type of template I am assuming but given that Cinque’s proposal partly relies on it, I start by introducing Greenberg’s Universal 20 given in (21) (1966 in Cinque 2000:46).

(21) Greenberg’s Universal 20
When any or all of the items (demonstratives, numerals and descriptive adjectives) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite.

In his Universal 20, Greenberg notices that demonstratives, numerals and adjectives occur in restricted orders cross-linguistically:

(i) Either as N > DEM > NUM > Adj or as N > Adj > NUM > DEM in post-nominal position
(ii) Always as DEM > NUM > Adj > N in pre-nominal position
Although a number of studies have shown since that post-nominal modifiers actually occur in more orders\(^6\) than those proposed, pre-nominal modifiers have not been found to occur in any other order than DEM > NUM > Adj > N. Therefore, Cinque (1996; 2000; 2004) argues that their pre-nominal order is the universal order in which demonstratives, numerals and adjectives are merged. The possible orders in which modifiers can occur with respect to the noun and each other cross-linguistically are argued to result from movement of the noun. His DP structure can be described as a template where a sequence of heads occur and project onto phrases in a universal and hierarchical order. Assuming an extended DP structure, Cinque takes the lexical NP to be dominated by a (limited) number of functional phrases. Demonstratives, numerals and adjectives are merged in that order in the Specifier positions of these functional projections, as shown in (22).

(22) \[
\begin{array}{c}
\text{DP} \\
\text{D} \\
\text{DemP} \\
\text{FP1} \\
\text{FP2} \\
\text{NumP} \\
\text{FP3} \\
\text{AP} \\
\text{NP}
\end{array}
\]

The different possible orders in which modifiers are found across languages result from the arrays of projections within which the noun can occur. These, in turn, depend on: (i) whether the noun moves or remains in situ, (ii) the particular

\(^6\)Hawkins (1983, as discussed in Cinque 2005), amongst others, has described languages where alternative post-nominal orders such as Dem > A > N > Num; Dem N A Num or Num or A > N > Dem (in Cinque, 2004: 320) are grammatical.
projection targeted by movement of the noun and (iii) whether the noun moves as a head or as part of the NP\(^7\).

Where the noun remains in situ, modifiers occur as they are merged in the pre-nominal order DEM, NUM, Adj, N. In contexts where N/NP moves, they occur in an order different to that in which they are merged. Cinque assumes that many of the FP projections within which the different modifiers are merged project AgrP’s through which N/NP movement takes place\(^7\). Crucially though, such movement can end at different levels within DP. That is, N/ NP can target the highest or any intermediate AgrP, as in (23).

(23) a. \([\text{AGR}_1 \text{P} \text{N}(P)_1 \text{[AGR}_2 \text{P} \text{t}_1 \text{[AGR}_3 \text{P} \text{t}_1 \text{[NP}_1 \text{t}_1]]]}\]

b. \([\text{AGR}_1 \text{P} \text{[AGR}_2 \text{P} \text{N}(P)_1 \text{[AGR}_3 \text{P} \text{t}_1 \text{[t}_1]],]}\]

c. \([\text{AGR}_1 \text{P} \text{[AGR}_2 \text{P} \text{[AGR}_3 \text{P} \text{N}(P)_1 \text{[t}_1]],]}\]

NP-movement can also occur in a roll-up fashion. That is, the displaced NP can pied-pipe any hosting AgrPs to some or all the other AgrPs it moves to:

(24) \([\text{AGR}_1 \text{P} \text{AGR}_2 \text{P} \text{[AGR}_1 \text{P} \text{[AGR}_2 \text{P} \text{AGR}_3 \text{P} \text{[AGR}_2 \text{P} \text{AGR}_2 \text{[AGR}_3 \text{P} \text{NP} \text{[AGR}_3 \text{P} \text{AGR}_3 \text{[NP}_1 \text{t}_1]],]}\]]\]

\(^7\)Cinque (2005) takes all noun movement to be NP-movement. That is N always moves as part of the NP which it heads. For empirical reasons (as will be clear in later sections), here, I believe that N-movement must be available in Berber. I will, therefore, keep with Cinque (1996; 2000) and assume that N-movement and NP-movement are in principle available.

\(^7\)AgrP are argued to be merged in order to license the functional projections occurring between D and NP (after Grimshaw, 1991). AgrPs are suitable licensor when they themselves contain a nominal feature, which they acquire by either movement of the noun or by \textit{AGREE} (Chomsky, 2000).
Depending whether the N/NP undergoes total or partial movement and whether pied-piping is involved or not, demonstratives, numerals and adjectives appear in various orders. In (25) below, I provide the DP template that Cinque proposes.

<table>
<thead>
<tr>
<th>Movement</th>
<th>Target</th>
<th>Derived order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N-movement</td>
<td>highest F° (D?)</td>
<td>N &gt; DEM &gt; NAdj &gt; NP</td>
</tr>
<tr>
<td></td>
<td>intermediate F°</td>
<td>DEM &gt; NUM &gt; N &gt; Adj &gt; NP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DEM &gt; N &gt; NUM &gt; Adj &gt; NP</td>
</tr>
<tr>
<td>NP-movement</td>
<td>highest Spec-FP</td>
<td>NP &gt; DEM &gt; NUM &gt; Adj</td>
</tr>
<tr>
<td></td>
<td>intermediate Spec-FP</td>
<td>DEM &gt; NP &gt; NUM &gt; Adj</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DEM &gt; NUM &gt; NP &gt; Adj</td>
</tr>
<tr>
<td>Roll-up NP-movement</td>
<td>highest Spec-FP</td>
<td>NP &gt; Adj &gt; NUM &gt; DEM</td>
</tr>
<tr>
<td>Roll-up NP-movement</td>
<td>intermediate Spec-FP</td>
<td>DEM &gt; NP &gt; Adj &gt; NUM</td>
</tr>
<tr>
<td>No movement</td>
<td>in-situ</td>
<td>DEM &gt; NUM &gt; Adj &gt; NP</td>
</tr>
</tbody>
</table>

72 Some types of N/NP movement and the resulting DP order (After Cinque, 1996; 2000; 2005)

```
DP
  D   AgrP
    Agr’
    Agr  FP1
      DEMP
        F1’
          F1
            AgrP
              Agr’
              Agr  FP2
                NUMP
                  F2’
                    F2
                      AgrP
                        Agr’
                        Agr  FP3
                          AP
                            F3’
                              F3
                                NP
```
3.2.3 A hierarchical analysis of the Taqbaylit DP

Following Cinque (1996; 2000; 2005), I will take the Taqbaylit and Berber underlying DP template to be as follows:

(26) \[
\begin{align*}
\text{DP} & \rightarrow D \left[ AGR_{1} \right] I \left[ AGR_{2} \right] F_{1} \left[ AGR_{3} \right] \text{N} \left[ F_{2} \right] \text{F}_{3} \left[ AGR_{4} \right] \text{N} \left[ F_{3} \right] \text{F}_{3} \left[ AGR_{5} \right] \text{N} \\
\end{align*}
\]

Recall from the previous section that the canonical order in which demonstratives and adjectives occur is as (27a) below, exemplified by the sentence in (27b).

(27) a. \text{N > DEM > Adj} \\
    b. argaz nni amectuh \\
        man DEM small \\
        \text{This small man}

The fact that N and its modifiers do not occur in the order in which they are merged hints that N moves out of the NP it projects. Within Cinque’s approach, such movement can either be N-movement or NP-movement. Hitherto, there is evidence that the type of movement involved is N-movement. Indeed, in some contexts where N extraction occurs from a complex NP, the order is as (28a) below, where demonstratives and adjectives appear between N and its argument.

(28) a. \text{N > DEM > Adj > Poss} \\
    b. avilu nni amelal n dada \\
        bike DEM white OF dad \\
        \text{This white bike of dad}

Separation of N from its arguments is as a rule taken as a sign of head movement (cf. Cinque, 1994). In fact, N-movement in the DP of other Berber languages has been independently argued for (El Moujahid, 1997; Ouhalla, 1997; Ennaji, 2001).

---

\(^{73}\) This is because the canonical order seems to be commonly shared by Berber languages.
Given that N precedes demonstratives and adjectives, I will, like the previous authors, assume that N-movement targets the D° position. I demonstrate the derivation of Taqbaylit DPs below with a representation of (28b) in (29).

(29)  `aviluj [əvelu, nni [əvelu, amelal [əvelu, n dada]

bike DEM white OF dad

However, alternative orders in which N and its arguments precede adjectives and demonstratives, such as N > Poss > Adj > DEM, demonstrate that roll-up NP movement—i.e. NP-movement involving pied-piping of the hosting AgrP— is also available, at least in Taqbaylit. Following Cinque, I will take this movement to target the Specifier of the highest AgrP and will assume that form

74 For now, NP-internal structures are left aside.
75 Because *N > Poss > DEM > Adj sequences are ungrammatical in Taqbaylit (cf. section 3.2.1), I assume that NP movement, when it occurs, obligatorily involves pied-piping. This is compatible with Cinque's observation that NP movement with pied-piping is typologically unmarked whereas NP-movement without pied-piping is more marked.
this position N further moves as a head to the D position. This movement is illustrated in (30b) below, representing (27a).

(30) a. avilu n dada averkan nni bike OF dad black DEMAMB
    This black bike of my father

b. 

\[
\begin{align*}
&\text{DP} \\
&D \quad \text{AgrP} \\
&\quad \text{avilu} \\
&\quad n \text{ dada averkan}_k \\
&\quad \text{Agr} \quad \text{FP1} \\
&\quad \text{DEMP} \\
&\quad \text{nni} \quad \text{F1} \\
&\quad t_i \quad \text{AgrP}_k \\
&\quad \text{Agr'} \quad \text{FP2} \\
&\quad \text{AdjP} \quad \text{F2} \\
&\quad \text{NP}_i
\end{align*}
\]

The availability of the N > DEM > Poss > Adj order demonstrates that both N-movement and NP-movement can interact to derive a structure. Thus, such a sequence involves NP movement to the Specifier of the AgrP which dominates the functional projection hosting AdjP, followed by N-movement to D via the head position of the AgrP dominating DemP.
Three of the orders in which modifiers are found in Taqbaylit DPs are straightforwardly derived by the Cinquean style template presented so far. The last available ordering of DP constituents described in section 3.1.2., namely the N > Adj > Dem > Poss sequence, however is not derivable within the framework and is even predicted to be ungrammatical. The main problem is posed by the position of a possessor XP after a demonstrative. Indeed if, as argued here, constituents are merged in the order Dem > Adj > NP, the placement of an adjective before a demonstrative obtains from roll-up NP-movement. Now, such movement involves displacement of the entire NP, including its arguments, to the AgrP hosting the AP, followed by pied-piping of the AgrP. If alternatively, an interaction of N-movement and NP-movement is argued for — that is N movement to the relevant AgrP followed by roll-up NP movement — the correct order is still
not obtained because the argument occurring within the lower NP is obligatorily pied-piped with the AgrP which contains it (cf. 32).

(32)  
```
          DP
            \   /
             D  AgrP
               \ /  
             Agr Pj Agr\n               \ /  
               Agr FP1
               \ /  DEMP
              F1\     /
               \   /
               F1 Agr Pj
               \ /  
               Agr FP2
               \ /  
               AdjP F2\       /
               \   /
               F2 Agr NP\    /
               \  /
               N S
```

Following Chaker (1983: 327-329), I will assume that the structures involving N > Adj > Dem > Poss, although they resemble DP internal modifying constructions, are always instances of nominal predications. As explained by Chaker (Ibid: 327), n in Taqbaylit can also take the function of an ‘auxiliary of predication’. In such contexts then, the constituent it precedes is not a dependent of the noun but, is in fact predicated of the entire DP containing the noun. He discusses, amongst others, the example in (33) below (Ibid: 327) in which the complex n Ali is predicated of the DP axxam nni ‘this house’.

(33)  
```
axxam nni, n ali
house DEMAMB OF Ali
```

This house is Ali’s.
Hence, the problematic order discussed above only arises because it represents a predicative construction. Given that the \(n\) constituent is not an argument occurring within NP or DP, it is not pied-piped in roll-up NP movement. In (34) below, for instance, the complex \(n\) wergaz 'of man' is outside of the DP headed by axxam 'house'.

(34) \([\text{DP} \ axxam \ amelal \ nni] \ n \ wergaz\)  
\(\text{house white DEM OF man}\)  
\(This \ white \ house \ is \ the \ man's.\)

In what precedes, I have shown that a typological DP template à la Cinque can be applied to Taqbaylit and possibly other Berber languages, and accounts for the various orders in which N-modifiers such as demonstratives and adjectives occur with respect to the noun and each other. However, in doing so, I have not taken into account other modifiers such as quantifiers and ordinal numerals and have eluded the issue of NP-internal structures. These are covered in the next section.

### 3.3 Other structures

So far, I have proposed that the underlying DP template of Taqbaylit is as in (35) below and that the various surface orders in which demonstratives, adjectives and lexical subjects appear can be derived by N-movement or NP-movement to different higher functional projections.

(35) \([\text{DP} \ D[\text{AGR1} F1 \ DEMP[F1] F1] \ [\text{AGR2} F2 \ NUMP[F2] F2] \ [\text{AGR3} F3 \ N] ]]\)

Two types of N-modifiers do not easily fit into such a structure, namely quantifiers and cardinal numerals (e.g. one, three (etc...)). Thus, as can be observed in the following examples, they precede the noun they modify while other types of modifiers obligatorily follow it.
Although, I do not attempt any in depth analysis of the type of configuration or structures within which such modifiers occur, in the following sub-sections I will briefly describe their distributions and show that they do not invalid the analysis of the DP developed earlier. Given that these modifiers mostly occur within ‘Construct’ State structures, I offer an overview of the construction in 3.3.1 below.

3.3.1 The Construct State

It is well known that many Berber nouns can occur in a special form known as the Construct State (henceforth CS). The terminology seems to have been borrowed from the Semitic terminology and some of the contexts in which it is found are indeed very similar to the CS in Semitic. However, I will argue that the CS in Berber differs from the Semitic in a number of important ways. Before presenting these differences, though, I describe the contexts in which the CS is found and its formal realizations. Most of the examples below are from the variety of Taqbaylit which is being described in this thesis, but the CS morphology and the syntactic contexts in which it surfaces are similar across Berber languages where the distinction is made.

Distribution

The ‘Construct State’\(^ {36} \) of a noun is generally opposed to its ‘Free State’, implicitly considered to be the canonical form of nouns. This nominal state opposition refers particularly to the two morphological forms taken by nouns

\(^ {36} \) Also referred to in the French literature as ‘l’État d’annexion’. 

36 | P a y v e
depending on the syntactic contexts in which they occur. Its most famous illustrations are the two morphological forms associated with nominal subjects depending whether they occur post-verbally or not. Thus, in (37) below, the counterpart of the noun ‘man’ occurs in the Free State form argaz when it is pre-verb and in the CS form wrgaz when it is post-verb:

(37) a. argaz, i-ruh  
man<sub>PS</sub> 3SGM-go<sub>PRF</sub>  
The man, he left.

b. i-ruh wrgaz  
3SGM-go<sub>PRF</sub> man<sub>CS</sub>  
The man left.

For most nouns, the CS is morphologically marked by a change of their initial vowel. These vocalic alternations are overall regular but different for masculine and feminine nouns. With feminine nouns, CS is simply marked by deletion of the initial vowel<sup>77</sup>, as shown by (38) below, while they are slightly more complex with masculine nouns (Chaker, 1988). Overall masculine CS obeys the patterns in Table (5) below.

(38) a. tmtut/ tqcict/ tlawin, te-ruh / ruh-ent  
woman / girl / women 3SGF-go<sub>PRF</sub> go<sub>PRF</sub>-3PLF  
The woman/girl/women, she/they left.

b. te-ruh/ ruh-ent tmtut/tqcict/tlawin  
3SGF-go<sub>PRF</sub> go<sub>PRF</sub>-3PLF woman<sub>CS</sub> / girl<sub>CS</sub> / women<sub>CS</sub>  
The woman/girl/women left.

<sup>77</sup>Note that some feminine nouns have an unmarked CS form.
Table 5  CONSTRUCT STATE PATTERNS (TAQBAYLIT)

<table>
<thead>
<tr>
<th>VOCALIZATION PATTERN</th>
<th>FREE STATE</th>
<th>CONSTRUCT STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>/a/ → /u/</td>
<td>azemur (olive)</td>
<td>azemur</td>
</tr>
<tr>
<td></td>
<td>aqwval (basket)</td>
<td>weqwval(^78)</td>
</tr>
<tr>
<td>/u/ → /wu/</td>
<td>ul (heart)</td>
<td>wul</td>
</tr>
<tr>
<td>/u/ → /w/</td>
<td>ultma (sister)</td>
<td>weltma</td>
</tr>
<tr>
<td>/i/ → /y/</td>
<td>Irgazen</td>
<td>yirgazen</td>
</tr>
<tr>
<td>/i/ → /y/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Apart from the post-verbal subject position described above, nouns are in their CS form when they occur: (i) inside genitive DP constructions, such as possessive DPs, quantified DPs, partitive DPs and some locationals — e.g. sufela ‘on’, zedat ‘next.to’, zedfIR ‘behind’, deg ‘inside’ etc..., (ii) following a number of prepositions such as the dative preposition i ‘to’ or the comitative d and (iii), in some varieties of Taqbaylit, when they are doubled by an accusative clitic. The following examples illustrate the various contexts in which CS is found:

(39)  

a. avilu n [weqciC] bicycle of boyCS.  
The boy’s bicycle.

b. kess n [weman] glass of waterCS.  
A glass of water.

c. atas n [werac] many of childrenCS.  
Many children.

d. i-fka avelu i [weqciC] 3SGM-givePRE bicycle toDAT boyCS.  
He gave a bicycle to the boy.

e. qim sufela n [tevla]! sitAOR on PREP tableCS.  
Sit on the table!  

\(^78\) The CS initial vowel of singular masculine nouns, /w/, can be phonologically realized as /pˈ/ in the variety of Taqbaylit presented here. The phonological variant is, however, only available inside genitive DPs.
Outside of the contexts presented above, nouns occur in their 'Free State' forms. That is: (i) in non argument positions, (ii) verbal object positions and (iv) complement positions of (mainly) directional prepositions — e.g. s and yur ‘toDir’ — as well as (iv) with the quantifier kul ‘each’, as illustrated by the following examples.

(40) a. i-čča [aqviz] nni
3SGM-eatPRF breadFS DEMAMB
He ate the bread.

b. i-ruh s [axxam]
3SGM-goPRF toDir houseFS
He went home.

c. kul [aqcic]
each childFS
Each child / every child

Having now given a sketch of the distributional properties of the CS in Berber, I look next at the differences with the Semitic CS.

**Differences with the Semitic CS**

The Construct State terminology used to describe the phenomenon under description is analogical to the one used to describe bare genitive DPs found in Semitic languages such as Arabic and Hebrew (cf. Ritter, 1991; Fassi-Fehri, 1999; Engelhardt, 2000; Benmamoun, 2000). Bare genitive DPs are mainly characterized by the non-occurrence of genitive prepositions or case markers.
(Ritter, Ibid) but display other specificities, only some shared by Berber Construct States. Consider, for example, the following pairs of DPs:

\[\text{(41) HEBREW}^{79}\]

\[\begin{array}{llll}
a. & \text{ha-bayit} & \text{fel} & \text{ha-mora} \\
    & \text{DEF-house} & \text{of} & \text{DEF-teacher} \\
    & \text{The house of the teacher} \\
b. & \text{beyt} & \text{ha-mora} \\
    & \text{house of the teacher} \\
\end{array}\]

\[\begin{array}{llll}
c. & \text{al-kalb-u} & \text{li-l-malik-i} \\
    & \text{DEF-dog-ABS} & \text{to-DEF-king-GEN} \\
    & \text{The king's dog} \\
d. & \text{kalb-u} & \text{i-malik-i} \\
    & \text{dog-ABS} & \text{DEF-king-GEN} \\
    & \text{The king's dog} \\
\end{array}\]

As shown in examples (41), Semitic bare genitives like Berber Construct States are associated with a specific nominal morphology. In Hebrew, for instance, the distinction is overtly marked by the special form taken by the head noun (bayit vs. beyt ‘house’). In addition, they also share some semantic and syntactic similarities with their Berber counterparts. Hence, semantically, they can entail a relation defined by possession while syntactically they involve the same word order in which the head noun (possessee) precedes its lexical subject (possessor). But Semitic bare genitives and Berber Construct States also contrast in a number of ways.

First, in Semitic, CS constructions involve a morpho-phonological modification of possessee nominals whereas they affect possessor nominals in Berber. Compare, for instance, the Hebrew example in (42a) with the Taqbaylit one in (42b) repeated below.

---

79 All the Hebrew examples presented in this section are from Ritter (1991). The Classical Arabic examples are from Creissels (2006).
The main reason to argue that Semitic and Berber CS are distinct constructions is that they differ in their distributions. The Semitic CS is restricted to genitive DPs involving possession, quantification, qualification and gerunds (Ritter, Ibid; Siloni, 1997). The Berber CS, however, occurs in a much wider range of syntactic contexts: post-verbal subject positions, coordinated DPs, dative and locative positions etc. Some illustrative examples of the range of contexts where CS is found are repeated as (43).

(43) a. i-čča [wergaz] aqviz subj
    3sgm-eatPRF manCS bread
    The man ate bread.

b. i-fkä avilu i [wεcic] prepDAT
    3sgm-givePRF bicycle toDAT boyCS
    He gave a bicycle to the boy.

c. tamyart d [wemyar] prepCOM
    old woman with old manCS
    The old woman and the old man.

Even though Berber and Semitic CS are both found in genitive DPs, the differences described above show that the two constructions cannot be treated on a par with one another. The need for a distinction between the two structures is further supported by one last difference worth discussing. In Semitic languages, CS is in complementary distribution with prepositions or case markers. In Berber,
on the other hand, nouns are in their CS forms even when they occur with the genitive preposition $n$. Consider the following examples:

(44) **TAQBAYLIT**

a. axxam $n$ [wergaz]  
   house OF man$_{CS}$  
   *The man's house*

b. axxam [wergaz]  
   house man$_{CS}$  
   *The man's house*

**HEBREW**

c. [bayit] fel ha-mora  
   house OF DEF-teacher  
   *The house of the teacher*

d. [beyt] ha-mora  
   house DEF-teacher  
   *The teacher's house*

As can be observed from (44a), the noun *wergaz* 'man' occurs in the CS form regardless of whether $n$ is present or not. By contrast, in Hebrew the counterpart of the English noun 'house' occurs in the FS form *bayit* in contexts where *fel* is present but in the CS form *beyt* if it is absent. In Semitic, the Construct State has therefore been linked to the notion of genitive case and many analyses adopt this proposal\(^8\) (Ouhalla, 1997; Ennaji, 2001). In the following sub-section, I discuss some of the proposed accounts of the Berber CS.

---

8 Non case related accounts have overall been rarer but nonetheless proposed (cf. Achab, 2004; 2006; Benjaballah & Haiden, 2005)
Analyses of the Berber Construct State

Case related analyses of the Berber CS constitute the majority of proposed accounts. Ouhalla (1997), for instance, proposes an AgrP occurring in the CP and DP domains, within which such genitive case is assigned. Nouns occurring in the CS form are argued to be DPs moved to the Specifier positions of such AgrPs to be assigned genitive case in a Spec-Head agreement relation. Within CS DP constructions, head nouns are argued to move to D, as shown in (45).

(45) a. \[DP e D [\text{AgrP } \text{DP}_{\text{GEN}} \text{AGR}_{\text{GEN}} [\text{NP } N \ldots]]]\n
b. \[IP e I [\text{AgrP } \text{DP}_{\text{GEN}} \text{AGR}_{\text{GEN}} [\text{VP } V \ldots]]\]

(Ouhalla, 1997: 202)

Although the CS nominal form may be indirectly associated with the notion of case, it is unlikely to be a specialized morphological mark of genitive case as proposed by Ouhalla (1997) and Ennaji (2001). Indeed, CS nouns are found in positions where dative and accusative cases are also assigned (cf. Guerssel, 1992; 1995). Thus, as already mentioned, the CS morphology can be found on DP’s which occur in the complement position of the dative preposition i.

(46) i-fka aqviz i [\text{weqcie}] 
3SGM-givePRF bread toDAT boyCS

He gave bread to the boy.

Evidence that the position is not associated with genitive case comes from the fact that pronominal clitics, when they replace i-DPs, obligatorily occur in their dative form. Hence, sentence (47b), below, where the clitic occurs in the form it takes in genitive DP’s is ungrammatical.

(47) a. i-fka =[(q)as] aqviz
3SGM-givePRF =CL3PLM;DAT bread

He gave them bread.

b. *i-fka =[(i)s] aqviz
The CS can also be found in positions where accusative case is assigned. Indeed, many varieties of Taqbaylit allow accusative clitic-doubling in which an accusative clitic can co-occur with a lexical DP fulfilling the same lexical role. In such contexts, the doubled accusative DP occurs in the CS form.

(48) y-engha = [wf] 3SGM-kill
[wzrem] nni
snakeCS DEM
He killed the snake.
(Achab, 2004: 2)

Guerssel (1992; 1995) also links the CS in Berber to case-marking, but he does not consider it as the assignment of a particular case such as genitive case. In fact, he attributes the state alternation to the different configurations in which case can be marked. Particularly, he proposes that Berber DPs occur within a larger functional projection, KP, headed by case markers and evidently associated with the assignment of case (cf. 49).

(49) [KP K [DP ]]

K, the head of KP can be occupied by a range of case markers, which except for verbs, include all prepositions preceding a noun in CS form and several default markers, or it can be left empty. The prepositions occurring in K (e.g. i or n in the previous examples) are each markers of a specific case, such as genitive or comitative (etc...) while the empty KP case-marks post-verbal DPs. The default markers occurring in K mark accusative case as well as default case (e.g. when the subject is left-dislocated) and correspond to the first vowel of a Free State noun. Prepositions associated with FS nouns are in turn taken to occur as real prepositions in a higher PP. The range of examples in (50) below illustrates the various ways in which case can be marked according to Guerssel and how this is linked to the state alternation with the noun ztu ‘stone’.
An analogous proposal (minus the case association) is that put forward by Achab (2004; 2006). Achab takes the state alternation between nouns to be a reflection of their different internal structures. Thus, nouns which occur within an NP projection are argued to occur in their CS form while those additionally projecting a DP, headed by the FS vowel, occur in their FS form. According to this proposal, the two forms of the noun ‘man’ argaz and wergaz can be represented as follows:

(51) a. *Free State*  
```
     NP  
    /   
   D    N  
  /     |  
 a    rgaz
```

(52) a. *Construct State*  
```
     VP  
    /   
   V    DP  
  /     /   
 D     D    NP  
 |     |     /     
 |     |    N     |  
 |     |     /     |  
 |     |    AGRj  t_i  
               wrgaz
```

On the surface, however, CS nouns do not occur as ‘deficient’ NPs but as complex DPs headed by either a preposition or, when they are post-verbal subjects, the agreement marker affixed onto the verb. This is illustrated in the following tree structures:
Similarly to Guerssel, Achab positions prepositions which do not occur with the CS in an independent PP projection selecting DP as their complement.

Achab’s and Guerssel’s proposals capture an important fact about CS nouns: their intrinsic semantic and syntactic bond with a preceding element whether it is a head verb or a head noun, even a preposition. Nevertheless, they are inconsistent with some of the data. Achab, for instance, predicts that CS DP’s are headed by prepositions or subject agreement markers. However, the fact that N-to-D movement is available even when the head noun occurs in the CS form, for instance as a post-verbal subject, demonstrates that CS DPs have an empty D position available for the noun to move to and are not, in this respect, deficient. Consider, for instance, the following sentence, illustrated in (54b).

(54) a. i-rya [wexxam] nni n [wergaz] 3SGM-burnPRF houseCS DEMAMB OF manCS
This/ the man’s house burned.
In (54) above, the head noun *wexxam* ‘house’ is in the CS form because it occurs in the post-verbal position of the verb *i-rya* ‘it burnt’. According to Achab’s analysis, the DP within which this noun occurs should be headed by the subject agreement marker *i*. However, the fact that *wexxam* precedes the demonstrative *nni* while its lexical subject follows it shows that N-movement to an empty D position (as proposed in section 3.2.3) has occurred and that the agreement marker *i* cannot be in the D position.

As for Guerssel’s hypothesis, it relies heavily on the assumption that the initial vowels, the CS *w*- and the FS *a*- here, are two independent prefixes marking respectively masculine gender, and default case with masculine gender. For the noun presented in (50) (repeated in 55 below) it means that its underlying form *[zru]* is either prefixed with *w*- which marks it as masculine, or *a*- which marks it as masculine and additionally marks its default case.

(55)  a.  [kr *s [wzru]] ‘with a stone’  (Case marker: instrumental *s*)  
b.  [kr *a [zru]] ‘stone’  (Case marker: default *a*)  
c.  [kr *θ [wzru]] ‘stone’  (Case marker: empty)  

(Guerssel, 1992: 117)
However, as explained by El Moujahid (1997, after Jebbour, 1988), the masculine FS form of a noun constitutes the form from which its other morphological forms (i.e. feminine, plural and CS forms) are derived. This means that the CS form of a noun does not exist in parallel with their FS form, as assumed by Guerssel, but obtains from a morpho-phonological rule which derives it from the FS form. For instance, the CS form wadjar ‘neighbour’ is derived as follows (El Moujahid, Ibid: 121-122): (i) the FS form of the noun adjar is prefixed with the CS melodic segment /u/, (ii) the melody /u/ is associated with the closest vowel a, and finally (iii) the syllabification rule which reanalyses the sequence u + a as wa applies giving the form wadjar.

The distribution of the Berber CS and the range of (non-genitive) contexts in which it occurs lead to the assumption that it is not a particular morphological case realization (e.g. a marker of genitive case). The fact that CS nominal forms are derived from FS forms show that the FS affixes belong to the noun and are not heads of KPs, as suggested by Guerssel. If this is not the case then the state alternation does not depend on the type of KP dominating DP. Actually, as also suggested by El Moujahid (Ibid), the Construct State could be analyzed as a morpho-phonological representation of the particular configuration in which those DPs occur and in which case is also assigned.

In particular, these constructions could be analyzed as particular types of predicative structures, such as those proposed by Den Dikken (2007). In this hypothesis, nouns would occur in their CS forms in contexts where they are one of the dependents of a relator functional head. In the remainder of this subsection, I give a sketch of the hypothesis.

Den Dikken’s analysis reposes on the assumption that constituents which are involved in predication – namely the predicate, defined as the constituent that denotes a particular property of another constituent, and the subject, defined as the constituent modified by the predicate – occur as dependents of a functional head, the relator, whose main role is to mediate syntactically and semantically between them. The structure is represented in (56) below.
Those types of predication structures, argued to occur across domains, have three main properties: (i) they are local (link occurs within RP), (ii) they are non-directional and linking can take place between the predicate in complement position of the relator and its subject in the Specifier position (57a) or take place in the reverse order (57b) and (iii) the relator is considered to be an abstract functional head; i.e. ‘a placeholder for any functional head in the structure that mediates a predication relation between two terms’ (Den Dikken, Ibid:15).

(56)\[
\begin{align*}
\text{XP} & \quad \text{R'} \\
\text{R} & \quad \text{YP}
\end{align*}
\]

(57) a.\[
\begin{align*}
\text{XP} & \quad \text{R'} \\
\text{SUBJECT} & \quad \text{R} & \quad \text{YP} \\
\text{PREDICATE}
\end{align*}
\]
b.\[
\begin{align*}
\text{XP} & \quad \text{R'} \\
\text{PREDICATE} & \quad \text{R} & \quad \text{YP} \\
\text{SUBJECT}
\end{align*}
\]

Interestingly, in the Berber languages where it is found, the CS often surfaces in exactly the contexts where predication is involved. Mainly, it occurs where a noun can be said to either ascribe a certain property to a subject or to be ascribed a certain property by a predicate. For instance post-verbal subjects, which occur in predication configurations with a VP predicate, take the Construct State whereas pre-verbal subjects, which are not merged in such configurations, take the Free State morphology.
The CS morphology is also found in nominal predicative structures of the type discussed in section 3.2.3 and in possessed noun phrases, described by Den Dikken as predicative structures. Consider, for instance, (59a) and (59b):

(59) a. aqjun nni, n wergaz aki
   dog demANTh OF manCS DEMPROX
   This dog belongs to this man.

b. axxam n wergaz
   house OF manCS
   The house of the man

Given that the present chapter is concerned with nominal structures, I will briefly attempt to explain how Den Dikken's proposal could be extending to the nominal contexts involving CS in Berber. For that I will concentrate on the two examples (59a) and (59b) provided above. (59a) contains two DP constituents aqjun nni 'this dog' and wergaz aki 'this man'. The second DP, as explained in section 3.2.3 (after Chaker, 1983) is predicated of the first DP, which is therefore a subject. Now applying Den Dikken's analysis, these two constituents could be taken to occur within an RP, a relator phrase and \( n \), which Chaker (Ibid) refers to as an 'auxiliary of predication' in such instances, could be taken to be the relator. The proposed structure is given in (60).

(60)
\[
\begin{array}{c}
\text{RP} \\
\text{DP} \\
\text{aqjun nni} \\
\text{n} \\
\text{wergaz nni}
\end{array}
\]
Following Den Dikken’s assumption on these constructions, possessed noun phrases, such as that in (59b), could also be argued to involve a DP predicated of a subject but, in those cases the subject constituents would be NPs and the RPs headed by \( n \) in which they occur, contained within larger DP structures. One reason for why RPs would occur within DPs in such contexts is that without a pause between the subject and the predicate (which would mean that it is an independent predication structure such as (60)), the constituent cannot stand alone in Taqbaylit. The hypothesized predication structure mediating the relation between possessums and possessors is illustrated in (61):

\[
(61) \quad \begin{array}{c}
\text{DP} \\
\text{D} \\
\text{(AgrP)} \\
\text{Agr} \\
\text{(FP)} \\
\text{F} \\
\text{RP} \\
\text{NP} \\
\text{axxam} \\
\text{R} \\
\text{R'} \\
\text{DP} \\
\text{n} \\
\text{wergaz}
\end{array}
\]

The hypothesis on nominal predications sketched here relies on the relator status of \( n \). And indeed it displays some of the properties which Den Dikken proposes are characteristic of relators. First, it does not assign \( 0 \)-roles and occurs in a range of complex type DPs, not just possessive ones (cf. the description of the distribution of CS in DPs given earlier). Second, it is meaningless (cf. El Moujahid, 1997 for a similar observation) and, in many Berber varieties, can be omitted altogether from DP structures. The following examples from Tashelhit Berber (El Moujahid, Ibid: 263) illustrates this.

\[
\begin{array}{c}
\text{(62) a. ayyis n uflah} \\
\text{horse OF farmer} \\
\text{The horse of the farmer}
\end{array}
\]
b. ayyis ufllah
   horse farmer
   The house of the farmer

The $[n + DP]$ constituent also shares one characteristic of constituents involving a
relator. Hence, unlike PPs, it cannot be extracted in cleft constructions:

(63) a. i-wala lafutu n tqcict ideli
    3SGM-seePF picture OF girlCS yesterday
    He saw the picture of a girl yesterday.

b. *n tqcict i i-wala lafutu ideli
    OF girlCS C 3SGM-seePF picture yesterday
    It is of the girl that he saw a picture yesterday.

c. i-fka tatefaht i hanna
    3SGM-givePF apple toDAT Hanna
    He gave an apple to Hanna.

d. i hanna i i-fka tatehat
    toDAT Hannah C 3SGM-givePF apple
    It is to Hanna that he gave an apple.

The proposal presented here is only a first attempt at extending Den
Dikken’s analysis and needs to be further developed and adapted in many ways,
but it could be assumed that other CS contexts are also predication structures.
Constructions, such as those in (64), involving quantifiers, numerals (cf. section
3.3.2 and 3.3.3) or locationals, could thus be analyzed in this way. Note that in
such constructions, the subject (the modified noun) would, it seems, occur in the
complement position of the relator.

(64) a. atas n werac
    many OF childrenCS
    Many children

b. yiwen n wexxam
    one OF houseCS
    One house
CS constructions involving prepositions and post-verbal subject DPs, on the other hand, would without doubts require more complex derivations. Particularly, the fact that the CS morphology is found on Specifiers in post-verbal contexts would have to be explained. One possibility which could be explored is that these contexts involve Predicate Inversions (Den Dikken, Ibid). As for the prepositions followed by nouns in the CS morphology, most of them could be argued, unlike \( n \), to be predicates themselves and not relators. I leave, however, these issues aside for further research.

