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Author (full names)	**Aicha Belkadi**
Title of thesis	**Pronominal and clitic systems in Taqbaylit Berber**
Degree	**PhD**

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 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 & Witlschko, 2002).

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PRONOMINAL AND CLITIC SYSTEMS IN TAQBAYLIT BERBER

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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).

Table of Contents

List of Abbreviations **8**

Acknowledgments **10**

Chapter 1: Introduction **12**

1.1 Overview of the dissertation *12*
1.1.1 Research focus 12
1.1.2 Issues of clitic placement and hierarchical CP and DP templates 13
1.1.3 Organizing the pronominal category in Taqbaylit 17

1.2 Language background *21*
1.2.1 Berber origins and classification 21
1.2.2 Linguistic research 24
1.2.3 Taqbaylit Berber 25
1.2.4 Corpus and methodology 27

1.3 Structure of the dissertation *30*

Chapter 2: Verbal and Clausal Structures **32**

Introduction *32*

2.1 Clause structure *33*
2.1.1 Canonical word order 33
2.1.2 Information structure and alternative word orders 35
2.1.3 Questions 42
2.1.4 Embedded Clauses 45

2.2 Verb stems *49*

2.3 Aspectual realizations *50*
2.3.1 Perfective forms 57
2.3.2 Imperfective forms 59
2.3.3 Aorist forms 61
2.3.4 Aspect in Taqbaylit: a summary 66

2.4 TAM particles *75*
2.4.1 Overview 75
2.4.2 The particle ad and the aorist 77
2.4.3 The imperfective particles 83

2.5 Other expressions of modality *92*

Conclusion *97*

Chapter 3: Nominal and Pronominal Structures **98**

Introduction *98*

3.1 Overview of the nominal constituent *99*
  3.1.1 Types of nominal modifiers 100
  3.1.2 Ordering 105

3.2 The internal structure of DP *107*
  3.2.1 El Moujahid's DP (1997) 108
  3.2.2 Cinque hierarchical DP Template 112
  3.2.3 A hierarchical analysis of the Taqbaylit DP 117

3.3 Other structures *122*
  3.3.1 The Construct State 123
  3.3.2 Numerals 142
  3.3.3 Quantifiers 143
  3.3.4 Initial conclusion 145

3.4 Pronominals *146*
  3.4.1 Berber feature geometry 146
  3.4.2 Personal pronouns 150
  3.4.3 Demonstratives 163
  3.4.4 Possessives and reflexives 165

3.5 Verbal affixes *171*
  3.5.1 Agreement paradigms 172
  3.5.2 Reciprocals 174
  3.5.5 Conclusion 175

Chapter 4 Taqbaylit and Berber Clitics **176**

Introduction *176*

4.1 Clitic Typology *177*
  4.1.1 The categorial status of clitics 177
  4.1.2 Morphosyntactic clitic systems 181
  4.1.3 Theories of clitic placement 191

4.2 Clausal clitics *197*
  4.2.1 Distribution of clausal clitics 197
  4.2.2 Previous analyses 203
  4.2.3 Extended event structure and clitic-movement 216
  4.2.4 Negation and cliticization 236

4.3 DP clitics *241*
  4.3.1 Distribution 241
  4.3.2 Hierarchical DP template and clitic placement 244
  4.3.3 Possessives and cliticization in other Berber languages 254

4.4 The locational clitic *259*
  4.4.1 Deictic reference 260
  4.4.2 Goal reference 261
  4.4.3 Endstate reference 263

4.4.4 Deictic reference associated with coerced motion 265
Conclusion *266*

Chapter 5: Pronominals in Taqbaylit and Typologial Hierarchies 268

Introduction *268*

5.1 Pronominal variation *269*
5.1.1 At the semantic level 269
5.1.2 At the morphosyntactic level 273

5.2 Structural hierarchies of pronominal forms *277*
5.2.1 Cardinaletti & Starke's structural deficiency 278
5.2.2 D&W's pronominal decomposition 282

5.3 Strong and Weak Distinctions in Berber *288*
5.3.1 Deficiency inside the category of personal pronouns 288
5.3.2 Choice and strong pronoun distribution 294
5.3.3 Deficiency inside the category of possessives 302

5.4 DP vs. ΦP in the category of personal pronouns *306*
5.4.1 Strong personal pronouns are DPs 306
5.4.2 Clitics and pro are ΦPs 309
5.4.3 Strong pronouns as bound variables 310

Conclusion *311*

Conclusion 313

Appendix 315

Narrative 1: Tameyra n Hassan (Hassan's wedding) *316*

Narrative 2: Taqcict n temurt (A girl from the village) *329*

References 340

Tables, Figures and Maps

Table 1: Taqbaylit consonantal verb roots 49
Table 2: A summary of aspectual terminologies 52
Table 3: Taqbaylit aspectual verb forms 53
Table 4: Typology of verb forms 55
Table 5 Construct State patterns (Taqbaylit) 125
Table 6: Independent Pronouns 152
Table 7: The feature Geometry of independent pronouns 153
Table 8: Accusative clitics 154
Table 9: Dative Clitics 155
Table 10: Participant feature: addressee 156
Table 11: Class feature: feminine 156
Table 12: Individuation feature: group 156
Table 13: The feature Geometry of accusative clitics 158
Table 14: The Feature Geometry of Dative Clitics 159
Table 15: Oblique Clitics 161
Table 16: The Feature Geometry of Oblique Clitics 162
Table 17: Demonstratives Pronouns 165
Table 18: Possessives 166
Table 19: Possessive clitics 168
Table 20: Clitics and strong possessive forms 170
Table 21: Reflexives 171
Table 22: Agreement markers 173
Table 23: VP Clitic Hierarchy 191
Table 24: Possessive clitics 242
Table 25: Personal pronouns distribution 301

Figure 1: The Afroasiatic branch of languages 22
Figure 2: From proto-Afroasiatic to Berber 23
Figure 3: Semantic interpretations of realis and irrealis in berber 67
Figure 4: The feature geometry of Berber 149

Map 1: Taqbaylit and Northern Berber languages 26

List of Abbreviations

Most of the following abbreviations are from the Leipzig Glossing Rules

1	First Person
2	Second Person
3	Third Person
ACC	Accusative
Adj	Adjective
ADV	Adverb
Agr	Agreement
ANA	Anaphoric
AOR	Aorist
AUX	Auxiliary
CAUS	Causative
CL	Clitic
C	Complementizer
COND	Conditional
CONJ	Conjunction
COP	Copula
CS	Construct State
DO	Direct object
DAT	Dative
DEM	Demonstrative
DET	Determiner
DIR	Directional
EVI	Evidential
F	Feminine
FOC	Focus
FUT	Future
GEN	Genitive
IMP	Imperative
IMPR	Impersonal
IND	Indicative
INF	infinitive
INS	Instrumental
INTR	Intransitive
IMPRF	Imperfective
LOC	Locative
M	Masculine
N	Noun
NEG	Negation

NOM	Nominative
OBJ	Object
OBL	Oblique
P2	Second Position Clitics
PASS	Passive
PAST	Past
PRTV	Partitive
PL	Plural
POSS	Possessive
PREP	Preposition
PRF	Perfect
PRS	Present
PRN	Pronoun
PROG	Progressive
PRT	Particle
PTCP	Participle
REC	Reciprocal
REFL	Reflexive
SUBJ	Subject
SD	Spatial deictic
SBJV	Subjunctive
SG	Singular
TAM	Tense Aspect Mood
TOP	Topic
TR	Transitive
V	Verb

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Chapter 1

Introduction

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***]
love$_{PRF}$-1SG Yanis
I love Yanis.

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

(2) a. sawle-γ i [***yanis***]
call$_{PRF}$-1SG to$_{DAT}$ Yanis
I called Yanis.

b. sawl-γ =[***as***]
call$_{PRF}$-1SG =CL.3SG; DAT
I called him.

(3) a. axxam [***n*** ***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$_{PRF}$-1SG to$_{DIR}$ Yanis
I will go to Yanis's (house).

b. ad ruhe-γ γur =[***es***]
PRT go$_{PRF}$-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***]
call$_{PRF}$-1SG to$_{DAT}$ Yanis / PRN.3SGM
I called Yanis/ him.

b. sawle-γ =[***as***]
call$_{PRF}$-1SG =CL.3SG; DAT
I called him.

(6) a. ad sawle-γ i [***yanis***] / [***netta***]
PRT call$_{AOR}$-1SG to$_{DAT}$ 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 call$_{AOR}$-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.	la	=[t]			i-tett	*=[t]	
		PRT	=CL.3SGM; ACC			3SGM-eat$_{\text{IMPRF}}$		
		He is eating it.						
	b.	ur	=[t]			čči-γ	ara	*=[t]
		NEG	= CL.3SGM; ACC			eat$_{\text{PRF}}$-1SG	NEG2	
		I didn't eat it.						
	c.	d	ella	i	=[t]		iččan	*=[t]
		COP	Ella	COMP	=CL.3SGM; ACC		eat$_{\text{PTCP}}$	
		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), partioned 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 aspectual 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 syntatic 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
Eaxh 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) a. hemle-γ =[*t*]
love$_{\text{PRF}}$-1SG =CL.3SGM; ACC
I love him.

b. hemle-γ [*netta*][1]
love$_{PRF}$-1SG PRN.3SGM
I love HIM.

(11) a. sawl-γ =[*as*]
call$_{PRF}$-1SG =CL.3SG; DAT
I called him.

b. sawle-γ i [*netta*]
call$_{PRF}$-1SG to$_{DAT}$ PRN.3SGM
I called him.

(12) a. axxam =[*is*]
house =CL.3SG; POSS
His house

b. axxam [*ines*]
house POSS.3SG
His house

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 form 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:

[*anta*]	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).

(14) Q:

anta	i	t-wala-d?
who	COMP	2SG-see$_{PRF}$-2SG

Who did you see?

A:

# wala-γ	=[*t*]
see$_{PRF}$-1SG	=CL.3SGM;ACC

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.

[*kul aqcic*]	i-zra	beli
every boy	3SGM-know$_{PRF}$	COMP

t-sawl	=[*as*]	Miriam
3SGF-call$_{PRF}$	=CL.3SGM;DAT	

Every boy knows that Miriam called him.

$\forall(x)$ [boy (x) $\rightarrow$ x knows Miriam call x]

$\forall(x)$ [boy (x) $\rightarrow \exists(y)$ [male (y) $\wedge$ x knows Miriam call y]

b. [***kul aqcic***] i-zra beli
every boy 3SGM-know$_{\text{PRF}}$ COMP

t-sawl Miriam i =[***netta***]
3SGF-see$_{\text{PRF}}$ Miriam to$_{\text{DAT}}$ =PRN.3GM
Every boy knows that Miriam saw him.
$*\forall(x)$ [boy (x) $\rightarrow$x knows Miriam call x]
$\forall(x)$ [boy (x) $\rightarrow\exists(y)$ [male (y) $\wedge$ 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.

(16) a. *i-čveh uxxam =[***iw***] mačči n wergaz
3SGM-be.beautiful$_{\text{PRF}}$ house =CL.1SG;POSS not OF man
My house is beautiful, not the man's.

b. * i-čveh uxxam =[***iw***] aq n wergaz
3SGM-be.beautiful$_{\text{PRF}}$ house =CL.1SG;POSS and OF man
?My and the man' house is beautiful.

(17) a. i-čveh uxxam [***inu***] mačči n wergaz
3SGM-be.beautiful$_{\text{PRF}}$ house POSS.1SG not OF man
MY house is beautiful, not the man's.

b. i-čveh uxxam [***inu***] aq n wergaz
3SGM-be.beautiful$_{\text{PRF}}$ house POSS.1SG and OF man
?My and the man' house is beautiful.

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 decription of the language on which the dissertation is based on.

1.2 Language background

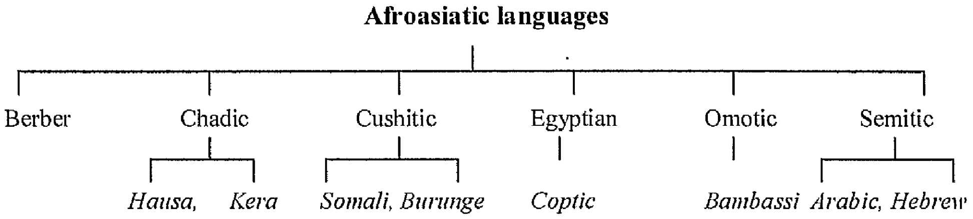
1.2.1 Berber origins and classification

Berber is a term used to refer to a number of languages spoken across various regions of North Africa[2]: 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 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).

---

[2] Berber is also spoken in Israel. Known as Judeo-Berber, the language bears similarities with Moroccan Berber (Lewis, 2009).