Because the structures proposed above require more elaboration, in the remainder of this chapter (and thesis), for DP internal CS, I will adopt more established analyses (Chaker, 1983; Kossman, 1997; Nait-Zerrad, 2003; Ouhalla, 2005a amongst others) and consider \( n \) to be a preposition. However, given the particular characteristics of \( n \) reviewed above, I will assume, along the same lines as El Moujahid (1997)\(^81\), that the preposition \( n \) functions as a dummy case marker\(^82\) there to license the argument of N (as the French preposition de (cf. Cinque, 1996)). I will take nominal arguments preceded by \( n \) to be DPs dominated by the projection of this dummy case marker, as represented in (65) below.

---

\(^81\) Note that the proposal presented here slightly differs from El Moujahid (1997: 262-264) who argues that \( n \) is not a preposition but only a realization of genitive case on the noun it precedes. He takes as evidence of that the following special characteristics of \( n \) compared with other prepositions: (i) it has no inherent semantics, (ii) it can be omitted, and (iii) it only occurs in the nominal domain.

\(^82\) Note that, in Den Dikken's framework, case markers can lexicalize the relator (1997: 67; 266). Adopting El Moujahid's proposal for convenience is therefore not incompatible with the hypothesis that \( n \) is a relator.
Concluding remarks and further research

The arguments presented in this section seem to indicate that the Berber CS differs from the Semitic CS in a number of ways. And although case may be indirectly involved, the Berber CS does not seem to correspond to a single characterizable case, in the same way that CS is genitive case in Semitic. In fact, as presented in details, the contexts within which the Semitic CS is found constitute only a subset of the contexts in which the Berber CS occurs. Thus, as presented, the Berber CS is found in genitive complex DPs but also in non-genitive contexts such as post-verbal subject positions, dative positions, accusative positions and on the nominal arguments of a range of locative prepositions. The Semitic Construct State on the other hand exclusively occurs in genitive DPs.

The wider distribution of the Berber CS, therefore, cannot be accounted for by extending Semitic analyses. But, other analyses proposing KPs or analysing the Berber CS in terms of DP deficiency also do not seem to capture the core of the CS. And as suggested towards the end of the section, the Berber CS may be more appropriately analyzable as a type of predicative structures such as that proposed by Den Dikken (2007). In the next sections, I describe modifiers occurring amongst other things in CS DPs.
3.3.2 Numerals

Cardinal numerals share the same distributional properties as nouns and have even been categorized as such (cf. Ouhalla, 2005b). First, they can occur independently in the same structural positions of nouns (e.g. 66). And, when they function as nominal modifiers, occur in genitive CS structures, as shown in (67) below.

(66) a. kul [tametut] ahi a te-qim
   each woman DEM PRT 3SGF-sitAOR
   Each of these women will stay.

   b. kul [yivet] ahi a te-qim
   each one DEM PRT 3SGF-sitAOR
   Each of these ones will stay.

(67) a. [axxam] n wergaz
   house OF manCS
   The man’s house

   b. [yiwen] n weqacic
   one OF boyCS
   One boy

Like ordinal numerals presented in section 3.1.1, cardinal numerals encoding the number one and two agree in gender with the noun they modify. As shown by (68c) and (68d), this is not the case for those encoding higher number (which are borrowed from Arabic).

(68) a. [yiwen] n weqacic
   oneM OF boyCS
   One boy

   b. [yiwen] n tqeict
   oneF OF girlCS
   One girl
c. \[\text{[tleta]}\] n \text{warac}
three OF children\text{CS}

*Three children*

d. \[\text{[tleta]}\] n \text{tullas}
three OF girls\text{CS}

*Three girls*

### 3.3.3 Quantifiers

Quantifiers always precede the noun they modify but are realized in different syntactic configurations. Most quantifiers, such as *kera* ‘some’ and *atas* ‘a lot’, occur in genitive CS constructions. Thus, as can be observed in (69), the quantifiers *atas* ‘a lot’ and *kera* ‘some’, are followed by *n* and the noun they modify, *werac* ‘children’ in CS form.

(69) a. \[\text{[kera]}\] n \text{werac}
some OF children

*Some children*

b. \[\text{[atas]}\] n \text{werac}
’a lot’ OF children

*Many children*

Quantifiers such as *kul* ‘each’ and *yarek* ‘all’ always directly precede the noun they modify but do not occur in CS constructions. Thus, as can be observed from (70), the nouns *argaz* ‘man’ and *irgazen* ‘men’ occur in the Free State form.

(70) a. \[\text{kul}\] argaz
each man\text{FS}

*Each man*

b. \[\text{yarek}\] irgazen
all men\text{FS}

*All men*
Given the formal similarities between *kul* ‘each/every’ and the Semitic quantifier *
*kul* *kol* ‘every’, I will, after Shlonsky (1991; 1997), take such quantifiers to occur as head of their own QP projections directly dominating DP, as shown in (71).

(71) \[ QP \underbrace{\text{QP}}_{\text{DP} \ldots} \]

Finally, negative quantification (e.g. no woman) occurs in copular constructions of the type used in Focus constructions. Thus, they are composed of the negation *ula* or *ursa*83 ‘no’ followed by the copular *d* and the noun modified. The template for negative quantification is provided in (72) below and illustrated with examples in (73a-b).

(72) \[ [\text{NEG COP N}] \]

(73) a. *ula d tametut*
    \[ \text{NEG COP woman} \]
    No woman

b. *ursa d aqcic*
    \[ \text{NEG COP child} \]
    No children

Evidence that copular constructions are involved in (73) comes from the fact that such quantified DPs can only occur in peripheral positions in which Focus copular sentences occur, precede the complementizer *i* and, when they correspond to subject constituents, trigger anti-agreement84. This is illustrated in (74) below.

(74) a. *[ursa/ula d tametut] i =d y-usa-n*
    \[ \text{NEG COP woman COMP =D 3sgm-come}_{\text{PREF}}-\text{PTCP} \]
    No woman came (Lit. There is no woman who came).

b. *t-usa =d *[ursa/ula d tametut]*
    \[ 3sgf-come}_{\text{PREF} =\text{D NEG COP woman} \]

83 These two negative elements seems to be composed of the sentential negation *ur* and the non-inflected verbs *la* ‘to be’ and *sa* ‘to have’.
84 Anti-agreement and Focus constructions are covered in details in Chapter 2.
From the last two sub-sections, it can be concluded that numerals and quantifiers do not behave on a par with other N-modifiers (such as those described in section 3.1.1 and 3.2.3) because they occur in different types of configurations.

3.3.4 Initial conclusion

So far in this chapter, I have entirely concentrated on structures and orderings within the DP. I have shown that the constituent organization is consistent with a Greenbergian account but, as many languages (cf. Hawkins, 1983 in Cinque 2005), present additional word orders. These alternative word orders are overall fairly restricted in terms of possibilities and can be straightforwardly generated by fairly established assumptions such as Cinque’s DP template (1996; 2000; 2005). Although, I did not discuss this in details, it is probable that some of these alternate DP orders involve specific interpretations relevant to Information Structure in discourse contexts. Indeed, like clausal alternative orderings, some of these DP orders seem to be more semantically marked than others. I will, however, leave these issues for further research. This first part of the present chapter will be useful for our discussion of DP clitics in chapter 4. Now, I turn to a discussion of pronominal structures.
3.4 Pronominals

Pronouns are traditionally treated on a par with determiners as D heads projecting onto DPs (Abney, 1987). Although I assume here that Berber pronouns start off within some level of the nominal projection — and this is why a description of pronouns is offered in this chapter — I do not take for granted that Berber pronouns all necessarily maximally project onto full DPs. I leave the issue of the internal structure of pronouns until Chapter 5 and the present section will be limited to a brief description of the pronominal forms and their paradigms.

Pronouns in most Berber languages including Taqbaylit display great formal variations and range from fully independent pronouns to bound clitics, from involving full feature paradigms to possibly encoding no Φ-features. For the present discussion I will assume a traditional partition of the pronominal system into demonstratives, personal pronouns, possessives and reflexives. This section is thus organised as follows, personal pronouns are covered in section 3.4.2, section 3.4.3 provides a description of demonstratives while possessives and reflexives are covered together because of their formal similarities in section 3.4.4. Given that pronouns realize a range of features such as case, person, number or gender (Chomsky, 1995; Everett, 1996; Harley & Ritter, 2002), any discussion of pronominal paradigms should also include a discussion of the features available in the language and those encoded by particular pronominal forms. This is done in section 3.4.1 below.

3.4.1 Berber feature geometry

For discussing pronominal features in Taqbaylit pronouns, I adopt the feature geometry proposed by Harley & Ritter (2002). This feature geometry primarily aims at accounting for the constraints which govern cross-linguistic feature combinations. In particular, it seeks to explain a number of universal properties noticed by Greenberg (1963) such as the non-occurrence of gender

\[^{85}\text{From those generally activated in Berber}\]
features in the absence of number features or the fact that dual number is never found in languages which do not otherwise have a plural number. However, here, I use their hierarchical organization as a mean of representing possible feature combinations in the language. A representation of their geometrical structure as given in Harley & Ritter is presented in (75) below.

(75) The Feature Geometry (Harley & Ritter, 2002: 486)

Referring Expression (RE)

PARTICIPANT

Speaker

Addressee

INDIVIDUATION

Group

Minimal

CLASS

Augmented Animate

Inanimate/Neuter

Feminine

Masculine...

In the previous structure, each node, except for the highest one (RE), is a dependent of the node dominating it. In turn, each dominating node has an underspecified dependent\(^8\), i.e. a dependent corresponding to a default interpretation. Thus, speaker and addressee which represent 1\(^{st}\) and 2\(^{nd}\) person features are dependents of the PARTICIPANT node, with speaker being the underspecified dependent\(^7\). 3\(^{rd}\) person is not a dependent of the PARTICIPANT node but rather, occurs in its absence and therefore, does not attach to any particular node in the structure. Group and Minimal, corresponding to number features are dependent on the INDIVIDUATION node while gender features are them dependent on the CLASS node which, in turn, is dependent on the INDIVIDUATION node (and so on and so forth). Crucially, only features which are active can occur within the structure. So for instance, a language where CLASS is not active will not

---

\(^8\) Underspecified dependents are underlined in the structure.

\(^7\) Speaker and Minimal are not necessarily underspecified dependents in all languages.
have it in the structure and, given that gender features are dependent on CLASS, will not encode gender distinction.

As will be described in the following subsections, the PARTICIPANT, INDIVIDUATION and CLASS nodes are found in Taqbaylit with the following respective dependents, speaker and addressee, minimal and group, and finally masculine and feminine. However, CLASS, and the features associated with it, is not activated by all pronominal categories. This variation occurs within and across pronominal paradigms. Thus, 1st person pronominal forms never show gender distinctions, while only some pronominal categories exhibit them in 2nd and 3rd person singular. In Figure 4 below, I give the possible feature combinations that form pronouns.

88 Possible and impossible combinations of features can be explicitly predicted: the presence of a dependent node requires the obligatory presence of the node it depends on. For instance, CLASS cannot occur without INDIVIDUATION. This means that a pronominal form not encoding number cannot at the same time encode gender.
Figure 4: The Feature Geometry of Berber

Singular

1st

<table>
<thead>
<tr>
<th>RE</th>
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</thead>
<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Speaker</td>
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<tr>
<td>Min</td>
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</tbody>
</table>

2nd

<table>
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<tr>
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<tbody>
<tr>
<td>PART</td>
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<tr>
<td>Addressee</td>
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<tr>
<td>Min</td>
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</table>

Masc

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<thead>
<tr>
<th>RE</th>
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<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Addressee</td>
</tr>
<tr>
<td>CLASS</td>
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</tbody>
</table>

Fem

<table>
<thead>
<tr>
<th>RE</th>
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<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Addressee</td>
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<tr>
<td>CLASS</td>
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</tbody>
</table>

3rd

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<thead>
<tr>
<th>RE</th>
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<tbody>
<tr>
<td>INDV</td>
</tr>
<tr>
<td>Min</td>
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</tbody>
</table>

Masc

<table>
<thead>
<tr>
<th>RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDV</td>
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<tr>
<td>CLASS</td>
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Fem

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<tr>
<th>RE</th>
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<tbody>
<tr>
<td>INDV</td>
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<tr>
<td>CLASS</td>
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</table>

Plural

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<thead>
<tr>
<th>RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Speaker</td>
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<tr>
<td>Group</td>
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</tbody>
</table>

<table>
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<tr>
<th>RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Addressee</td>
</tr>
<tr>
<td>Group</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART</td>
</tr>
<tr>
<td>Addressee</td>
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<tr>
<td>Group</td>
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<table>
<thead>
<tr>
<th>RE</th>
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<tbody>
<tr>
<td>PART</td>
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<tr>
<td>Addressee</td>
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<tr>
<td>Group</td>
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<table>
<thead>
<tr>
<th>RE</th>
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<tbody>
<tr>
<td>INDV</td>
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<tr>
<td>Group</td>
</tr>
</tbody>
</table>

Having discussed the possible feature combinations in the language, I move on to the description of pronominals. I start next with a sketch of personal pronouns.

3.4.2 Personal pronouns

Taqbaylit, like most Berber languages, distinguish morphosyntactically between two types of personal pronouns, independent pronouns and clitic pronouns. In this brief section, I present paradigms for these pronouns. I start below with independent forms.

**Independent personal pronouns**

Syntactically, independent pronouns\(^{90}\) have overall free distributions similar to those of lexical DP's. Mostly they appear in peripheral positions (e.g. left or right-dislocations, cleft constructions):

(76) a. \[\text{[nekkini] i i-ss-pwe-n imensi}\]
    PRN.1SG COMP 3SGM-CAUS-cook\(_{\text{pres}}\)-PTCP dinner
    *It is me who cooked dinner.*

c. \[\text{[nettar], ur t-hmir ara ayrum}\]
    PRN.3SGF NEGl 3SGF-like\(_{\text{pres}}\) NEG2 flatbread
    *Her, she doesn't like flatbread.*

But, they can also occur as arguments in subject and indirect object positions where they are often associated with semantic markedness\(^{91}\), such as focus or contrastive topic contexts, as shown in the following sentences.

---

\(^{90}\) The syntax and semantic of independent personal pronouns are discussed in more details in chapter 5.

\(^{91}\) cf. Aghali-Zakara (2004) for same observations in Tuareg Berber
(77) a. i-fka =t =id [i \textit{NEKKINI}]!
3SGM-give\text{prf} =\text{CL.3SGM;}\text{ACC=}D \text{to} \text{DAT PRN.1SG}
\text{He gave the book TO ME!}

b. čēi-γ [\textit{NEKKINI}] tatefah
eat\text{prf}=1SG PRN.1SG apple
\text{I ate the apple.}

In some Berber languages (e.g. Tarifit (Ouhalla, 1988)), independent pronouns cannot occur in direct object positions. In Taqbaylit, this is possible but exclusively in the following limited set of semantic and syntactic contexts: (i) the pronoun is overtly contrasted, as in (78a), (ii) the pronoun is coordinated (78b) or (iii) the pronoun is construed as covertly contrasted (78c).

(78) a. \textbf{OVERT CONTRAST}
\begin{verbatim}
\text{t-}t\text{tel} \quad \text{[\textit{NETTA} \text{mačči} \text{nettat}]}
\end{verbatim}
3SGF-bandage\text{prf} PRN.3SGM NEG PRN.3SGF
\text{She bandaged him not him!}

b. \textbf{COORDINATED}
\begin{verbatim}
\text{t-}t\text{tel} \quad \text{[\textit{NETTA} \text{aq} \text{nettat}]}
\end{verbatim}
3SGF-bandage\text{prf} PRN.3SGM and PRN.3SGF
\text{She bandaged him and her.}

c. \textbf{CONTRASTED}
\begin{verbatim}
al\text{a} \quad \text{t-}t\text{tel} \quad \text{[\textit{NETTA}]}
\end{verbatim}
no, 3SGF-bandage\text{prf} PRN.3SGM
\text{No, she bandaged HIM!}

In terms of the features they encode, independent pronouns make full use of the features available in Taqbaylit. Thus, they make a distinction between 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} person, singular and plural number and masculine and feminine gender. The paradigm for independent pronouns is given in Table (6) below and represented in terms of feature geometry in Table (7).
<table>
<thead>
<tr>
<th>Table 6: INDEPENDENT PRONOUNS</th>
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<tbody>
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<td></td>
</tr>
<tr>
<td><strong>SINGULAR</strong></td>
</tr>
<tr>
<td><strong>MASC</strong></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nekkeni (I, me)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>keččini (you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>netta (he, him)</td>
</tr>
<tr>
<td><strong>FEM</strong></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nukni (we, us)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>kemini (you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nettat (she, her)</td>
</tr>
<tr>
<td><strong>PLURAL</strong></td>
</tr>
<tr>
<td><strong>MASC</strong></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nukni (we, us)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>kenwi (you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>niteni (they, them)</td>
</tr>
<tr>
<td><strong>FEM</strong></td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nukni (we, us)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>kenemti (you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
</tr>
<tr>
<td>nitenti (they, them)</td>
</tr>
</tbody>
</table>
Table 7: **THE FEATURE GEOMETRY OF INDEPENDENT PRONOUNS**

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
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<tbody>
<tr>
<td><strong>1st</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>RE</strong></td>
<td><strong>RE</strong></td>
</tr>
<tr>
<td>PART</td>
<td><strong>INDV</strong></td>
<td><strong>INDV</strong></td>
</tr>
<tr>
<td>Speaker</td>
<td><strong>Min</strong></td>
<td><strong>Group</strong></td>
</tr>
<tr>
<td>nekkini</td>
<td></td>
<td>nukni</td>
</tr>
</tbody>
</table>

|        | **2nd Masc**      | **2nd Fem**     |
|        | RE                | RE              |
| PART   | **INDV**          | **INDV**        |
| Addresssee | **CLASS**     | **CLASS**       |
| Masculine|                | Masculine       |
| keččini|                  | kenwi           |

|        | **2nd Fem**       | **3rd Masc**    |
|        | RE                | RE              |
| PART   | **INDV**          | **INDV**        |
| Addresssee | **CLASS**     | **CLASS**       |
| Feminine|                | Masculine       |
| kenini|                  | netta           |

|        | **3rd Fem**       | **3rd Fem**     |
|        | RE                | RE              |
| INDV   | **INDV**          | **INDV**        |
| CLASS  | **CLASS**         | **CLASS**       |
| Masculine|                | Masculine       |
| niteni|                  | niteni          |
| Feminine|                | Feminine        |
| nettat|                  | nettat          |
| Feminine|                | Feminine        |
| niteni|                  | niteni          |
Clitic personal pronouns

Clitic pronouns correspond to (semantically unmarked) DP’s which are either complements of a verb or of a preposition (e.g. pur ‘to’, yid ‘with’, fel ‘about’ (…)). Unlike independent pronouns which are not overtly marked for case and occur in various positions with one and the same morphological form, clitics appear in at least two different forms: clitics which are direct objects of the verb appear in the accusative, while those standing for dative PPs occur in the dative, as illustrated in (79) and (80) below.

(79)  a. te-zemmed $[\text{[tadut} \text{nni]})$
      3SGF-bind$_{PRF=D}$ wool DEM$_{AMB}$
      She bound the wool.

     b. te-zemmed $=[\text{itt}]$
      3SGF-bind$_{PRF}=$CL.3SGF;ACC
      She bound it.

(80)  a. fka-n $[i \text{ tislit}]$ cwiya n wksum
      give$_{PRF-3PLM}$ to$_{DAT}$ bride little.bit OF meat
      They gave a little bit of meat to the bride.

     b. fka-n $=[\text{as}]$ , cwiya n wksum
      give$_{PRF-3PLM}=$CL.3SGF;DAT little.bit OF meat
      They gave her a little bit of meat.

In the accusative, clitics have a paradigm similar to that of independent pronouns. Thus, while 1st person only has a number distinction, 2nd and 3rd person additionally also display gender distinctions.

Table 8: ACCUSATIVE CLITICS

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1st Pers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Pers</td>
<td>(i)y</td>
<td>(me)</td>
</tr>
<tr>
<td></td>
<td>(you)</td>
<td></td>
</tr>
<tr>
<td>3rd Pers</td>
<td>(i)t</td>
<td>(him. it)</td>
</tr>
<tr>
<td></td>
<td>(her. it)</td>
<td></td>
</tr>
</tbody>
</table>

154 | P a E C
Dative clitic paradigms display a slightly different combination of features. Hence, in addition to 1st person forms, the category does not encode gender distinction in the 3rd person singular:

Table 9: **DATIVE CLITICS**

<table>
<thead>
<tr>
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<th>PLURAL</th>
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<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1st Pers</td>
<td>iyi</td>
<td>(to me)</td>
<td>ay</td>
<td>(to us)</td>
</tr>
<tr>
<td>2nd Pers</td>
<td>ak</td>
<td>(to you)</td>
<td>am</td>
<td>(to you)</td>
</tr>
<tr>
<td></td>
<td>(to you)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Pers</td>
<td>as</td>
<td>(to him/her/it)</td>
<td>asen</td>
<td>(to them)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>asent</td>
<td>(to them)</td>
</tr>
</tbody>
</table>

As can be observed from the tables above, accusative and dative clitics share many formal similarities. Forms for 1st person singular and plurals are identical (iyi and ay in both paradigms) while others differ only in the phonological realizations of their initial vowels. Thus, accusative clitics have their initial vowel realized as i and dative clitics, by contrast, have theirs realized as a. One plausible explanation for these vocalic divergences would be to consider the vocalic realizations i and a as markers of, respectively, accusative and dative cases on clitic forms.

Leaving aside the constant forms for 1st person which seem to be morphologically indecomposable and the suffix -m which seems to be a special marker for the 2nd person singular feminine, the morphemes shared by the two types of clitics represent features of person, gender and number (cf. also Boukhris, 1998). The morpheme k-, for instance, which is found on all second person clitics, singular and plural, apart from the dative second person singular feminine (realized as =m) (cf. Table 10 below) can be analyzed as realizing the addressee feature (2nd person).
Table 10: PARTICIPANT FEATURE: ADDRESSEE

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
</tr>
<tr>
<td>DATIVE</td>
<td>(a)k</td>
<td>(a)m</td>
<td>aken</td>
</tr>
<tr>
<td></td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
</tr>
<tr>
<td>ACCUSATIVE</td>
<td>(i)k</td>
<td>(i)kem</td>
<td>(i)ken</td>
</tr>
<tr>
<td></td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
</tr>
</tbody>
</table>

The suffix \( -t \), found on all clitics with a feminine feature apart from \( =kem \) and \( =m \) can be analyzed in the same way as realizing the feminine class feature.

Table 11: CLASS FEATURE: FEMININE

<table>
<thead>
<tr>
<th></th>
<th>2nd SINGULAR</th>
<th>3rd SINGULAR</th>
<th>2nd PLURAL</th>
<th>3rd PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATIVE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a)m</td>
<td>(a)m</td>
<td>(a)kent</td>
<td>(a)kent</td>
</tr>
<tr>
<td></td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
</tr>
<tr>
<td>ACCUSATIVE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i)kem</td>
<td>(i)kem</td>
<td>(i)kent</td>
<td>(i)kent</td>
</tr>
<tr>
<td></td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
</tr>
</tbody>
</table>

Finally, the morpheme \( -n \) which is found on all plural forms can be analyzed as realizing the individuation group feature.

Table 12: INDIVIDUATION FEATURE: GROUP

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
</tr>
<tr>
<td>DATIVE</td>
<td>(a)k</td>
<td>(a)m</td>
<td>(a)kem</td>
</tr>
<tr>
<td></td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
</tr>
<tr>
<td>ACCUSATIVE</td>
<td>(i)k</td>
<td>(i)kem</td>
<td>(i)ken</td>
</tr>
<tr>
<td></td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
</tr>
</tbody>
</table>
Masculine gender and singular features seem not to be realized overtly by particular morphemes. Thus, most clitics carrying the features only realize overtly accusative or dative vowels and person features as applicable. For instance, the second person singular masculine clitic \( =ik \) only overtly realizes the accusative vowel \( i \) and the second person morpheme \( k \).

The third person feature seems to be realized by two different morphemes depending on whether the clitic is in its accusative form (\( -i \)) or its dative form (\( -s \)). It is possible, as proposed by Boukhris (Ibid), that the two morphemes are actually part of the case inflection on the clitic. If this is correct then the third person feature is unmarked, and the markers of accusative and dative cases on clitics are \( (i)t \) and \( (a)s \). In the following two Tables, I provide the feature geometry (and the morphemes which realize them) of accusative and dative clitics.
Table 13: THE FEATURE GEOMETRY OF ACCUSATIVE CLITICS

<table>
<thead>
<tr>
<th>Part</th>
<th>Speaker</th>
<th>Addressee</th>
<th>Class</th>
<th>1st</th>
<th>2nd Masc</th>
<th>2nd Fem</th>
<th>3rd Masc</th>
<th>3rd Fem</th>
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<tbody>
<tr>
<td>1st</td>
<td>RE</td>
<td>INDV</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaker</td>
<td>iyi</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Addressee</td>
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<td></td>
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<td>Class</td>
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<tr>
<td>Masc</td>
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<td></td>
</tr>
<tr>
<td>Feminine</td>
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</tr>
<tr>
<td>2nd Masc</td>
<td>RE</td>
<td>INDV</td>
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<td></td>
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<tr>
<td>Speaker</td>
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<td></td>
</tr>
<tr>
<td>Addressee</td>
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<td>Class</td>
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</tr>
<tr>
<td>Masculine</td>
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<tr>
<td>Feminine</td>
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<td></td>
</tr>
<tr>
<td>2nd Fem</td>
<td>RE</td>
<td>INDV</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Speaker</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addressee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masculine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( ^{92} \) Note that the schwa /a/ is not part of the vocalic system of Berber, but rather is a neutral vowel realized to prevent consonantal sequences of more than two consonants (Chaker, 1983: 43-44).
### Table 14: The Feature Geometry of Dative Clitics

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PART</strong>&lt;br /&gt;<strong>Speaker</strong>&lt;br /&gt;<strong>iyi</strong></td>
<td><strong>PART</strong>&lt;br /&gt;<strong>Speaker</strong>&lt;br /&gt;<strong>ay</strong></td>
</tr>
<tr>
<td><strong>2nd Masc</strong></td>
<td><strong>PART</strong>&lt;br /&gt;<strong>Addressee</strong>&lt;br /&gt;<strong>k</strong></td>
<td><strong>PART</strong>&lt;br /&gt;<strong>Addressee</strong>&lt;br /&gt;<strong>k-</strong>&lt;br /&gt;<strong>-n-</strong>&lt;br /&gt;<strong>-∅</strong></td>
</tr>
<tr>
<td><strong>2nd Fem</strong></td>
<td><strong>PART</strong>&lt;br /&gt;<strong>Addressee</strong>&lt;br /&gt;<strong>m</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3rd</strong></td>
<td><strong>INDV</strong>&lt;br /&gt;<strong>(as)-∅</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Masc</strong></td>
<td><strong>INDV</strong>&lt;br /&gt;<strong>(as)-n-</strong>&lt;br /&gt;<strong>-∅</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Fem</strong></td>
<td><strong>INDV</strong>&lt;br /&gt;<strong>(as)-n-</strong>&lt;br /&gt;<strong>-t</strong></td>
<td></td>
</tr>
</tbody>
</table>
As mentioned in the introductory part of this sub-section, clitics in Berber can also replace complements of prepositions. Formally, these clitics are very similar to dative clitics and, as a consequence, the two are often treated as one category (cf. Chaker, 1983 on Taqbaylit; Ouhalla, 2005a). In the variety of Taqbaylit under focus, however, oblique clitics slightly differ from their dative counterparts in that they lack an initial vowel. Thus, unlike dative clitics which have their initial vowel a systematically realized when they occur on a verb ending with a consonant, oblique clitics occur without an initial vowel in the plural or with a schwa in the singular. Compare, for instance, the oblique clitics in (81) with the dative ones in (82).

(81) a. i-ruh γur =[sen]/*[asen]
    3SGM-gopRF toDIR =CL.3SGM;OBL
    He went to their (house).

    b. i-ruh γur =[^s]/ *[s]
    3SGM-gopRF toOBL =CL.3SGM;OBL
    He went to his/her (house).

(82) a. fki-γ =[^s]/ *[s]!
    givepRF-1SG =CL.3SG;DAT
    I gave him!

    b. fki-γ =[asen]/*[sen]!
    givepRF-1SG =CL.3PLM;DAT
    I gave them!

Boukhris (1998) similarly observes that oblique clitics have an initial vowel different from that of datives. She argues that, in Tamazight, the initial vowel of oblique clitics is i-. This vowel is, however, not realized on the clitic but on the preposition that hosts it, as shown in (83).
Given these facts, I will assume that a series of oblique clitics (also referred to as prepositional clitics) exists in Taqbaylit. It displays the same paradigms and feature geometries (cf. Tables 15 & 16) as dative clitics but lack the dative vowel a-. Notice from the following paradigm that the realizations of 1st person clitics also slightly differ from those in other series: the plural morpheme contains an additional morpheme, n-, while the singular one is in the more reduced form i.

Table 15: **OBLIQUE CLITICS**

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>PLURAL</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1st Pers</td>
<td></td>
<td></td>
<td></td>
<td>(o)ny</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Pers</td>
<td>(o)k</td>
<td>(o)m</td>
<td>(o)ven/ken</td>
<td>(o)went/kent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Pers</td>
<td>(o)s</td>
<td></td>
<td>(o)sen</td>
<td>(o)sent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 16: THE FEATURE GEOMETRY OF OBLIQUE CLITICS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Geometry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>Plural</td>
</tr>
<tr>
<td>1st</td>
<td>RE</td>
</tr>
<tr>
<td>PART Speaker</td>
<td>INDV Min</td>
</tr>
<tr>
<td>2nd Masc</td>
<td>RE</td>
</tr>
<tr>
<td>PART Addressee</td>
<td>INDV CLASS</td>
</tr>
<tr>
<td>Masculine k</td>
<td>RE</td>
</tr>
<tr>
<td>(as)θ</td>
<td></td>
</tr>
<tr>
<td>3rd Masc</td>
<td>RE</td>
</tr>
<tr>
<td>INDV</td>
<td></td>
</tr>
<tr>
<td>(as)θ</td>
<td></td>
</tr>
<tr>
<td>Fem</td>
<td>RE</td>
</tr>
<tr>
<td>INDV</td>
<td></td>
</tr>
<tr>
<td>(as)-n-</td>
<td></td>
</tr>
<tr>
<td>Teil</td>
<td></td>
</tr>
<tr>
<td>(as)-n-</td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td></td>
</tr>
</tbody>
</table>

PART Singular

PART Plural

PART Addressee

PART INDV

PART Group

PART CLASS

PART k

PART k-

PART -n-

PART -θ

PART k-

PART -n-

PART -t

PART -θ

PART Feminine

PART Masculine
In this sub-section, I have tried to show that the feature geometry proposed by Harley & Ritter (2002) can be extended to Berber personal pronouns. However, such a system requires further elaboration if it is to account for pronominal forms that are fundamentally relational such as demonstratives and possessives covered in the next sub-sections.

3.4.3 Demonstratives

Taqbaylit differentiates between two basic types of demonstratives: demonstrative determiners and pronominal demonstratives, as shown below.

(84) a. i-čveh aqcic [nui]  
3SGM-be.beautifulP boy DEM_{AMB}  
_The boy is beautiful._

b. i-čveh [wagl]  
3SGM-be.beautifulP DEM  
_This one is beautiful._

Demonstrative pronouns share many similarities with their determiner counterparts. Like them, they are all canonically deictic but can be further partitioned into three types depending on the specific deictic feature they involve. Thus, as their determiner counterparts, proximate demonstrative pronouns refer to entities spatially located near the location of the discourse participants. Distal demonstrative pronouns by contrast refer to entities spatially located farther away from the location of the discourse participants. And finally, ‘ambient’ demonstrative pronouns refer to entities from the discourse common ground, i.e. entities that are salient in the discourse context or judged as such by the speaker. Note that ‘ambient’ demonstratives do not impose restrictions on the distance of the object referred to.

Sentences (85-87) are examples of demonstrative uses in the language.
As pronouns, demonstratives encode a number of $\emptyset$-features, which is not the case when they occur as determiners. Thus, although demonstrative pronouns are deficient in not having a PARTICIPANT node (thus are 3rd person by default), they display number and gender distinctions; respectively singular and plural and, masculine and feminine. Combined together these features give four distinct forms for each of the demonstrative pronouns, as shown in Table (17).
Table 17: **DEMONSTRATIVES PRONOUNS**

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td><strong>Proximal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>wagi</td>
<td>tagi</td>
</tr>
<tr>
<td>(this)</td>
<td>(this)</td>
<td>(these)</td>
</tr>
<tr>
<td><strong>Distal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>wahi</td>
<td>tahi</td>
</tr>
<tr>
<td>(that)</td>
<td>(that)</td>
<td>(those)</td>
</tr>
<tr>
<td><strong>Ambient</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>wina</td>
<td>tina</td>
</tr>
</tbody>
</table>

In the next sub-section, I turn to another type of ‘relational’ pronouns, possessive pronouns which identify an object with reference to another participant. Reflexives, unlike possessives, are not relational but because they are built from the possessive forms and like them, involve genitive case, they are also covered in the next section.

**3.4.4 Possessives and reflexives**

**Possessives**

Across Berber languages, possessives consist of the dummy preposition *n* combined with an oblique clitic (Chaker, 1983; Kossman, 1997; Boukhris, 1998; Ouhalla, 2005a). In the following examples from Tamazight and Tarifit, thus, the respective counterparts of the possessive pronouns ‘your’ and ‘her’ are formed by *n* hosting the oblique clitic forms =*[k]* and =*[s]*:

(88) **Tamazight** (Boukhris, 1998: 426)

a. afus n =*[k]*
   
   hand OF =CL.2SGM;OBL
   
   *Your hand*

**Tarifit** (Ouhalla, 2005: 16)

b. axxam n =*[s]*
   
   house OF =CL.3SG;OBL
   
   *Her house*.
Although some morpho-phonological variations exist, the paradigm in Table 18 can be given for possessive forms across Berber languages:

Table 18  Possessives

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
</tr>
<tr>
<td>1st Pers</td>
<td>inu/inw(^93)</td>
<td>(my)</td>
<td>ney</td>
</tr>
<tr>
<td>2nd Pers</td>
<td>(i)n=k</td>
<td>(i)n=m</td>
<td>n=went</td>
</tr>
<tr>
<td></td>
<td>(your)</td>
<td>(your)</td>
<td></td>
</tr>
<tr>
<td>3rd Pers</td>
<td>(i)n=s</td>
<td>(i)n=s</td>
<td>n=ssen</td>
</tr>
<tr>
<td></td>
<td>(his)</td>
<td>(her)</td>
<td></td>
</tr>
</tbody>
</table>

The variety of Taqbaylit described here also has a series of possessives built from the same entities. Although underlyingly similar to the possessive forms found in other Berber languages and described above, these complex forms seem to be losing their analytic properties. Indeed, although this is only true for singular forms, possessives can optionally occur preceded by \( n^94 \). Consider, for instance, these DPs:

(89)  a. axxam (n) [inu]  
     house OF POSS.1SG  
     *My house*

     b. axxam (n) [inek]  
     house OF POSS.2SGM  
     *Your house*

     c. axxam (n) [ines]  
     house OF POSS.3SG  
     *His house*

\(^93\)The possessive for 1\(^{st}\) person singular occur in this irregular form across all Berber languages and with 2\(^{nd}\) and 3\(^{rd}\) person singular in Taqbaylit. Chaker (1983) argues that \( in \) is a particular (singular) form of the preposition, composed of \( n \) and the reduced form of an indefinite \( i \) (approximately 'one'). He proposes that the form was historically analytic but is now synthetic.

\(^94\) This option is also found in other varieties of Taqbaylit. For instance, Rabdi (2004) make the same observation for the Ihbuchen variety of Taqbaylit spoken in the south-eastern part of the Kabylie region.
The examples in (89) demonstrate that, in the singular, the complex formed by the preposition \( n \) and the oblique clitic, \( [n=\text{CL}] \), can be reanalyzed as a synthetic entity \( [n-cl] \) and occur with the dummy preposition \( n \) \((n + [n-cl])\). Note from (90) below that the same constructions are ungrammatical when a ‘true’ \( [n + \text{DP}] \) complex is involved.

\[
\begin{align*}
(90) \quad & a. \quad *\text{axxam} \quad n \quad [n \quad \text{wrgaz}] \\
& \quad \text{house} \quad \text{OF} \quad \text{OF} \quad \text{man} \\
& \quad \text{The house of the man} \\
& b. \quad *\text{avilu} \quad n \quad [n \quad \text{dada}] \\
& \quad \text{bike} \quad \text{OF} \quad \text{OF} \quad \text{dad} \\
& \quad \text{The bike of dad}
\end{align*}
\]

It is possible that \( n \) and the clitic together are being reanalyzed as DPs, but whether this is really the case requires further research. Here, I will take complex possessives to involve a dummy preposition \( n \), similarly to lexical possessors (cf. section 3.3.1), as in (91):

\[
\begin{align*}
(91) \quad & n \quad \text{PP} \\
& \quad \quad \text{CLP}^{95}
\end{align*}
\]

In addition to complex possessives which from now on I will refer to as strong forms\(^{96}\), Taqbaylit also uniquely has a series of possessive clitics. Like with personal pronouns, strong possessive forms and their clitic counterparts display different semantic and morphosyntactic distributions. Strong possessive forms occur, amongst other contexts, in predicative (cf. 92a, b) or coordinated (cf. 92c) structures, and are otherwise associated with a semantically marked interpretation (e.g. they are often interpreted as contrasted either overtly or covertly) (cf. 93):

\(^{95}\) On the maximal projections of clitics see Chapters 4 and 5.