Figure 1: THE AFROASIATIC BRANCH OF LANGUAGES



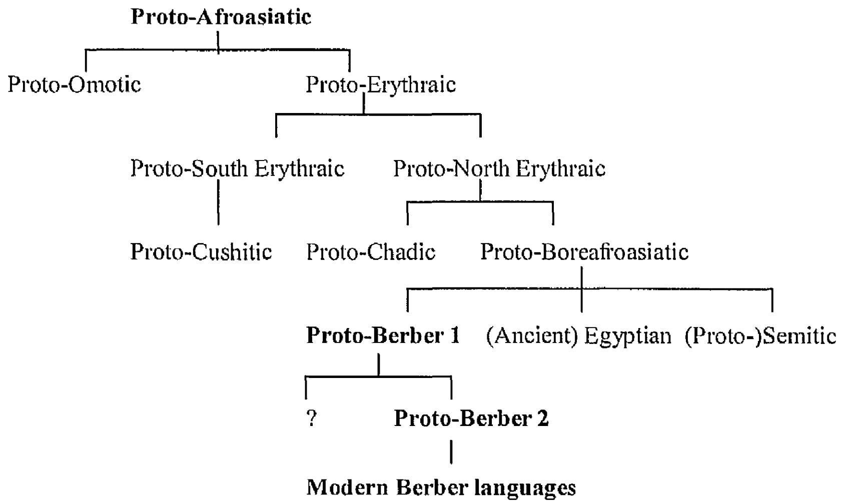
Like other Afroasiatic members, the language descends from proto-Afroasiatic, almost certainly spoken in the Horn region of Northeastern Africa around 15000 years ago (cf. Ehret et al., 2004). Proto-Berber, the common ancestor of Modern Berber is thought to have first emerged somewhere in North Africa approximately 11000 years ago as the language of Ancient Libyans, accepted by most as the indigenous people of the region[3] (Galand, 2002; Dugoujon & Philippson, 2005; Decret & Fantar, 1998; Smith, 2003). The profound differences between Berber and (reconstructed) proto-Afroasiatic[4] (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.

---

[3] 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)

[4] Cf. Allati (2006) for a contrastive view.

Figure 2: FROM PROTO-AFROASIATIC TO BERBER


Proto-Afroasiatic
Proto-Omotic
Proto-Erythraic
Proto-South Erythraic
Proto-North Erythraic
Proto-Cushitic
Proto-Chadic
Proto-Boreafroasiatic
Proto-Berber 1
(Ancient) Egyptian
(Proto-)Semitic
?
Proto-Berber 2
Modern Berber languages

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, sourthern 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.

(iii) **Mauritanian Berber** (e.g. Zenaga) is mostly spoken in Mauritania but can also be found in Senegal.

(iv) **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 ninetieth 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, Taqbaylit[6] 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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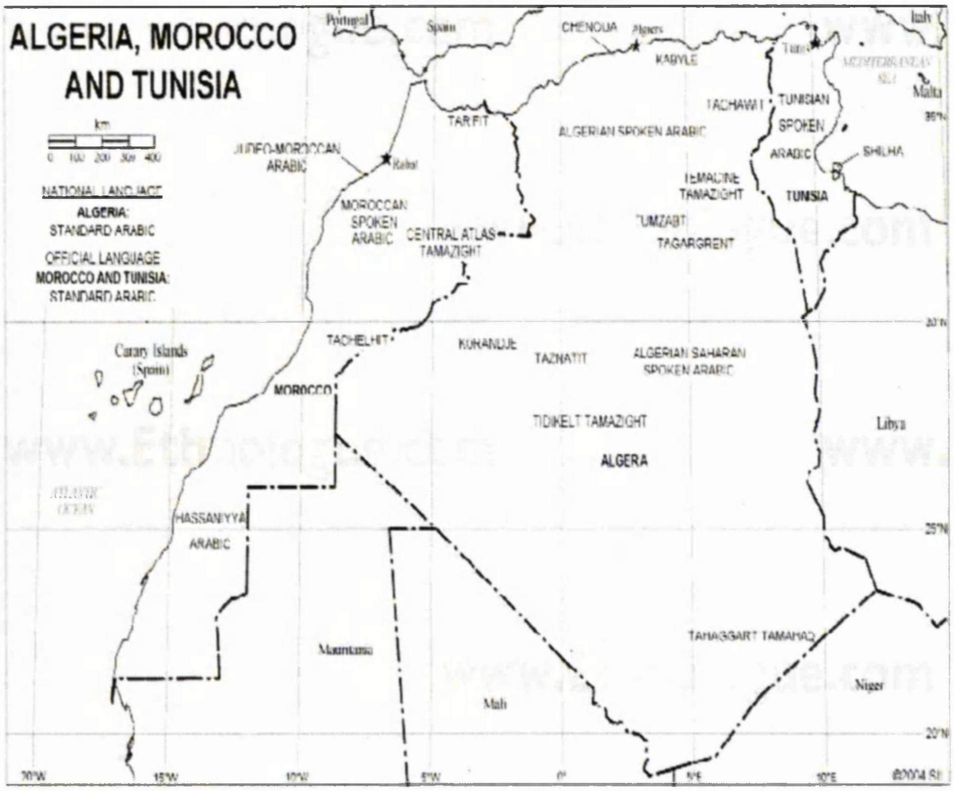
[6] The language is also often referred to as Kabyle (the French translation of Taqbaylit).


ALGERIA, MOROCCO AND TUNISIA
km
0 100 200 300 400
NATIONAL LANGUAGE
ALGERIA:
STANDARD ARABIC
OFFICIAL LANGUAGE
MOROCCO AND TUNISIA:
STANDARD ARABIC
Portugal
Spain
CHENOUA
Algiers
KABYLE
Tunis
Italy
MEDITERRANEAN SEA
Malta
TARIFIT
JUDEO-MOROCCAN ARABIC
Rabat
ALGERIAN SPOKEN ARABIC
TACHAWIT
TUNISIAN SPOKEN ARABIC
SHILHA
TEMACINE TAMAZIGHT
TUNISIA
MOROCCAN SPOKEN ARABIC
CENTRAL ATLAS TAMAZIGHT
TUMZABT
TAGARGRENT
TACHELHIT
KORANDJE
TAZNATIT
ALGERIAN SAHARAN SPOKEN ARABIC
Canary Islands (Spain)
MOROCCO
TIDIKELT TAMAZIGHT
ALGERA
Libya
ATLANTIC OCEAN
HASSANIYYA ARABIC
Mauritania
Mali
TAHAGGART TAMAHAQ
Niger
35°N
30°N
25°N
20°N
20°W
15°W
10°W
5°W
0°
5°E
10°E
©2004 SIL
(Lewis, 2009, http://www.ethnologue.com/)

Map 1: TAQBAYLIT AND NORTHERN BERBER LANGUAGES

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 shorther 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 Tikičurt 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[7]). 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 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.

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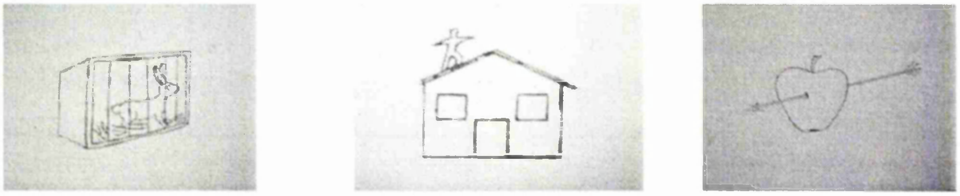
[7] The story is available in the appendix section of this dissertation.

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



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.

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[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 Ouhalla, 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 pronominals.