\(^{96}\) Cf. Chapter 5 for a detailed description of the difference between strong pronominal forms and other forms.
By contrast, possessive clitics, whose paradigms are given in Table 19, occur in all other contexts, but must be adjacent to the nominal they modify:

Table 19: Possessive Clitics

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MASC</strong></td>
<td><strong>FEM</strong></td>
</tr>
<tr>
<td>1st Pers</td>
<td>(i)w</td>
</tr>
<tr>
<td>2nd Pers</td>
<td>(i)k</td>
</tr>
<tr>
<td>3rd Pers</td>
<td>(i)s</td>
</tr>
</tbody>
</table>

As can be seen from the paradigms above, clitics and strong possessive forms are formally identical when they carry plural features. Even though they are similar on the surface, there is evidence that an underlying difference effectively exists between the two. Thus, strong possessive forms rarely occur between a
noun and its demonstrative or adjectival modifiers, where clitics are much preferred. In the rare contexts where they do so, they can only be interpreted as semantically marked:

(95) a. axxam =\[iw\] aki
    house =CL.1SG;POSS DEM\textsc{prox}
This house of mine
#This house of MINE

b. axxam =\[inu\] aki
    house POSS.1SG DEM\textsc{prox}
This house of MINE
#This house of mine

c. axxam =\[iw\] amelal
    house =CL.1SG;POSS white
My white house
#MY white house

d. axxam =\[inu\] amelal
    house POSS.1SG white
MY white house
#My white house

Plural possessive forms, by contrast, behave on a par with singular clitic forms: in most contexts, they intervene between a noun and its modifiers and need not be semantically marked:

(96) a. axxam =\[ussen\] aki
    house =CL.3PLM;POSS DEM\textsc{prox}
This house of theirs

b. axxam =\[ussen\] amelal
    house =CL.3PLM;POSS white
Their white house

In the singular, strong and clitic possessives have different realizations. Yet, singular forms of the clitic paradigm seem to be ‘morphologically reduced’ forms of their respective strong counterparts. Thus, 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} person singular clitics

\footnote{The capital script represents semantic markedness, not stress.}
correspond to their strong counterparts minus the preposition *n*, as demonstrated in Table 20 below (cf. Ouhalla, 2005a for a similar observation).

Table 20: CLITICS AND STRONG POSSESSIVE FORMS

<table>
<thead>
<tr>
<th></th>
<th>CLITIC</th>
<th>STRONG FORMS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1st Pers</td>
<td>(i)w</td>
<td></td>
</tr>
<tr>
<td>2nd Pers</td>
<td>(i)k</td>
<td>(i)m</td>
</tr>
<tr>
<td>3rd Pers</td>
<td>(i)s</td>
<td></td>
</tr>
</tbody>
</table>

In terms of the features they encode, possessive clitics are analogous to the dative and oblique clitics described in the previous sub-sections. The similarities with oblique forms are expected given that possessive clitics are reduced from their strong counterparts, which are, in turn, built from *n* and oblique clitics. Note that possessive forms ‘agree’ in Φ-features exclusively with the possessor and do not encode features associated with the properties of the possessum (as in French. E.g. *mon fils* ‘my son’; *ma fille* ‘my daughter’).

**Reflexives**

Reflexives in Taqbaylit and other Berber languages, such as Tuareg (cf. Aghali-Zakar, 2004), are morphologically complex forms composed of the noun *iman* ‘soul’ (Ibid: 10) on which possessive clitics occur:

(97) a. wala-γ  [iman =[iw]]
    see_{prf}-1SG REFL =CL.1SG;POSS
    *I saw myself.*

b. te-wala  Amira  [iman =[is]]
    3SGf-see_{prf} Amira REFL =CL.3SG;POSS
    *Amira saw herself.*
The paradigm of reflexive pronouns is given in (21) below and is, as expected, identical to that of the possessive clitics.

Table 21: REFLEXIVES

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th></th>
<th>PLURAL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td></td>
</tr>
<tr>
<td>1st Pers</td>
<td>iman=iw</td>
<td></td>
<td></td>
<td></td>
<td>iman=nw</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(myself)</td>
<td></td>
<td></td>
<td></td>
<td>(yourself)</td>
<td></td>
</tr>
<tr>
<td>2nd Pers</td>
<td>iman=ik</td>
<td>iman=im</td>
<td></td>
<td>iman=nwen</td>
<td>iman=nkent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(yourself)</td>
<td>(yourself)</td>
<td></td>
<td>(yourself)</td>
<td>(yourself)</td>
<td></td>
</tr>
<tr>
<td>3rd Pers</td>
<td>iman=is</td>
<td></td>
<td></td>
<td></td>
<td>iman=rnen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(himself, herself, itself)</td>
<td></td>
<td></td>
<td></td>
<td>(themselves)</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the pronominals described in this section, Taqbaylit also makes use of two forms which occur as affixes on the verb, namely subject agreement markers and the reciprocal morpheme -m-. Whether such affixes should be regarded as pronouns or not is an issue independently raised in linguistics. Agreement affixes, for instance, contrast cross-linguistically and have been concurrently treated as pronouns (Ritter, 1994; Harley & Ritter, 2002) or as just agreement (Chomsky, 1995). Given this, I treat these elements independently in the next section.

3.5 Verbal affixes

In this section, I provide a descriptive overview of verbal affixes associated with pronominal reference which, as mentioned above involve subject agreement affixes and the reciprocal -m-. In Berber, agreement markers have regularly been argued to be pronouns (cf. Guerssel, 1995; Elouazizi & Wiltschko, 2006; Achab, 2006). As for the reciprocal morpheme, while its lack of Φ-features makes it atypical, its referential properties are essentially pronominal-like. Therefore, I will assume here that, although, they occur as affixes on the verb
stem, these elements are pronominal. I start my description of verbal affixes with agreement paradigms next.

3.5.1 Agreement paradigms

Recall from Chapter 2 that subjects in Berber can be covertly realized by a covert DP (pro) (Ouhalla, 1988b; Guerssel, 1995). As already mentioned, the semantics of pro-drop constructions is not unconstrained. However, in cases where subject DP’s are not overtly realized, reference to a particular discourse entity is essentially assured by subject agreement affixes. For sake of clarity, the examples used there to illustrate these pro-drop constructions are repeated in (98) below.

(98) a. i-ruh=ed yanis, y-swa Iqahwa
3SGM-goPREF=D Yanis. 3SGM-drinkPREF coffee
Yanis came. He drank a coffee.

b. Q: anida =tt Hanna
where =CL.3SGF;ACC Hanna
Where is Hanna?

A: te-fey
3SGF-exitPREF
She went out.

The agreement system of Berber consists of a range of bound morphemes which appear as prefixes, suffixes or circumfixes on the verb stem. Of all the verbal affixes, agreement morphemes are the most external. That is when they occur with other markers such as aspectual markers, causative, passive or reciprocal morphemes, they occur farthest from the root, as shown in the following example.

\[\text{\textsuperscript{98} Cf. Chapter 5 for a more detailed discussion of the referential properties of subject agreement.}\]

\[\text{\textsuperscript{99} Cf. Ouhalla (2005b) for a possible derivation of the Berber agreement system.}\]
(99)  a.  t-tt-m-wali-m
     2PL-REC-seel 2PLM
     You are seeing each other.

        b.  AGR > ASP_IMPREF > REC > AGR

All agreement markers encode person and number distinctions. However, gender
distinctions are only made for 2nd person plural and 3rd persons (cf. paradigm for
agreement markers in Table 22).

Like most verbal affixes, agreement markers can be vowels or consonants
and may (slightly) phonologically alternate depending on the verb stem they
combine with. Thus, the 3rd person masculine singular marker i is realized as a
glide /y/ when the verb stem it attaches to begins with a sequence of two
consonants (cf. (98a) above where the affix is realized as i with -ruh and y with -
swa).

Table 22: AGREEMENT MARKERS

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>FEM</th>
<th>PLURAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
</tr>
</tbody>
</table>
| 1st Pers |  | -y/i |  | n-
|        | (I)   |  | (we)  |       |
| 2nd Pers |  | t....d  |  | t....m  | t....mt |
|        | (you) |  | (you) | (you) |
| 3rd Pers | i/y-  | t-  | -e  | -ent |
|        | (he)  | (she) | (they) | (they) |

As briefly mentioned in the introductory part of this section, in addition to
agreement morphemes, Berber verbs also host a reciprocal morpheme. It is
described in the following section.
3.5.2 Reciprocals

Reciprocal reference is marked on the verb by the morpheme -m, which as other lexical markers (e.g. causative) occurs closer to the verb stem than agreement markers and the imperfective morpheme $tt$, as illustrated below.

(100) a. n-\(tt\)-m-wali
   \(1PL\)-IMPRF-REC-see\(_{\text{IMPRF}}\)
   \(We\ are\ seeing\ each\ other\)

b. AGR > IMPRF > REC > V\(_{\text{ASP}}\)

Unlike all the pronominals described above, the reciprocal category does not exhibit any \(\emptyset\)-feature distinctions and, as shown below, remains unchanged regardless of the features associated with its co-referent. However, it is incompatible with singular co-referents, as proves the ungrammaticality of (102).

(101) a. ne-\(m\)-wala
   \(1PL\)-REC-see\(_{\text{PRF}}\)
   \(We\ saw\ each\ other\)

b. te-\(m\)-wala-m
   \(2PLM\)-REC-see\(_{\text{PRF}}\)-2PLM
   \(You\ saw\ each\ other\)

c. te-\(m\)-wala-mt
   \(2PLF\)-REC-see\(_{\text{PRF}}\)-2PLF
   \(You\ saw\ each\ other\)

\(^{100}\) In many languages, reciprocal strategies are very alike reflexive strategies. As is often discussed, in French, for instance, the pronominal clitic se is ambiguous between the two readings. Thus, in sentence (i), two readings are available: a reciprocal one where John and Mary love each other and a reflexive one where John and Mary love themselves. In Berber, as shown in (ii) \(m\) can never be interpreted as a reflexive.

i. Jean et Marie \(\text{[j]}\)' aim-e-nt
   John and Mary se love-PRS-3PL
   \(John\ and\ Mary\ love\ each\ other\)
   \(John\ and\ Mary\ love\ themselves\)

ii. \(\text{[m]}\)-ss-kra-n werac
   REC-CAUS-hate\(_{\text{IMP}}\)-3PLM boys
   \(The\ boys\ hate\ each\ other\)
   \(\text{The\ boys\ hate\ themselves}\)
3.5.5 Conclusion

In these last two sections, I have provided an initial description of Berber pronominal forms in terms of a feature geometrical framework such as that proposed by Harley & Ritter (2002). I have shown that the framework can also apply to Berber pronominals but requires further elaboration if it is to be extended to 'relational' pronouns; i.e. pronouns which establish a relation between an object and another (discourse or event) participant such as demonstratives and possessives. In the next Chapter I will focus on clitic systems and in Chapter 5 I will look at pronoun systems in more details.
Chapter 4

Taqbaylit and Berber Clitics

Introduction

As briefly explained in chapter 1, pronominal clitics in Berber have special morphosyntactic distributions which differ from those of their non-clitic counterparts. Other pro-forms have regular syntactic distributions: agreement morphemes occur on the lexical head of the constituent (e.g. verb or noun) while independent personal pronouns or possessive PP's overall occur in the same types of positions as lexical DP's. Clitics, by contrast, have more complicated distributions: they can occur on a number of different hosts, but are restricted to specific positions from which other forms are excluded. Inside the clausal domain, they uniquely either occur on the lexical verb they are associated with or, given the right syntactic context, to an adjacent functional head, while in the nominal domain they must systematically follow the noun they modify.

The present chapter focuses on the issue of clitic placement in Berber, with particular attention to Taqbaylit, and aims to give an analysis that accounts for the phenomenon. In line with a large amount of research on cliticization across languages and in Berber too, the proposal developed in what follows relies on an interaction between syntactic and phonological processes. Adapting from Cardinaletti & Starke (1999)'s hypothesis, it holds that the various orders in which clitics are found inside CP and DP constituents derive from a syntactic movement to the Specifier position of a higher extended projection of VP and NP, followed by a PF incorporation into a prosodic head which can either be an adjacent functional head or, as a last resort, the lexical head.
The chapter is organized as follows. In section 4.1, an exhaustive discussion of the typological properties of clitics is provided and a hierarchical organization of cross-linguistic clitic systems depending on the types of locations they target is proposed. Building from the similarities between Berber clitics occurring in CP and the identified typological clitic systems, an account of clitic orders in the clause is developed in section 4.2. In section 4.3, the issue of clitic placement inside DP is discussed and the analysis proposed for clausal cliticization is extended to the constituent. Finally, to conclude the chapter, an overview of the different interpretations of a non-pronominal clitic, the locational clitic, =d is proposed in section 4.4. The raison d'être of this overview is that the clitic seems to be carrying a deictic feature and, depending on the context, relies on a discourse participant or an anaphoric subject for interpretation.

4.1 Clitic Typology

Fundamentally, clitics can be defined as linguistic elements which in many respects are words but attach to other words in the same way that affixes do. In addition to this ‘semi-affixal’ status, clitics are also characterized by their unique morpho-syntactic behaviour\(^1\) across and even within languages. In this section, I provide a brief overview of clitics and their behaviour cross-linguistically.

4.1.1 The categorial status of clitics

One categorization on which linguistic research relies is that between words and affixes. A range of properties serves as the basis for that categorization. In this section, I offer a synopsis of the main differences that exist

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\(^{1}\) As discussed in later sections, not all elements which undergo cliticization display unique morpho-syntactic properties. Using the terminology of Zwicky (1977) for now, having unique morpho-syntactic properties is characteristic of ‘Special clitics’, not ‘simple clitics’.
between clitics and affixes on the one hand and between clitics and words on the other.

The main property of clitics which sets them apart from independent words is their prosodic deficiency (Zwicky, 1977; Selkirk, 1995). Being prosodically deficient, clitics lack a metrical structure and thus must combine with another prosodic word\(^\text{102}\) (Anderson, 2005; Selkirk, 1995 amongst others). This affix-like nature is substantiated by a number of properties which clitics share with affixes. Zwicky (1977; 1985) and Zwicky & Pullum (1983) propose the following morphosyntactic characteristics of affixes which seem to be universally shared by clitics\(^\text{103}\):

(i) **Binding.** Like affixes, clitics are bound to their host and can never occur as independent morphemes\(^\text{104}\).

(ii) **Rule immunity.** Bound morphemes occurring word-internally and clitics cannot undergo deletion under identity (e.g. cannot be deleted in coordinated structures).

(iii) **Parasitic gaps** (Simpson & Withgott, 1986; Monachesi, 2000 and others). Bound morphemes have gaps in their combinations with specific stems or bases (e.g. the English past-tense affix *ed* do not combine with all verbs: *stride* → *strided* or *come* → *comed*) (Zwicky & Pullum, 1983). Similar gaps occur in the distribution of clitics. The formation of clitic clusters,

\(^\text{102}\) Whether clitics form a prosodic word with their host or not is subject to cross-linguistic and even dialectal variations and the nature of the phonological attachment of clitics to their host is subject to debate. Selkirk (1995) proposes a three way distinction between categories of clitics: free clitics, internal clitics and affixal clitics. The latter two categories combine with their hosts at the prosodic word (PW) level and as such form a prosodic word with it. Free clitics do not form a prosodic word with their host because they combine with it at the phonological phrase (PPh) level. The distinction between PPh clitics and PW clitics is also argued for Irish clitics by Green (2000). Gerlach & Grijzenhout (2000), for Dutch, argue that the clitic-host compound is never a prosodic word. Rather, all types of cliticization occur at the PPh level. A more in-depth analysis of the phonological nature of clitic attachment is beyond the scope of this overview hence, I will leave these issues aside for now.

\(^\text{103}\) There is an enormous variation regarding clitic properties across languages and even within languages. In particular languages or dialects of a language, clitics will share more properties of bound affixes than in other languages.

\(^\text{104}\) Note that the Binding property logically follows from the prosodic deficiency of clitics.
particularly, is constrained and, within a language, specific clitic sequences are ruled out (e.g. the well known restriction on the co-occurrence of 1st and 2nd person accusative clitics with dative clitics, the so-called Person Case Constraint, i.e. PCC (Bonet, 1991; Sportiche, 1993; Monachesi, 2000)).

Nevertheless, clitics differ from affixes in a number of ways. Zwicky (1977) distinguishes several domains in which clitics differ from bound affixes:

(i) **Ordering.** Cross-linguistically, affixes attach to their hosts in a strict order. Clitics are freer and can occur in various orders with respect to other affixes, a property more generally associated with independent words — particularly in free word order languages.

(ii) **Internal Sandhi rules.** Internal sandhi rules are a set of language-specific phonological rules which only apply word-internally. While these rules apply across boundaries between an affix and a base, they sometimes do not apply across boundaries between a clitic and its host.

(iii) **Selection.** The way in which clitics select their host is the main (probably universal) property which makes clitics less affix-like. While affixes rigidly select their hosts and only attach to elements of particular categories, clitics can freely combine with a range of different hosts.

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105 The properties described below are sufficient for an element presenting them to be categorized as a clitic but they are not all necessary. Thus, clitics do not need to present all of these characteristics to be categorized as such. Ordering and internal sandhi, for instance, are not universal properties of clitics. But the fact that they apply in some languages is still evidence that clitics are not like regular affixes.

106 Note that free ordering is not a universal property of clitics. The ordering of clitics, particularly within clitic clusters, is rigidly fixed in a number of languages (Pehnutter, 1972; Zwicky, 1985; Anderson, 2005). In French, for instance, pronominal clitics occur in the following strict configuration where clitics on the left side obligatorily precede those on the right (after Sportiche 1996, 1999):

\[
\begin{align*}
1st & \\
2nd & \rightarrow 3^\text{rd ACC} > 3^\text{rd DAT} > \text{LOC} > \text{GEN} > \text{REFL}
\end{align*}
\]
The criteria mentioned above are, for the most part, morpho-phonological. Based on morpho-syntactic criteria, the clitic category can be further sub-categorized.

Traditionally, two types of clitics are distinguished, namely simple clitics and special clitics (Zwicky, 1977). Simple clitics are the unstressed counterparts of otherwise accentuated free morphemes. Being unaccentuated, they need to phonologically attach to another word inside the clause. However, apart from deaccentuation, they do not display other differences with their counterparts. Hence, syntactically, they occur in exactly the same positions while semantically they make the same meaning contributions. The clitics of English such as reduced forms of auxiliaries ('s) and negation ('n't) belong to that category 107. (Zwicky, 1977; Zwicky & Pullum, 1983) Special clitics are also unstressed counterparts of free accentuated forms. But, the choice between them and accentuated forms depends on specific syntactic and semantic conditions. And special clitics are often in complementary distribution with their strong counterparts. (Zwicky, Ibid, Cardinaletti & Starke, 1999) 108

The simple vs. special clitic classification is well established. However, in this thesis I will adopt a partition along the lines of that proposed by Anderson (2005). Anderson (2005) suggests a distinction between phonological and morphosyntactic clitics, which respectively correspond to simple clitics and special clitics. Anderson is concerned with the fact that simple and special clitics are not necessarily phonologically reduced forms of non-clitic counterparts and that, across languages, clitics are found that do not have non-clitic counterparts 109. He proposes two criteria for the distinction between the two types of clitics: (i)

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107 Two views exist on the nature of simple clitics. One (Zwicky, 1977) is that they simply derive from full forms. Simple clitics are therefore the reduced forms of stressed elements, as a result of a stylistic strategy. The second view (Zwicky & Pullum, 1983 amongst others) is that some simple clitics, at least in English, are lexicalized and co-exist in the lexicon with the full forms.

108 This special property of clitics is discussed in more details in the next chapter.

109 As discussed in Anderson (2005: 14-22), in K'ak'wa (Northern Wakashan), pronominal reference is only marked by clitics as no full pronominal forms exist:

i. la-'? =an kwixid =u7 yas =gada kwixyu=k
   AUX-FUT =l strike =you with =DEM club =DEM
   I'll strike you with this club

ii. la-'mis =as liqala-?a-s a?anam gax =an
   AUX-CONN =you name-FUT-INST wolf to =me
   And so you will name me (with) wolf
one strictly based on the phonological properties of the clitic, and (ii) one based on its morphosyntactic behaviour.

Phonological clitics are clitics which fulfil the first criterion. They have special phonological properties which derive from the fact that they are prosodically deficient. Their deficiency requires them to attach to a host which has the metrical structure of prosodic words\textsuperscript{110}. Morphosyntactic clitics, in contrast, are clitics which fulfil the second criteria\textsuperscript{111}: they have a special syntactic behaviour which is not derived from their phonological nature, but from an independent set of constraints.

To sum up, clitics share the properties of both affixes and words and as such, cannot easily enter into grammatical categorizations. In this section, I have outlined a number of morpho-phonological properties and lexical characteristics of clitics. One of their main properties is that they must attach to prosodic hosts. Phonological clitics select the closest available word but morphosyntactic clitics present more specificity and the types of hosts they select vary depending on the language in which they occur and a range of additional factors. To illustrate this variation, I present in the following section three clitic systems which I believe are representative of the cross-linguistic distribution of clitics and are relevant for an analysis of clitics in Berber.

4.1.2 Morphosyntactic clitic systems

From the morphosyntactic point of view, the three clitic systems most relevant to the investigation of Berber clitics are Second Position, Romance and Semitic clitic systems. I start below with a description of the former.

\textsuperscript{110} Phonological clitics can have a specific syntactic behaviour but this is seen as an effect of their phonological deficiency and the prosodic attachment requirement.

\textsuperscript{111} Note that most morphosyntactic clitics will also fulfil the first criteria.
Second Position clitics

Second position clitics\textsuperscript{112} (henceforth P2) characteristically occur in second position of the domain within which they occur (CP, DP). In this small section, I will mainly concentrate on P2 clitics occurring within CP. Although typically found in Slavic languages they also occur in a range of unrelated languages such as Indo-Iranian (Pashto, Roberts, 2000), Austronesian (e.g. Tagalog (Anderson, in press); Sasak (Austin, 2004)), Amerindian (e.g. Strait Salish (Jelinek, 1996)) and Medieval Romance (Wanner, 1996). Some examples are provided in (1) below.

(1) \textbf{Pashto}\textsuperscript{113}

\begin{enumerate}
\item \textit{kushal} =\textit{[mee]}\textit{ zyaati ne wah-i}
\textit{Khoshal} =CL.1SG \textit{anymore} \textit{NEG hit-PRES.3SG}
\textit{Khoshal does not hit me anymore}
\end{enumerate}

\textbf{Tagalog}\textsuperscript{114}

\begin{enumerate}
\item \textit{Ganu} =\textit{[ka} \textit{=na} \textit{=ba]} \textit{kakinis?}
\textit{How} =CL.2SG \textit{=already} \textit{=int clever?}
\textit{How clever are you?}
\end{enumerate}

\textbf{Medieval Romance}\textsuperscript{115}

\begin{enumerate}
\item \textit{angois} =\textit{[xe]} \textit{parti de nostre ost touz seus}
\textit{rather} =CL.REFL. he-departed from our troops all alone
\end{enumerate}

There is common agreement that P2 clitics occur in a single specific position. The nature of this position and how it is derived is obviously not agreed on. In the second part of this section, I will discuss theories on P2 cliticization but for now I concentrate on the first elements, i.e. the hosts of P2 clitics.

P2 clitics always occur in second position, even in languages with an otherwise relatively free word-order (Halpem & Zwicky, 1996 and references cited therein). However, even in these languages there are constraints on what constitutes an appropriate first prosodic word or host. In a range of languages,

\textsuperscript{112} Also often referred to as Wackernagel clitics.

\textsuperscript{113} From Roberts (2000: 69)

\textsuperscript{114} Anderson (in press) citing Bloomfield (1917: 143)

\textsuperscript{115} Wanner (1996: 539)
functional words such as complementizers, conjunctions or prepositions are not satisfactory first words (Halpern & Zwicky, 1996; Austin, 2004). But mainly, second position clitics vary as to whether they attach to the first prosodic word (as in the examples seen so far) or the first constituent of the clause (Halpern, 1995).

The nature of the first element depends on language-specific constraints. Essentially, three types of P2 languages can be distinguished (after Halpern, 1995). Languages, such as Serbo-Croatian, allow clitics to appear freely either after the first prosodic word (henceforth W2) of the clause or after the first constituent (D2). Languages, such as Pashto, allow the two orders (W2 vs. D2) in complementary distributions:

(2) a. \([\text{[Taj]} =\text{[je]}] \text{ covek voleo Mariju} \]
That man loved Maria.

b. \([\text{[Taj covek]} =\text{[je]}] \text{ voleo Mariju} \]
That man loved Maria.

Finally some languages only allow one position and clitics either obligatorily occur in W2 or in D2. In Czech, for instance, clitics occur in 2D:

(4) a. \([\text{Ten básník } =\text{[mi] ëte ze své kníhy} \]
That poet reads to me from his book

b. \(*\text{Ten } =\text{[mi] básník ëte ze své kníhy} \)

116 The examples in (2), (3) and (4) are all from Halpern (1995).
In addition, P2 clitics can also occur at the edge of other domains such as DP, VP (etc...) (Legendre, 2000; Anderson, 2005). In a number of Balkan languages, for instance, definite articles appear as clitics in the DP domain and obligatorily follow the first word of the constituent. This is illustrated with Bulgarian in (5) below (from Anderson, Ibid: 111).

(5) a. knigi =[te]  
books =CL.ARTDEF  
The books

b. interesni =[te] knigi  
interesting =CL.ARTDEF books  
The interesting books

c. mnogo =[to] interesni knigi  
many =CL.ARTDEF interesting books

As can be observed from the previous examples, the Bulgarian definite article =te always occur combined to the first word occurring within DP. Thus, in (5a-c), the clitic follows, in that order, the head noun knigi ‘books’, the adjective interesni ‘interesting’ and the quantifier mnogo ‘many’.

The main characteristic of the P2 clitic category presented in this brief section is its link to a specific position, i.e. the edge of the domain within which they occur. Cross-linguistically, other intra domain positions are characteristic of clitics. In the following section, I give an overview of the Romance clitics which typically appear with the verb and its satellites.

Romance clitic systems

In general, Romance pronominal clitics correspond to verbal arguments but characteristically occur in positions within and outside of the verbal complex\(^{117}\). They differ from P2 clitics in that their position inside clauses and in

\(^{117}\) As is well known, dative clitics in Romance languages such as French and Spanish can be used as ethical datives in which case they do not correspond to verbal arguments (cf. Jaeggli, 1986; Borer, 1986).
relation to a host — i.e. whether they are proclitics or enclitics — also depends on the host they attach to.

Hence, Romance clitics’ positions vary according to the morphosyntactic features of the verb they occur with. In French and Italian, for instance, clitics always precede their host if it is a finite verb:

(6) **FRENCH**

a. Jean [le]= donne à Marie
   John CL.3SGM;ACC= give\textsubscript{PRE}-3SG to Mary
   John gives it to Mary.

**ITALIAN**

b. Sarebbe assurdo che tu [gli]= parlassi
   it-would-be absurd that you CL.3SGM;DAT= spoke
   It would be absurd that you spoke to him.

However, they occur as enclitics when the verb is in one or all of the following forms: (i) Imperative, (ii) Gerund and/ or (iii) Infinitive. Thus, in Spanish such verbs exclusively host enclitics\(^ {119}\), while in French only Imperatives take enclitics:

(7) **SPANISH**\(^ {120}\)

a. muestra [=le] el catalogo
   show\textsubscript{IMP} =CL.3SG;DAT the catalog
   Show her the catalog!

b. puede mostrar [=le] el catalogo
   can show\textsubscript{INF} =CL.3SG;DAT the catalog
   He can show her the catalog.

c. Velasquez pintando [=lo]
   Velasquez paint\textsubscript{GER} =CL.3SGM;ACC
   Velasquez showing it.

\(^{118}\) The following example is from Kayne (1991)

\(^{119}\) Encliticization in those environments is often analyzed as a result of the Tobler-Mussafia effect which prohibits clitics (in those languages) to occur in the initial position of a clause (Uriagereka, 1995; Wanner, 1986).

\(^{120}\) Unless stated otherwise all the Spanish examples in this section are from Pineda & Meza (2004)
In contexts where certain types of elements precede the verb, Romance clitics are not hosted by their verbal head. In French and Italian, for instance, if an auxiliary precedes the verb, clitics occur on the auxiliary (cf. 8). Similarly, in European Portuguese, clitics precede the verb if it follows the negation *não*, as shown in (9b)\textsuperscript{121}.

(8) **FRENCH**

\begin{itemize}
  \item a. Pierre \[l]= a mangée
  \item Pierre CL.3SGF;ACC= AUX eat\textsubscript{TCP}
  \end{itemize}

Pierre has eaten it.

(9) **EUROPEAN PORTUGUESE**

\begin{itemize}
  \item c. O Paulo deu \[no=lo\]
    the Paulo gave =CL.2PL;DAT=CL.3SGM;ACC
    Paulo gave it to us.
  \end{itemize}

\textsuperscript{121} The Portuguese examples are edited from Luis & Sadler (2002).

\textsuperscript{122} Data from Monachesi (1999)
d. O Paulo não deu

And finally, in some Romance varieties, the nature of the clause also affects clitic positioning. In complex clauses, clitics can occur on any of the verbs contained within the TPs that form the clause, even though they are arguments for only one of them. Such clitic climbing occurs, for instance, in Italian and Spanish (Monachesi; 1999, Cardinaletti & Shlonsky, 2004; Pineda & Meza, 2004). This is illustrated with Spanish examples in (10).

(10) a. puede haber querido mostrar = [se=lo]
    He could have wanted to show it to her
    
    b. puede haber = [se=lo] querido mostrar
    c. [se=lo] = puede haber querido mostrar

The clitics presented thus far occur on different hosts depending on a range of morphosyntactic and syntactic criteria. This variable host selection of clitics is all the more fascinating that it does not necessarily target the projection of the head they are lexically associated with. Thus, Romance verbal clitics do not systematically select the verbal head for which they are arguments as their host and P2 clitics always occur after the first element of CP even when it is not a head to which it is lexically linked. Yet again, not all morphosyntactic clitics can have such a variable host selection. Semitic clitics, which I describe below, are such clitics.

**Semitic clitic systems**

Semitic clitics share some properties of both Romance and P2 clitics. With their Romance counterparts, they share the property of being pronominal while they share with P2 clitics the property of always combining with their hosts as enclitics. Consider, for instance, the following sentences from Palestinian Arabic (Shlonsky, 1997: 179).
In (11 b-d) above, the clitic ha replaces the lexical DP li-mSalme and occurs as an enclitic hosted, in that order, by the verb fhimt ‘I understood’ and the noun beet ‘house’.

However, Semitic clitics contrast with Romance and P2 clitics in a number of respects. Thus, as described in Shlonsky (1997), Semitic clitics cannot combine together to form clusters and display no overt case alternations. The latter property is obvious in the previous examples where the clitic ha occurs in the same form both when it corresponds to the lexical object of a verb (11b) and the lexical subject of a noun (11d). The latter property is illustrated by the examples given in (12 e-f) below where the co-occurrence of the two clitics =u and =ha leads to ungrammaticality (from Shlonsky, Ibid: 180).
(12) CAIRENE ARABIC

a. ʔil-mudarris fahhim l-dars li-l-bint
the-teacher understandCAUSPRF3SGM the-lesson to-the-girl
*The teacher explains the lesson to the girl.

b. ʔil-mudarris fahhim l-bint l-dars
the-teacher understandCAUSPRF3SGM the-girl the-lesson
*The teacher explains the lesson to the girl.

c. ʔil-mudarris fahhim =[ʔa] li-l-bint
the-teacher understandCAUSPRF3SGM =CL.3SGM to-the-girl
*The teacher explains it to the girl.

d. ʔil-mudarris fahhim =[ʔa] l-dars
the-teacher understandCAUSPRF3SGM =CL.3SGM the-lesson
*The teacher explains the lesson to her.

e. *ʔil-mudarris faliliim =[ʔa] =[ʔa]
the-teacher understandCAUSPRF3SGM =CL.3SGM =CL.3SGF
*The teacher explains it to the girl.

f. *ʔil-mudarris faliliim =[ʔa] =[ʔa]
the-teacher understandCAUSPRF3SGM =CL.3SGF CL.3SGM
*The teacher explains the lesson to her.

But the key distinctiveness of Semitic clitics essentially reposes on their distribution. Indeed, whilst Romance and P2 clitics can be hosted by different elements in their domain of occurrence, Semitic clitics must be hosted by the head of the domain within which they occur. Consider the following examples from Hebrew and Palestinian Arabic (Ibid: 177 & 179):

(13) HEBREW

a. tmunot =[ʔa] tuveyot Ṣal ha-kir
picture =CL.3SGF hangPAss-FS on the-wall
*Her picture hands on the wall.

b. xašavnu Ṣal =[ʔa]
thinkPAss-1PL about =CL.3SGF
*We thought about her.
In the preceding examples, the Hebrew clitic =eha 'her' combines with the head noun tmunot 'picture' when it occurs within the NP but combines with the prepositional head ṣal when it occurs within the PP. Similarly, the Palestinian clitics ḥa and hin combine with the head of VP when they are verbal objects, the head of QP\textsuperscript{123} and the head of CP when they are subjects.

Although they present differences, the three clitic systems described above, namely second position, Romance and Semitic, share some properties with one another. And in fact, they can be hierarchically organized on a clitic 'cline' depending on their distribution and the way in which they select appropriate hosts.

At the top end of such a clitic hierarchy are edge-oriented clitics such as P2 clitics. They occur at the edge of the domain which contains them and can overall combine with any element as long as it corresponds to the first word or the first constituent of that domain. In addition, they can also be hosted by semantic operators. Thus, in European Portuguese, P2 orders can be found with negation operators, some quantifiers and wh-operators (Madeira, 1993; Luis & Sadler, 2002).

In an intermediary position in the hierarchy are clitics oriented towards intermediate functional projections of the domain within which they occur.

\textsuperscript{123} Shlonsky (1997) treats such element as kull (Arabic) and kol (Hebrew) as quantifiers heading a QP.
Romance clitics, for instance, are such clitics since they occur on the verb or its TAM satellites (henceforth they are V-TAM oriented). Like edge-oriented clitics, these clitics can combine with different hosts. However, they are more restricted and only select certain heads from the domain in which they occur as their hosts. Thus, Romance clitics exclusively occur on verbs, auxiliaries and in some varieties negation elements.

Finally, at the bottom of the hierarchy are found head-oriented clitic systems, such as the Semitic one. Clitics in such systems are very restricted and can only combine with the head of the domain that contains them (after Shlonsky, 1997). In the following sections, I look at some of the proposals put forward to account for these different clitic systems, but in Table 23 below, I represent the proposed hierarchy. For sake of clarity, I will focus on VP clitics; i.e. clitics which lexically correspond to verbal arguments.

<table>
<thead>
<tr>
<th>Edge-oriented cl.</th>
<th>V-TAM cl.</th>
<th>Head-oriented cl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>hosts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.g. P2 languages</td>
<td>morphosyntactic: V or T</td>
<td>lexical: V</td>
</tr>
<tr>
<td></td>
<td>e.g. Romance languages</td>
<td>e.g. Semitic</td>
</tr>
<tr>
<td></td>
<td>e.g. European Portuguese</td>
<td></td>
</tr>
</tbody>
</table>

4.1.3 Theories of clitic placement

Numerous analyses, which diverge on a number of points, have been proposed to account for clitic phenomena. The main area on which they differ is perhaps the category that clitics are taken to belong to. Increasingly popular types of analyses have been treating clitics as phrasal affixes (Legendre, 2000; Anderson, 2005), lexical affixes (Monachesi, 2000; 2006; Miller & Sag; 1997; Simpson & Withgott, 1986), or agreement heads (Sportiche, 1996; 1999; Shlonsky, 1997; Taylor, 2000; Manzini & Savoia, 1999). Although they differ on some of the assumptions they make, these accounts uniformly treat clitics as...
functional realizations of a number of features. Other type of analyses (mostly put forward to account for pronominal cliticization) treat clitics as lexical arguments (Kayne, 1991; Uriagereka, 1995; Ouhalla, 1989; 2005a) merged in verbs’ argument positions.