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 **VSO**
3SG-drink$_{\text{PRF}}$ Yanis coffee
Yanis drank the coffee.

b. i-degr yanis abalu ɣur lhid **VSO PP**
3SGM-throw$_{\text{PRF}}$ Yanis ball to wall
He threw the ball to the wall.

c. *i-degr yanis ɣur lhid abalu ***VS PP O**
3SGM-throw$_{\text{PRF}}$ Yanis to wall ball

(2) a. i-fka yanis akadu i hanna **VSO IO**
3SGM-give$_{\text{PRF}}$ yanis presentto$_{\text{DAT}}$ hanna
Yanis gave a present to Hanna.

b. i-fka yanis i hanna akadu **VS IO O**
3SGM-give$_{\text{PRF}}$ Yanis to$_{\text{DAT}}$ 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-ruh=d **yanis**. **y**-swa lqahwa **pro-drop**
3SGM-go$_{\text{PRF}}$=D Yanis. 3SGM-drink$_{\text{PRF}}$ coffee
Yanis came. He drank a coffee.

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

A: **te**-feγ
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-ruh =d [*yiwen*] / *[*pro*]
3SGM-go$_{\text{PRF}}$ =D one / pro
Someone came.

b. ye-ruh =d [*yiwen aqcic*]/ *[*pro*]
3SGM-go$_{\text{PRF}}$ =D one boy pro
A boy came.

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

---

[9] 1st and 2nd 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-čveh
3SGM-be.beautiful$_{\text{PRF}}$
This one is beautiful

d.	te-čveh	[*nettat*]/	*[*pro*][11]
	3SGF-be.beautiful$_{\text{PRF}}$	PRN.3SGF	pro
	SHE is beautiful.		

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[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)[13]. Focus is, by contrast defined as contributing new information or information which contrasts, in some way or another, from the pragmatic presupposition, i.e. focus elements are not provided or 'recoverable' by the context (Ibid).

---

[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.

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).

(5) a. **Topic $[_{CP}$ C $[_{TP}$ T $[_{VP}$ V]]]**

b. **$[_{CP}$ C $[_{TP}$ T $[_{VP}$ V]]] Topic**

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.

---

[14] Guerssel (1995) (cf. also Achab, 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 & Elmadlaoui, 1989; Ouhalla, 2005a; Ouali, 2006) and subject agreement markers are affixes.

(6) a. i-fka yanis tatefaht i hanna
3SGM-give$_{\text{PRF}}$ Yanis apple to$_{\text{DAT}}$ Hanna
Yanis gave the apple to Hanna.

b. **[yanis]**$_{\text{T}}$ i-fka tatefaht i hanna **SUBJ**
Yanis 3SGM-give$_{\text{PRF}}$ apple to$_{\text{DAT}}$ Hanna
Yanis, he gave the apple to Hanna.

c. **[tatefaht]**$_{\text{T}}$ i-fka=**tt**/ *ø i hanna **OBJ**
apple 3SGM-give$_{\text{PRF}}$=CL.3SGF;ACC to$_{\text{DAT}}$ Hanna
The apple, he gave it to Hanna.

d. [(i) **hanna**]$_{\text{T}}$ i-fka=**yas**/*ø tatefaht **I.OBJ**
to$_{\text{DAT}}$ Hanna 3SGM-give$_{\text{PRF}}$=CL.3SG;DAT apple
Hanna, Yanis gave her the apple.

(7) a. i-degr yanis abalu **γur lhid** **ADJUNCT**
3SGM-throw$_{\text{PRF}}$ Yanis ball to wall
Yanis threw the ball to the wall.

b. * **[γur lhid]**$_{\text{T}}$ i-degr yanis abalu ***ADJUNCT**
to wall 3SGM-throw$_{\text{PRF}}$ 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[15]:

(8) a. y-uγal=d yiwen n weqcic sufela uvelo [...]
3SGM-return$_{\text{PRF}}$=D one of boy on bicycle

b. cwit akka, **[aqcic nni]**$_{\text{T}}$ ye-tef averid=i-s
then like.this, boy DEM 3SGM-take$_{\text{PRF}}$ way=POSS-3SG

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

d. **[aqcic nni]**$_{\text{T}}$ y-uli sufela uvelo
boy DEM 3SGM-go.up$_{\text{PRF}}$ on bicycle

---

[15] For clarity, the relevant Topic elements are bolded and bracketed. Elements which appear for the first time and then become Topicalized are underlined.

e.	**[telata**	**nni**	**n**	**warac]**$_T$	pi-n	telata	ttefahin
	three	DEM	of	boys	take$_{PRF}$-3PLM	three	apples

*One boy arrived on a bicycle. [...] Then, **[that boy]**$_T$, he followed his path and left.[...] Three boys passed. [...] **[That boy]**$_T$, he went up on his bicycle. **[Those three boys]**$_T$, they took three apples.*

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[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 ***i***[17] (9b). This is illustrated in (10) below with examples from Taqbaylit.

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[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 ***ay*** (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.

(9) a. **FOCUS** [$_{\text{CP}}$ C *i* [$_{\text{TP}}$ **T** [$_{\text{VP}}$ **V**]]]

b. **(COP) FOC COMP *i***

(10)	a.	i-fka	yanis	tatefaht	i	hanna	ideli
		3SGM-give$_{\text{PRF}}$	Yanis	apple	to$_{\text{DAT}}$	Hanna	yesterday

Yanis gave an apple to Hanna yesterday

b.	**(d)**	**[TATEFAHT]$_{\text{F}}$**	**i**	g-fka[18]	yanis	i	hanna
	COP	apple	COMP	3SGM-give$_{\text{PRF}}$	Yanis	to$_{\text{DAT}}$	Hanna

It was an apple that Yanis gave Hanna yesterday

c.	**(d)**	**[I**	**HANNA]$_{\text{F}}$**	**i**	g-fka	yanis	tatefaht
	COP	to$_{\text{DAT}}$	Hanna	COMP	3SGM-give$_{\text{PRF}}$	Yanis	apple

It was Hanna that Yanis gave an apple to yesterday

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 *i/y*. Since, other agreement markers are not affected by this, the *i/y – g* alternation can be analyzed as phonological. The y-g alternatin 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.	**[ARGAZ]$_{\text{F}}$**	i=m	ni-γ	beli	wala-γ=t
	man	COMP=CL.2SGF;DAT	tell$_{\text{PRF}}$-1SG	that	see$_{\text{PRF}}$1SG=CL.3SGM;ACC

This is the man who I told you I saw

b. *argaz i=m ni-γ beli wala-γ=ø

Shlonsky ((1986) after Guerssel 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	ii.	wasal-a	l-tullaab-u
	the-students-NOM	arrived-3PL		arrived-3SG	the-students-NOM
	The students arrived			*The students arrived*	

Consider, for instance, the following examples:

(11)		**[IDELI]**$_{\text{F}}$	i	g-fka	tatefaht	i	hanna
		yesterday	COMP	3SGM-give$_{\text{PRF}}$	apple	to$_{\text{DAT}}$	Hanna

It was yesterday that he gave an apple to Hanna.