In addition, analyses also vary as to how the various positions in which clitics occur cross-linguistically and within similar languages are derived. Basically, cliticization is derived either by base-generation or movement. There is a fundamental correlation between the category to which a clitic is believed to belong to and its possible derivation. Thus, movement accounts are more generally associated with analyses of clitics as underlying independent verbal arguments. On the other hand, when argued to be affixes or agreement heads, clitics and their syntactic placement are mainly linked to base-generation derivations. Discussing all the proposals would be stepping outside the scope of this chapter. But, I will describe here representative accounts of the main lines of analyses for P2, Romance and Semitic clitics.

P2 cliticization is, in the majority of cases, analysed as governed by an interaction of syntax and phonology. Halpern (1995) proposes an account of P2 cliticization based on the interaction of the two levels of grammar. In the syntax, clitics are positioned on a phrase left-adjointed to the maximal projection of IP but, in the phonology, they are banned from occurring at the edge of the first prosodic constituent. Languages use two strategies not to violate this phonological constraint: (i) a re-ordering strategy referred to as Prosodic Inversion and (ii) A'-movement. Prosodic Inversion, the process whereby the first daughter of the first constituent swaps places with the clitic, gives rise to 2W orders (i.e. order in which the clitic follows the first prosodic word). By contrast, A'-movement of a constituent from its underlying position to Spec-CP gives rise to 2D orders (i.e. order in which the clitic follows the first constituent of the clause). Halpern’s derivation is illustrated below.

124 Within this approach, the threefold distinction between 2P clitics cross-linguistically can be explained by a specific syntactic transformation — movement of a phrase to the Specifier position of CP — and whether it is allowed, excluded or made compulsory by the grammatical rules of the language. In languages where second position clitics obligatorily occur in the 2W order, movement of a phrase out of the constituent containing the clitic is strictly disallowed. Languages where clitics are in a strict 2D order involve an
Legendre (1998, 2000) and Anderson (2000, 2005 & in press) also explain P2 cliticization with recourse to the relation between phonological and syntactic constraints. Anderson (2005), for instance, takes clitics to be phrasal affixes which occur at the edge of the domain that contains them. In his optimality theoretical account, he uses an interaction of violable constraints:
(i) **EDGEMOST**, a syntactic constraint, stipulates that clitics must occur at the edge of a specific domain. The domain in question is argued to be IP for clitics occurring within the clause and DP for those occurring in nominal projections.

(ii) **NON-INITIAL**, a phonological constraint, requires clitics not to occur in initial position within a specific prosodic domain.

In languages where NON-INITIAL outranks EDGEMOST, it must be satisfied in priority and the second position order is derived. Legendre (Ibid) further extends this analysis to verbal clitics of the type found in Romance languages. But most accounts of Romance clitics can be divided into two kinds, namely movement approaches and base-generation accounts.

Movement approaches argue that clitics are merged in their 0-position within VP but move to attach to a specific host. Amongst others, Kayne (1975; 1991) proposes that clitics are functional heads which occur within VP in corresponding argument positions but move to IP. He assumes a split IP hypothesis (after Pollock, 1989) according to which the projection can be divided into three phrases: AgrP, TP and InfnP (projection of the infinitive head). Clitics left-adjoin to the highest of these functional phrases which does not contain a trace. Hence, depending on the target of V-movement, clitics will occur either in AgrP, TP or InfnP.

\[ \text{(16)} \]

\[
\begin{array}{c}
\text{IP} \\
\text{I'}
\end{array}
\]

\[
\begin{array}{c}
\text{I} \\
\text{VP}
\end{array}
\]

\[
\begin{array}{c}
\text{Cl} \\
\text{I}
\end{array}
\]

In base-generation accounts, clitics are merged directly in the position in which they occur on the surface (Jaeggli, 1986; Sportiche, 1996, 1999; Legendre,
Monachesi (2000, 2006) and Miller and Sag (1997) argue that cliticization is a lexical operation and clitics are lexically combined with their host. One influential account is proposed by Sportiche (1996; 1999). He argues that clitics occur as agreement heads in their own projections, clitic voices, occurring in the highest level of the clause (above AgrSP and TP). An empty DP pro (DP∗) occurs in the verb’s θ-positions to satisfy the subcategorization of the verb but, moves to the Specifier position of the clitic phrase to check features in a Spec-Head agreement configuration. Sportiche’s clitic template (1996: 237) is illustrated in (17) below.

(17) CP
    C NomV = Nominative clitics
    DP∗1 Nom’
    Nom AccV = Accusative clitics
    DP∗2 Acc’
    Acc DatV = Dative clitics
    DP∗3 Dat’
    Dat TP
    T VP
    DP∗1 ... DP∗2 ... DP∗3

Along the same lines as Sportiche, Shlonsky (1997) proposes an analysis of Semitic clitics as agreement affixes heading their own projections and containing a referential covert DP (pro) in their Specifier position. Given that Semitic clitics occur in these domains, such AgrP are argued to occur above CP, Shlonsky (1997) proposes an analysis of Semitic clitics as agreement affixes heading their own projections and containing a referential covert DP (pro) in their Specifier position. Given that Semitic clitics occur in these domains, such AgrP are argued to occur above CP,

---

125 Sportiche (1996: 238) proposes the following rule for cliticization:

Clitic Criterion

i. A clitic must be in a Spec-head relationship with a [+F] XP at LF

ii. A [+F] XP must be in a Spec-head relationship with a clitic at LF
VP, PP, QP and DP. Encliticization in Semitic is derived by movement of the relevant head to AgrP and incorporation with the clitic. This derivation is illustrated in (18).

(18)

```
   AgrP
      /
     /   \
Agr'  Agr
   /     |
CI     X
```

The main aim of this concluding section was to offer a brief overview of clitic forms and their associated behaviours from a typological point of view. The rationale for this was two-fold. First, such an in-depth definition of clitics and their morphosyntactic properties is necessary for an understanding of clitic distributions in Berber. Secondly, a description of the range of contexts in which clitics tend to occur cross-linguistically and aspects of the accounts brought forward to explain their behaviours crucially builds the foundation for an analysis of clitics in Berber. Indeed, Berber clitics display the distributional properties of each of the three types of clitic systems argued above to constitute the clitic hierarchy; Edge-oriented, V-TAM-oriented and Head-oriented clitic systems. What these similarities are and how they can be accounted for are topics covered in the following two sections. Section 4.2 focuses on the distributions of clausal clitics (i.e. clitics which occur within the CP constituent) and provides an analysis which accounts for their various placements. Section 4.3 focuses on clitics which occur within DP structures.
4.2 Clausal clitics

4.2.1 Distribution of clausal clitics

In most Berber languages, clausal clitics consist of pronominal elements as well as spatial deictics. However, depending on the variety, clitic classes can additionally include adverbal, prepositional, aspectual, and participial elements (Dell & Elmedlaoui, 1989; Ouhalla, 1989; 2005a; 2005b):

(19) **Tuareg**

a. i-uri =[t] arrau PRONOMINAL
   3SGM-open_{PRF} =CL.3SGM;ACC boy
   The boy opened it.
   (Ouhalla, 2005a: ?)

**Tashelhit**

b. ur =_[a]_ =dis i-shtta AUXILIARY
   NEG CL.AUX with-her 3SGM-eat_{IMPRF}
   *He does not eat with her.*
   (Ouhalla, 2005a: 15)

c. is =_[sul]_ =t gi-s i-srs ADVERB
   COMP finally CL.3SGM;ACC LOC-3SG 3SGM-put_{PRF}
   *Did he finally put it into it?*
   (Dell & Elmedlaoui, 1989: 173)

d. lmqar lra ra [xr-xy] y-afk PREPOSITIONAL
   even:if just PRT toward-3SG 3SGM-go_{AOR}
   *Even if he goes to it only now.*
   (Ibid: 172)

**Taqbaylit**

e. Ala nekk ur =_[a]_ i-ghl PARTICIPLE
   only PRO.1SG NEG =PTCP 3SGM-fall_{PRF}
   *I was the only one who did not fall.*
   (Ouhalla, 2005b: 665)

Most Taqbaylit varieties conventionally possess pronominal clitics and a locational clitic\(^{126}\), the *d* clitic, which will be described in details in section 4.4.

\(^{126}\) The variety presented here does not make use of a participle clitic of the type proposed by Ouhalla (2005b after Achab, pc).
As for pronominal clitics occurring within the clausal domain, as described in Chapter 3, they come in accusative and dative forms. The clitic paradigms provided there are repeated below for convenience.

Table 8: ACCUSATIVE CLITICS

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
<td>iy</td>
<td>(me)</td>
<td>ay</td>
<td>(us)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
<td>ik</td>
<td>ikem</td>
<td>iken</td>
<td>ikent</td>
</tr>
<tr>
<td></td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
<td>(you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
<td>it</td>
<td>itt</td>
<td>iten</td>
<td>itent</td>
</tr>
<tr>
<td></td>
<td>(him, it)</td>
<td>(her, it)</td>
<td>(them)</td>
<td>(them)</td>
</tr>
</tbody>
</table>

Table 9: DATIVE CLITICS

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th></th>
<th>PLURAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Pers</td>
<td>iyi</td>
<td>(to me)</td>
<td>ay</td>
<td>(to us)</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Pers</td>
<td>ak</td>
<td>am</td>
<td>aven</td>
<td>aken</td>
</tr>
<tr>
<td></td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
<td>(to you)</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Pers</td>
<td>as</td>
<td>(to him/hers/it)</td>
<td>asen</td>
<td>asent</td>
</tr>
<tr>
<td></td>
<td>(to them)</td>
<td>(to them)</td>
<td>(to them)</td>
<td>(to them)</td>
</tr>
</tbody>
</table>

Taqbaylit clausal clitics behave on a par with most of their Berber counterparts (cf. Dell & Elmedlaoui, 1989 for Tashelhit; Ouhalla, 1989; 2005a for Tarifit; Ouali, 2006 and Boukhris, 1998 for Tamazight). They combine as enclitics with a number of hosts but only occur in two positions within clauses: either directly before or directly after the verb. Whether they are pre-verbal or post-verbal depend on the particular syntactic contexts in which clitics occur:

(i) When an appropriate clitic host precedes the verb, it obligatorily hosts the clitic and a pre-verbal order is derived.
(ii) In all other contexts, the verb hosts the clitic and a post-verbal order occurs.

Consider the two illustrative sentences in (20):

(20) a. la = [d] i-ttazel *= [d]  
PRT =D 3SGM-runIMPREF
He is running (towards here).

b. y-awed = [as] melih tamuyeli  
3SGM-repeatPRF =CL.3SG;DAT good look
He gave him a good look.

c. *[as]= y-awed melih tamuyeli

In (20a), the aspectual particle la, which is an appropriate host, precedes the verbal form ittezel 'run' and hosts the clitic. By contrast, in (20b), no host precedes the verb form yawed 'repeat', therefore it is the latter which hosts the clitic.

Across Berber, appropriate clitic hosts form a limited class and only include some of the overt heads of functional projections contained within the extended VP (Ouhalla, 2005). In Taqbaylit, the functional heads which can host a clitic are TAM particles – aspectual markers lala and the Irrealis marker ad –, the complementizer associated with clefts and relative clauses constructions i (cf. 21c) and the negation ur.
(21) **Particle ad**

a. \( \text{ad} = [\text{gen}] \text{ dehku-γ} \) \( *= [\text{gen}] \)

\( \text{PRT} = \text{CL.2PL;ACC} \text{ tellAOR-1SG} \)

*I will tell you (the story).*

**Complementizer \( i \)**

b. \( \text{acuyer i} = [s] \text{ sefre-n} \) \( *= [s] \)?

\( \text{why} \ \text{COMP} = \text{CL.3SG;DAT} \text{ whistle}_{\text{PRF}}-3\text{PLM} \)

*Why did they whistle at him?*

c. \( \text{amba i} = [d] \text{ iruhen} \)

\( \text{who} \ \text{COMP} = \text{D} \text{ go}_{\text{PTCP}} \)

*Who came?*

**Negation \( ur \)**

d. \( \text{ur} = [\text{ten}] \text{ i-γya} \) \( *= [\text{ten}] \text{ ara} \)

\( \text{NEG} = \text{CL.3PLM;ACC} \text{ 3SGM-want}_{\text{PRF}} \text{ NEG} \)

*He didn’t want them.*

Other elements which occur within the CP projection do not constitute appropriate clitic hosts. Such elements as \( \text{WH} \)-operators and the complementizer \( \text{beli} \), even when they occur adjacent to the verb, never host clitics. Consider for instance the following sentences:

(22) a. \( \text{i-na} = d \text{ beli t-ruh} = [d] \)

\( \text{3SGM-say}_{\text{PRF}} = \text{D} \text{ COMP} \text{ 3SGF-go}_{\text{PRF}} = \text{D} \)

*He said that she came.*

b. \( *\text{i-na} = d \text{ beli} = [d] \text{ t-ruh} \)

\( \text{3SGM-say}_{\text{PRF}} = \text{D} \text{ COMP} = \text{D} \text{ 3SGF-go}_{\text{PRF}} \)

*He said that she came.*

c. \( *\text{acuyer} = [\text{as}] \text{ t-fka} \text{ tatefaht?} \)

\( \text{why} = \text{CL.3SG;DAT} \text{ 3SGF-give}_{\text{PRF}} \text{ apple} \)

*Why did she give her/him an apple?*

That \( \text{WH} \)-operators and the complementizer \( \text{beli} \) are not appropriate clitic hosts is demonstrated by the ungrammaticality of examples (22b) and (22c) above. In (22b), the clitic \( =d \) occurs on the complementizer \( \text{beli} \) instead of the verb \( t\text{-ruh} \) ‘she went’ leading to ungrammaticality. In (22c), the ungrammaticality is caused
by the combination of the dative clitic =as with the operator acuyer ‘why’. Furthermore, in complex verb constructions, as shown in (23) below, the clitic is obligatorily hosted by the second verb, never by a higher verb.

(23) a. y-uyal\textsuperscript{127} y-ukr = [as] yiwen uqcwal
   \textit{3SGM-become\textsuperscript{pref} 3SGM-rob\textsuperscript{pref} =CL.3SG;DAT one basket}
   \textit{Then/after he robbed one basket from him.}

b. \textit{*y-uyal = [as] y-uker yiwen uqcwal}
   \textit{3SGM-become\textsuperscript{pref} =CL.3SG;DAT 3SGM-rob\textsuperscript{pref} one basket}

c. i-la i-ruh = [d]
   \textit{3SGM-be\textsuperscript{pref} 3SGM-go\textsuperscript{pref} =D}
   \textit{He had gone.}

d. \textit{*i-la = [d] i-ruh}
   \textit{3SGM-be\textsuperscript{pref} =D 3SGM-go\textsuperscript{pref}}

In contexts where several possible hosts co-occur, clitics attach to the one occurring rightmost and directly preceding the verb. This is illustrated by (24a) and (24c) in which the dative clitic obligatorily combines with the lowest appropriate host, respectively the aspectual particle \textit{la} and the negation \textit{ur}.

(24) a. ur la = [s] i-ttak ara aqviz
   \textit{NEG PRT =CL.3SG;DAT 3SGM-give\textsuperscript{imprf} NEG2 bread}
   \textit{He doesn’t give her/him bread.}

b. \textit{*ur = [s] la i-ttak ara aqviz}

c. argaz i ur = [s] i-ttak ara aqviz
   \textit{man COMP NEG1 =CL.3SG;DAT 3SGM-give\textsuperscript{imprf}NEG2 bread}
   \textit{It is the man who he doesn’t give bread to.}

d. \textit{*argaz i = [s] ur ittak ara aqviz}

\textsuperscript{127} In Taqbaylit, the lexical verb \textit{uyal} ‘to become’ can be used in complex verb constructions of the type described in section 2.4.3. In these constructions, its main meaning is aspectual (Nait-Zerrad, 2001) and, in those contexts, can be translated either as ‘start to do something’ or ‘after/then’. In complex constructions, \textit{uyal} can be followed by the particles \textit{la} and \textit{ad}.

i. y-uyal a/la i-trtu
   \textit{3SGM-become\textsuperscript{pref} PRT 3SGM-cry\textsuperscript{imprf}}
   \textit{Then, he was crying}
Clitic clusters

Verbal clitics in Taqbaylit, like in all Berber languages, can combine to form clitic clusters. However, given that clitic clusters are constrained by the PCC (Bonet, 1991), 1st/2nd person accusative and dative clitics are incompatible and thus, cannot co-occur. This restriction is shown by the ungrammaticality of (25a) below where the 1st singular accusative clitic =iyi forms a cluster with the 3rd singular dative clitic =(a)s.

(25) a. *i-cga =[(a)s] = [iyi]
   3SGM-sendPRF CL.1SG;DAT CL.3SG;ACC
   He sent me to her.

b. i-cga =[iyi] γur=es
   3SGM-sendPRF CL.1SG;ACC to=CL.3SG;OBL
   He sent me to him/her.

The order in which clitics occur within clusters not violating the PCC is rigidly fixed: a dative clitic must precede an accusative clitic which, in turn, always precedes the =d clitic. The order of clitic clusters is summarized in (26) and further illustrated by the sentences in (27).

(26) Clitic clusters ordering

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dative</td>
<td>Accusative</td>
<td>Locational (=d)</td>
</tr>
</tbody>
</table>

(27) a. i-fka =[(9as] =[t] =[id]
   3SGM-givePRF =CL.3SG;DAT =CL.3SGF;ACC =D
   He gave it to him/her

b. *i-fka =[t] =[(9as] =[id]
   3SGM-givePRF =CL.3SGF;ACC =D=CL.3SG;DAT =D
   He gave it to him/her

Clitic doubling

As many languages with pronominal clitics, Berber also allows clitic-doubling constructions. That is constructions in which a clitic co-occurs with a
co-indexed lexical DP (Sportiche, 1996) fulfilling the same lexical role. Taqbaylit is known for allowing both accusative and dative clitic doubling (cf. (28)). However, the variety of Taqbaylit under study behaves on a par with other Berber languages and only licenses dative clitic-doubling. This is shown by the ungrammaticality of (29) below.

(28) a. y-engha =\[t\] 3SGM-kill\_PRF =CL.3SGM;ACC He killed the snake. 
    (Achab, 2004: 2)

b. te-gezm =\[as\] 3SGF-cut\_PRF =CL.3SG;DAT to\_DAT She cut the boy’s navel string. 
    (Lit: she cut the navel string to the boy)

(29) *wala-γ =\[t\] seeprg-1SG =CL.3SGM;ACC I saw the man.

In section 4.2.3, I will locate the domain of cliticization within the semantic zone structure I proposed in Chapter 2. But before, a description of the previous analyses proposed to account for clitic placement in various Berber languages is necessary. In the next section, I will discuss the main three accounts of the phenomenon which have been proposed in the literature.

4.2.2 Previous analyses

Accounts of the distribution of clitics across Berber languages have been numerous. Although they differ in how the final position of clitics is derived, they overall concur on the idea that it corresponds to some extended functional projection of VP. This projection has been concurrently identified as vP and TP (Boukhris, 1998), AspP (Achab, 2007), CIPs (Ouali, 2006) and a null FP (Ouhalla

\footnote{Note that accusative clitic-doubling, when allowed, requires that the noun heading the doubled DP occurs in it Construct State form.}

**Base-generation: Ouali (2006)**

Ouali (2006) adopts Sportiche's proposal (1996 & 1999) to account for the distribution of clitic forms across Berber. He assumes a template of the type given in (30) within which accusative and dative clitics are base-generated as heads of their own clitic phrases, Cl\_DATP and Cl\_ACC\_P occurring just below TP.

\[(30)\]
\[
\begin{array}{c}
\text{TP} \\
\text{T'} \\
\text{T} \\
\text{Cl\_DATP} \\
\text{Cl\_DAT} \rightarrow \text{Cl\_ACC\_P} \\
\text{Cl\_ACC} \rightarrow \text{AspP} \\
\text{Asp'} \\
\text{Asp} \rightarrow \text{VP}
\end{array}
\]

Within this approach, the preverbal and post-verbal clitic orderings are derived as follows. Heads of functional projections occurring above the proposed clitic projections, when they are overt, host the clitics. In all other contexts, the verb undergoes PF movement to the head position of TP in order to be a prosodic host for the clitics. The derivation can be illustrated with the following examples (Ouali, 2006: 102-104).

\[(31)\]
\[
a. \quad \text{da} = [\text{as}] = [\text{thu}] \quad \text{wshe-x} \\
\text{FUT} = \text{CL\_3SG;DAT} = \text{CL\_3PLM;ACC} \quad \text{give}_{\text{PRF}-1SG} \\
\text{I will give them to him.}
\]
The clitics $=\text{as}$ and $=\text{thn}$ are merged as the respective heads of $\text{Cl}_{\text{DAT}}P$ and $\text{Cl}_{\text{ACC}}P$ directly dominated by TP. In (31), the head of TP is phonologically realized by the particle $da$ and hosts the clitics. In (32), by contrast, the head of T is not realized. As a consequence, the verb undergoes a PF movement to T and hosts the clitic. The contexts in which clitics are hosted by the negation $ur$ or a complementizer head are derived in the same way. Consider the following derivations (Ouali, Ibid: 104):
In (33a) above, the head of NegP, which Ouali assumes to occur right above TP, hosts the clitics because it is the phonologically overt head which precedes them. In (33b), the closest overt head available to host the clitics is ay, the head of CP.

Although it explains basic orderings, there are a number of limitations to a base-generation analysis of clitic placement in Berber. On a theoretical level, the following problem arises. Sportiche (1996: 55-62) proposes a link between positions within which series of clitic voices are generated and the semantic notion of specificity. The assumption made, in a nutshell, is that accusative clitics are specificity licensors and dative clitics are agreement elements. Now, specificity licensors must occur in higher clausal projections linked to specificity. However, Ouali locates C1ACC, the projection of accusative clitics, lower than the projection of dative clitics, and furthermore locates the series of clitic projections lower than TP, therefore failing to link the proposed order to specificity.

Empirically there are two problems with the thesis that clitics are base-generated in their surface location. First, like Sportiche for French and Romance dative clitics, Ouali considers Berber clitics to be agreement heads. However, unlike their French counterparts, these clitics behave differently from other agreement elements, such as subject agreement markers. As already noted by Shlonsky (1997) and Ouhalla (2005b), subject agreement markers obligatorily occur on the lexical verb whereas clitics combine with other TAM satellites. The sentences in (34) and (35) show that the dative clitic can and must occur on the particle ad whereas the agreement marker n- must occur on the verb.
(34) a.  a [n]-fka akadu i tislit
   PRT 1PL-giveAOR present toDAT bride
   We will give a present to the bride.

b. *[n]-a fka akadu i tislit
   1PL-PRT giveAOR present toDAT bride

(35) a. =[s] n-fka akadu
   PRT =CL.3SG;DAT 1PL-giveAOR present
   We will give her a present.

The second issue with a base-generation account is somewhat a bit more
trivial but shows that it is an uneconomic way to derive clitic placement. It is
linked to the prepositional clitics found in a number of Berber languages. In
Tamazight and Tashelhit, PPs formed by a preposition and an oblique clitic can
themselves undergo optional cliticization (Dell & Elmedlaoui, 1989; Boukhris,
1998; Ouhalla, 2005a) and behave syntactically in the same way that other clitics
do. The following sentences from Tamazight, adapted from Boukhris (Ibid: 423),
illustrate this phenomenon. In (36a) the PP dis formed the preposition di
(in/inside) and the clitic =s occurs post-verbally, the regular position for oblique
PPs (cf. Chapter 2). In (36b), the complex appears pre-verbally within a cluster,
along with the dative and accusative clitics, hosted by the negation ur.

(36) a. ur =as =t gri-n [di=s]
   NEG =CL.3SG;DAT CL.3SGM;ACC throwPRLM-3PLM in=CL.3SG;OBL
   They didn't throw it to him inside it.

b. ur =as =t =[dis] gri-n
   NEG =CL.3SG;DAT CL.3SGM;ACC =PREP.CL throwPRLM-3PLM
   They didn't throw it to him inside it.

To account for this optional cliticization of prepositions, a base-generation
account would have to uneconomically project two different positions for similar
types of PPs, one occurring post-verbally and the other pre-verbally. This type of
phenomenon and the alternative orderings which are found are in fact more
straightforwardly derived by assuming a movement approach to clitic placement
in Berber. This is the stance I will take in section 4.2.3 to explain clitic placement in Taqbaylit. Several analyses adopting a movement approach have been proposed to account for the distribution of clitics across Berber languages. Two of these are described in the next sub-sections.

**Movement: Boukhris (1998) and Ouhalla (2005)**

Boukhris (1998) relies on an interaction between clitic and verb movements to derive clitic placement in Tamazight. She proposes a clausal structure in which VP can be dominated by three functional projections: vP, AspP and TP. The verb is generated with its subject inside VP, but raises to one or all of the dominant projections depending on the features their heads contain. In a nutshell:

(i) V always moves to transitive v, which carries a strong [V] feature.

(ii) V moves to Asp and T if they carry strong features – respectively [+Perf] and [-Fut].

(iii) Asp and T which carry the weak features [-Perf] and [+Fut] are realized by morphemes, respectively *la* and *ad*.

(iv) In contexts where Asp is realized by an overt morpheme (i.e. *la*), the latter raises to T to check its strong feature instead of V.

In this structure, clitics are considered to be heads of deficient DPs projected inside VP in the same argument positions as their lexical counterparts. Direct object clitics are merged as complements of V while datives and obliques are merged as complements of covert prepositions. All undergo an XP-type movement to the Specifier of vP. The derivation is illustrated below in (37) (adapted from Boukhris, 1998: 389).
Similarly to V-raising, clitic-raising is motivated by feature checking. As functional heads, clitics require their case and \( \Phi \)-features to be checked. Reciprocally, little \( v \) carries a \([D]\) feature that also needs to be checked. Hence, clitics are attracted by \( v \) to check its \([D]\) feature and in the meantime get their case checked. Whichever overt head precedes the clitic in the structure hosts it at the phonological level (Phonetic Form, henceforth PF).

This type of movement coupled with the various possible targets of verb-raising gives rise to the various clitic orderings. Thus, in (38) below (adapted from Boukhris, 1998: 268), the clitic \( m \) raises to Spec vP while the verb \( clan \) moves to v and is then further attracted by Asp and T. V in T directly precedes the clitic and hosts it at PF.

(38) a. \( \text{cla-n} = [m] \) middn
\( \text{see}_{3\text{PLM}} \quad = \text{CL3SGM;ACC} \quad \text{people} \)

*People saw them.*
Now in (39) (Ibid: 321-325) below, the clitic also raises to Spec-vP, but the verb only moves as high as v. Because Asp is [-Perf] it is realized by the morpheme la. This morpheme is in turn attracted to T and hosts the clitic at PF.

(39) a.  
\[
\text{la} = [tn] . \quad \text{ucllu-x} \\
\text{PRT} = \text{CL.3PLM;ACC} \quad \text{see}_{\text{ASP}} \text{-} 1 \text{SG} \\
I \text{am seeing them}:
\]

b.  
\[
\text{TP} \\
T' \\
T_{[-\text{Perf}]} \quad \text{AspP} \\
\text{clan}_{k} \quad \text{Asp'} \\
\text{Asp}_{[\text{+Perf}]} \quad \text{vP} \\
t_{k} \\
\text{cl}_{k} \\
\text{tm} \\
v \\
\text{tm} \\
\text{VP} \\
\text{VP} \\
\text{DP} \\
\text{VP} \\
\text{DP} \\
\text{DP}
\]

\[
\text{ucluux}_{k} \quad \text{DP} \\
\text{pro} \\
\text{DP} \\
t_{k} \\
t_{i}
\]

I am seeing them’.
Finally in the structure below (Ibid: 329), the verb is moved to little v while the clitic in Spec vP is hosted at PF by ad, the overt realization of [+Fut] T.

(40) a. ad = [tn]  
    PRT = CL.3PLM;ACC  
    see$_{aor}$-1SG  
    *I will see them.*

b. \[TP \quad \begin{array}{c} T' \\ \begin{array}{c} T_{[+Fut]} \\ vP \\ \begin{array}{c} ad \\ cl_i \\ v' \end{array} \\ VP \end{array} \end{array} \]

Movement to Spec-vP accounts for all the orders in which a clitic is hosted by either the verb or one of its TAM particles (i.e. la/a and ad). However, in contexts where negation and complementizer heads are hosts, an additional movement to a higher target is necessary. Indeed, in Boukhris’s structure, CP and NegP occur in that order above TP. Such a system as the one described so far wrongly predicts that, in most instances, either a particle or the verb itself will intervene between Neg and C and host the clitic in Spec-vP. To solve the problem, clitics are further argued to undergo a second movement to the Specifier of TP. Within the framework, the two orders in sentences (41) are derived as shown in (42a) and (42b) below (adapted from Boukhris, Ibid: 330-339).

(41) a. ur = [tn]  
    NEG = CL.3PLM;ACC  
    see$_{prf}$-1SG  
    *I didn’t see them.*

b. is = [tn]  
    COMP = CL.3PLM;ACC  
    see$_{inf}$-1SG  
    *Have I seen them?*
Movement to Spec-TP is triggered by features too. Pronominal clitics carry a Person feature and Boukhris proposes that it requires them to occur in a Specifier-Head relationship with a tense operator (T). As for Neg and C, they are argued to contain elements linking them to T and permit clitic attraction to Spec-TP. The link between Neg and T is the [+Neg] feature the former gives to the latter while an abstract temporal operator it contains is argued to link C to T. Note that in contexts where clitics remain in Spec-vP, the relevant features are proposed to be checked in LF (Logical Form).
Despite its ordering advantages, the movement of clitics to Spec-TP and its motivations raise a number of issues. In particular, there seems to be no common link between the clitics and some of the features inherited by T from C and Neg. For instance, it is not clear what type of features carried by pronominal clitics in Berber could permit checking of the [+Neg] feature acquired by T from a preceding Neg. This feature-based movement, assuming it occurs, poses an additional problem. Clitics never move overtly to Spec-TP in contexts where the TAM particles are realized, even where T is selected by Neg or C. Boukhris is aware of that and to explain this absence of clitic attraction, she argues that clitics must remain in a Specifier-Head relationship with the verb. Presumably, the absence of movement there signifies that the requirement for locality between clitics and the lexical verb they are associated with is stronger than T attraction. Thus, clitics remain in Spec-vP when V is in v but move to Spec-TP when V is in T. However perfective verbs, which move all the way to T, are not accompanied by clitic movement to Spec-TP:

\[1\]

Boukhris does not consider the possibility but even if, as argued by Chomsky (1995), T carries a [+D] feature that needs to be checked, and thus attracts clitics to its Specifier position, it is still not clear why attraction would occur only in contexts where T is preceded by C or Neg.
Boukhris suggests that movement does not happen here because no attraction from T is triggering it. Yet, bearing in mind that the requirement for clitics to be in a Specifier-Head relationship with V seems to outrank attraction in the presented analysis, movement to Spec-TP should be expected to occur. In addition, T which hosts a perfective verb carries, according to the presented account, a strong feature [-Fut] and could be argued to be able to attract a clitic in the same way that a T selected by C containing a temporal feature does.

Now, if, as suggested above, Neg and C share no particular features with the clitic, movement to Spec-TP in these contexts occurs only in order for clitics to check their person features in a Specifier-Head relationship with V. For the same reason, higher clitic movements should therefore be possible and obligatory in all contexts where the verb moves to higher positions. As shown by (43) above this is not the case.

Without clitic movement to Spec-TP, however, the ordering issue when the verb is preceded by C and Neg heads is not solved. With clitics in Spec-VP, Boukhris's clausal structure and different movement operations trigger in all contexts attachment to the verb or, when it is not raised, to one of the TAM
particles. Although her proposal captures an important aspect of the distribution of clitics in Berber— that when they do not follow the verb, clitics must strictly precede it—, it does not take into account another important fact: verbs only function as clitic hosts as a last resort. That is, when no overt possible host is available. With that in mind it seems that clitics must target a position which is higher than the verb at all time (i.e. even after verb-movement). This is, in part, what Ouhalla (2005a) proposes and the stance I will take in section 4.2.3. Next, I briefly describe the gist of Ouhalla’s analysis.

Ouhalla (2005a) also proposes a derivation for clitic placement involving movement but, follows the type of approach argued by Kayne (1991) for Romance languages. He suggests that clitics in Berber are attracted by and left-adjoin to a single null functional phrase (FP) occurring above VP. The structure can be formally represented as (44) below.

\[
\begin{array}{c}
\text{F}_{\text{NULL}} \\
\text{CL} \\
\text{F}' \\
\text{F}_{\text{NULL}} \\
\text{VP} \\
\text{V} \\
\text{CL}
\end{array}
\]

The proposed FP can be valued by one of the following functional heads C, NEG or T. The preverbal and post-verbal orders are also straightforwardly derived. In contexts where the head of FP is overtly realized by one of the preceding elements, it phonologically hosts the clitic. Given their prosodic nature, clitics cannot be the first elements in the minimal domain in which they occur. Thus, they inverse orders with their hosts in a clitic-host inversion process. This is illustrated in (45) below (slightly edited from Ouhalla (2005a:12)):

\[
\begin{align*}
\text{(45) a.} & \quad \text{\textcolor{red}{[FP [ [ CL ] [F] [\text{XP } \text{V} \ldots ]]}} \\
\text{Clitic-host Inversion} \\
\text{b.} & \quad \text{\textcolor{red}{[FP [ [ F ] [=CL] [\text{XP } \text{V} \ldots ]]]}}
\end{align*}
\]
By contrast, in contexts where FP remains null, the clitic attaches to the following verb. For the same reasons as before, clitic-host inversion takes place and the clitic inverses orders with the verb.

\[
\text{(46) a. } [\text{FP} [[\text{CL}] [\text{F}\text{null}]] [\text{xp} \text{ V}]]]
\]

\[
\text{Clitic-Verb Inversion}
\]

\[
\text{(46) b. } [\text{FP} [[\text{V}] [=\text{CL}] \text{F}\text{null} ] [\text{xp} \text{ ...}]]
\]

Ouhalla’s proposal captures the essential syntactic properties of clitics in Berber. Indeed, as mentioned before, clitics are only hosted by lexical verbs in contexts where no other hosts are available, and this is straightforwardly explained by positing a clitic movement to an FP occurring higher than VP/vP. As well, the proposal put forward captures the fact that clitics always attach to the lowest functional head preceding the verb. Nevertheless, it is not obvious how F the head of FP could be valued by heads from a number of categories such as C, Neg, T and Asp.

In the next section, I adopt part of Ouhalla’s and Boukhris’s proposals and present an analysis of clitic placement within the extended structure I proposed in Chapter 2.

4.2.3 Extended event structure and clitic-movement

The aim of this section is to offer a derivation of clitic placement within the extended event-structure framework and show at the same time that this type of clausal structure can, amongst its many advantages, help solve the puzzle of cliticization in Berber. In previous sections, we have seen that Berber clitics display a number of distributional properties, which can be summarized as follows:
(i) They occur either pre-verbally or post-verbally but must be in strict adjacency with the verb.

(ii) Pre-verbal orders only arise in contexts where the verb is preceded by at least one of a number of functional heads, namely C, Neg and TAM particles.

(iii) The functional head which directly precedes the verb is the prosodic host of the clitic.

(iv) Functional heads occurring above the lower CP never host clitics.

As can be observed, Berber clitics share a number of strong similarities with Romance clitics and more generally, V-TAM clitics. All the accounts described earlier have been developed, partly, on these similarities. However, Berber clitics also present distributional particularities which are characteristic of other systems on the clitic hierarchy set up in section 4.1.2, particularly with P2 clitics. For these reasons, the analysis to be developed in the following sub-sections builds on from Ouhalla’s (2005) proposal and relies principally on an interaction between syntactic and phonological processes to derive clitic placement. Most specifically, it proposes that Berber clitics have the syntactic properties associated with V-TAM clitic systems and the phonological properties associated with Edge-oriented systems. Although the account primarily focuses on Taqbaylit, reference to other Berber languages will be made where necessary.

The present section is organized as follows. In the first sub-section, I will discuss the V-TAM properties of Taqbaylit clitics and argue that one step in the derivation of clitic orders is a syntactic movement targeting a TAM projection occurring above vP. In the second sub-section, I will discuss the Edge-oriented properties of Taqbaylit clitics and suggest that the second step in clitic ordering is a phonological operation which incorporates clitics either on a preceding prosodic head or on the verb. In the third sub-section, I will propose a reason for why the
two operations argued to give rise to clitic distributions take place. Finally, I will conclude the section by showing with a number of examples how the proposed analysis derives the orders summarized above.

V-TAM oriented movement

In a nutshell, the clitic hierarchy proposed in section 4.1.2 is a cross-linguistic organization of verbal clitics along a cline, depending on the semantic and syntactic domains within which they cliticize. Edge-oriented clitics (e.g. P2 clitics) are those that tend to target the edge of higher clausal domains. V-TAM oriented clitics tend to occur on the verb or other elements carrying modal, temporal or aspectual functions. And finally, Head-oriented clitics always occur with the head of the domain they are merged in.