(12)	a.	uγe-γ	snat	n	tiktabin
		buy$_{\text{PRF}}$-1SG	two	PREP	books

I bought two books.

b.	**[NEKKINI]**$_{\text{F}}$	i	g-uγ-n	snat	n	tiktabin
	PRO.1SG	COMP	3SGM-buy$_{\text{PRF}}$-PTCP	two	PREP	books

It is me who bought two books.

c.	*[NEKKINI]$_{\text{F}}$	i	uγe-γ	snat	n	tiktabin

Sentence (11), where the adverb *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 3rd 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[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 & Puglieli, 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.

iii. You are eating an apple
iv. It is you who is eating the apple
v. ?It is you who are eating the apple

[21] Focus elements are bracketed and italicized.

(13) a.

ye-fka	=yi	=d	appi	inexdaven
3SGM-give$_{\text{PRF}}$	=CL.1SG;DAT=D		God	fiancé

inexdaven	nni	asemi	i	=iy	xdev-en
fiancé	DEM$_{\text{AMB}}$	when	COMP	=CL.1SG;ACC	ask$_{\text{PRF}}$-3PLM

ur	=ten	i-vγa	ara	wul=iw
NEG	=CL.3PLM;ACC	3SGM-want$_{\text{PRF}}$	NEG	heart=CL.1SG;POSS

d	[***imetawen***]$_{\text{F}}$	i	la	ttru-γ	mačči
COP	tears	COMP	PRT	cry$_{\text{IMPRF}}$-1SG	not

d	[***lferh***]$_{\text{F}}$	i	ferehe-γ
COP	happiness	COMP	be.happy$_{\text{PRF}}$-1SG

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.*

b.

te-kecm=d	samiya	d	nunu
3SGF-enter$_{\text{PRF}}$=D	samiya	with	nunu

feka-nt	=iyi	=d	lemus
give$_{\text{PRF}}$-3PLF	=CL.1SG;DAT	=D	knife

gezme-γ	=as	i	weqcic	timit
cut$_{\text{PRF}}$-1SG	=CL.3SG=DAT	to$_{\text{DAT}}$	boy	navel.string

d	[***samiya***	***nattayed***]$_{\text{F}}$	i
COP	Samiya	Nattayed	COMP

=iyi	=t	i-ttele-n
=CL.1SG;DAT=CL.3SGM;ACC		3sgm-bandage$_{\text{PRF}}$-PTCP

ur	sa-γ	ara	lekuraje	ass	nni
NEG	have$_{\text{PRF}}$-1SG	NEG	courage	day	DEM$_{\text{AMB}}$

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.*

In the previous extracts, all Focus elements correspond to new information in some way or another: in (13-a) the new information has not been mentioned before in the narrative while in (13-b), the new information comes from the 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. TOPIC < FOCUS < COMP *i*

b. **[argaz nni]**$_{T}$ (d) [***tametut=is***]$_{F}$ i g-mut-n
man DEM COP wife=CL.3SG;POSS COMP 3SGM-die$_{PRF}$-PTCP
That man, it is his wife who died.

c. *(d) [***tametut=is***]$_{F}$ i **[argaz nni]**$_{T}$ g-mut-n
COP wife=CL.3SG;POSS COMP man DEM 3SGM-die$_{PRF}$-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 being 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).

WH-questions

WH-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, WH-interrogations do not involve, even optionally, the non-verbal copula ***d***. I provide examples of WH-constructions in (15) below.

(15) a. te-fka amira tatefhat i tametut
3SGF-give$_{PRF}$ Amira apple to$_{DAT}$ woman
Amira gave an apple to the woman.

b. [***dacu***]$_{WH}$ i te-fka i tametut? **OBJ**
what COMP 3SGF-give$_{PRF}$ to$_{DAT}$ woman
What did she give to the woman?

c. [***iwumi***]$_{WH}$ i te-fka tatefaht? **IND OBJ**
who COMP 3SGF-give$_{PRF}$ apple
To whom did she give an apple?

d. [***milmi***]$_{WH}$ i te-fka tatefaht i tametut **ADJ**
when COMP 3SGF-give$_{PRF}$ apple to$_{DAT}$ woman
When did she give an apple to the woman?

d. [***acuyer***]$_{WH}$ i te-fka tatefaht i tametut? **ADJ**
why COMP 3SGF-give$_{PRF}$ apple to$_{DAT}$ woman
Why did she give an apple to the woman?

As subject clefts, subject WH-movement has anti-agreement effects on the verb[22], 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.

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

a. [*anwa*]$_{WH}$ i t-eni-d beli te-wala-d=t?
who COMP 2SG-say$_{PRF}$-2SG that 2SG-see$_{PRF}$-2SG=CL.3SGM;ACC
Who did you say that you saw yesterday?

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

(16) [*anta*]$_{\text{WH}}$ i g-fka-n tatefaht i tametut? **SUBJ**
who COMP 3SGM-giv$_{\text{PRF}}$-PTCP apple to$_{\text{DAT}}$ 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) a. čča-n
eat$_{\text{PRF}}$-3PLM
They ate.

b. čča-n?
eat$_{\text{PRF}}$-3PLM
Did they eat?

c. te-ruh =d amira s axxam
3SGF-go$_{\text{PRF}}$ =D Amira to$_{\text{DIR}}$ house
Amira came home.

d. te-ruh =d amira s axxam?
3SGF-go$_{\text{PRF}}$ =D Amira to$_{\text{DIR}}$ house
Did Amira come home?

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

(18) a. **[amira]** te-ruh =d
Amira 3SGF-go$_{\text{PRF}}$ =D
Amira, she came.

b. **[amira]** te-ruh =d?
Amira 3SGF-go$_{\text{PRF}}$ =D
Amira, did she come?

c. ye-čča **=tt** **[tatefaht]**
3SGM-eat$_{\text{PRF}}$ =CL.3SGF;ACC apple
The apple, he ate it.

d. ye-čča **=tt** **[tatefaht]**?
3SGM-eat$_{\text{PRF}}$ =CL.3SGF;ACC apple
The apple, he ate it?

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 nni **[i** **g-uker-n** **aqcwal]**$_{\text{RC}}$
3SGM-fall$_{\text{PRF}}$ boy DEM COMP 3SGM-rob$_{\text{PRF}}$-PTCP basket
The boy who had robbed the basket fell.

b. a=tt i-zuγur si lexid **[i** **g-urz-n**
PRT=CL.3SGF;ACC 3SGM-drag$_{\text{IMPRF}}$ with rope COMP 3SGM-tie$_{\text{PRF}}$-PTCP

di temgart=is]$_{\text{RC}}$
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** **tifiras]**$_{\text{RC}}$
3SGM-carry$_{\text{PRF}}$ basket COMP 3SGM-fill$_{\text{PRF}}$-PTCP pears
He carried the basket which was filled with pears.

d. t-qim nettat d tilawin **[i** **=d** **i-gran]**$_{\text{RC}}$
3SGF-sit$_{\text{PRF}}$ PRN.3SGF with women COMP =D 3sgm-stay$_{\text{PRF}}$-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')

tilawin	ahi	kul	yiwet	[i	**g-qrev**
women	DEM	each	one	COMP	3SGM-be.next$_{PRF}$

wexxam=is]$_{RC}$	a	te-qim	a	t-ens
house=CL.3SG;POSS	PRT	3SGF-sit$_{AOR}$	PRT	3SGF-sleep$_{AOR}$

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) a.