Clausal clitics in Taqbaylit can be considered to belong to the V-TAM oriented type. Indeed, they display a number of properties characteristic of other V-TAM clitic systems, such as the Romance ones. First, like Romance clitics, they are not phonologically hosted by the verb when it is preceded by the TAM particles *ad* and *la/a*.

(47) **Taqbaylit**

a. \[a la\] =*[d]* i-tazel \ *=*[d]*
    
    PRT =D 3SGM-runIMPRF
    
    He is running (toward here).

b. \[a ad\] =*[gen]* dehku-γ \ *=*[gen]*
    
    PRT =CL.2PL;ACC tellAOR-1SG
    
    I will tell you (the story).

(48) **French**

    
    I CL.3SGM;ACC will.give to Mary
    
    I will give it to Mary.

b. Je *[l]= ai donné à Marie
    
    I CL.3SGM;ACC have.given to Mary
    
    I have given it to Mary.
Second and most crucially, they display a distributional particularity that is strikingly similar to that of other V-TAM clitics such as Romance clitics. As observed by Sportiche (1993, 1996), Romance clitics always occur on the highest verbal element of the clause; that is the highest head which picks up agreement and TAM inflections. In the following sentences from French (Sportiche, 1993: 6) for instance, the accusative clitic is hosted by the highest verbal element, respectively the verb in (49a) and the auxiliary in (49b) (note that in 49b, the verb has no agreement inflection and occurs in a non-tensed form).

(49) a. Il [le]= [lui]= donnera
   he CL.3SGM;ACC CL.3SG;DAT give.FUT.3SG
   He will give it to him.

   b. Ils [lui]= ont été donnés
   they CL.3SG;DAT have.PAST.3PL been given
   They were given to him.

In Taqbaylit, and most Berber languages, clitics must also be adjacent to the highest verbal element. Indeed, whether they are positioned post-verbally or pre-verbally, clitics obligatorily occur in strict syntactic adjacency to the lexical verb, which always carries agreement and aspectual or mood inflections. Recall that even though they are associated with TAM-related semantics, TAM particles carry no such inflectional elements and are, in that respect, non-verbal.

(50) a. ve-fka =[(ɔ)s] =[iʃ]
   3SGM-giveprf =CL.3SG;DAT =CL.3SGM;ACC
   He gave it to him.

   b. ur la =[(a)s] =[iʃ] i-ttak ara
   NEG1 PRT =CL.3SG;DAT =CL.3SGM;ACC 3SGM-giveimpf NEG2
   He is not giving it to him.

   c. *ur =[(a)s] =[iʃ] la i-ttak ara
   NEG1 =CL.3SG;DAT =CL.3SGM;ACC PRT 3SGM-giveimpf NEG2
Verbal adjacency can be observed from the examples in (50) above. In (50a) the clitic directly follows the lexical verb *yejk*ā ‘he gave’. In (50b), the clitic is phonologically hosted by the aspectual particle *la* but again occurs in strict adjacency with the verb. As for (50c), it is ungrammatical because, although the clitic is phonologically hosted by an appropriate head (the negation *år*), it is separated from the verb by the particle.

The previous properties suggest that the FP to which clitics move is one of the TAM projections occurring above vP. Given the adjacency between clitics and the verb they are associated with, this TAM projection is then, presumably, one that also hosts the verb (as partly proposed by Boukhris, 1998). Now, it was established in Chapter 2 that the highest projection to which lexical verbs move in most contexts in Taqbaylit is the Higher Aspect projection (h-AspP) where they get their aspectual morphology and semantics. The FP which hosts clitics can thus be identified as h-AspP. The structure as proposed is given in (51) below, with irrelevant details omitted.

(51)

```
   h-AspP
      |           |
   CL  h-Asp'  h-Asp
      |      /\    |
      vP   vP
      |      |      |
      v   v   v
      |      |      |
      x   x   x
      |      |      |
      V   V   V
      |      |      |
      x   x   x
      |      |      |
      VP  VP  VP
```

Living aside how the various orders arise for now, the structure in (51) illustrates part of the derivation of clitic placement. It shows that clitics are generated in the same structural positions as their lexical counterparts — for accusative and dative clitics, the position is within the lower VP constituent (Boukhris, 1998; Ouhalla, 2005a) —, and subsequently, move to the Specifier of h-AspP. The lexical verb is merged as the head of the VP constituent and then undergoes head-movement up
to the head position of h-AspP in order to get its aspectual morphology and semantics.\(^\text{130}\)

**Edge-oriented phonology in clitic ordering**

The hypothesis that the Taqbaylit clitic system is V-TAM oriented and that the movement of clitics targets a TAM projection explains part of their distributional properties. There are, nevertheless, important differences between these two clitic systems. One crucial area where they diverge is their prosodic distribution.

For the most part, not only do Romance clitics always occur adjacent to the highest verbal element of the clause but they also systematically select it as their prosodic host. In Taqbaylit, and other Berber languages, on the other hand, the prosodic host is not necessarily the highest verb of the clause. TAM particles, we saw, can also function as prosodic hosts. But more interestingly, higher functional heads, such as complementizers and the negation particle phonologically host clitics when they are overt. Examples (52) and (53) demonstrate these prosodic discrepancies.

(52) **TAQBAYLIT**

\[
\begin{align*}
\text{a. } & \text{ambi i} =\text{[d]} \quad \text{iruhen} =\text{*[d]}? \\
& \text{who} \quad \text{COMP} =\text{D} \quad \text{go}_{\text{PTCP}} \\
& \text{Who came?}
\end{align*}
\]

\[
\begin{align*}
\text{b. } & \text{ur} =\text{[ten]} \quad i-v\gamma a =\text{[ten]} \quad \text{ara} \\
& \text{NEG} =\text{CL.3PLM;ACC.3SGM-want}_{\text{PREP}} \quad \text{NEG}
\end{align*}
\]

\text{He didn't want them.}

\(^\text{130}\)Since Chomsky (2001), transitive vPs (along with CPs) are considered to be phases. If vP is considered to be a phase, the clitic in \(\phi P\), c-commanded by v, should not be able to move to the Specifier of h-AspP. To solve the problem, successive movement of the clitic projection through Spec-vP could be argued to occur (cf. Ouali, 2006). However, I will follow here Svenonius (2004:264)'s assumption that a phase is not spelled out until its head has had all its features checked and, thus until then, materials within its domain are still accessible. Given this assumption, transitive vP in Berber is not a phase because the verb has its aspectual feature unchecked and \(\phi P\) can therefore move out of vP.
Another important difference between the two systems is their attachment orientation. Depending on the TAM inflection of the verb that hosts them, Romance clitics are either proclitics or enclitics (cf. section 4.1.2). Berber clitics, on the other hand, can never be proclitics. Going back to the examples in (52) and (53), it can be noticed that French clitics are indeed hosted by the head they precede whereas Taqbaylit clitics are phonologically hosted by the head they follow.

Actually, the prosodic properties of Berber clitics highlighted here are more generally characteristic of Edge-oriented systems. As discussed in details in section 4.1.2, Edge-oriented clitics are also always enclitics and also select as hosts prosodic heads occurring in higher clausal domains. In the following examples from Serbo-Croatian (Halpern, 1995: 21-22), the auxiliary clitic, similarly to Berber clitics, attaches to the relativizer and complementizer heads.

The similarities highlighted above with P2 cliticization suggest that some property of this system also takes part in the derivation of clitic placement in Berber. Given that these similarities are within the domain of prosody, the
property shared by the two systems must be a phonological one. In fact, this is part of Ouhalla’s argument. Indeed, he argues that Berber languages are governed by a phonological constraint such as (55) below.

(55) CL cannot be the first element in the minimal domain within which they occur.
     (Ouhalla, 2005a: 10)

The above restriction is similar to a number of constraints proposed to account for the behaviour of P2 clitics (Halpern (1996); Legendre (2000); Anderson (2005) amongst others). In essence, it prohibits clitics to be the first prosodic elements in their minimal domain; the minimal domain of a clitic in Berber being the maximal projection within which it occurs (cf. Ouhalla, Ibid).

Adopting Ouhalla’s view, it can be concluded that Taqbaylit clitics, like Berber clitics in general, are governed by a phonological constraint and as such are not allowed to be the first prosodic elements in h-AspP; i.e. their minimal domain in the present analysis. Now, like Edge-oriented systems, the specific attachment orientation of clitics in Berber results from the application of strategies available not to violate the phonological constraint in (55). I propose that Berber languages possess two such strategies: the first one is a PF movement of clitics to a preceding functional head (Boukhris (1998)) and the second strategy, also occurring at PF, is a clitic-verb inversion (Ouhalla, 2005a) whereby the verb is phonologically re-positioned in front of the clitic.

The two strategies suggested to be employed in Berber not to violate the phonological constraint in (55) are formally presented in (56).
(56) a. XP
   \[ X = \text{CP} \]
   PF-MOVEMENT
   \[ \text{h-AspP} \rightarrow \text{h-Asp'} \]
   vP
   V

b. h-AspP
   \[ \text{CL} \rightarrow \text{h-Asp'} \]
   vP
   V

CLITIC-VERB INVERSION

(56a) and (56b) above are in principle both available but PF movement to a preceding functional head has priority over clitic-verb inversion. The argument developed here therefore predicts that, whenever possible, a clitic will prosodically attach to a preceding functional head and that prosodic attachment to the lexical verb will occur only as a last resort, when no other hosts are available. This prediction is indeed borne out. Consider, for instance, the following sentences:

(57) a. ur =[(a)s] sawl-\(\gamma\) ara
NEGl =CL.3SG;DAT call\text{pRF-lSG} NEG2
I didn't call him.

b. *ur sawl-\(\gamma\) =[as] ara

c. a(d) =[(a)s] sawle-\(\gamma\)
PRT =CL.3SG;DAT call\text{AOR-lSG}
I will call him.

d. *ad sawl-\(\gamma\) =[as]

e. sawl-\(\gamma\) =[as]
call\text{pRF-lSG} =CL.3SG;DAT
I called him.
In (57a) and (57c), the dative clitic =as obligatorily occurs on the preceding functional heads ur and ad. In (57e), no functional head precedes the clitic and it attaches to the lexical verb and inverses orders, whence the V=CL order.

In the last sub-part of this section, I will show with more examples how the different possible orders in which clitics occur are derived in my analysis but before, I suggest a purpose for clitic movement(s) and the derivation of prosodic attachment.

**Clitic movement: Why and How?**

In the present dissertation, I adopt the pronominal hierarchy put forward by Cardinaletti & Starke\textsuperscript{131} (1999) (henceforth C&S). This hierarchy is an organization of pronominal forms into the three types in (58) based on syntactic deficiency.

(58) Strong pronouns > Weak pronouns > Clitics

The gist of the proposal is that each of the forms, strong pronouns, weak pronouns and clitics, is associated with its own syntactic, semantic and phonological behaviour which is determined by the type of features it contains and projects. Forms that lack certain features are considered to be deficient. Thus, strong pronouns which behave syntactically, semantically and phonologically as their lexical counterparts are argued to project the same features as, and thus be, CP's\textsuperscript{132}. Weak pronouns which do not project the CP layer lack the features associated with C (C-features) and, as such, are argued to be deficient. And finally, clitics which additionally lack a prosodic projection are argued to lack prosodic features and as a consequence be more deficient than weak pronouns.

Crucially, C&S argue that all the features which are missing must be recovered at all levels of representation. Because recoverability of features is only possible in particular positions, deficient elements, such as clitics, are restricted in

\footnotesize{\textsuperscript{131} Their proposal is described in details in Chapter 5.}
\footnotesize{\textsuperscript{132} In this context, C&S adopts the term CP to refer to DP (cf. chapter 5).}
terms of their distributions. That is, they must occur in structural positions where all the features they are missing can be retrieved. In C&S’s investigation, C-features are all derivable from the functional case feature, which can be recovered in the Specifier position of an agreement projection, AgrP. As for prosodic features, they are recoverable by clitics after incorporation into a head containing a prosodic feature. According to C&S, two heads carry such prosodic features inside clauses: Σ₀, the locus of prosodic features¹³³, head of a projection located between CP and IP or V which contains a copy of the features projected by the functional heads associated with it. C&S’s derivation is summarized in (59).

(59) **Cardinaletti & Starke’s derivation** (1999: 196)

In Chapter 5, I show that Berber clausal clitics fit right into that hierarchy and present the characteristics of projections that are deficient in both C-features and prosody. Adopting the terminology of Déchaine & Wiltschko (2002), I consider clitic projections to be ΦPs, as represented in (60).

(60) \[ \begin{array}{c}
Φ \\
\PhiP \\
NP
\end{array} \]

CL

As ΦPs, clitics simply consist of a bundle of Φ-features such as Person, Number and Gender (for pronominal clitics). The need for recovering their

¹³³ Σ₀ is also thought to be associated with focus, negation and mood heads (Condoravdi & Kiparsky)
missing features can account for the distribution of clitics in Taqbaylit and Berber in general. Clitics being deficient, they lack C-features and prosody and, as a consequence, must occur in structural configurations where these missing features can be recovered. I propose that the two operations that derive clitic orderings in Berber take place exactly for those reasons.

According to C&S, recoverability of the functional case feature, from which derive all C-features such as semantic range, is achieved by movement to the Specifier of an AgrP, a higher extended projection of VP. In Berber, it was proposed in the previous section, the position targeted by clitics is the Specifier of h-AspP. Given that h-AspP is also a higher extended projection of VP and that it hosts the lexical verb, this movement to Spec-h-AspP can be argued to be motivated by the need and to occur in order for clitics to recover their functional case feature. Additional support for the proposal that clitic recover their case feature, and therefore C-features, in this configuration also comes from a number of studies that have identified a close link between the notions of aspect and Case (Kiparsky, 1998; Kratzer, 2004). Achab (2006) has even similarly proposed that accusative clitics in Tamazight occur in Spec-AspP where they receive case. The present proposal is illustrated in (61).

(61) **Syntactic ΦP-Movement**

```
(=C-features)  CL_d  h-Asp  vP
               V_m  V  VP

  XP

  X  h-AspP
    ΦP  h-Asp'
```

---

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The second types of features clitics must recover are prosodic ones. C&S argue that prosodic features are recoverable from incorporation into Σ° − the head of ΣP that they take to be the locus of prosody in the clause and to occur below CP − or V°. However, given that prosody belongs to the domain of phonology, I assume that no such ΣP is projected in the extended event clausal structure of Berber. As for V°, it has been demonstrated and argued in various places above that it prosodically hosts clitics only when no other hosts are available. Clitics indeed favour prosodic attachment to a preceding functional head whenever possible. I propose, therefore, that in Berber, recoverability of prosodic features is achieved by either: (i) incorporation of clitics into the next higher functional head carrying prosodic features or (ii) if no such head is available, by incorporation with V°. Higher functional heads from which clitics can recover their prosodic features must occur within a particular domain, the lower CP, and thus include only lower complementizer heads, negation and TAM heads.

Recall that phonological attachment is governed by a phonological constraint which forbids clitics to be the first prosodic element in the minimal domain in which they occur. The constraint has two effects on clitic incorporation. First whenever possible, it will give precedence to a PF head-movement of the clitic to the closest prosodic head available. And second, in contexts where the only prosodic head available for clitics to incorporate into is the verb, it will cause a clitic-verb inversion. This is shown in (62) below.

(62) **PF incorporation**

\[
\text{XP} \xrightarrow{\text{INCORPORATION}} X (=\text{CL}_I) \xrightarrow{\Phi P} \text{h-AspP} \xrightarrow{\text{h-Asp'}} \text{vP} \xrightarrow{\text{V} = \text{CL}_I} \text{CL}_I \xrightarrow{\text{INCORPORATION + CLITIC-VERB INVERSION}} \]

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Note that although it adopts C&S's hypothesis that recoverability of features occurs in two different configurations, the analysis being developed here departs from it in two crucial ways. First, it builds on the assumption that missing features can be recovered in other structural configurations than those suggested by C&S, namely Spec-h-AspP and incorporation into other functional heads than $\Sigma^0$. Secondly, it proposes that each type of features, C-features and prosodic features, are recovered at different levels of representation in Taqbaylit and across Berber languages. Particularly, C-features, which are linked to syntactic and semantic functions (cf. Chapter 5), are recovered by clitic movement to Specifier of h-AspP at the syntactic level while prosodic features, which belong to the domain of phonology, are recovered by PF incorporation into a higher functional head or the verb.

In this sub-section and in Chapter 5 which discusses in more details the syntactic and semantic properties of Taqbaylit clitics, I focus on pronominal clitics. Although, it is not investigated in details, the spatial deictic clitic $=d$ found in Taqbaylit and across Berber languages (cf. section 4.4) can be assumed to lack C-features and prosodic features in the same way that pronominal clitics do and its placement can be derived by the same mechanisms as those proposed below. Indeed, C&S indicate that their hierarchical classification into strong and deficient forms can be extended to other grammatical categories. Prepositional clitics found in the Tamazight and Tashelhit varieties (cf. sections 4.2.1 and 4.2.2) can also be assumed to share these properties and behave in the same way.

As an initial conclusion to this section, Berber clitics can be said to syntactically belong to the V-TAM category of the clitic hierarchy presented earlier but, also display the phonological properties of Edge-oriented systems. These two characteristics are straightforwardly explained by the analysis developed so far. Clitic-placement in Taqbaylit and Berber has been argued to be derived in two-steps involving two levels of representations. At the syntactic level, clitics move as $\Phi P$ to the Specifier of h-AspP in order to recover the functional case feature (and consequently C-features) they are missing. At the
phonological level, clitics must incorporate into a prosodic head in order to recover the prosodic features they lack. Because clitics cannot be the first prosodic elements in their minimal domain, incorporation occurs into a higher functional head occurring within the lower CP domain. In contexts where no such head is available, incorporation targets the lexical verb in h-Asp and clitic-verb inversion takes place. In the next sub-sections, I show how this analysis derives clitic orders in Taqbaylit.

**Deriving clitic orders**

In this final part of the section, I demonstrate with a number of examples how the different clitic orders found in Taqbaylit can be derived by the analysis proposed. I start with the order where clitics are hosted by the aspectual particles *lala* in (63) below.

**(63)**

\[
\begin{align*}
\text{(a)} & \quad \text{la}/a \quad = [t] \quad \text{i-ttnadi} \quad \text{vava=}s \\
& \quad \text{PRT} \quad = \text{CL.3SGM;ACC 3SGM-look.for} \quad \text{father=} \text{CL.3SG;POSS} \\
& \quad \text{His father is looking for him.}
\end{align*}
\]

\[
\begin{align*}
\text{(b)} & \quad \text{CP2} \\
& \quad \text{C} \quad \text{h-Asp}_{\text{PRG}}P \\
& \quad \text{h-Asp}_{\text{PRG}} \quad \text{h-Asp}_{\text{IMPREF}}P \\
& \quad \text{la} = t_i \quad \Phi_{\text{CL}} \quad \text{h-Asp}_{\text{IMPREF}}' \\
& \quad \text{ti} \quad \text{h-Asp}_{\text{IMPREF}} \quad vP \\
& \quad \text{i-ttnadi} \quad DP \quad v' \\
& \quad \text{vava} s \quad VP \\
& \quad \text{i-ttnadi} \quad \Phi_{\text{CL}}
\end{align*}
\]
In (63) above, the lexical verb *ittnadi* ‘he looks for’ is merged in the head position of VP and combines with its direct object argument, the clitic *=t*. The verb moves to the h-Asp projection where it gets its imperfective morphology and semantics realized. In the present example, the verb is preceded by the particle *la* which heads its own projection in h-AspP. The clitic is merged as the head of a Φ-projection and moves to the Specifier of h-AspP in order to recover its C-features. At PF, the clitic further moves and incorporates into the next higher prosodic head, the particle *la*.

The same derivation is illustrated by (64) below. The aorist verb moves into the head of h-AspP and the clitic moves as a ΦP in order to get its case feature. The prosodic head which occurs above h-AspP being the Irrealis marker *ad* in the head of TvP, the clitic incorporates to it at PF.

(64) a. a(d) = [t] i-nadi vava=s
PRT =CL.3SGM;ACC 3SGM-look.for aor father=CL.3SGM;POSS
His father will look for him.

b. CP2
    C
    ┌─╴ TVs
    │
    │  h-AspAORP
    h-Asp
    └─╴ l_i
      ad
    h-AspAOR
      ├──╴ l_i
      │
      │ h-AspAOR
      ├╴ vP
      │  └╴ inadi_k DP
      │       └╴ v化妆
      │         └╴ VP
      │             └╴ *\h\*V
      │                 └╴ \^V
      │                     └╴ *\h\*V
      │                         └╴ \^V
      │                             └╴ *\h\*V
      │                                 └╴ \^V
      │                                     └╴ *\h\*V
      │                                          └╴ \^V
      │                                               └╴ *\h\*V
      │                                                    └╴ \^V
      │                                                         └╴ *\h\*V
      │                                                              └╴ \^V
      │                                                               └╴ *\h\*V
      │                                                                    └╴ \^V
      │                                                                        └╴ *\h\*V
      │                                                                             └╴ \^V
      │                                                                                     └╴ *\h\*V
      │                                                                                           └╴ \^V
      │                                                                                                               └╴ *\h\*V
      │                                                                                                                               └╴ \^V
      │                                                                                                                                   └╴ *\h\*V
      │                                                                                                                                   └╴ \^V
      │                                                                                                                                       └╴ *\h\*V
      │                                                                                                                                             └╴ \^V
      │                                                                                                                                                └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └╴ \^V
      │                                                                                                                                                    └╴ *\h\*V
      │                                                                                                                                                    └

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In (65), the clitic incorporates into the complementizer head $i$ which directly precedes the h-Asp projection within which the clitic occurs.

(65) a. $d\ \text{yemas}\ i=[s]\ \text{COP mother}\ \text{COMP}=\text{CL}\text{-}3\text{SGM};\text{ACC}\ \text{i-sawel}\ \text{3SGM-call}_\text{prf}$

It is his mother that he called.

b. 

Now consider the examples and derivations below, both involving incorporation to the lexical verbal head and clitic-verb inversion:

(66) a. $t\text{-heml}=[\text{it}]\ \text{yema}\text{=s}\ \text{3SOF-love}_\text{prf}=\text{CL}\text{-}3\text{SGM};\text{ACC}\ \text{mother}\text{=CL}\text{-}3\text{SG}\text{POSS}$

His mother loves/loved him.
In (66) and (67) the lexical verbs, respectively *thmel* (she loves) and *ttwali* (I see) are moved from their merge position, the head of VP, to the head of h-AspP to get their perfective and imperfective morphology and semantics realized. The accusative clitics, respectively *it* (him) and *kem* (you), are first merged as deficient OPs and are subsequently moved to the Spec-h-AspP where they get
their case feature recovered. At PF, clitics incorporate with the verbal head, which is the only prosodic head available to the clitic and because of the ‘not-first’ phonological constraint, clitic-verb inversion occurs.

To sum up, in this section I have presented an analysis of clitic placement in Taqbaylit and other Berber languages that relies on an interaction between syntactic and phonological processes. In particular, I have shown that clitic orderings can be derived by a syntactic movement of clitics to theSpecifier position of the aspectual projection hosting lexical verbs, h-AspP, and a PF incorporation of the clitic into a prosodic head which is either a preceding functional head or the verb. I have argued after Cardinaletti & Starke (1999) that both processes are motivated by the need for clitics to recover the features that they lack by virtue of being deficient. The syntactic movement permits recovering of the functional case feature while incorporation occurs in order for clitics to recover their prosodic features. I have additionally explained the compulsory enclitic orientation of Berber clitics by adopting Ouhalla (2005a)'s phonological constraint forbidding clitics to occur first in their minimal domain. In the final sub-section, I have shown how various clitic orderings are derived. Yet, there are contexts in which clitics occur that require further discussion. These are discussed in section 4.2.4. Before and to conclude this section, I provide in (68) a modified extended event structure of Berber clauses which incorporates the account proposed here. The syntactic and semantic domain of cliticization is identified there as the aspectual projection occurring in the middle TAM semantic zone.
(68) Extended Event Structure of Taqbaylit and Berber (Version 3)

**Key:**

- **CL**: clitic and clitic clusters
- **i**: relative clause and focus
- **ad**: particle
- **da/rad**: future particle in Tamazight-like dialects
- **la₁**: present and past particle (Tamazight and Tarifit)
- **la₂**: aspectual particle (Taqbaylit)
4.2.4 Negation and cliticization

It has been shown in various places that the sentential negation marker ur is an appropriate clitic host. Before explaining how the orders in which clitics attach to this head are derived, a word on how sentential negation is structured in Taqbaylit is necessary. Sentential negation is marked by two elements: (i) a preverbal head, ur, which occurs adjacent to the verb unless it is preceded by aspectual particles and (ii) a post-verbal negation, ara\textsuperscript{134}, which must be strictly adjacent to the verb. This is illustrated by the examples in (69b) and (69c).

\begin{itemize}
\item \textbf{a.} i-fka tatefaht i islam ideli 3SGM-give\textsubscript{PRF} apple to\textsubscript{DAT} Islam yesterday
\end{itemize}

\textit{He gave an apple to Islam yesterday.}

\begin{itemize}
\item \textbf{b.} ur i-fka ara tatefaht i islam ideli NEG1 3SGM-give\textsubscript{PRF} NEG2 apple to\textsubscript{DAT} Islam yesterday
\end{itemize}

\textit{He didn't give an apple to Islam yesterday.}

\begin{itemize}
\item \textbf{c.} ur la i-ttak ara daimen tatefaht i islam NEG1 PRT 3SGM-give\textsubscript{IMPRF} NEG2 always apple to\textsubscript{DAT} Islam
\end{itemize}

\textit{He doesn't always give an apple to Hanna.}

Following a long tradition in Berber linguistics, I assume that the first negation element ur occurs as the head of its own projection, namely NegP. As shown by (70), the first negation always precedes the aspectual particles but systematically follows the complementizer i and any dislocated constituent.

\begin{itemize}
\item \textbf{(70) t-na} =d beli d čučuka T i [ur] 3SGF-say\textsubscript{PRF} =D COMP cop čučuka COMP NEG1
\end{itemize}

\textit{She said that Seddik, he will not eat čučuka.}

\textsuperscript{134}In most Berber languages, NEG2 is either never (e.g. Touareg and Tashellit) or optionally used (e.g. Tamazight, Tarifit and some varieties of Taqbaylit) (Ouali (2003:2-4). In the variety of Taqbaylit under study NEG2 is obligatory, but can be dropped in some specific contexts:

\begin{itemize}
\item iv. argaz mni ur–i hmile–γ
\item man DEM\textsubscript{MNG} NEG1=CL.3SGM;ACC love\textsubscript{PRF}=1SGM
\end{itemize}

\textit{That man, I don't like him!}
Given the order in which it occurs, I locate the NegP headed by *ur* in the Upper Clausal Periphery zone argued for in Chapter 2, just below the lower CP projection. After Ouali (2003), I consider the second negation *ara* to be a negative adverb. I assume that it occurs in the Specifier position of a projection that I tentatively assume is a second NegP (henceforth NegP2), occurring just above vP. There are two main reasons for hypothesizing on a second NegP which directly dominates vP. The first one is that, in the present framework, adverbs are taken to occur in the Specifier positions of specific projections (Tenny, 2000; Cinque, 1999). As an adverb, then, *ara* must be merged in that kind of position. Given its semantics, it is likely that the projection is linked to negation semantics. The second motivation concerns the placement of the second Neg projection. The adverb *ara* is always adjacent to the verb, even when its subject is overtly realized. Given that subjects occur in the Specifier of vP and that lexical verbs move to higher TAM projections, NegP2 must occur between vP and the highest projection targeted by the verb. The structure involving negation heads in Taqbaylit is represented in (71) below.

(71) \[ \text{UPPER CLAUSAL PERIPHERY} \]

Let's focus now on how the clitic orders involving negation are derived. To that effect, consider (72):

---

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As in all the previous examples, the lexical verb, here thmir (she loves), is merged as the head of the VP. It undergoes head-movement to h-Asp via $v$ and Neg2. In h-Asp, the verb acquires its perfective morphology and semantics. The accusative clitic is merged as the head of $\Phi P$ occurring in the direct object position of VP. In order to recover its missing case feature, the clitic moves to the Specifier of h-AspP and finally, in order to recover its prosodic feature, incorporates at PF into the negation head $ur$.

As it stands, the proposal makes the prediction that clitics in Berber will always occur on the prosodic head which directly precedes the verb. And as mentioned in various places, this is indeed the case in most Berber languages. In the following sentence (73), for instance, three potential hosts occur above the h-
Asp projection hosting the verb and the accusative clitic \( t \) (him), namely the aspectual particle \( l a \), the negation \( ur \) and the complementizer \( i \). The clitic in the Specifier of \( h\)-AspP has moved there from its lower merge position to acquire a functional case feature. The analysis predicts that in order to recover the prosodic features it lacks, the clitic should further incorporate into a head which carries such prosodic features and that such head, in Taqbaylit and most Berber languages, should be the closest preceding one whenever possible. In (73a), the prosodic host of the clitic is the aspectual particle \( l a \) which, indeed, is the closest available preceding head:

\[(73)\]

\[
d\ yema=s \quad i \quad ur \quad la \quad =\{t\} \quad \text{COMP} \quad \text{NEG1} \quad \text{PRT} =\{\text{CL.3SGM};\text{ACC}\}
\]

\[
\text{ihmlen} \quad \text{ara} \\
\text{love}_{\text{PCTY}} \quad \text{NEG2}
\]

It is his mother who doesn't love him.

To conclude this section, I provide in (74) below a final version of the extended event structure of Taqbaylit and Berber.
(74) Extended event structure of Taqbaylit and Berber (final version):

**Upper Clausal Periphery**

- **C**
  - **Top**
  - **Foc**
  - **CP**
  - **Neg**

- **beli**
  - **Top**
  - **Foc**
  - **CP**
  - **Neg**

**Upper Semantic Zones**

- **TP**
  - **TvP**
  - **h-AspP1**

**Middle TAM Semantic Zones**

- **la1/da/rad Tv**
- **h-Asp**
- **h-AspP**

**Lower Semantic Zones**

- **la2**
- **h-Asp**
- **V_{AOR/IMPRF/PREF}**

**Key:**

- **[CL]**: clitic and clitic clusters
- **i**: relative clause and focus C
- **ad**: particle
- **da**: future particle in Tamazight-like dialects
- **la1**: present and past particle (Tamazight and Tarifit)
- **la2**: aspectual particle (Taqbaylit)
4.3 DP clitics

4.3.1 Distribution

Clitics which occur within the nominal structure belong to the possessive category. As discussed in the previous chapter, possessives across Berber languages are formed by combining the preposition /n/ with an oblique clitic. Most Taqbaylit varieties have possessives formed out of the same entities, but additionally make use of clitics, which can be described as reduced forms of possessive PPs. In (75a) below, for instance, the noun axxam ‘house’ is modified by the PP ines formed by the preposition in\textsuperscript{35} and the oblique clitic s, but in (75b), it is modified by the clitic is, which lacks the n of its non-clitic counterpart.

(75) a. axxam\[\text{[in }=\text{s}]\]  
    house  OF  =CL.3SG;OBL  
    \textit{His house}

    b. axxam =\text{[is]}  
    house  =CL.3SG;POSS  
    \textit{His house}

The paradigm for possessive clitics in Taqbaylit given in Table 19 (section 3.4) is repeated in (24) below for convenience.

\footnote{According to Chaker (1983), the n which occurs with the preposition /n/ in singular possessive forms comes from an indefinite article (meaning approximately ‘the one’). Although, historically analytic the complex in has become synthetic.}
Like those in the clausal domain and others found across languages, clitics occurring within DP display morpho-syntactic and semantic properties that differ from their strong form counterparts. Indeed, as briefly mentioned in the previous chapter and discussed in more details in chapter 5, possessive clitics behave similarly to deficient elements in the sense of Cardinaletti & Starke (1999). Thus, they cannot be predicated, overtly contrasted, coordinated, c-modified or introduce new referents into the discourse context. Consider the following examples:

(76) a. axxam =/[ɪw]/ aki
    house =CL.1SG;POSS DEMPRX
   #This house is mine!
    This house of mine.

b. *i- çeveh uxxam =[ɪw] mačči n wergaz
   3SGM-be.beautifulPREF house =CL.1SG;POSS not OF man
   MY house is beautiful, not the man’s.

c. *i- çeveh uxxam =[ɪw] aq n wergaz
   3SGM-be.beautifulPREF house =CL.1SG;POSS and OF man
   ?My and the man’s house is beautiful.

d. *axxam =/[ɪs]/ wahd =is
   house =CL.3SG;POSS one =CL.3SG;POSS
   The house of him only.
The sentences in (76) and (77) clearly illustrate the deficient properties of possessive clitics mentioned earlier. (76a), for instance, is grammatical but limited as to the types of interpretations it can be given. In particular, the 1st person singular possessive clitic =iw ‘my’ there cannot be construed as predicated. Similarly, (76b) and (76c) show that the same possessive clitic cannot be overtly contrasted or be coordinated. In (76d), modification of the 3rd person singular clitic =is by the adverbial DP wahi= is ‘him only’ makes the construction infelicitous. And finally, (77) shows that a possessive clitic cannot correspond to new information -- in this example, cannot be the part of the answer which corresponds to the interrogative word in the question.

Distributionally, DP clitics prosodically attach to a preceding host and are therefore, like their clausal counterparts, enclitics. They differ, however, in that they can only be hosted by the noun they modify. Thus, in the contexts where the noun occurs with modifiers such as demonstratives, numerals and adjectives, none of the latters can alternatively host the clitic, whichever order they surface in. This is shown in the following examples:

(78) a. avilu =[(i)s] aki amelal
    bike =CL.3SG;POSS DEMprox white
    This bike of his

    b. *avilu aki =[(i)s] amelal

    c. *avilu aki amelal =[is]

    d. *avilu amelal =[is] aki

    e. *avilu amelal aki =[(i)s]
Similarly, in contexts where the noun is modified by a quantifier occurring within a higher QP such as *kul ‘each’ (cf. section 3.3.3), the clitic also cannot be hosted by the quantifier.

(79) a. kul axxam =\[\text{his}\] each house =CP.3SG;POSS
    Each of his houses

b. *kul =\[\text{his}\] axxam

From a typological point of view, the Taqbaylit possessive clitic system is interesting because its presents the properties of both Head-oriented and Edge-oriented systems. Thus, the obligatory attachment of clitics to the nominal head makes them appear similar to Head-oriented clitics, but their occurrence in the second position of the extended nominal domain makes them look Edge-oriented. In the following section, I offer an analysis of clitic placement and show that these dual properties derive from the internal structure of Taqbaylit DP’s.

4.3.2 Hierarchical DP template and clitic placement

Based on Cinque’s universal DP template (2000; 2005), I proposed, in Chapter 3, a structure for Taqbaylit DPs in which the projection of the nominal head, NP, can be dominated by a number of hierarchically ordered functional projections. Each of these functional projections hosts in its Specifier a particular type of modifier (e.g. adjectives and demonstratives) and additionally merges an Agreement head. Functional projections are licensed by either movement of N to the head positions of projected AgrPs or by movement of the NP to their Specifier positions. The DP structure in (80a), for instance, where the noun *avilu ‘bike’ is modified by the possessor *n dada ‘of dad’, the adjective amelal ‘white’ and the demonstrative *nni ‘this’ is derived, as in (80b), by N-movement through the head positions of the two AgrPs merged by the functional projections hosting, respectively the adjective and the demonstrative.
(80) a. avilu nni amalal n dada
bikeDEM₃₄₅₆₇₈₉₁₀₁₁.whiteOFdad
This white bike of dad.

b. DP
D      AgrP
      
  avilu  Agr'

           Agr  FP1
DEMP      F1'

           F1  Agr'

           Agr  FP2

AdjP      F2'  NP

amelal n dada

The alternative order displayed in (81a) below is derived from the same underlying structure, as shown in (81b), by NP movement to relevant Specifier positions and pied-piping of the remnant AgrP.
(81) a. avilu n dada amelal nni
bike OF dad white DEM_{AMB}

This white bike of dad.

b. DP
    D
    AgrP
    avelu n dada amelal_k
    Agr'
    Agr F1
    DEMP F1'
    mni F1
    AgrP_k
    i
    Agr'
    Agr FP2
    AdjP F2'
    F2 NP_i

Within this DP template, clitics can be assumed to be merged in the same position as non clitic possessors — that is the complement position of N. And, given that they present the same deficient properties as their pronominal counterparts occurring within the clausal domain, they can also be considered to be ΦPs, the deficient forms of possessive PPs. The proposal is illustrated in (82) below with irrelevant details omitted.
As explained in section 4.2, I take $\Phi P$’s to correspond to Cardinaletti & Starke (1999)’s projections which are deficient in both C-features and prosody, and must move to higher positions in order to recover these missing features. Adapting from C&S’s hypothesis and Ouhalla (2005a) and Boukhris (1998)’s proposals, I suggest there that missing features in Taqbaylit and other Berber languages can be recovered in two clausal configurations arrived at in two steps: C-features are recovered after syntactic movement to the Specifier position of a higher functional projection of the verb, while prosodic features are recovered by an incorporation into an adjacent prosodic head, occurring at PF.