čfi-γ	(beli)	te-ruh	amira	f	tnach
remember$_{PRF}$-1SG	that	3SGF-go$_{PRF}$	Amira	at	12

I remember that Amira left at 12 o'clock.

b.

ril-γ	(beli)	te-ruh	amira	f	tnach
think$_{PRF}$-1SG	that	3SGF-go$_{PRF}$	Amira	at	12

I think that Amira left at 12 o'clock.

c.

i-na	=d	(beli)	te-ruh	f	tnach
3SGM-say$_{PRF}$	=D	that	3SGF-go$_{PRF}$	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[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- go$_{\text{AOR}}$	where	COMP	3SGM-work$_{\text{IMPRF}}$	
		He will go where he works.					
	b.	*ad	i-ruh	anega	*i*	[Mohand]$_{\text{T}}$	i-xxdem
		PRT	3SGM- go$_{\text{AOR}}$	where	COMP	Mohand	3SGM-work$_{\text{IMPRF}}$

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

d.	te-γil	***beli***	[nek	d	weltma]$_{\text{T}}$	a	=tt
	3SGF-think$_{\text{PRF}}$	COMP	PRN.1SG	with	sister	PRT	=CL.3SGF;ACC
	n-zur	azeka					
	2PL-visit$_{\text{AOR}}$	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*[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$_{\text{PRF}}$	=D	COMP	PRT	3SGM-go$_{\text{AOR}}$
		He said that he would leave.				

---

[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.

[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-ttruhu
3SGM-say$_{PRF}$ =D COMP PRT 3SGM-go$_{AOR}$
He said that he was leaving.

c. d nekk ***i*** la i-ttazal-n atas
PRT PRN.1SG COMP PRT 3sgm-run$_{IMPRF}$-PTCP a.lot
It is me who runs the fastest.

d. d nekk ad y-azzl atas
PRT PRN.1SG COMP 3SGM-run$_{AOR}$ 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-run$_{AOR}$-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 follows[25]:

(22) [$_{CP}$ **C *beli* [TOPIC [FOCUS [$_{CP}$ 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.

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[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

MONOLITERAL ROOTS	BILITERAL ROOTS	TRILILTERAL ROOTS	QUADRILITERAL ROOTS[26]
ɣ <to buy>	*zl* < to run>	*dgr* <to throw>	*nnɣl* <to throw away>
l <to open>	*rh* <to go>	*sfr* <to whistle>	
d < to pass>	*wm* < to swim>	*qrh* < to hurt>	
n < to tell>	*kr* = <to stand>	*srs* < to put>	

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		*ran*		*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 aspectual system and how aspect is marked in more details. Agreement markers which, as we see in

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[26] Roots of five consonants are found across Berber languages (Chaker, 1983; Louali & Philippson, 2004). However, these are not instantiated in our corpus.

(23) 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 Tarifit 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[27] 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) t-**uzel** rachil
3SGM-run$_{\text{PRF}}$ Rachil
Rachel ran

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.

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[27] Of the type presented in Table (2)

(25) a. ad t-**azel** rachil
PRT 3SGF-run$_{AOR}$ Rachel
Rachel will run.
Rachel used to run.[28]

b. akas ad te-**kat** lehwa di meγres
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,

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

1983; 1995; Kossman, 1997; Nait-Zerrad, 2003). The aorist is, very rarely, referred to as an imperfect (Prasse, 1986).

Table 2: A SUMMARY OF ASPECTUAL TERMINOLOGIES

PERFECTIVE STEM	IMPERFECTIVE STEM	AORIST STEM	Dell & Elmedlaoui (1989); Ouhalla (2005a); Ouali (2006)
Accompli	non Accompli	Accompli	Cadi (1987); (2000); Galand (2003)
Perfect	Intensive Imperfect	Imperfect	Prasse (1986)
Preterit	intensive Aorist	Aorist	Basset (1952); Chaker (1983, 1995, 1997); Kossman (1997, 2000); Nait-Zerrad (2001); Rabdi (2004); Benjaballah (2000)

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[29]. In general, they often take less than three forms, as shown in Table 3 below.

Table 3: TAQBAYLIT ASPECTUAL VERB FORMS

ROOT	AORIST STEM	PERFECTIVE STEM	IMPERFECTIVE STEM	ENGLISH
zl	azel	uzel	ttazel	*run*
f	af	ufa	ttaf	*find*
wl	wali	wala	ttwali	*see*
xdm	xdem	xdem	xeddem	*work*
kčm	kčem	kčem	kičem	*enter*
dgr	deger	deger	deger	*throw*

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** – **ə**/ (e.g. *zl* → uzel), /**u** – **a**/ (e.g. *f* → ufa), /**a** – **a**/ (*wl* →wala) or /**ə** – **ə**/ (e.g. *dgr* → deger). Aorist stems show the same divergent vocalic patterns: /**a** – **ə**/ (e.g. *zl* → azel), /**a** – **i**/ (e.g. *wl* → wali) and /**ə** – **ə**/ (e.g. *dgr* → deger). The imperfective is more regularly marked, generally by the prefix ***tt***, which seems to 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* → kičem).

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[29] Across Berber languages some verbs take a fourth form — the 'negative preterit' (Benjaballah, 2000) — which is found with the negation *ur* and other negative operators.

i. i-kčem Seddik
3SGM-enter$_{\text{PRF}}$ Seddik
Seddik entered

ii. ur i-kčim ara Seddik
NEG 3SGM-enter$_{\text{PRF}}$ NEG Seddik
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).

(27)	a.	(la)	ttplombe-γ[30]	turumst=iw
		PRT	fill$_{\text{IMPRF}}$-1SG	tooth=CL.1SG;POSS
		I am filling my tooth.		
	b.	(la)	ttskype-γ[31]	
		PRT	skype$_{\text{IMPRF}}$-1SG	
		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 *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.

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[30] Borrowed from French *plumber* 'to fill a tooth'

[31] This 'borrowing' is very new and very rare. Furthermore, most speakers prefer to use the complex expression:

i.	a=m	sawl-γ	di	lskype
	PRT=CL.2SGF	call$_{\text{IMPRF}}$-1SG	in	skype
	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 □ I □ A □ U □ 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.