It is common knowledge that strong similarities exist cross-linguistically between nominal and clausal structures. If this is the case, then one can hypothesize that clitic placement inside DP’s in Taqbaylit is derived in the same way as clitic placement in the clause. This is the stance taken by Ouhalla (2005a) who extends his analysis of clitic placement in the Berber clause (cf. section 4.2.2) to DP clitics. Similarly, I propose, here, that the same derivation as that suggested to operate inside CP in the previous section gives rise to clitic-placement within the nominal domain. Thus DP clitics, which occur in deficient $\Phi P$ projections, move out of the position in which they are merged to some higher positions in order to recover their missing features. As in the clausal domain, I argue that there are two configurations in which recoverability of features takes place: C-features are recovered in the Specifier position of an extended functional projection of $N$, while prosodic features are recovered by incorporation into an adjacent head.

Because clitics always prosodically attach to the nominal head, it can be concluded that the Specifier position they target is one that is located around the
final position of the nominal head. In particular, as proposed for clausal clitics, it can be argued that DP clitics move to the highest functional projection which also hosts the lexical head they are associated with, here the noun in D°. In Spec-DP, clitics can recover their C-features, similarly to clausal clitics which recover their C-features in Spec-h-AspP. The first step of the derivation of clitic placement within DP is represented in (83) below.

(83)

The second step in the derivation of clitic placement is prosodic incorporation. Now recall that, in the clausal domain, clitics incorporate at PF into a prosodic head which is either the preceding functional head or, as a last resort, the verb they are associated with. Inside DP, however, the noun occupies the highest functional head in the domain, D, and therefore, incorporation always occurs on the noun. DP clitics are, like clitics which occur inside CP, always enclitics because, as argued by Ouhalla (2005a), clitic placement in Berber is governed by a phonological constraint which forbids clitics to surface in first position within their domain of occurrence. The constraint in question is given in (84) below:

(84)  

Similarly to their clausal counterparts, DP clitics inverses order with their nominal host in order not to violate the constraint in (84). This is illustrated in (85) below:
Following this analysis, the DP in (86a) can be derived as in (86b) below.

(86) a. \textit{axxam} = [\text{[is]}] \quad \text{aki} \quad \text{amelal}  \\
\text{house} = \text{CL.3SG;POSS} \quad \text{DEMP}_{\text{PROX}} \quad \text{white}  \\
\text{This white house of his}

b. \Phi_{\text{PCL}} \quad \text{DP}  \\
\text{axxam} = [\text{[is]}] \quad \text{aki} \quad \text{amelal}  \\
\text{FP1} \quad \text{FP2} \quad \text{NP}

In the structure above, the noun \textit{axxam} 'house' is merged as the head of NP. Its modifiers, the demonstrative \textit{aki} 'this' and the adjective \textit{amelal} 'white' are merged in the Specifier positions of higher functional projections, respectively FP1 and FP2, which merge two agreement projections. The nominal head
undergoes N-movement to D, via all the AgrP in order to license them. As for the possessive clitic, it merges in the complement position of the nominal head, and then moves to the Specifier position of DP. In order to recover prosodic features, the clitic subsequently incorporates into the nominal head in D, and inverses order with it.

Having set up the foundations of the analysis, there are now two additional facts that remain to be explored. First, in the account of clausal clitics developed in section 4.2, it is argued that incorporation into the verb and clitic-host inversion is a last resort operation, occurring when no preceding overt head is available to host the clitic. The prediction is that whenever a functional head overtly occurs in the lower CP – the domain of cliticization – it will automatically host the clitic. Inside DP, however, the same prediction is not borne out. Indeed, overt heads which precede the clitic in Spec-DP are never appropriate hosts. Thus, possessive clitics cannot be hosted by the quantifier heads which, when present, occur right adjacent to them – in the head position of QP directly dominating DP. In (87) below, for instance, the DP within which the clitic is merged is dominated by a QP, headed by the quantifier *kul* ‘each’, but the clitic incorporates into the nominal head in D and not into the preceding adjacent Q head:

\[
(87) \quad \text{a. } \text{kul}\ (\#=[is]) \quad \text{axxam}=[is] \\
\quad \quad \quad \text{each} \quad \text{house} =\text{CL.3SG.POSS} \\
\quad \quad \quad \text{Each of his houses}
\]

To account for such facts, I propose that PF incorporation of possessive clitics to a prosodic head must, as in CP, also occur within a restricted domain. Since only the heads occurring within DP are accessible, and those occurring in higher
domains, such as heads occurring in QP, are not, I conclude that the domain of possessive cliticization in Taqbaylit is the DP.

The second fact that needs to be further addressed is linked to the optional NP-movement that is available in Taqbaylit DP’s. As illustrated in the first part of this section, the AgrP’s which are projected by the functional projections hosting nominal modifiers can optionally be licensed by raising the NP to theirSpecifier positions. Such NP-movement, which obligatorily involves pied-piping of remnant AgrPs, gives rise to the sequence in (88) where the possessor NP and the adjectives precede, in that order, the demonstrative in the Specifier position of the highest FP:

(88)    axxam  n  wergaz  amelal  aki
         house  OF  man  white  DEM<pro>

This white house of the man

Given that such orders are also available with possessive clitics (cf. 89 below) it can be concluded that NP-raising is also available in such cases.

(89)    axxam  •  =-[is]  amelal  aki
         house  =CL.3SG;POSS  white  DEM<pro>

This white house of his

I will assume here that, when NP-raising occurs, the clitic is pied-piped along with the NP, just like other possessor PPs, to the highest Spec-AgrP position which is targeted. From this position, the clitic subsequently moves to Spec-DP and incorporates into the nominal head in D to get its prosodic features. The derivation of (89), which is illustrated in (90) below goes as follows. The noun axxam ‘house’ is merged in the head position of the NP with its possessor argument: the clitic is ‘his’. The adjective amelal ‘white’ and the demonstrative aki ‘this’ occur respectively in the Specifier position of FP2 and FP1. Agreement projections, merged by the functional projections hosting the modifiers, are licensed by raising the NP – containing N and its complement ΦP – to their Specifier positions. From the highest Spec-AgrP, that merged by the FP hosting
the demonstrative, the clitic moves to the Specifier of DP. It then incorporates with the noun in D and inverses order with it in respect of the phonological constraint which forbids clitics to be first in their minimal domain.
According to the present proposal, DP cliticization parallels CP cliticization. Clitics in both domains undergo syntactic movement to the Specifier position of the particular extended nominal or clausal projection which hosts the lexical head they are associated with (i.e. the noun for possessives, and the verb for clausal clitics). At PF, clitics in both domains incorporate into an adjacent prosodic head. Given that a specific phonological constraint, of the type holding in Edge-oriented clitic systems, also holds in Berber and forbids clitics to be first in their minimal domain (cf. Ouhalla, 2005a), attachment targets a preceding available host, or as a last resort the following lexical head which is either N or V.

Note that although clitic placement is derived in the same way in both domains, possessive and clausal clitics do not surface in similar structural zones. Thus, possessive clitics occur in the highest zone of DP, and in that sense are Edge-oriented like, whereas clitics in CP occur in intermediate TAM zones, and are V-TAM-oriented. These differences probably have to do with the fact that nouns and verbs maximally target different projections; nouns move up to D while, as argued in chapter 2, verbs only move as far as h-Asp. Before concluding this section, I offer a brief discussion of possessives in other Berber languages, which apparently display behaviours distinct from those of possessive clitics found in Taqbaylit DP’s, and propose a possible explanation for these differences.

4.3.3 Possessives and cliticization in other Berber languages

In various parts of this dissertation it has been brought to the attention of the reader that Taqbaylit varieties are unique amongst Berber languages in having possessive clitics prosodically hosted by the noun. In most Berber languages, indeed, possessives can only occur as complexes built from the preposition n affixed with an oblique/prepositional clitic (Chaker, 1983; Boukhris, 1998; Kossman, 1997 amongst others). In those complexes, unless the noun modified belongs to the class of kinship terms, the preposition n is always obligatory (Ouhalla, 2005a, Kossman, Ibid). The following examples from Tamazight
(Boukhris, 1998: 426) and Tarifit (Ouhalla, 2005a: 16-17) demonstrate the
composition of possessives:

(91) **Tamazight**

a. afus [n = [k]]
   hand OF = CL.2SGM;OBL
   *Your hand*

**Tarifit**

b. axxam [n = [s]]
   house OF = CL.3SG;OBL
   *Her house*

(92) **Tarifit**

a. *axxam = [s]*
   house = CL.3SG;OBL
   *Her house*

b. yilli = [s]
   daughter = CL.3SG;?
   *His/Her daughter*

Ouhalla (2005a) focuses on the issue and proposes an account for the
difference of behaviors between possessives in Taqbaylit and their counterparts
in other Berber languages. He argues that clitics, clausal as well as those
occurring within DP, can only be hosted by functional categories and that because
the noun is a lexical category, a preposition, n, which is described there as
semantically vacuous, is inserted to host the clitic. This gives rise to the analytic
structure in (93) below (Ouhalla, 2005a: 21).

(93) [DP D [N [ PP P [CL/DPross]]]]

In Taqbaylit varieties, however, he argues that the analytic structure in (93) has
been reanalyzed into a synthetic structure of the type given in (94) (Ibid), which
does not include the preposition anymore.
The analysis being developed throughout the present dissertation offers two possible alternative explanations for the differences between Taqbaylit and other Berber languages when it comes to possessive cliticization.

The first one is that possessive clitics are an innovation exclusive to Taqbaylit varieties. Other Berber languages do not have such clitics and, as a consequence, can only express possessiveness with strong PP forms. If this is correct then, what is analyzed as an analytic structure including the preposition $n$ and a possessive clitic is in fact a strong possessive form composed of the preposition $n$ and an oblique clitic.

Now, oblique clitics, like all clitics, are prosodically deficient and, hence, must always attach to a prosodic host. This prosodic host, it can be assumed, must occur inside a restricted domain, namely PP (as also proposed by Ouhalla, Ibid). Nouns, which are outside of the PP domain, are not available to host clitics, and thus, if no preposition is projected clitics remain without an overt prosodic host. This is illustrated with the structure in (95b) below representing the ungrammatical example (92b) repeated in (95a) (irrelevant details have been omitted):

(95) a. *axxam =][s]
    house =CL.3SG;OBL
    Her house
b. *DP
   D
   NP
   axxam N
   PP
   []
   s
   P
   ΦP_CL;OBL

The fact that oblique clitics require a prosodic host and that this prosodic host can only be a preposition explains the obligatoriness of the preposition \( n \) in most Berber languages. In Taqbaylit varieties, by contrast, possessive clitics do not occur in the PP domain. They are instead deficient forms of possessive PPs (cf, Chapter 5 for more details), which occur as complements of N and their domain of cliticization being the DP, they can be prosodically hosted by the nominal head.

The second option is that other Berber languages have also developed possessive clitics, but that all clitics, singular and plural, still formally include the preposition \( n \). This would make the forms of singular possessive clitics in other Berber languages similar to those of plural possessive clitics in Taqbaylit. If this is the correct option, then the analytic structure \( PP \ lbrack \ \_ n \ rbrack \) can, as in Taqbaylit, be a synthetic deficient structure \( \ lbrack \_ n \ rbrack_{\text{poss}} \) and be actually hosted by the noun. Note that prepositional clitics, which do not formally differ from their non-clitic counterparts, are frequently found in a number of Berber languages. The following examples from Tamazight (Boukhris, 1998: 423) illustrate this very clearly, since the PP formed by the preposition \( \text{di} \) ‘inside’ and the clitic \( =s \) ‘it’ in (96a) is cliticized in (96b) but still occurs in the same form: \( \text{dis} \).

\[
\begin{align*}
(96) \ a. \ & \text{ur} =\text{as} =t \text{gri-n} \ [\text{di}=s] \\
& \text{NEG} =\text{CL.3SG;DAT} \ \text{CL.3SGM;ACC} \ \text{throw}_{\text{reg}=3\text{PLM}} \ \text{in}=\text{CL.3SG;OBL} \\
& \text{They didn't throw it to him inside it.}
\end{align*}
\]

\[
\begin{align*}
& \text{b. ur} =\text{as} =t =[\text{dis}] \text{gri-n} \\
& \text{NEG} =\text{CL.3SG;DAT} \ \text{CL.3SGM;ACC} =\text{PREP.CL} \ \text{throw}_{\text{reg}=3\text{PLM}} \\
& \text{They didn't throw it to him inside it.}
\end{align*}
\]

A final decision on which of the proposed options is the correct one requires an in-depth analysis of the behaviour of possessive PP complexes across Berber languages, something outside the scope of the present dissertation. Before ending this discussion of possessive forms across Berber, however, a word on possessives and kinship terms is in order.

As mentioned earlier, kinship terms host forms that appear to be clitics across Berber, even in those varieties which otherwise require the insertion of the
I have no explanations as to why this is the case but it could possibly be argued that, although the forms found on kinship terms across Berber are formally similar to possessive clitics, and of course also to oblique clitics, they are in fact agreement markers. In the variety of Taqbaylit under focus here, at least, these forms indeed display some properties that are characteristic of agreement morphemes. In particular, as shown in (97) below, the morphemes found on kinship terms are obligatory and, hence, can be doubled by a lexical PP. Possessive clitics occurring with common nouns, on the other hand, are optional and can never occur in clitic-doubling constructions.

(97) a. yema =s n wergaz
    mother =POSS.3SG OF man
    The man’s mother

b. *yema n wergaz

c. avilu n wergaz
    bike OF man
    The man’s bike

d. *avilu =s n wergaz

So far in this chapter, I have discussed cliticization in Berber mainly with reference to pronominal and possessive clitics. I conclude the present chapter by giving a brief description of the deictic clitic =d in the next section. This clitic is not pronominal but, given its deictic nature and the fact that it appeals, depending on the context, to a discourse participant or an anaphoric subject for interpretation, a description of its distribution at this point seems essential.
4.4 The locational clitic

The =d clitic is traditionally defined as a ‘directional’ orienting the event towards the location of the discourse participants — i.e. speaker and addressee — at the time of the event or at the time of the utterance (Bentolila, 1969; Chaker, 1983; Ouhalla, 2005a; El Mountassir, 2000). Consider, for instance, the following sentences:

(98) a. i-ruh kinzo γur thanut
   3SGM-gopRF Kinzo to shop
   Kinzo went to the shop.
   Kinzo left for the shop.

b. i-ruh =d kinzo γur thanut
   3SGM-gopRF =D Kinzo to shop
   Kinzo came to the shop.

The preceding sentences both describe the motion event [go to the store] but, they receive different interpretations depending whether =d is present or not. In (98a) the motion event is interpreted as ending in a location different from that of the discourse participants. By contrast, in (98b), the end location of the motion event is construed as corresponding to the participants' location.

In Taqbaylit and other Berber languages (cf. El Mountassir, 2000 & Bentolila, 1969 for Tashelhit and Tamazight), the =d clitic is associated with a range of additional interpretations. These interpretations vary depending on the internal meaning (Aktionisarts) of the verb it occurs with but, crucially, all involve reference to some location (Belkadi & Chao, in preparation). An in-depth analysis of the clitic is beyond the scope of this study. Hence, here, I only concentrate on its four main interpretations.

136 In most Berber languages, the =d clitic is opposed to an =u clitic (whose meaning is almost always translated as ‘away from speaker’). The variety of Taqbaylit described here, the =u clitic is almost non existent and in the very rare contexts where it is found, its interpretation is similar to that normally associated with its opposite =d.

137 Note that in some contexts the motion event can also be interpreted with no reference to the discourse participants.

138 The reader is referred to Belkadi & Chao (in preparation) for a more detailed analysis.
4.4.1 Deictic reference

One of the main contexts in which the =d clitic occurs is one in which it has deictic reference. As was the case in the previous examples, =d is there construed as referring to a deictic location, i.e. a location associated with one of the discourse participants. The clitic’s deictic meaning is canonically available with verbs of motion whose core lexical meaning involves a spatial path\(^{\text{139}}\) such as go, enter, exit, ascend, descend (etc...) (Talmy, 1985; 2000; Asher and Sablayrolles 1995) or motion verbs whose default interpretation can involve a spatial path such as run, swim, walk\(^{\text{140}}\) (Beavers, 2008). Note that, although the deictic location often overlaps with the end location of the motion event, it can also, depending on the verb, correspond to any location along the path of a particular event (cf. 99b). Some illustrative examples are provided in (99) below.

(99) a. y-uli umyar=im Allah ye-rehmu
  3SGM-ascend\(_\text{PRF}\) father.in.law=CL.2SGF;POSS God 3SGM-bless
  *Your father-in-law went up, God bless him.
  (speaker or addressee is not upstairs)

b. y-uli =\([\text{d}]\) umyar=im Allah ye-rehmu
  3SGM-ascend\(_\text{PRF}=D\) father.in.law=CL.2SGF;POSS' God 3SGM-bless
  *Your father-in-law, God bless him, came up.
  (speaker or addressee can be upstairs or anywhere along path upstairs)

\(^{\text{139}}\) A (spatial) path can be thought of as a sequence of locations traversed by a moving entity during the course of motion (Zwarts (2006)).

\(^{\text{140}}\) In terms of Talmy’s typology (2000). Taqbaylit allows path encoding in both verb-framed (i) and satellite-framed (ii) constructions.

i. i-fey kinzo
  3SGM-exit\(_\text{PRF}\) kinzo
  Kinzo went out

ii. y-uzzel yur tehannut
  3SGM-run\(_\text{PRF}\) to shop
  He ran to the shop

Note, however that not all verbs can occur in these constructions:

iii. *te-\(\text{d}e\)h Sarah yur tameyra
  3SGF-dance\(_\text{PRF}\) Sarah to wedding
  Sarah danced to the wedding

In complex motion events, paths are expressed by the main verb. Co-events (e.g. MANNER) are expressed externally.

iv. i-ruh [\(\text{in}\) i-\(\text{dz}\)el]
  3SGS-go\(_\text{PRF}\) PRT 3SGM-run\(_\text{IN}\text{PRF}\)
  He ran away (lit. he went he was running)
c. y-uzel yur tehanut
   3SGM-runREF to shop
   He ran to the shop.
   (Speaker or addressee is not at the shop)

d. y-uzl =d yur tehanut
   3SGM-runREF =D to shop
   He ran to the shop.
   (Speaker or addressee is at the shop or rarely, along the path to the shop)

4.4.2 Goal reference

In addition, the clitic can be found in contexts where it refers to a goal location. That is contexts in which =d is associated with the end location or endpoint of some event. This interpretation is exclusively found with verbs of transfer such as ‘give’, ‘send’, ‘throw’ (etc), verbs of verbal emission such as ‘whistle’, ‘tell’, ‘laugh’ (etc) and verbs of perception such as ‘see’ and ‘listen’.

Thus, in the following examples, the =d clitic is associated with the endpoints of the different events described, respectively Khaled (100a), ‘the boys’ (100b) and some male referent in (100c).

(100) a. i-ččega =d acadu i Khaled
   3SGM-sentREF =CL.3SG;DAT =D present to Khaled
   He sent a present to Khaled.

b. sefer-n =d warac nni
   whistleREF-3PLM =CL.3S;DAT =D boys DEM
   These boys whistled at him.

c. i-sli =d
   3SGM-hearREF =CL.3SG;DAT =D
   He heard him/her.

Even though they may seem to be similar, the goal and deictic reference meanings differ in one crucial way. Deictic interpretations obligatorily involve reference to one of the discourse participants’ location except in narrative contexts and

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Some verbs such as throw, push (etc...) are ambiguous between goal and deictic interpretations. Interestingly, these verbs can be classified either as verb of transfer or as verbs of motion depending on the context in which they are used (e.g., throw the ball to the wall vs. throw the ball to John.)

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reported speech. Thus, (101a) below is infelicitous in contexts where the location of the discourse participants does not intersect with the location of the wedding. However (101b), which involves reported speech, is felicitous even in contexts where none of the discourse participants is or was at the wedding’s location.

(101) a. #ruh-n =d yur tameyra n Mohand
gopRF-3PLM =D to wedding OF Mohand
Yesterday, they went to the Mohand’s wedding.
(discourse participants not at the wedding)

b. i-na =d Mohand ‘ruh-n =d yur tameyra=s’
3SGM-sayPRF =D Mohand gopRF-3PLM =D to wedding=CL.3SG;POSS
Mohand said that they went to his wedding.
(discourse participants not at the wedding)

Goal interpretations, by contrast, are rarely deictic. Actually, unless one of the discourse participants is also an event participant (cf. 102), the default interpretation associated with =d will not be linked to deixis142.

(102) a. #fki-y =as =d tektef i ella
givePRF-1SG =CL.3SG;DAT =D book toDAT Ella
I gave a book to Ella.

b. fki-y =am =d tektef
givePRF-1SG =CL.2SGF;DAT =D book
I gave you a book.

142 It is likely that the clitic in those contexts has logophoric referential properties in the sense of Sells (1987). In other words, the clitic may refer to the location of a prominent antecedent, which depending on the context is either of the following:

SOURCE: the one who makes the report
SELF: the one whose “mind” is being reported
PIVOT: the one from whose physical point of view the report is made
4.4.3 Endstate reference

The location with which \( =d \) is associated is not always spatial. Thus, when \( =d \) occurs with change of state verbs such as ‘open’, ‘cool’, ‘burn’ and verbs of change of configuration such as ‘stand’, ‘sit’ (etc...), it refers to the end state location of some entity. Consider the following examples:

(103) a. t-semd lekahwa
       3SGF-cool\textsubscript{PRF} coffee
       The coffee is cool.
       The coffee cooled.

b. t-semd \( =d \) lekahwa
       3SF-cool\textsubscript{PRF} \( =D \) coffee
       *The coffee cooled.

(104) a. i-ker\textsuperscript{143} Salem
       3SGM-stand\textsubscript{PRF} Salem
       Salem stands.
       Salem stood up.

b. i-kr \( =d \) Salem
       3SGM-stand\textsubscript{PRF} \( =D \) Salem
       *Salem is standing.

The verbs contained in (103) and (104) above are ambiguous between stative and inchoative readings\textsuperscript{144}. Thus, (103a) can describe both a state (the coffee is cool) or a change of state (the coffee has cooled) while (104a) can describe a stative configuration (Salem is standing) and a change of configuration (Salem stood up). On the other hand, given that the locational clitic refers to and therefore requires an endstate location, only inchoative interpretations are available in (103b) and (104b).

This interpretation is probably the most described non-deictic meaning of the clitic. In most accounts, inchoativity is argued to be exclusively derived from

\textsuperscript{143} The verb also means ‘to wake up’. Since this is not relevant here, I will ignore this meaning.

\textsuperscript{144} Recall from Chapter 2 that the ambiguity between stative and inchoative readings does not appear in the Imperfective aSpect.
the directional meaning of the clitic (Bentolila, 1969; Rabdi, 2004; El Mountassir, 2000; Fleisch, 2007). However, several important facts demonstrate that this is not the case.

First, all stative verbs which are construed as inchoatives when they occur with =d, can also be interpreted as such when they occur alone (cf. 103 & 104). Second, the clitic can only refer to an endstate location if an inchoative meaning is independently available, i.e. contained in the lexical meaning of the verb (cf. Guerssel (1986) for similar observations in Tamazight). As is well known, Taqbaylit stative verbs are not all ambiguous between stative and change of state interpretations. Thus, a large class of verbs does not encode an inchoative meaning and can only refer to states (Chaker, 1993; Mettouchi, 2004). This is illustrated with the verb vzg ‘to be wet’ in (105) below:

(105) i-vzig yanis
     3SGM-be.wetREF Yanis
     Yanis is wet.
     *Yanis got wet.

Crucially, when it occurs with such verbs, =d cannot be associated with an inchoative meaning of the type described above. In such contexts, an independent motion event must be coerced. This is illustrated in (106) and further discussed in section 4.4.4.

(106) i-vzig =d yanis
     3SGM-be.wetREF =D Yanis
     *Yanis got wet.
     Yanis arrived wet.
     Yanis was coming and on his way he got wet.
     Yanis got wet and he came.

The fact that inchoative interpretations are not available with pure stative verbs demonstrates that the clitic does not itself bring about an inchoative meaning. The exact role of the clitic in the current context is not easy to tease
apart. One possibility is that the clitic is associated with speaker’s point of view or some kind of evidentiality. I leave these issues aside for now and discuss next the coerced motion interpretation in more details.

4.4.4 Deictic reference associated with coerced motion

With verbs that do not involve a spatial path or a change of state such as pure statives and non-motion activity verbs (Rappaport Hovav, 2006), $=d$ requires the coercion of an additional motion event (after Beavers, 2008), i.e. $=d$ forces an interpretation which involves a motion not included in the verb’s lexical meaning. In these cases, the location referred to by the clitic is that of the discourse participants. This is illustrated by the following examples:

(107) a. te-čdeh Sarah di tameyra  
3SGF-dance$_{PRF}$ Sarah at wedding  
Sarah danced at the wedding.

b. te-čdeh $=d$ Sarah di tameyra 
3SGF-dance$_{PRF}=D$ Sarah at wedding  
Sarah danced at the wedding and came back.

c. i-telm$'$ Didine Taglisit  
3SGM-learn$_{PRF}$ Didine English  
Didine learned English.

d. i-telm $=d$ Didine Taglisit  
3SGM-learn$_{PRF}=D$ Didine English  
Didine learned English and came back.  
Didine arrived and he had learned English.

e. i-čča Saeed  
3SGM-eat$_{PRF}$ Saeed  
Saeed ate.

f. i-čča $=d$ Saeed  
3SGM-eat$_{PRF}=D$ Saeed  
Saeed ate and came back.

Note that coerced motion can also be construed in other aspects and moods (cf. 108):
Conclusion

In this chapter, I have done four things. First, I have discussed typological properties of clitics and have organized well known clitic systems along a hierarchy depending on their distributions and the way in which they select their hosts: (i) Edge-oriented cliticization targets the edge of a particular domain, (ii) V-TAM oriented cliticization favours the verb and its TAM satellites and (iii) Head-oriented cliticization targets the head of the domain within which it occurs. Berber clitics display properties of each of these systems.

Secondly, I have sketched a proposal that accounts for clitic placement in the clause. Adapting Cardinaletti & Starke (1999)'s derivation and Ouhalla and Boukris's proposals, I have argued that clitic placement in the Berber clause is derived in two steps. One step occurs at the syntactic level and moves clitics as phrasal projections to theSpecifier position of h-AspP, the highest functional projection which hosts the verb. The second step incorporates clitics into an adjacent prosodic host which is the head of a functional projection occurring just above h-AspP and contained within the lower CP, or if no such head is available the verb in h-Asp. In contexts where the verb functions as a prosodic host, clitic-verb inversion occurs in order for the clitic not to be first in its minimal domain.

The third thing I have done in this chapter is discuss cliticization in the DP domain. Extending the analysis of clitic placement in CP, I have suggested that clitic placement in the constituent is derived by movement of clitics as phrasal projections to the Specifier position of DP, the highest extended projection of NP hosting the noun, followed by incorporation of the clitic into the noun in D.
Finally, in the last part of the Chapter, I have discussed various interpretations associated with the =d clitic. The clitic has been mostly analyzed as a directional but I have shown that it is best described as a locational which can be associated with different related interpretations depending on the internal meaning of the verb it modifies. In the next Chapter, I also look at clitics. There, I compare their uses with non-clitic counterparts and look at how the Berber pronominal system fits into independently proposed typologies.
Chapter 5

Pronominals in Taqbaylit and Typological Hierarchies

Introduction

In the previous chapter, I have focused on the syntactic distributions of clitic systems in Taqbaylit and Berber, and their place in cross-linguistic clitic typology. In the present chapter, I will look at clitics from two additional perspectives. On the one hand, I will describe the morphosyntactic and semantic properties of clitics and how they differ from other pronominal forms. On the other, the pronominal systems of Taqbaylit will be analyzed from the point of view of typologies such as those predicted by the proposals of Cardinaletti & Starke (1999) and Déchaine & Witlschko (2002).

The chapter is organized as follows. In section 5.1, I give a sketch of the semantic and morphosyntactic variations that characterize the pronominal category. In section 5.2, I describe in details two typological analyses based on structural hierarchies which seek to account for such pronominal variations. In section 5.3, I apply the proposed structural hierarchies to Taqbaylit but discuss its application in other Berber languages. In particular, I will show that personal pronouns and possessive systems are morphosyntactically arranged along a strong and deficient hierarchy. In 5.4, I show that the strong vs. weak opposition correlates with differences in their internal structures.
5.1 Pronominal variation

It is well known that pronouns do not constitute a uniform category either cross-linguistically or within a single language. In Chapter 3, for instance, we observed that different categories of pronouns can vary as to the Φ-features they exhibit. These paradigmatic distinctions are not trivial but they straightforwardly occur across different categories of pronominal forms which, is not necessarily the case for other distinctions. Across languages, indeed, asymmetries can be found within the same pronominal class and even on the same pronoun. However, they characteristically happen along morphosyntactic, syntactic and semantic dimensions. In the present section, I give a brief description of the semantic and morphosyntactic angles from which pronouns vary. In section 5.1.1, I sketch a description of the different ways in which pronouns vary at the semantic level. In section 5.1.2, I give a picture of pronominal morphosyntactic variation and discuss the now well established distinction between strong and deficient pronouns.

5.1.1 At the semantic level

Pronouns differ from their lexical counterparts in lacking a descriptive content and picking up their denotation from the context in which they are uttered (cf. Simon & Wiese, 2002). For that reason, traditional semantics defines pronouns as variables whose denotations are determined by — and, vary depending on — a particular context (Heim & Kratzer, 1998). Thus, the denotations of he in the following two sentences (assuming that they correspond to different utterance contexts) are two different individuals, respectively a man who has just left and Smith.

145 See Kratzer (2009) for a contrastive analysis.
(1)  
a. I am glad he is gone  
b. I don’t think anybody here is interested in [Smith]'s work. [He] should not be invited.  
(Heim & Kratzer, Ibid: 239-240)

Crucially, the range of individuals which a particular pronoun can be assigned as its denotation is restricted given a particular utterance. Of course, the particular Φ-features encoded by a pronoun can play a part in those restrictions. A pronoun encoding a masculine CLASS feature, for instance, is in most contexts infelicitous with a feminine referent. On the other hand, restrictions as to its denotation are for the most part linked to and vary according to a pronoun’s type and the linguistic context. In the following sentence, for instance, the 3rd masculine singular pronoun himself can only be interpreted with relation to the closest DP John and not in relation to the higher DP his father, even though both DPs bear similar Φ-features.

(2) His father wants John to behave himself  
a. His father wants [John] to behave [himself]  
b. *[His father] wants John to behave [himself]  

This is because pronouns can receive their denotations in different semantic and syntactic configurations depending on the category they belong to but also depending on the sentence type within which they occur. Based on the different semantic configurations in which they are assigned their denotation, pronouns can be interpreted as free variables or bound variables.

Free variable pronouns, such as deictic pronouns, are referential and receive a denotation from the utterance context (Partee, 1978; Heim, 1998). In (2) above, for instance, the pronoun he has a free variable interpretation. It picks up its reference from the situational context in (2a) and from a linguistic antecedent in (2b). By contrast, bound variable pronouns receive their denotation not from the utterance context but in binding configurations. Hence, a bound pronoun is, in most contexts, construed by co-indexation with a c-commanding antecedent.
(Higginbotham, 1980; Reinhart, 1983). Classic examples of bound variable pronominal uses are those involving quantifiers as binders, as in sentence (3) below (from Higginbotham, 1980: 680), but reflexives, reciprocals and PRO amongst others, which are interpreted by co-indexation with a c-commanding antecedent, are also analyzed as variable pronouns, as shown in (4) (from Grodzinsky & Reinhart (1994)).

(3) \[\text{Everyone here}]_i \text{ thinks [he]}_i \text{'s a nice fellow}\]

(4) a. \[\text{Lucie}]_i \text{ adores [herself]}_i\]
   b. \[\text{Alfred}_i \text{ promised [PRO]}_i \text{ to cook well}\]

The distinction between pronouns as free or bound variables is not necessarily as clear-cut as presented hitherto. There are some contexts in which a pronoun can be ambiguous between one and the other reading. In (3) above, he can, in addition to a bound variable interpretation, be interpreted as a deictic referring to some individual from the discourse context (Higginbotham, 1980). But even more interestingly, the ambiguity does not solely oppose deictic interpretations to anaphoric ones. As is well known, anaphoric pronouns can also be ambiguous between co-referential and bound variable readings (Reinhart, 1983; Grodzinsky & Reinhart, 1993). In the following example discussed by Grodzinsky & Reinhart (Ibid: 74), the anaphoric pronoun he can either be interpreted as a bound variable (5a) or as co-referential (5b).

(5) Alfredi thinks hei is a great cook
   a. Alfred (\(\exists x (x \text{ thinks } x \text{ is a great cook})\))
   b. Alfredi (\(\exists x (x \text{ thinks hei is a great cook})\))

Given that they both entail Alfred thinks that Alfred is a good cook, on the surface there is not much difference between the two propositions expressed by the pair sentences above. However, evidence for the two possible structural configurations in which he can receive a denotation is offered by the different possible readings
available in constructions involving VP ellipsis, as in (6). Particularly, depending on whether *he* is interpreted as bound or co-referential, sentence (6) can receive respectively a sloppy reading in (6a) or an identity reading (6b).

(6) Alfred thinks he is a great cook, and Felix, does too [e] .
   a. Alfred (\(\exists x (x \text{ thinks } x \text{ is a great cook})\)) & Felix (\(\exists y (y \text{ thinks } y \text{ is a great cook})\))
   b. Alfred, (\(\exists x (x \text{ thinks he, is a great cook})\)) & Felix (\(\exists y (y \text{ thinks he, is a great cook})\))

Bound variable pronouns by the nature of their denotation assignment are always anaphoric. Free variable pronouns on the other hand, are traditionally further subcategorised depending on how they pick up a reference.

Hence, they can be further classified as deictics or referentially independent and co-referential or referentially dependent pronouns (Partee, 1978; Heim & Kratzer, 1998; Heim, 1998 Kiparsky, 2002 amongst others). Co-referential pronouns are anaphoric and pick up a referent exclusively from the linguistic context. That is, they require an antecedent in the discourse. Deictic pronouns, on the other hand, can get their reference from the non-linguistic context and can also introduce new referents into the discourse context (Partee, 1978; Kiparsky, 2002). In (7a), the 3rd singular masculine pronoun *he* can be used as a deictic and pick a referent by ostension but in (7b) it is only interpretable as co-referring to a linguistic antecedent, here *Elliot*.

(7) a. (On walking into a room) Why is *he* [pointing] here?
   b. I couldn’t reach Elliot last night. *He* is probably in Boston. (Partee, 1978: 81)

In this brief section it was shown that pronouns vary semantically as to how they receive a denotation. Depending on its category and the linguistic context (e.g. sentence type) in which it occurs, a pronoun can be construed as a bound variable or a free variable. Free variable pronouns can be further ambiguous between deictic and co-referential readings. But besides these
semantics variations, pronouns also differ from each other and their lexical counterparts with respect to their morpho-syntactic properties. The following subsection provides a brief overview of these variations.

5.1.2 At the morphosyntactic level

Investigations of the different morphosyntactic distributions of pronouns have been abundant in the past 40 years. For the main part, they have focused on just two dimensions of such variations, namely those linked to their binding requirements and those displayed by pronouns when they occur as clitics. Bound pronouns contrast, for instance, as to whether they require local or non-local binders (Chomsky, 1981; Reinhart & Reuland, 1993; Kiparsky, 2002). And clitics, for their part, undeniably exhibit special properties which not only distinguish them from their lexical counterparts but are universally shared by non-pronominal clitics (cf. Chapter 3). These specific properties oppose pronouns from various semantic classes (e.g. reflexive himself to non-reflexive he) and special pronouns to other morphological categories (e.g. clitic vs. words). Rarer but, nonetheless influential research (Kayne, 1975; Cardinaletti, 1998; Cardinaletti & Starke, 1999) has, however, shown that other types of variations are also found that oppose apparently equivalent pronouns. That is, pronouns from the same semantic category with similar Φ-features such as, for instance, the French plural feminine personal pronouns elles and les (Kayne, 1975). Accordingly, it has now become customary to sub-categorize pronouns into strong, weak and clitic classes (Cardinaletti & Starke, 1999 and much subsequent research).

Even though it is originally based on prosodic asymmetries, the distinction between strong and weak pronominal forms actually correlates with morphosyntactic discrepancies. In an influential investigation comparing the three types of pronouns, Cardinaletti & Starke (1999) propose that strong and weak pronouns are each associated with their own, possibly universal, properties. Morphologically, strong pronouns can correspond to augmented forms of weak
pronouns. In Italian, for example, a strong pronoun *a loro* is opposed to a weak form *loro*. However, such straightforward formal asymmetry is not necessarily the case and the opposition between strong and weak pronominal elements is most visible at the syntactic level. In the remainder of this section, I provide a review of the morphosyntactic properties which can be characteristically associated with each type of pronouns as identified by Cardinaletti & Starke (1999).

One of the main areas in which strong and deficient pronouns differ from one another is their syntactic distributions. Hence, strong pronouns are in many ways syntactically similar to their lexical counterparts and can quite freely occur in a range of syntactic positions. Thus, like lexical DPs strong pronouns can occur in θ-positions, peripheral positions as left-dislocated or clefted elements but can also occur within coordinated structures and be modified by NP adverbs (i.e. c-modifications). The following examples from Italian (Cardinaletti & Starke, 1999: 150-152) and French illustrate the syntactic distribution of strong pronouns.

(8) **ITALIAN**

a. *non dirò mai tutto a Gianni / a loro*  
not (l)will-say never everything Gianni / them
*I will never say everything to Gianni / them.*

b. *E’ Maria / lei che è bella*  
It.is Mary / she that is pretty
*It is Mary / her who is pretty.*

c. *lei e(d) Maria / lei sono belle*  
she and Mary are pretty
*Her and Mary / her are pretty.*

d. *solo Maria / lei è bella*  
only Mary / she is pretty
*Only Mary / her is pretty.*
Weak pronouns, on the other hand, are excluded from left-dislocation constructions and other similar peripheral positions. Unlike lexical DPs and their strong counterparts too, they cannot be c-modified or be coordinated, as shown in (10) below with the Italian weak pronoun *essa* (from Cardinaletti & Starke, 1999: 150-152).

(10)

a. *E’ essa che è bella
   It is sheD that is pretty

b. *lei e(d) essa sono belle
   she and sheD are pretty

c. *solo essa è bella
   only sheD is pretty

   Only her is pretty.
The deficient pronominal class is additionally divided into weak and clitic pronouns. And, as discussed in previous chapters, clitic pronouns further differ from weak pronouns in occurring in a range of positions which are restricted to them. In the following examples, the clitic *li* ‘them’ occurs pre-verbally, but the DP *questi studente* ‘these students’ and the weak pronoun *loro* ‘them’ cannot occur in this position (Ibid).

(11) a. Gianni *li* stima
    John them estimates
    John estimates them.

    b. *Gianni *questi studente / *loro* stima
    Gianni these students / them estimates

These morphosyntactic asymmetries between strong, weak and clitic pronouns also correlate with other pronominal asymmetries, including prosodic asymmetries. For instance, strong and weak pronouns have word-stress but as already discussed, not clitics. However most interestingly, they also correlate with semantic asymmetries which are not straightforwardly linked to the semantic oppositions reviewed in section 5.1.1 (e.g. free variable vs. bound variable (etc...)). First, strong pronouns have the ability to freely introduce new referents into the discourse context while weak and clitic pronouns require prominent referents, i.e. referents which are familiar either by having been previously introduced in the discourse context or by ostension. Second, strong pronouns appear to be restricted as to the type of referents they can select. Thus, while weak and clitic pronouns refer to both human and non human entities, strong pronouns only pick up human referents. In addition, strong pronouns are cross-linguistically excluded from a range of non-referential contexts such as expletive, impersonal and non-referential dative constructions. Again, this is not the case of weak and clitic pronouns which are found in those contexts. Consider the following French examples which illustrate these asymmetries (adapted from Cardinaletti & Starke, 1999: 154-155):
It can be observed from the previous sentences that the weak pronoun *il* can be interpreted as an expletive (12a) and impersonal subject (12b) but the strong pronouns *lui* and *eux* cannot be construed as such.

Subsequently, pronouns can be classified as strong, weak or clitic depending on their specific syntactic and semantic distributions. There is no obvious evidence that such morphosyntactic discrepancies are actually linked to the semantic asymmetries described in section 5.1.1 but they nonetheless hint at the possibility that pronouns may not have uniform internal structures. Indeed, that different classes of pronouns have different grammatical behaviour can be explained by them belonging to different grammatical categories and hence, occurring within different types of projections. In the following section, I describe two proposals that account for the grammatical discrepancies described in this section focusing on pronominal internal structures.

5.2 Structural hierarchies of pronominal forms

It is overall well accepted that pronouns uniformly occur within an extended projection of NP. For the most part, this projection is taken to correspond to DP (Postal, 1966; Abney, 1987; Reinhart & Reuland, 1993; Ritter, 1995; Panagiotidis, 2002; Kratzer, 2009). However, recent accounts have proposed that the semantic and morphosyntactic asymmetries characteristic of pronouns correspond and can be attributed to asymmetries in their internal structures. Suggestions that some pronominal forms have unique internal
organization have been around for several years (Chomsky, 1986; Reinhart & Reuland, Ibid)\footnote{SELF reflexives, for instance, have been argued not to project onto full DPs on their own and to combine with a pronoun to form a DP (cf. Reinhart & Reuland, 1993)}. Most recent accounts, however, argue for a hierarchical organization of the pronominal system reflected in different pronouns maximally projecting different hierarchically ordered heads, not necessarily including neither N° nor D°. In this section, I describe two of these proposals. In section 5.2.1, I sketch Cardinaletti & Starke (1999)'s structural deficiency. In section 5.2.2, I give an overview of Déchaine and Wiltshko (2002)'s proposed pronominal composition.

5.2.1 Cardinaletti & Starke's structural deficiency

Cardinaletti & Starke (1999, henceforth C&S) focus on the morphosyntactic and semantic asymmetries between strong, weak and clitic pronouns and suggest that they have in fact different syntactic representations, even when they share obvious similar forms such as the French strong and weak pronouns elle and elle in the following example.

(13) a. elle est venue
    She has come
    \textit{She came}.

    b. elle et celles d' à côté sont venues
    she and those from of side have come
    \textit{She and those besides came}.

Their basic proposal relies on a hierarchical structural deficiency where the difference between strong and weak pronouns on the one hand and weak and clitic pronouns on the other can be attributed to the lack of one functional head and hence, of one functional projection. The specific asymmetries associated with each type of pronouns reflect asymmetries in their underlying syntactic structure.

Under this proposal, particular classes of pronouns have less syntactic structure than other pronouns and are syntactically deficient. Particularly, clitic
pronouns are severely deficient, weak pronouns are mildly deficient while strong pronouns are not deficient. Structurally, strong, weak and clitic pronouns all occur within an extended NP but are associated with different functional projections. Strong pronouns are associated with CP\textsuperscript{147}, the highest functional projection dominating NP. Weak pronouns lack a CP and are associated with the second highest functional projection above NP, ΣP. Finally, clitics are most deficient in lacking the previous two functional projections and project onto IPs.

\begin{center}
\begin{tabular}{ccc}
\textit{Strong pronouns} & \textit{Weak pronouns} & \textit{Clitics} \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{ccc}
\textit{Strong pronouns} & \textit{Weak pronouns} & \textit{Clitics} \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{ccc}
\textit{Strong pronouns} & \textit{Weak pronouns} & \textit{Clitics} \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{ccc}
\textit{Strong pronouns} & \textit{Weak pronouns} & \textit{Clitics} \\
\end{tabular}
\end{center}

Evidence for a tripartite structural hierarchy comes from a range of languages where the three classes of pronouns have transparent morphology. In Italian, the additional projection which differentiates strong from deficient pronouns can be overtly realized by the dummy marker \textit{a}. Thus the strong pronoun \textit{a loro} corresponds to the weak version \textit{loro} plus \textit{a}. Whether the dummy marker occurs or not has specific effects on the distributional properties of the pronoun. With \textit{a}, \textit{loro} can freely occur in coordinated structures (15a), it can be c-modified (15b) and can pick up new discourse referents (15c). As shown by the examples in (16), this is not the case when the dummy marker is missing.

\textsuperscript{147}Following Starke (1993), C&S take DP structures to be similar to clause structures. Thus, in the same way that extended VP structures consist of the following [\textit{CP C [p I [v V]}], nominal structures can consist of [\textit{CP C [p I [n N]}].
According to C&S, a number of unrelated languages similarly overtly realize the additional projection that differentiates between weak pronouns and clitics. Thus, Slovak, Spanish and Greek, amongst others, have weak pronouns which can further be decomposed into clitics and dummy morphemes which serve as prosodic support. The morphological complexity into dummy markers and clitics of weak pronouns in those languages is illustrated in (17) below.

(17) clitic weak

Slovak ho je-ho him
     mu je-hu to him

Spanish los el-los them

Greek tos af-tos he

The link between structural deficiency and the distributional properties associated with each proposed class of pronouns (cf. section 5.1.2) is argued to be as follows. Functional projections which occur above NP host a range of
reduplicated nominal features. That is, nominal feature are each reduplicated on a particular functional projection. The lack of one or more of these functional projections therefore entails the absence in the structure of the features they host. In C&S account, CPs, ΣPs and IPs are argued to be associated respectively with functional case features and semantic range, prosodic features and Φ-features. Precisely, it is the presence and absence of these features which gives rise to the range of asymmetries observed between strong, weak and clitic pronouns.

Strong pronouns which correspond to full CPs have a functional case feature and a semantic range. Having a functional case feature means that they have a freer syntactic distribution and can occur in coordinated structures, be c-modified (etc...). Having a semantic range means that they can introduce new discourse referents but also imposes some constraints on strong pronouns. Thus, they cannot correspond to impersonal or expletives subjects and cannot refer to non human entities. As mentioned in the previous chapter, weak and clitic pronouns, by contrast, lack the CP projection and are respectively ΣP and IP. The consequence is that they contain neither a functional case feature nor semantic range. Given that missing features must be recovered (at all levels of representation), weak and clitic pronouns are syntactically restrained to positions where the case feature can be recovered. Now, the absence of semantic range has three effects on the semantic behaviour of deficient pronouns: (i) it prevents them from introducing new discourse referents, (ii) lets them be used as impersonals or expletives and (iii) imposes no restrictions such [+/-human] on their referents. Clitic pronouns, which do not project a ΣP projection and in that are distinct from weak pronouns, lack prosodic features which, in order to recover they must occur in a local configuration with a head containing a prosodic feature. C&S’s proposal is summarized in (18).

---

148 Semantic range is not considered to be a feature hosted by C in C&S approach. Instead, it is argued there that semantic range is a post LF interpretation of the Case feature.
Strong and deficient pronouns distributions (Cardinaletti & Starke, 1999)

<table>
<thead>
<tr>
<th>Features</th>
<th>Strong</th>
<th>Weak</th>
<th>Clitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural deficiency</td>
<td>no</td>
<td>mild</td>
<td>severe</td>
</tr>
<tr>
<td>Case feature</td>
<td>✓</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Prosodic features</td>
<td>✓</td>
<td>✓</td>
<td>no</td>
</tr>
<tr>
<td>ϕ-features</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Semantic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>✓</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Independent reference</td>
<td>✓</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>[+human] restriction</td>
<td>✓</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Non referential contexts</td>
<td>no</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Prosody</td>
<td></td>
<td>✓</td>
<td>no</td>
</tr>
<tr>
<td>Word stress</td>
<td>✓</td>
<td>✓</td>
<td>no</td>
</tr>
</tbody>
</table>

The presented framework accounts for the morphosyntactic and some referential asymmetries between pronouns. However, the opposition between strong pronouns, weak pronouns and clitics as described here does not correlate with the semantic variations between free and bound clitics. In the following section, I review Déchaine & Wiltschko (henceforth D&W)'s proposal (2002) which accounts for these asymmetries.

5.2.2 D&W's pronominal decomposition

Along the same lines as the one described in the previous section, D&W’s (2002) proposal relies on a tripartite categorial structure to explain the heterogeneous behaviour of pronouns. They propose three distinct categories of pronouns, each associated with their own maximal projection: pro-NPs maximally project onto NPs, pro-DPs maximally project onto DPs and pro-ΦPs are spell-outs of ϕ-features and maximally project onto an ΦP, which dominates.
an array of functional projections hosting the features they realize. This categorization of pronouns results in a hierarchy according to which NP pronouns lack ΦP projections which in turn lack DP projections, as can be observed in the following representations (D&W, 2002: 410).

Their tripartite hierarchical structure is supported by a number of languages. Halkomelem Salish, for instance, has independent pronouns which demonstrate the presence of the three projections. First, they can be split into an overt D and a morpheme realizing Φ-features\(^{149}\) (e.g. \(\text{thu}-tl'\dot{o}\) consists of the determiner \(\text{thu}\) and the ‘bundle’ of features -\(tl'\dot{o}\) (p. 412). Second, they can function as demonstratives modifying a noun (cf. (20) below) which shows that the pronoun’s maximal projection indeed contains an NP projection (in some cases overtly realized) and an additional projection hosting the feature morpheme, ΦP.

\[ (19) \]
\[
\begin{array}{c}
\text{a.} & \text{DP} \\
& \text{ΦP} \\
& \text{D} \\
& \text{Φ} \\
& \text{NP} \\
& \text{N} \\
\end{array}
\begin{array}{c}
\text{b.} & \text{ΦP} \\
& \text{Φ} \\
& \text{NP} \\
& \text{N} \\
\end{array}
\begin{array}{c}
\text{c.} & \text{NP} \\
& \text{N} \\
\end{array}
\]

(20) a. Tl'\dot{o}-cha-l-su qwemciwe-t \text{thu}-tl'\dot{o} \text{q'ami}
Then-FUT-1SG-so hug-TRANS DET.FEM-3SG girl
Then I'm going to hug that girl. (p. 412)

Shuswap Salish and Japanese provide evidence respectively for pro-ΦPs and pro-NPs and for the absence of DP and ΦP in the structure of certain pronouns. The (intermediate) ΦP categorical status of Shuswap independent pronouns, for instance, is demonstrated by their possible co-occurrence with independent D (as in 20) and their banning from positions associated with NP categories (cf.21).

\(^{149}\) After Wiltshko, 1998; 2002
The pro-NP status of the Japanese pronoun, *kare* ‘he’ is established by its co-occurrence with typical N-modifiers such as adjectives and possessives, as illustrated in (23).

(23) a. tiisai kare
    small he
    *He who is small.*

b. watasi-no kare
    I-GEN he
    *My boyfriend.*

Crucially, membership to one or the other category determines a pronoun’s internal and external syntax which in turn determines its binding properties. Its membership to one category also means that a pronoun grammatically behaves as other members of the category. Thus pro-DPs like other DP’s are definite and syntactically occur in argument positions. Semantically, they are constrained by the same Binding Principle as R-expressions (i.e. Principle C) and, in principle are not able to be bound variable or co-refer to an antecedent. Pro-NPs like nouns can occur in predicate positions. As constants, they cannot function as bound variables. As regard their binding properties, they are ambivalent (i.e. their binding properties depend on their referential
properties). Pro-\(\Phi\)Ps can be either arguments or predicates. Semantically they are variables and constrained by Principle B\(^{150}\).

W&D defend the thesis that English pronouns belong to one of the three categories. 1\(^{st}\) and 2\(^{nd}\) personal pronouns are argued to be pro-DPs and are shown to present characteristics associated with the category. In American English, for instance, these pronouns when they encode a plural feature can function as determiners and modify a noun, as shown below (cf. also Panagiotidis, 2002).

\[(24) \begin{align*}
& a. \textit{we} \text{ linguists} \\
& b. \textit{you} \text{ linguists} \quad (p. \, 421)
\end{align*}\]

Moreover, 1\(^{st}\) and 2\(^{nd}\) personal pronouns resemble other DP’s as to their binding properties. As well discussed in the literature, 1\(^{st}\) and 2\(^{nd}\) pronouns cannot be freely interpreted as bound variables. In the following sentence, a sloppy identity reading (25b) is not available precisely because the 1\(^{st}\) person pronoun \textit{me} is not be bound.

\[(25) \begin{align*}
& a. \text{ I know that John saw me and Mary does too} \\
& b. \quad \# \text{ I know that John saw me and Mary knows that John saw her} \\
& \quad \lambda x [x \text{ knows that John saw } x] \& \lambda y [y \text{ knows that John saw } y] \\
& c. \text{ I know that John saw me and Mary knows that John saw me} \\
& \quad \lambda x [x \text{ knows that John saw me}] \& \lambda y [y \text{ knows that John saw me}] \quad (p. \, 423)
\end{align*}\]

Other personal pronouns, such as third person, show on the other hand the properties of pro-\(\Phi\)Ps. As predicted 3\(^{rd}\) person pronouns can occur as predicates or as arguments. In (26) below, \textit{he} and \textit{her} are arguments.

\[(26) \quad [\textit{He}]_{\text{ARG}} \text{ saw } [\textit{her}]_{\text{ARG}} \quad (p.\, 425)\]

\(^{150}\) The presented Japanese, Shuswap and Halkomelem pronouns share the characteristics of respectively NPs, \(\Phi\)Ps and DPs just mentioned (cf. D&W, 2002: 411-418).
As shown in (27), the same pronouns can take part in complex noun formations which shows their predicate status. Note from (27c-d) that 1st and 2nd person pronouns cannot participate in such constructions because as DPs they are banned from predicate positions.

(27) a. [she]-male
b. [he]-goat
c. *[me]-male
d. *[you]-goat
(p. 426)

As OPs they can, furthermore, freely function as bound variables or co-refer to an antecedent:

(28) a. [Every candidate], thinks that [he], will win
   \( \forall x, \text{candidate}(x), x \text{ thinks that } x \text{ will win} \)

b. [John], thinks that [he], will win
(p. 423)

Finally one\(^{13}\) belongs to the category of pro-NPs. Like nouns, it can co-occur with modifiers such as determiners, quantifiers and adjectives:

(29) a. the one
b. someone
c. the real one

Semantically, the pronoun displays the properties of pro-NPs: being a constant, it cannot be a bound variable (30a) and because it does not hold referential content it cannot co-refer to an antecedent (30b).

(30) a. *[Everybody], thinks [one], is a genius
    \( \neq \forall x, x \text{ thinks that } x \text{ is a genius} \)

\(^{13}\) After Postal (1966), D&W assume that one is a pronoun
D&W’s proposed tripartition, although hierarchical, differs from C&S’s structural deficiency in that membership to one or the other category does not necessarily make a pronoun more or less deficient. Thus, D&W argue that pro-ΦP which does not fully project onto DPs can be strong pronouns. Furthermore, D&W show that French clitic pronouns display the categorial behaviours of pro-ΦPs and pro-NPs. Thus, the partitive clitic *en* is argued to be a pro-NP while accusative clitics (*'*-clitics) are argued to be pro-ΦPs. D&W do propose a way to incorporate C&S structural deficiency into their hierarchical system. Thus, they propose that the three projections proposed by C&S are ΦPs: strong pronouns are ΦPs which contains an NP, weak pronouns contain no NP while clitics are just Φ-heads. In the remainder of this section, I will apply a common structure to C&S and D&W proposed pronouns. Given that C&S’s hierarchy reposes on the presence or absence of features, I will assume, along the same lines as D&W, that strong, weak and clitic pronouns can all project onto ΦPs. However, such ΦPs differ, not in whether they contain an NP or not but, in the number of features

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122 *en* demonstrates the syntactic and semantic behaviour of nouns. It can replace a noun (as shown in (i) and (ii)) and cannot be a bound variable or bound by a co-referring antecedent (as shown in (iii) and (iv) respectively):

**i.** J’ai vu un [grand livre]  
I have seen a large book

**ii.** J’ *en* a vu un grand  
I *en* have seen a large

**iii.** [Chacun] pense que Jean *en* a vu  
each one thinks that Jean *en* has seen

**iv.** [Marie] pense que Jean *en* a vu  
Marie thinks that Jean *en* has seen

123 French 1-clitics show typical behaviour of pro-ΦPs. Thus syntactically, they can be arguments and predicates (example (v) and (vi)). Semantically, they can be bound variables (as shown in (vii)).

**v.** Jeanne la voit  
Jeanne her sees

**vi.** Jean est avocat, et Francois *le* sera aussi  
Jean is lawyer and Francois *le* will be too

**vii.** [Chaque homme] pense que Marie *[l’]* a vu  
each man thinks that Marie *[l’]* has seen
they encode. I will further assume that strong pronouns additionally project onto DP’s.

In the next section, I propose a hierarchical organization of the Taqbaylit pronominal system. In this section, I look at an organization of Taqbaylit pronominal forms in terms of deficiency: what forms can be classified as strong, weak or clitics and how such a classification can account for asymmetries in pronominal behaviour (some already observed by Ouhalla, 1988a).

5.3 Strong and Weak Distinctions in Berber

Recall from Chapter 3 that Taqbaylit makes use of a variety of pronominal forms ranging from independent pronouns with full Φ-feature paradigms to verbal affixes encoding no Φ-features at all. Up until now I have employed a somewhat traditional classification of these forms into demonstratives, personal pronouns, possessives, reflexives, reciprocals and agreement markers. In the light of the previously described frameworks, however, I now discuss these forms in relation to pronominal typologies.

5.3.1 Deficiency inside the category of personal pronouns

It was shown in previous chapters that personal pronouns come in different shapes in Taqbaylit and almost all Berber languages. Particularly, they can occur as independent forms\(^{154}\), as clitics, and when they correspond to the subject of a sentence, as the covert form *pro* whose reference can be identified by the features on agreement markers. In the following sentences, for instance, the 1\(^{st}\) person singular pronoun occurs in the independent form *nekkini*, the clitic form *iyi* and *pro*.

\(^{154}\) Paradigms for independent and clitic forms of Taqbaylit personal pronouns are provided in Chapter 3 (section 3.4.3).
Each of these pronominal forms is associated with its own interpretation and what's more, may occur in syntactic and semantic contexts from which the other forms are excluded. Particularly, independent personal pronouns exhibit in many contexts the behaviour of the strong pronoun class proposed by Cardinaletti & Starke (1999), while pro and clitic pronouns display those of deficient pronouns.

Indeed, independent pronouns can occur in the same range of syntactic positions as those identified as characteristic of strong pronouns. Recall from Chapter 3 that unlike clitics and covert pro which in Taqbaylit correspond to specific lexical arguments of a verb (respectively internal and external arguments), independent pronouns share the freedom of lexical DPs and can be associated with a subject, an object or an indirect object. As shown by the following examples, sentences containing independent pronouns are often, although not necessarily\textsuperscript{155}, semantically marked (contrastive topic or focus).

\textbf{(32) a. t-ttel =it [neutta]}  
\textit{3SGF-bandage}_{\text{REF}}  \textit{=CL.3SGM;ACC PRN.3SG}

\textit{Him, she bandaged him.}

\textit{# She bandaged him.}

\textbf{b. t-fka ayrum i [NETTA] IND.OBJ}

\textit{3SGF-give}_{\text{REF}} flatbread to_{\text{DAT}} PRN.3SG

\textit{She gave the flatbread TO HIM.}

\textsuperscript{155}As will be discussed in section 5.3.2, strong pronouns may be required by the syntax, and in those cases, they are not necessarily semantically marked.
Furthermore, they can occur in peripheral constructions — such as clefts, left-dislocations\textsuperscript{156} and right-dislocations —, in coordinated structures and be c-modified, as illustrated in (33) below with the strong pronoun \textit{nettat} ‘her’.

\begin{enumerate}
\item \begin{tabular}{ll}
\text{[nettat]} & i \\
\text{g-sp"e-n} & cerba \\
\end{tabular}
\begin{tabular}{l}
\text{cleft} \\
\end{tabular}
\begin{tabular}{l}
\text{PRN.3SGF COMP 3SGM-cook\textsubscript{PRF-PTCP} soup} \\
\text{It is her who cooked the soup.} \\
\end{tabular}
\item \begin{tabular}{ll}
\text{[netta]}, & fey-\gamma \\
\text{fell=asi} & \text{left-dislocation} \\
\end{tabular}
\begin{tabular}{l}
\text{PRN.3SG exit\textsubscript{PRF-1 SG on\textsubscript{CL.3SG\textsubscript{DAT}}} } \\
\text{As for him, I pleased him.} \\
\end{tabular}
\item \begin{tabular}{ll}
\text{a t-qim} & \text{[nettat]} \\
\text{d tilawin} & \text{coordination} \\
\end{tabular}
\begin{tabular}{l}
\text{PRT 3SGF-sit\textsubscript{AOR} PRN.3SGF with women} \\
\text{Her and the women will sit.} \\
\end{tabular}
\item \begin{tabular}{ll}
\text{t-lhu meme} & \text{[nettat]} \\
\text{sufela uvelo} & \text{c-modification} \\
\end{tabular}
\begin{tabular}{l}
\text{3SGF-walk\textsubscript{PRF even} PRN.3SGF on bike} \\
\text{Even she left on a bike.} \\
\end{tabular}
\end{enumerate}

Semantically too, independent pronouns display the same distributions as those associated with strong pronouns. First, they cannot be interpreted as rangeless: so they cannot correspond to impersonal subjects and obligatorily refer to human entities. Sentence (34a) below can receive both an impersonal and a specific reading. In the specific reading, the referent of the strong pronoun can be construed as a human entity or a non human entity (e.g. a chicken). However, only a specific reading involving a human entity is available in (34b) which contains the independent form of the pronoun.

\begin{enumerate}
\item \begin{tabular}{ll}
\text{zik} & \text{la=n} \\
\text{la=d ttkre-n} & \text{zik} \\
\end{tabular}
\begin{tabular}{l}
\text{early be\textsubscript{PRF=3PL.M PRT=D stand.up\textsubscript{PREF-3PL.M early}}} \\
\text{In the old days, they got up early.} \\
\end{tabular}
\item \begin{tabular}{ll}
\text{zik} & \text{la=n} \\
\text{la=d ttkre-n} & \text{zik} \\
\end{tabular}
\begin{tabular}{l}
\text{early be\textsubscript{PRF=3PL.M PRT=D stand.up\textsubscript{PREF-3PL.M early}}} \\
\text{In the old days, they got up early.} \\
\end{tabular}
\end{enumerate}

\textsuperscript{156}Clefts and left-dislocations in Berber are covered in Chapter 2.
Second, they can freely refer to new discourse entities. So in the answer to a question, for instance, they can correspond to the WH-element, such as in (35) below.

(35) Q: [amba]i=d i-ruh-n?
   Who COMP=D 3SGM-gO_PRF-PTCP
   Who came?

A: d [netta] (i=d i-ruh-n)
   COP PRN.3SG COMP=D 3SGM-gO_PRF-PTCP
   It's him (who came).

On the other hand, clitics and pro display the distinctive properties of deficient classes of pronouns. Thus, they are excluded from peripheral clausal positions and unlike their independent counterparts cannot be coordinated or c-modified. The following examples illustrate the deficient behaviour of clitics and pro.

(36) a. *[pro] i g-spe-n cerba *cleft
    pro COMP 3SGM-cook_PRF-PTCP soup
    It is her who cooked the soup.

    *left-dislocation

b. *[tyt] la veda-n =i(y)i lehlak
    CL.1SG;DAT start_PRF-3PLM =CL.1SG;DAT disease
    Me, the pain started on me.

    *coordination

c. *a t-qim [pro] d tilawin
    PRT 3SGF-sit AOR pro with women
    Her and the woman will sit.
In addition, these pronouns exhibit the same semantic properties as those of deficient pronouns. pro, for instance, can be rangeless and correspond to an impersonal subject. Thus, sentence (37a) (repeated from (34a)) is ambiguous between a specific and an impersonal reading. As for their referential properties, both pronouns require prominent referents and unlike independent pronouns, cannot introduce new referents into the utterance context (37b-c).

(37) a. zik la=n [pro] la=d ttkre-n
    early be_{PRT=3PL.M} pro PRT=D stand.up_{PRT=3PL.M}

[pro] zik
pro early
In the old times, they used to get up early.

b. Q: anta i=d i-ruh-n?
    who COMP=D 3SGM-go_{PTCP}
    Who came?
A: #t-ruh=d [pro]
    3SGF-go=D
    She came.

c. Q: anta i t-wala-d?
    who COMP 2SG-see_{PTCP=2SG}
    Who did you see?
A: # wala-γ =[r]
    see_{PTCP=1SG} =CL.3SGM;ACC
    I saw him.

In chapter 2, note, it was observed that constructions involving pro are semantically constrained and subjects which introduce a new discourse referent such as indefinite DPs, deictic demonstratives and deictic pronouns must be overtly realized. This is now straightforwardly accounted for by the fact that pro
being deficient it requires a prominent antecedent in the utterance context. Examples given there to illustrate this fact are repeated in (38) below.

(38) a. ye-ruh =d [yiwen] / *[pro]
   3SGM-goPREF =D one / pro
   Someone came.

b. ye-ruh =d [yiwen aqcic] / *[pro]
   3SGM-goPREF =D one boy / pro
   A boy came.

c. i-čveh [wagi] / *[pro]₁⁵⁷
   3SGM-be.beautifulPREF DEM prv / pro
   This is beautiful.

d. te-čveh [nettar] / *[pro]₁⁵⁸
   3SGM-be.beautifulPREF PRN.3SGF pro
   She is beautiful.

In conclusion, a tripartition into strong, weak and clitic pronouns can be applied to the personal pronoun system of Taqbaylit, and possibly other Berber languages. Particularly, two classes of personal pronouns are found in the language, strong pronouns and deficient pronouns. Hitherto, there is evidence that independent pronouns belong to the strong class while clitics and pro belong to deficient classes. After Cardinaletti & Starke (1999) adopting Chomsky (1993), I will assume that pro is a weak pronoun. The personal pronoun category of Taqbaylit as organized in terms of deficiency can be represented as in (39) below.

(39) Deficiency in the personal pronoun category

<table>
<thead>
<tr>
<th>strong</th>
<th>weak</th>
<th>clitic</th>
</tr>
</thead>
<tbody>
<tr>
<td>independent pronouns &gt; pro &gt; clitics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

₁⁵⁷ Note that dropping of the demonstrative is possible if the referent has not been explicitly mentioned before but is prominent in the discourse context (e.g. the discourse participants are looking at two trousers in a shop, the speaker can point at one and say:
  i. i-čveh
     3SGM-be.beautifulPREF
     This one is beautiful

₁⁵⁸ Same as previous sentence.
In section 5.3.3, I turn to the category of possessives and look at how the hierarchy can also be applied to the system. But I leave these issues aside for now and in the next section, I show that a hierarchical organization of the personal pronoun system accounts for their distributions in Taqbaylit, and probably other Berber languages too.

5.3.2 Choice and strong pronoun distribution

In their description of the syntactic positions in which strong pronouns occur, Cardinaletti & Starke (1999) include θ-positions. Thus strong pronouns can occur at PF in the same position as that in which argument DP’s occur. Consider the following examples from French:

(40) a. J’ ai vu [Marie]
   I have seen Mary
   \textit{I have seen Mary.}

b. J’ ai vu [elle]
   I have seen her
   \textit{I have seen HER.}

c. *Je [elle] / [Mary] ai vu
   I her Mary have seen
   \textit{I have seen her.}

d. Je [l]= ai vu *[l]
   I her have see her
   \textit{I have seen her.}

In (40a), the strong pronoun \textit{elle} ‘she’ occurs in the position associated with object DP arguments but in (40b) the deficient pronoun \textit{l} ‘her’ occurs in a preverbal position from which strong pronouns and DP arguments are excluded.

If independent pronouns are strong pronouns they are predicted to occur in corresponding argument positions too. This prediction is however not straightforwardly born out. Indeed in Taqbaylit, as in other Berber languages (e.g. Tarifit (Ouhalla, 1988b)), independent pronouns do not freely occur in all θ-
positions. Particularly, unless independently required, they are banned from the direct object position. Consider for instance the following sentences:

(41) a. te-ttel 3SGF-bandage=CL.3SGM;ACC
    She bandaged Nuam.

b. *te-ttel [netta] 3SGF-bandage PRN.3SGM
    She bandaged him.

(41b) above is ungrammatical precisely because the strong pronoun netta ‘he/him’ occurs in the object position. Note that the sentence can be rescued if an accusative clitic encoding the same Φ-features as the strong pronoun occurs on the verb, in which case the whole sentence is semantically associated with contrastive topic, as shown in (42) below.

(42) a. te-ttel = [it] 3SGF-bandage =CL.3SGM;ACC
    Him, she bandaged him.
    # She bandaged him.

b. te-ttel = [it] 3SGF-bandage =CL.3SGM;ACC
    She bandaged him.
    #Him, she bandaged him.

Even though they are banned from the object position, strong pronouns can freely occur in subject positions\(^\text{160}\). Sentences (43a, b) illustrate this option.

\(^{159}\) The type of construction involved here is described in more details, later in this section.

\(^{160}\) Recall from Chapter 2 that the canonical word order of Taqbaylit is VSO
That independent pronouns have a peculiar distribution is not a new observation. It has, for instance, been suggested that independent pronouns in Berber never occur in any of the argument positions. As example (44b) shows, this restriction is too strong as they are clearly able to occur in subject positions. Taking the opposite stance, Ouhalla (1988a and references therein) proposes that independent pronouns are the overt counterparts of pro and consequently occur in the same positions as pro. Given that pro occurs in A-positions, independent pronouns also occur in these positions, including the object position. But, because they 'are negatively specified for referential features [... and] do not seem to be capable of referring without an agreement element', they require co-indexation with an agreement marker which is, depending on the A-position, either the subject agreement affix on the verb or an accusative clitic. An observation of the more general distribution of independent pronouns shows that this cannot be the case.

First, the cases described as involving object clitic doubling are actually instances of right-dislocations. Although, as justly mentioned by Ouhalla (Ibid), an intonation pause is not obligatorily required between the [verb + clitic] complex and the independent pronoun such constructions force a semantically marked interpretation on the utterance which, in most contexts is linked to Topic. Given that the construction involved is indeed right-dislocation, the clitic in those

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161 Ouhalla’s proposal makes a number of presuppositions worth describing here. First, after Jaeggli (1986) it presupposes that accusative clitics in Berber are agreement markers and that the corresponding 0-position (i.e. that associated with the object argument of the verb) is filled by pro which, in some cases is overtly realized by an independent pronoun. Second, given that most Berber languages do not allow accusative clitic doubling, independent pronouns are the only DP/NP allowed in this position when the clitic is overtly realized.

162 Recall from chapter 2 that left-dislocations and right-dislocations in Taqbaylit characteristically involve clitic doubling and are associated with the Topic component of Information Structure.
examples is best analyzed, not as an agreement marker needed for referential specification, but as a resumptive pronoun.

Second, as demonstrated by many of the previous examples, independent pronouns do not display the properties of referentially underspecified elements. Thus, they can introduce new referents into the discourse and what’s more are infelicitous in impersonal and expletive contexts which are by nature non-referential. It is not the case either that these pronouns obligatorily require an agreement element in order to be referential. Thus, they can be used in isolation (e.g. as the answer to a question, as in (44b)) and also occur in indirect object positions without the need for the dative clitic to be realized (45).

(44) a. anta i t-wala-d?
   who COMP 2SG-seeREF-2SG
   Who did you see?

   b. [netta]
   PRN.3SG
   Him.

(45) a. t-fka ayrum i weqcic
   3SGF-giveREF flatbread toDAT boy
   She gave a flatbread to the boy.

   b. t-fka ayrum i [net tat]
   3SGF-giveREF flatbread toDAT PRON.3SGM
   She gave a flatbread to him.

It is actually more plausible that strong pronouns are referentially fully specified and do not obligatorily require syntactic nor discourse antecedents in order to be interpreted. But even so, it remains to be explained why they freely occur in certain argument positions and not in others. Particularly, why can they not occur in object positions? This question can be straightforwardly answered to by recourse to the CHOICE ‘constraint’ brought forward by Cardinaletti & Starke (1999) given in (46) below:
Choice of a pronoun

Choose the most deficient possible form
(Cardinaletti & Starke, 1999: 153)

According to (46), the deficient form of a pronoun must be chosen over its strong form. That is given a particular context if the occurrence of a deficient form of a pronoun is grammatical then it will get precedence over the strong form whose occurrence will be consequently ungrammatical. Choice also predicts that whenever a deficient form cannot be realized, a strong form will occur instead.

Suppose then that independent pronouns, because they are strong, cannot occur in the same contexts — syntactic and semantic — in which accusative clitics, which are deficient, also occur. This would predict that the independent form of a pronoun is banned from the object position, unless it is required by the unavailability of its deficient form. One key argument in support of this analysis is the fact that in some contexts, independent pronouns can indeed occur in the object position. Particularly if it is overtly contrasted or coordinated, the independent form of an accusative pronoun is allowed in the object position. Consider the following examples:

(47)

<table>
<thead>
<tr>
<th>OVERT CONTRAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
</tr>
<tr>
<td>3SGF-bandage PRN.3SGM NEG PRN.3SGF</td>
</tr>
<tr>
<td>She bandaged HIM not her!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COORDINATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
</tr>
<tr>
<td>3SGF-bandage PRN.3SGM and PRN.3SGF</td>
</tr>
<tr>
<td>She bandaged HIM and her.</td>
</tr>
</tbody>
</table>

Crucially, strong forms can also be found independently in the object position providing the right semantic background. For instance, if it can be understood as

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163 After Cardinaletti (1998)
164 Here I use the term contrasted as involving newness. As mentioned by C&S. deficient forms can also be contrasted as long as their referent is already prominent. The same is also true for Berber.
'covertly' contrasted, an accusative pronoun can be realized as its independent form. This is illustrated by the following example:

(48) a. ala t-ttel CONTRASTED
    no, 3SGF-bandage_{PRF} PRN.3SGM
    No, she bandaged him.