Table 4: TYPOLOGY OF VERB FORMS

LEXICALIZED (?) AORIST STEM[33]	PERFECTIVE STEM	IMPERFECTIVE STEM	EXAMPLE
√	√	√	*l* → li li tt-li
√	√	≠	*rh* → ruh ruh tt-**ruhu**
√	≠	√	*wl* → wali **wala** tt-wali
≠	≠	≠	*ffk* → **fka ifk tt-ak**
*≠	√	√	—

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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[33] The symbol √ is used to show similarity with another stem, the ≠ symbol is used to show that a stem is different form 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 continuality (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 continuality and incompletion. 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 continuality (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 (28, a-b) or some other reference time (28c).

(28) a. t-**uzel** Marwa
3SGF-run$_{PRF}$ Marwa
Marwa ran.

b. čči-γ
eat$_{PRF}$-1SG
I ate.

c. t-aya εlaxaterc **te-seder** atas
3SGF-be.tired because 3SGF-catwalk$_{PRF}$ many

te-lha tiselit d sexana daγen ulahed aklimatisur
3SGF-walk$_{PRF}$ 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, *Marwa's running* and *I eating*, are interpreted as terminated at the time of utterance (although, two different events of *Marwa running* or *I eating* can, of course, occur simultaneously to the utterances of each sentence). In example (28c), two eventualities are described, one is a state (*the bride is tired*), the other, an event (*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[34]). Empirical support comes from stative verbs, which in the perfective can either be re-interpreted as inchoatives[35] or describe states, in the past as well as in the present[36].

(29)	a.	**te-li**	tpurt
		3SGF-open$_{\text{PRF}}$	door

The door is open.
The door was open.
The door opened.

b.	**te-hma**	lkahwa
	3SGF-be.hot$_{\text{PRF}}$	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	b.	t-bzeg	akk
	3SGM-plough$_{\text{PRF}}$	field		3SGF-be.wet$_{\text{PRF}}$	all
	The field is ploughed			*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 vécû a 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)
(ii) 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	aniγ	**te-cemt**
3SGF-be.beautiful$_{\text{PRF}}$	or	3SGF-be.ugly$_{\text{PRF}}$

'She was beautiful or she was ugly'.

b.

nekkini	di	lamr	=iw	**mectuhe-γ**
PRN.1SG	in	age	=CL.1SG;POSS	be.small$_{\text{PRF}}$-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$_{\text{IMPRF}}$	window

The window is opening.
**The window is open.*

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$_{\text{IMPRF}}$	Kinzo

Now, Kinzo is working.

b.

a	**ye-xeddem**	Kinzo	daiman
PRT	3SGM-work$_{\text{IMPRF}}$	Kinzo	daiman

Kinzo is always working.
Kinzo always worked.

c.

wala-γ	argaz	sufela	uselum,	a	**ye-ttkas**	ttefah.
see$_{\text{PRF}}$-1SG	man	on	ladder	PRT	3SGM-pick$_{\text{IMPRF}}$	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** **ttuγal-n**
go$_{\text{IMPRF}}$-3PLM come.back$_{\text{IMPRF}}$-3.PLM

ttruhu-n **ttuγal-n**
go$_{\text{IMPRF}}$-3PLM come.back$_{\text{IMPRF}}$-3PLM
They were going and coming back, going and coming back.

b. a **te-ttruhu** γar texxamt=is
PRT 3SGF-go$_{\text{IMPRF}}$ to room=CL.3SG;POSS
She was going to her room.

a =d **te-ttuγal** anida dahi
PRT =D 3SGF-return$_{\text{IMPRF}}$ where there

i nejema-nt yarek tilawin
COMP group$_{\text{PRF}}$-3PLFM 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[38]:

(34)	a.	ad	**i-feγ**	si	lxedma=s	f	tenac
		PRT	3sgm-exit$_{\text{AOR}}$	from	work=CL.3SG;POSS	at	twelve

He will get out from work at twelve.

b.	a(d)	**te-z^{w}edj**	Miriam	azeka
	PRT	3SGF-marry$_{\text{AOR}}$	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[39] 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.

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[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$_{\text{AOR}}$

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

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

[my stomach] hurt and calmed.

b.

a	**tefeγ-γ**	a	**kečm-γ**	γar	laduc
PRT	exit$_{\text{AOR}}$-1SG	PRT	enter$_{\text{AOR}}$-1SG	to$_{\text{DIR}}$	bathroom

alami	d	yiwen	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$_{\text{AOR}}$	dishes

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

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

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

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

a	**n-eččar**	iqecwalen	n	uzemur
PRT	1PL-fill$_{\text{AOR}}$	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)[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[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 aorist (along with its *ad* particle) to be associated with Irrealis[42], 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).

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[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 fulfil 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.

[41] Reel vs. non reel

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)	a.	a	=gen	**dehku-γ**	dacu	i	wala-γ
		PRT	=CL.2PL;DAT	tell$_{\text{AOR}}$-1SG	what	COMP	see$_{\text{PRF}}$-1SG

I will tell you what I saw.

b.	ad	**y-azel**	Mohand	azeka
	PRT	3SGM-run$_{\text{AOR}}$	Mohand	tomorrow

Mohand will run tomorrow.

c.	n-qim	a	n-ttrağu	milmi	a	=d	**t-as**
	1PL-sit$_{\text{PRF}}$	PRT	1PL-wait$_{\text{IMPRF}}$	when	PRT	=D	3SGF-come$_{\text{AOR}}$

Yemma
mother

We were waiting for mother to come.

d.	azeka	yahi	a	**xedm-n**	lftur	n	teslit
	tomorrow	DEM	PRT	work$_{\text{AOR}}$-3PLM	lunch	OF	bride

The following day, they also prepared the bride's meal.

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[42] 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	go$_{\mathrm{PRF}}$-3PLM	PRT	=D	bring$_{\mathrm{AOR}}$-3.PLM	bride

Then, they went to bring the bride.

b.	nukni	n-sub	s	asalu	aken	a	**n-tes**
	PRN.1PL	1PL-go.down$_{\mathrm{PRF}}$	to	living room	for	PRT	1PL-sleep$_{\mathrm{AOR}}$

Us, we went down to the living room to sleep.

(ii) **Imperative**

(39)	ičč!
	eat$_{\mathrm{AOR}}$

Eat!

(iii) **Conditional**

(40)	lukan	cucfe-γ	svah	ad	**ili-γ**	trankil	tura
	if	wash$_{\mathrm{PRF}}$-1SG	morning	PRT	be$_{\mathrm{AOR}}$-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.destroyed$_{\mathrm{AOR}}$

May he be destroyed!