Now, these semantic and syntactic contexts are the precise contexts from which accusative clitics which are, here, analyzed as members of the deficient class are banned, as illustrated in the following examples.

(49) a. *t-ttel = [Ir] mačči nettat
    3SGF-bandage_{PRF} =CL.3SGM;ACC
    She bandaged HIM, not her!

b. *t-ttel = [Ir] aq nettat
    3SGF-bandage_{PRF} =CL.3SGM;ACC
    She bandaged HIM and her.

c. #ala t-ttel 165
    no, 3SGF-bandage_{PRF} CL.3SGM;ACC
    No, she bandaged HIM (contrasted).

In fact, even the occurrence of strong pronouns in subject and indirect object positions is restricted to certain semantic contexts. Although, they more easily occur in those positions and can be construed without the need for a context reconstruction, strong pronouns always induce a semantically marked interpretation. Unmarked interpretations, on the other hand, are associated with deficient pronouns (pro and clitics) and are always ungrammatical with strong pronouns.

165 Note that the clitic is allowed in this sentence if the entity it refers to has already been mentioned in the discourse. For instance, as the answer to a question such as ‘She hasn’t bandaged the boy yet?’
The distribution of strong pronouns, in Taqbaylit at least, parallels that found in many languages (cf. Cardinaletti & Starke, 1999). In French, for instance, strong pronouns only occur in A-positions if they are semantically or syntactically required, i.e. if a deficient pronoun is banned from the particular position. In (51a) for instance, the strong pronoun lui ‘him’ is only acceptable in the object position if it is construed as semantically contrasted. Otherwise, the accusative form le ‘him’ must be used.

The dichotomy between the syntactic distribution of independent pronouns and that of clitics and pro in Taqbaylit is straightforwardly explained by the recourse to the Choice ‘constraint’. Given that a deficient form is always chosen over a strong form, unless it is independently required an independent pronoun will be ungrammatical in those positions. Table 25 below summarizes the distribution of personal pronouns in Taqbaylit.
Before turning to the category of possessives, there is one last fact worth discussing. There seems to be an asymmetry between the types of positions in which independent pronouns can be found and their possible interpretations in a given language. As we saw, in Taqbaylit a strong pronoun alone is less effortlessly accepted in object position than in the two remaining A-positions, namely subject and indirect object positions. We have seen that the need for an agreement marker (as proposed by Ouhalla (1988)) is not the reason for this limitation. And even though choice accounts for the overall distribution of strong pronouns, it does not explain this asymmetry. Actually, the asymmetry does not concern only the object position. In French, for instance, it is more difficult to construe an interpretation with a strong pronoun in subject position than in any other A-position. Consider the following examples:

\[(52)\] a. Je vois [lui]  
I see PRN.3SGM  
(pointing) I see HIM.

b. Je [lui] ai donne a [lui]  
I CL.3SGM;ACC have given to PRN.3SGM  
(pointing) I have given it to HIM.
c. Lui est arrive a neuf heures.  
PRN.3SGM is arrived at nine hours  
(pointing) HE arrived at 9 o'clock.

d. Il est arrive a neuf heures.  
PRN.3SGM he is arrived at nine hours  
(pointing) Him, he arrived at 9 o'clock.

In (52a) and (52b) above the 3rd singular masculine strong pronoun occurs alone respectively as a direct object and as an indirect object, and can be interpreted as semantically marked. In (52c), on the other hand, the pronoun is not easily interpreted, even as semantically marked. Like the Taqbaylit examples involving the direct object position, more context is required for full interpretation. Thus, (52c) can be perfectly understood given an appropriate context is provided. This is shown in (53) below.

(53) Lui est arrive a 9 heures, pas elle.  
PRN.3SGM is arrived at 9 hours, NEG PRN.3SGF  
HE arrived at 9, not her.  
Him not her arrived at 9.

I have unfortunately no explanation for why this is the case and will these issues aside for further research. I turn now to possessives and show that a strong vs. clitic distinction also exists there.

5.3.3 Deficiency inside the category of possessives

In chapter 3, I was shown that in Taqbaylit possessives appear in the following three different forms: (i) clitics, (ii) PP complexes [n = Cl-obj], and (iii) complex forms preceded by the dummy preposition n (cf. Rabdi, 2004 for similar observations). In the following example, the 3rd person singular possessive appears as the clitic = (i) s, as the PP ines and preceded by n, n ines.
The complex and clitic forms of the possessives share formal similarities in that the latter corresponds to a reduced form of the former but like personal pronouns, they differ in their syntactic and semantic distributions. These facts hint that a strong vs. deficient opposition also occurs in the possessive domain. And indeed when they appear in their complex form, possessive pronouns display properties similar to those of strong forms while clitics, on the other hand, display the properties of deficient elements. Cardinaletti (1998) proposes to extend the tripartite organization into strong, weak and clitic classes to the category of possessives and suggests a series of tests adapted from Cardinaletti & Starke (1999) to the domain of possessives. I will apply these tests in the following discussion on possessive pronominal forms in Taqbaylit.

The complex [n =CL Obl], preceded or not by the preposition n, displays the properties associated with strong forms as described for pronouns in the previous sections. Thus, they can be predicated, overtly contrasted, coordinated and c-modified:

(55) a. axxam aki [ina / n inu]
    house DEMPROX POSS.1SG
    This house is mine.

---

166 Singular possessive clitics are reduced forms while plural forms are identical in the two classes (cf. Chapter 3 for more details).
b. \([\text{jnu} / \text{n inu}]\) axxam aki
POSS.1SG house DEMPROX
This house is mine!

c. axxam aki \([\text{jnu/n inu}]\) mačči inek / n inek
house DEMPROX POSS.1SG NEG POSS.2SGM
This house is mine, not yours.

d. axxam \([\text{jnu/n inu}]\) aq (y)ine-m / n inem
house POSS.1SG and POSS.2SGF
The house of you and me.

e. tilifun \([\text{jnu/n inu}]\) wahd =iw
phone POSS.1SG one =CL.1SG;POSS
The phone of me only.

Like their clitic counterparts in the personal pronoun system, possessive
clitics on the other hand cannot be predicated, overtly contrasted, coordinated nor
c-modified.

\(56\) a. axxam =\([\text{iw}]\) aki
house =CL.1SG;POSS DEMPROX
#This house is mine!

b. *i-čveh uxxam =\([\text{iw}]\) mačči n wergaz
3SGM-be.beautiful\(\text{prf}\) house =CL.1SG;POSS NEG OF man
MY house is beautiful, not the man's.

c. *i-čveh uxxam =\([\text{iw}]\) aq n wergaz
3SGM-be.beautiful\(\text{prf}\) house =CL.1SG;POSS and OF man
?My and the man's house is beautiful.

d. *axxam =\([\text{is}]\) wahd =is
house =CL.3SG;POSS one =CL.3SG;POSS
The house of him only.

Semantically, the two forms also contrast on their referential properties. Thus,
independent pronouns can freely introduce new referents into the discourse
context but not clitics:
Given the properties they exhibit, possessives too can be classified as strong or deficient. Before concluding this section, there is one important fact yet to discuss. As explained in chapter 3, strong possessives are PPs headed by the dummy preposition $n$. The partition of possessives into strong and deficient forms just proposed raises the question of what the status of possessive clitics is. C&S (1999: 207-212) argue that the asymmetries between strong and deficient forms exist in other categories, such as adverbs or adjectives. In the case of possessives in Taqbaylit, it can be argued that the asymmetries are effective within the prepositional domain. Assuming that morpho-syntactic and semantic asymmetries visible on the surface indeed result from underlying asymmetries, then possessive clitics should be treated as deficient PPs ($\Phi$Ps); i.e. projections lacking a PP layer and prosodic features. The distinction between strong and clitic PPs exists underlyingly but is, however, not visible morphologically. Recall, indeed, that the plural forms of clitics realize $n$ and that singular forms realize the $i$ vowel (assumed by Chaker (1983) to be part of the preposition $n$).
5.4 DP vs. ΦP in the category of personal pronouns

5.4.1 Strong personal pronouns are DPs

In the previous section I have shown that independent forms of personal pronouns in Taqbaylit are strong pronouns. In this section, I will show that they also display the syntactic and binding properties identified by D&W (2002) as characteristic of DP’s.

Recall from section 5.2.2 that pronouns which belong to the pro-DP category have the following properties: (i) they are definite, (ii) can occur in argument but not predicate positions and (iii) cannot be construed as bound variables or co-refer to an antecedent. Strong pronouns in Taqbaylit display these properties. First, as observed in the previous section, they can occur in argument positions (providing the right semantic context). In the examples given in (58), the strong form of the 3rd singular feminine personal pronoun nettat ‘her’ occurs in the same position as that of the subject DP Marwa.

\[(58)\]

a. te-čča [marwa] ayrum nni
   3SGF-eatPRF marwa bread DEMAMB
   Marwa ate this bread.

b. te-čča [nettat] ayrum nni
   3SGM-eatPRF PRN.3SGF bread DEMAMB
   She ate this bread

There are contexts where strong pronouns can apparently be found in predicate positions, such as predicative constructions of the type given in (59) involving the non verbal copular d.

\[(59)\]

a. d [ajenjari]
   COP blue
   This is blue.

b. mačči d [axxam]
   NEG COP house
   It’s not a house.
In the previous examples, the adjective *ajenjari* ‘blue’ and the noun *axxam* ‘house’ which are involved in the copular construction function as predicates. As shown by (60) below, the strong pronoun *nettat* can also co-occur with the copular in the same type of constructions.

(60)  
\[
\text{COP} \quad \text{PRN.3SGF} \\
\text{It is her.}
\]

Although such examples as (62) are perfectly grammatical in Taqbaylit, it is not the case that strong pronouns function as predicates there. Indeed, unlike those involving adjectives and nouns, copular constructions involving strong pronouns cannot be interpreted as predicative.

(61)  
\[
\text{COP} \quad \text{PRN.3SGF} \\
\#It's her. \\
\text{It's her.}
\]

 Actually, their interpretation is similar to that attributed to the same constructions involving a DP, as shown in (62) below.

(62)  
\[
a. \quad \text{COP} \quad \text{house DEM}_{\text{AMB}} \\
\#This is a house. \\
\text{It's this house.} \\

b. \quad \text{COP} \quad \text{Ahmed} \\
\text{It's Ahmed.} \\
\#It's a Ahmed.
\]
Instead, strong pronouns, like the DP’s in (62), ought to be considered as clefted arguments whose complement CPs are missing in an elliptical-type of structure. So for instance, (61) and (62) could be completed as in (63a, b) below.

(63) a. d netta \{i wala-γ\}  
    COP PRN.3SGM COMP see<sub>rfr</sub>-1SG  
    It's him that I saw.

b. d axxam mni \{i g-cevehe-n\}  
    COP house DEM<sub>AMBI</sub> COMP 3SGM-be.beautiful<sub>rfr</sub>-PTCP  
    It's this house that is beautiful.

c. d Ahmed \{i =d i-ruh-n\}  
    COP Ahmed COMP =D 3SGM-go<sub>rfr</sub>-PTCP  
    It is Ahmed who came.

Additional evidence that Taqbaylit strong pronouns belong to the category of DP’s comes from the fact that they cannot normally occur as bound variables or be co-referential to a linguistic antecedent. This is shown by the following examples:

(64) a. [kul aqcic]<sub>i</sub> ye-na=d [netta]<sub>i</sub>j/k i-vra ad  
    every boy 3SGM-say<sub>rfr</sub>=D PRN.3SGM 3SGM-want<sub>rfr</sub> PRT  
    i-ruh  
    3SGM-go<sub>AD</sub>  
    Every boy said that he wanted to go.  
    *∀(x) \[\text{boy (x) } \rightarrow x \text{ said } x \text{ wants to go}\]  
    ∀(x) \[\text{boy (x) } \rightarrow \exists(y) \text{ [male (y) } \land x \text{ said } y \text{ wants to go]}\]

---

167 Recall from Chapter 2 that Berber clefts involve pre-position of the focus constituent in the left-periphery of the clause in between the optional copular d and the complentinizer i.

168 Note that even if the strong pronoun occurs in more embedded positions, the sentence cannot be rescued. This is shown below:

i. *[kul aqcic]<sub>j</sub> i-nad i-vra [netta]<sub>j</sub> i-ruh  
   every boy 3SGM-say<sub>rfr</sub>=D 3SGM-want<sub>rfr</sub> PRN.3SGM PRT 3SGM-go<sub>AD</sub>  
   Every boy said that he wanted to go.

ii. *[kul aqcic]<sub>j</sub> i-nad i-vra ad i-ruh [netta]<sub>j</sub>
b. i-zra  [didine]; beli sarah te-wala
3SGM-know  Didine  that sarah 3SGF-see

[netta]*i/k
PRN.3SGM
Didine knows that Sarah saw him.\textsuperscript{169}

*Didine\textsubscript{i} (λx (x knows that Sarah saw him))
Didine\textsubscript{i} (λx (x knows that Sarah saw him))

In (64a) above, the strong pronoun netta ‘him’ cannot receive a denotation under variable assignment, i.e. the pronoun cannot be bound by and hence cannot be construed as anaphoric to the quantifier phrase kul aqciec ‘every boy’. Similarly in (64b), netta ‘him’ cannot be interpreted as co-referential to Didine.

After D&W (2002), strong personal pronouns in Taqbaylit can be represented as follows:

(65)  
\[
\begin{array}{c}
\text{DP} \\
\begin{array}{c}
\text{D} \\
\text{PRN} \quad \Phi \\
\end{array} \\
\Phi P \\
NP
\end{array}
\]

5.4.2 Clitics and pro are ΦPs

In previous sections, I have analyzed clitics and covert pro as deficient pronouns. In this section, I show that these two forms display some of the properties of the pro-ΦP\textsuperscript{170} category proposed by D&W. The main property associated with pro-ΦPs is that, having no semantics on their own, they can be either construed as variables or as co-referential. Berber deficient pronouns display those properties. Thus, as shown by the following examples, they can be

\footnotesize{\textsuperscript{169} The sentence might be possible if contrasted but I leave that aside for further development.}

\footnotesize{\textsuperscript{170} The present analysis contrasts with Elouazizi & Wiltschko (2006) who argue that subject agreement markers (i.e. pro) in Berber are of category N. Their main arguments for the fact that agreement markers are N-agreement are: (i) that subject agreement exclusively occurs on the verb and never on the particles which precede the verb (which after the ‘like-merges-with-like’ principle means that agreement merges with v because it is of category n) and (ii) subject agreement markers do not occur in clefts, wh-constructions and relative clauses because as constant they cannot be bound.}
construed as bound variables. In (66a) below, the covert pronoun \textit{pro} is ambiguous between a bound reading and a free variable reading. Similarly in (66b), the accusative clitic can be construed as a free variable or as a bound variable.

\begin{itemize}
\item[(66) a.]
\begin{align*}
i-na=d & \quad [\textit{kul aqcic}]_{\text{loc}} & \quad \text{3SGM-say}_\text{prf}=D & \everyboy & \text{pro} & \quad \text{3SGM-want}_\text{prf} & \text{PRT} \\
i-ruh & \quad \text{3SGM-go}_\text{aor} \\
\text{Every boy said that he wanted to go.} \\
\forall (x) \ [\text{boy (x)} \rightarrow x \text{ said } x \text{ wants to go to}] \\
\forall (x) \ [\text{boy (x)} \rightarrow \exists (y) \ [\text{male (y)} \land x \text{ said } y \text{ wants to go}]
\end{align*}
\item[(66) b.]
\begin{align*}
[kul aqcic] & \quad i-zra & \quad \text{beli} & \quad \text{every boy} & \quad \text{3SGM-know}_\text{prf} & \text{COMP} \\
t-wala & \quad =\lbrack t \rbrack & \quad \text{3SGF-see}_\text{prf} & \equiv \text{CL.3SGM;ACC} \\
\text{Every man knows that she saw him} \\
\forall (x) \ [\text{boy (x)} \rightarrow x \text{ knows Miriam saw } x] \\
\forall (x) \ [\text{boy (x)} \rightarrow \exists (y) \ [\text{male (y)} \land x \text{ knows Miriam saw } y]
\end{align*}
\end{itemize}

After D&W clitics and pros can be represented as (67) below:

\begin{itemize}
\item[(67)]
\begin{itemize}
\item \(\Phi P\)
\item \(\Phi \xrightarrow{\text{CL}} \text{NP}\)
\item \(\text{CL}\)
\item \(\text{pro}\)
\end{itemize}
\end{itemize}

5.4.3 Strong pronouns as bound variables

In section 5.4.1, I looked at the internal structure of the strong forms of personal pronouns and showed that they are pro-DPs in Taqbaylit and cannot be
bound variables. However, it is not always the case that strong pronouns cannot be interpreted as bound variables. Consider, for instance, the following sentences:

(68) \[kul\ aqcic\]i i-na=d [nett\a]i\k a [every boy] 3SGM-say\Prf=D PRO.3SGM PRT

i-ttazal-n atas 3SGM-run\Impf-PTCP a.lot

Every boy said that he was the fastest runner.

a. \(\forall(x) [\text{boy}(x) \rightarrow x \text{ said } x \text{ was the fastest runner}]\)

b. \(\forall(x) [\text{boy}(x) \rightarrow \exists(y) [\text{male}(y) \wedge x \text{ said } y \text{ was the fastest runner}]]\)

In (68) above, netta 'him/he' can either be construed as a bound variable (cf. 68a) or as a free variable (68b). Although they might seem to be, such examples are not counterevidence that strong pronouns should be analysed as pro-DP's. Indeed, the only reason for the use of a strong pronoun here is the unavailability of a weak pronoun (cf. sections 5.3.1 & 5.3.2) in a cleft construction.

(69) \*i-na=d kul aqcic a i-ttazal-n atas 3SGM-say\Prf=D every boy PRT 3SGM-run\Impf-PTCP a.lot

Every boy said that he was the fastest runner.

Conclusion

In this chapter, I have looked at clitics focusing on their morpho-syntactic and semantic particularities with respect to other pronominal elements. Applying typological classification of pronouns such as those proposed by Cardinaletti & Starke (1999) and Déchaine & Wiltschko (2002), I have proposed that Berber personal pronouns and possessives can be classified into Strong and Deficient categories. In terms of their syntactic internal structure, strong pronouns correspond to DPs or PPs (i.e. possessives) while, deficient clitics and covert pro correspond to \(\emptyset\)Ps. From a typological point of view, I was shown that the Berber
pronominal organization conforms to independently proposed hierarchical classifications of pronominal forms into different classes or categories.
The main aim of this dissertation was to explore and analyze pronominal and clitic systems in Taqbaylit Berber (Afro-Asiatic) from the point of view of their syntactic, semantic and interpretative properties. To achieve this goal, given the interaction of clitics with various elements which participate in the composition of clausal and nominal projections two things were primordial.

First, a detailed analysis of clausal and verbal structure was necessary. The exploration of the Berber clause cannot go without a discussion of the language’s aspectual system. In this dissertation, based on the different interpretations associated with the various verb forms, I proposed a basic aspectual opposition between perfective and imperfective and an opposition between Realis and Irrealis moods which can be assumed to be fairly stable across Berber languages. Although the Berber clause does not greatly vary, there are nonetheless small divergences that need to be sorted out to understand the system. Differences for the most part affect the V external TAM elements and are more easily observable by focusing on the semantic contexts and range of interpretations within which these various elements occur. I hope to have shown here that an extended event structure divided into semantic zones provides the key to understanding these variations.

The second essential requirement for an account of cliticization and pronominal systems was an understanding of the nominal projections. The categorization of clitics and other pronominal forms as extended nominal projections, such as DP or as proposed by Déchaine & Wiltshko (2002), ΦP, makes a comprehensible description of the Berber DP and elements participating in its composition crucial. In this dissertation, I have tried to achieve such a goal. I presented various elements which give rise to extended nominal structures such as DP and accounted for the various orders in which they occur, building from Cinque’s DP template (2000; 2005). In the context of Berber DP structure, the
particular form in which Berber DPs/ NPs occur depending on the environment in which they appear, the Construct State, was discussed in great details. In particular, I presented a number of differences between the Berber CS and the Semitic CS on which the terminology and many analyses of the phenomenon are based.

Clitic systems are a popular topic of research in Berber linguistics. Here, I chose to explore them from the perspective of the interface between morphology, syntax and semantics/pragmatics. From that perspective, a number of claims on clitic placement and on the organization pronominal systems in Tabaylit were made.

On the issue of clitic placement, I have adapted Cardinaletti & Starke (1999)'s derivation and argued that it is derived in two steps in Taqbaylit and other Berber languages. Inside the clause, the first step occurs at the syntactic level and moves clitics as phrasal projections to the Specifier position of h-AspP, the highest functional projection which hosts the verb. The second step occurs at PF and incorporates clitics into an adjacent prosodic host which is the head of a functional projection occurring just above h-AspP and contained within the lower CP, or if no such head is available the verb in h-Asp. In contexts where the verb functions as a prosodic host, clitic-verb inversion occurs in order for the clitic not to be first in its minimal domain. Inside DP, the same analysis has been extended to possessive clitics. I have suggested that clitic placement in the constituent is derived by movement of clitics as phrasal projections to the Specifier position of DP, the highest extended projection of NP hosting the noun, followed by incorporation of the clitic into the noun in D.

As for the organization of Taqaylit pronominal systems, it was shown based on a number of criteria that the system relies on a basic morphosyntactic opposition between strong and deficient pronouns. From a typological point of view, it was shown that the division of the system was linked to various distributions attested cross-linguistically.
The data on which the above dissertation is based comes from a corpus of elicitations and narratives collected in Algeria during the summer of 2007 (cf. Chapter 1 for more details). In this appendix section, I provide the reader with a sample of the corpus narratives in the form of two short stories.

These stories, which are free narratives, have been chosen in particular because they display many of the features discussed in the previous chapters. Thus, like all of the corpus data, they show the use of pronominal and locational clitics in discourse contexts. In addition, they show the various uses of the different aspects and moods available in the language and specifically, the pragmatic and semantic environments within which imperfect and Aorist are chosen over one another.

The first of the sample narratives, Tameyra n Hassan (Hassan’s wedding), is the story of a traditional wedding party told by a sixteen years old girl from the region of Bouira (Kabylie). Because weddings in Algeria are very different from those we know in western societies, I briefly explain here how they take place. For the main part, Algerian weddings last for at least three days. The bride and groom, as well as their families, party separately until the afternoon of the second day when the groom’s family pick up the bride from her parent’s house and bring her to her new house. In her new house, the bride cat-walks in different clothes in front of the groom’s extended family. On the third day of the wedding, the bride’s family is invited for lunch at her new house. The second story, Tagciet n temurt, is an autobiographical story told by a Taqbaylit woman in her sixties living in the region of Algiers.
Today, I will tell you the story of Hassan’s wedding, how it happened.

That day, the day of this party, we got up in the morning.

After, at around ten o’clock, we were waiting for mother and Kahina and those of Bouzareah to come.

After, they went to Lila’s.

After, that evening we met them in Hassan’s house, where the party took place.
After that evening, when we went, us and (those from) our house, we went to the house of the wedding.

We went to the house of the wedding party (and) there we got into a bedroom.

Inside, we found many women (and) old women. After, they were dancing and singing Cherifa’s song ‘tray of little glasses’.

After, they sat like that, they sat.

We sat in that room until dinner time.

We went to the other house next to them (the house of party)

We went, there we ate couscous and soup.
After, when we were finished, we went back to the room, to the living room.

And they started to dance again, like this, until nearly midnight.

There, they finished their celebration.

But, us, we went down to the living room to sleep.

Then, the following morning, we got up.

We had breakfast.

Then, they went to bring the bride.
Then, they went to bring her from Tisemsilt.

Then, while they were going to get her, we stayed.

My mother and my mother Ouardia went.

They went (there).

The others stayed in the house (and) they were waiting for the arrival of the bride.

Then, they sat in the living room they were talking (and) talking.

Then, at lunch time, we ate couscous and soup.

After, until the arrival of the bride at about three o'clock.

but, one car broke down in Tisemsilt.
(33) t-qim umpan
3SGF-stay
It remained broken.

(34) ur t-pid ara alami d degid, alami d tessa
NEG1 3SGF-arrive
n degid
OF night
It didn't arrive until the evening, until nine in the evening.

(35) imaren n-qim qime-n
after 1PL-sit
Then, we sat, they sat.

(36) mi t-ped tislit t-seder
when 3SGF-arrive bride 3SGF-catwalk
When the bride arrived, she cat-walked.

(37) imaren a t-ttdir a t-thetit di
after PRT 3SGF-catwalk 3SGF-wear in
levesa
Then, she cat-walked, she wore beautiful clothes.

(38) a te-truhu yar texxamt=is
PRT 3SGF-go t_o_dr room=CL3SG;POSS
She went to her room.

(39) a =d t-ttyal anida dahi i
PRT =D 3SGF-return where SP_DIS COMP
nejema nt yarek tilawin
group all women
She came back to where all the women were grouped

(40) imaren mi t-ped kan tiselit
after when 3SGF-arrive just bride
fka-n =as a t-ečč cwiya pkesum
give=3PLM =CL3SG;DAT PRT 3SGF-eat little bit meat
As soon as the bride arrived, they gave her a little bit of meat to eat.
They also gave her some milk, they also gave her a pot of ice cream.

She ate them until she was full in order to have strength.

In order to have strength because she got tired when she came from Tisemsilt, because the journey (lasted) four hours, it’s a lot!

Then, each time she entered the living room to catwalk, she showed the women the clothes (that) she had bought, because she was a new bride.

She returned.
She arrived at her room to eat something cold in order to be able to go on.

Then, she cat-walked like that.

During this time, women kept speaking about her.

'She is beautiful or she is ugly'

Then, she was tired perhaps because they didn't give her many (...)

or she was tired because she cat-walked a lot.

The bride walked in the heat and (there was) no air-conditioning.

There was only a fan.

Then, then, she sat in her room, like that.
She rested, she changed her clothes

(Amongst) those women, those who were near their houses stayed to sleep over, those who were far from their houses left.

Their husbands picked them up.

They added a little bit of movement and celebration in the room with the drum and the songs of Cherifa, such as 'tray of little glasses'.

That song, since we got there, it was switched on.

It means (that) they had fun with it.
(62) imaren n-argā ak nni n-argā after 1PL-wait_{PRF} like DEM_{ADD} 1PL-wait_{PRF}
n-qim alami tamedit 1PL-sit_{PRF} until evening
Then, we waited, like that, we waited, we stayed until the evening.

(63) fka-n =ay iinensi give_{PRF}-3PLM =CL.2PL;DAT dinner
They gave us dinner.

(64) ce-đe-đe-n layevad CAUS-eat_{PRF}-3PLM people
They made people eat.

(65) zeware-n deg rgazen imaren tilawin start_{PRF}-3PLM in men after women
They started with the men, then the women.

(66) imaren tislit ahi t-usa =d a t-qim, after bride DEM_{DIS} 3SGF-come_{PRF} =D PRT 3SGF-sit_{AOR}
nettat d tilawin i =d igran PRN.3SGF and women COMP =D stay_{PTCP}
Then, the bride came to sit, her, and the women who stayed.

(67) t-qim, t-qeser kid=sent 3SGF-sit_{PRF} 3SGF-chat_{PRF} with=CL.3PLF
She sat, she chatted with them.

(68) t-dha yid=sent aq 3SGF-have.fun_{PRF} with=CL.3PLF and
te-qedim =itent i temyart=is 3SGF-introduce_{PRF} =CL.3PLF;ACC to_{DAT} mother.in.law=CL.3SG;POSS
She had fun with them and introduced them to her mother-in-law.

(69) imaren deg id ahi a rma-nt cwiya n after in night DEM_{DIS} PRT add_{AOR}-3PLM some OF
zehwa di latiras celebration on roof
Then, that night they continued their celebration on the roof.
After, they slept.

The following day, they also prepared the bride’s meal.

The groom’s sister cooked.

She cooked meat with prunes, she cooked a soup, couscous, bourek, kefta in order to show the bride that they respected her.

They made her that meal.

They added meat with prunes.

They cooked like that.

The bride’s sister cooked.

All those old women helped each other.
Each one gave some of her strength in order to finish the work quickly

Then, at lunch time, they left.

They were making their relatives eat, (those) closely related.

They took them to the living room.

They made them eat from all the good things.

After, they also gave them dessert, soft drinks, oranges, melon, watermelon

Then, when they finished the service, those women were speaking about the goodness of the food
Since it was the bride’s meal, God gave it some goodness.

Then, we started to leave because the party ended.

Then, we assembled. Those who were going to Algiers went, those who were staying in Bouira stayed.

When we were leaving, they gave us boxes of macaroons.
Everyone received a box of macaroons.

In addition, they also received two small boxes of cakes from the party.

Our car stayed, we went to our house.

This is how Hassan’s wedding party took place.
Narrative 2: Taqcict n temurt (A girl from the village)

(1) d taqcict n puwxam
   COP girl OF house
I was a house girl.

(2) leqenaya, ur n-γeri ara
   Studies, we didn't study.

(3) n-xdem ceyel puwxam
   We did the housework.

(4) n-effed iduman
   We swept the rubbish.

(5) a n-essired lehwal
   We washed the dishes.

(6) a n-nenyel iduman s agudu d iqecwalen
   We threw the rubbish in the bin, (carrying) the baskets on our backs.

(7) imaren i-la leweqet n-truhu γar lexxela
   After there were times, we went to the field.

(8) a ttdu-γ nek d hepu yemma=s n vava
   We were going, me and my grandmother, my father's mother.
We went, at the time of oil, we went to pick-up olives.

We filled up baskets of olives.

In the evening, we brought them on our backs.

The following day, it was also the same.

At the time of the mache harvest, we also harvested mache.

At the time of figs, we picked up figs.

We picked up figs.

At the time of acorn, it was acorn.

At the time of cherries (…)

It was always me in the field, me and grandma in the fields.
(19) sanga i t-ruh hepu di-γ yid=s
where COMP 3SGF-goP R F  granny go,withP R F -l SG with=CL.3SG
Where grandma went, I went with her.

(20) t-fehme-d?
2SG-understand_prf-2SG
Do you understand?

(21) lamer i=(i)y te-ği deg uxxam ad reyehe-γ
never COMP=CL.1SG;ACC 3SGF-leave_prf in house PRT rest_aor-1SG
Never, did she leave me at home to rest.

(22) nekkeni di lamr=iw mectuhe-γ
PRN.1SG in age=CL.1SG;POSS be small_prf-1SG
Me, at my age, I was young.

(23) nettat te-ra=yi tametut taneqrant
PRN.3SGF 3SGF-consider_prf=CL.1SG;ACC woman tall
Her, she considered me as a mature woman.

(24) a n-ruh ad n-jered asayur
PRT 1PL-goAOR PRT 1PL-harvest_aor mache
We went to harvest the mache.

(25) a n-lqed azemur
PRT 1PL-pick_aor olives
We picked olives.

(26) a n-lqed heblemluk
PRT 1PL-pick_aor cherry
We picked cherries.

(27) a n-ekes avelud, lekermus, kulec kulec
PRT 1PL-pick_aor acorn, figs, everything, everything
We picked acorn, figs, everything, everything.

(28) ad ruhe-γ s axxam ad uyal-γ γar lexxela
PRT go_aor-1SG toOIR house PRT return_aor-1SG toOIR field
I would go to the house, I would return to the fields.

(29) a =sent awi-γ lifur ad fetr-nt
PRT =CL.3PLF;DAT bring_aor-1SG lunch PRT eat_aor-3PLF
I brought lunch for them to eat.
(30) idaren hafi, bela asebad, hafi
feet naked, without shoe, naked
(with our) feet naked, without shoes, naked.

(31) ye-rnu lexela=ney i-vad
3sgm-add$_{PREF}$ field=CL$_{3PL}$;POSS 3SGM-be$_{PREF}$
i-vad atas te-fehme-d
3SGM-be$_{PREF}$ a.lot 2SG-understand$_{PREF}$-2SG
And our field was far, it was very far, do you understand?

(32) ak nni am ass a am azeka dima dima
like DEM$_{AMB}$ like today DEM like tomorrow always always
dima
always

Like that, today like tomorrow, (it was) always always like that.

(33) ad qime-$\gamma$ deg uxxam ad niwele-$\gamma$
PRT stay$_{AOR}$-1SG inside house PRT sift$_{AOR}$-1SG
I stayed at home, I sifted.

(34) ad niwele-$\gamma$ seksu
PRT sift$_{AOR}$-1SG couscous
I sifted couscous.

(35) ad ge-$\gamma$ tametunt
PRT knead$_{AOR}$-1SG bread
I kneaded bread.

(36) ad ge-$\gamma$ ayrum
PRT knead$_{AOR}$-1SG flat cake
I kneaded flat cakes.

(37) ttare-$\gamma$ =asent awal
buy$_{IMPREF}$-1SG =CL$_{3PL}$;DAT request
I was answering their requests.

(38) a =(i)yi cka-nt sanga i yya-nt
PRT =CL$_{1SG}$;ACC send$_{AOR}$-3PL where COMP want$_{REF}$-3PL
te-fehme-d
2.SG-understand-2.SG

They sent me where they wanted, do you understand?
(39) dayaki
COP that
That's all.

(40) as mi i meqre-γ uyal-n
day when COMP be.tallPref-1SG becomePref-3PL

heğev-en =iyi =d heğev-en =iyi =d
veilPref-3PLM =CL.1SG;DAT =D veilPref-3PLM =CL.1SG;DAT =D

When I grew up, they veiled me, they veiled me.

(41) n-ruh =d
1PL-goPref =D
We left.

(42) t-ker =d legira legira n fransa
3SGF-standPref =D war war OF France
The war, the war with France started.

(43) uyal-n, n-ruh =d yar, lebira
becomePref-3PL 1PL-goPref =D toBouira Bouira
We came to Bouira.

(44) lebira, n-la dina cehal
Bouira, 1PL-bePref there how.much
Bouira, we were there for a long time.

(45) ye-fka =yi =d appi inexdaven
3SGM-givePref =CL.1SG;DAT =D God fiancé
God gave me a fiancé.

(46) ye-fka =yi =d appi inexdaven
3SGM-givePref =CL.1SG;DAT =D God fiancé
God gave me a fiancé.

(47) inexdaven nmi, as mi (i) =iy
fiancé DEMamb when day when (COMP)=CL.1SG;ACC

xdev-en ur =ten i-vγa ara wul=iy
proposePref-3PLM NEG =CL.3PLM;ACC 3SGM-wantPref NEG heart=CL.1SG;POSS

This fiancé (and his family), when they asked for my hand in marriage my heart
didn't want them.
It was tears that I was crying it was not joy that I was feeling.

It was tears that I was crying.

It was time that my parents prepared me.

They prepared me.

They bought me clothes.

I sewed scarves.

I sewed dresses.

During the month of Mulud, my father-in-law hurried

He was telling him (my father): 'I have to take her before my son is taken away by the army'.
After the month of Mulud arrived.

They prepared me.

We made couscous with butter, sugar and meat.

Me, I wore beautiful (things), Kabyle clothes, a scarf with frou frou, silver.

I went away (as a bride).

After, I wore a (long) scarf, a veil.

I wore sandals and white socks.

I went away (as a bride).

After, in my father’s black lavidat, lavidat

It is in it that I rode/travelled.
My father brought me.

It was him who brought me here to my house.

It is in his car that I went away (as a bride).

After, I came to the Benichu's, a house full of people, old women, brother-in-laws' wives, husband's sisters.

Me, honestly, I was young.

But thank God, thank God, I could cope with all those people.

I satisfied them.

I fulfilled my task.

I could work, thank God.

I was smart, do you understand, thank God.
That man too, nothing bad came from him.

I pleased him.

Him, I pleased him.

Him he pleased me.

We built a home.

God gave us children.

We had twelve children.

(Instead) of prolonging his life, God took him early, in his fifty third year.

He died.
We stayed like this.

He left two who were young.

Kahina and Sofian, he left them (when) they were young.

Nunu; he left her in her house with her children.

Saliha, she had just got engaged.

Two years passed until she went away as a bride.

Now, thank God, I am (well).

My children are older.

My daughters are all in their homes.
Now, I am with my grandchildren.

I have daughters-in-law, God bless them.

Now, we are well, thank God, thank God, thank God, God will prevent misery Inch Allah, for each one, Inch Allah.
References


Basset, R. (1883) Notes de lexicographie berbère in *Journal Asiatique*.


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