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

(42)	ad	t-afe-d	degg	wexxam
	PRT	2SG-find$_{\mathrm{AOR}}$-2SG	in	house

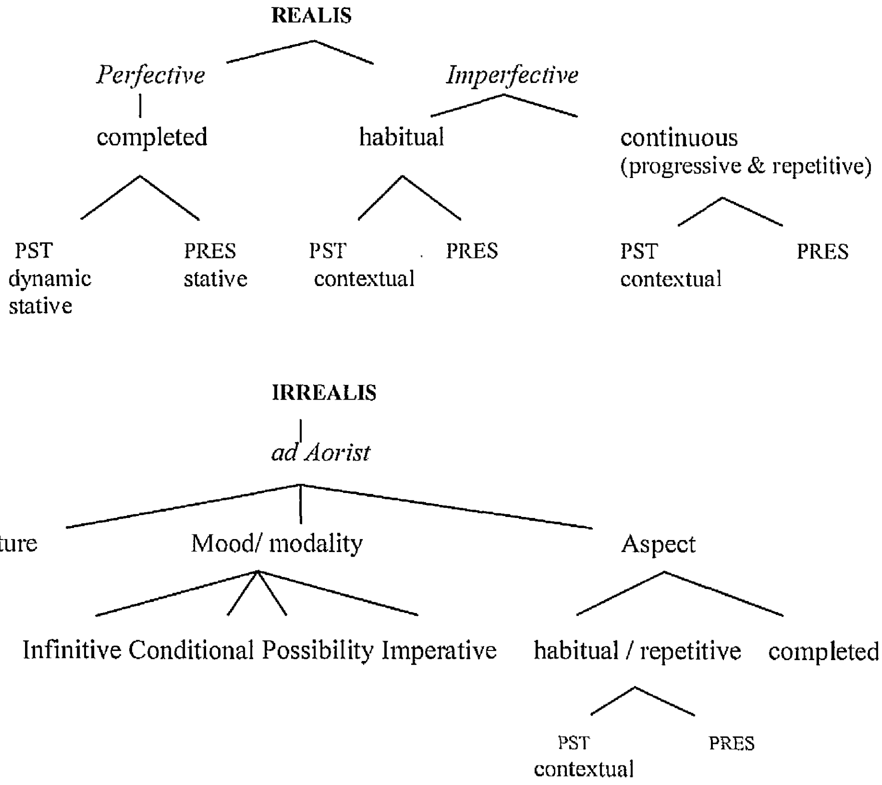
You may find him in the house.

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.

Figure 3: SEMANTIC INTERPRETATIONS OF REALIS AND IRREALIS IN BERBER


REALIS
Perfective
Imperfective
completed
habitual
continuous
(progressive & repetitive)
PST
dynamic
stative
PRES
stative
PST
contextual
PRES
PST
contextual
PRES
IRREALIS
ad Aorist
Future
Mood/ modality
Aspect
Infinitive Conditional Possibility Imperative
habitual / repetitive
completed
PST
contextual
PRES

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)**

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

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).

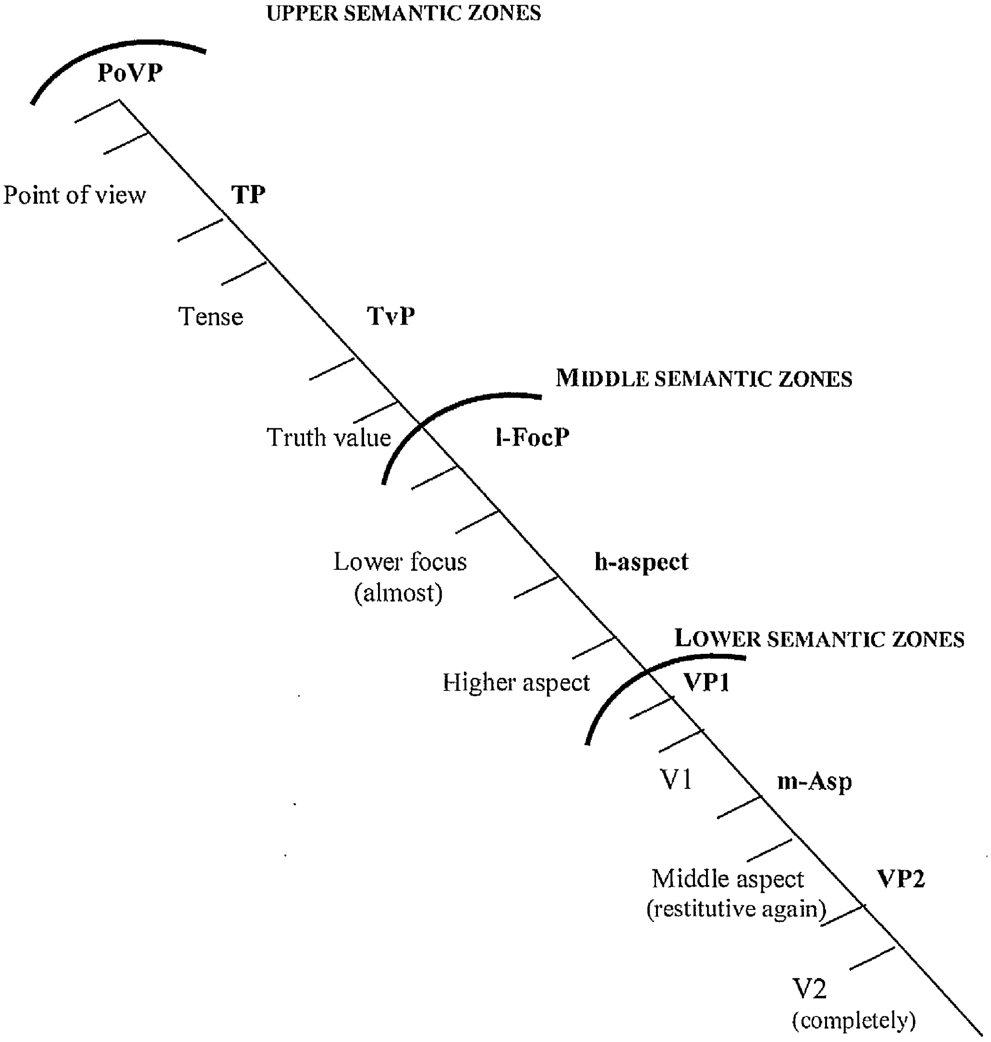
(vi) **Subject-Oriented** roughly corresponds to the syntactic vP shell projection and contains agentive subjects, causative subjects and other agent-oriented items such as the adverbs 'willingly' and 'knowingly' (etc...).

(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 aspectual 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.

(44) **Tenny' Semantic Zones (2000: 326)**


UPPER SEMANTIC ZONES
PoVP
Point of view
TP
Tense
TvP
MIDDLE SEMANTIC ZONES
Truth value
l-FocP
Lower focus
(almost)
h-aspect
LOWER SEMANTIC ZONES
Higher aspect
VP1
V1
m-Asp
Middle aspect
(restitutive again)
VP2
V2
(completely)

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 *i*[43]. 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[44]. 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[45] 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 *v*P 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 her (Hale & Keyser, 1993; Chomsky, 1995), I will take transitive verbs to occur within a *v*P shell constituent and their agentive subjects to be merged in the specifier of *v*P. 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.

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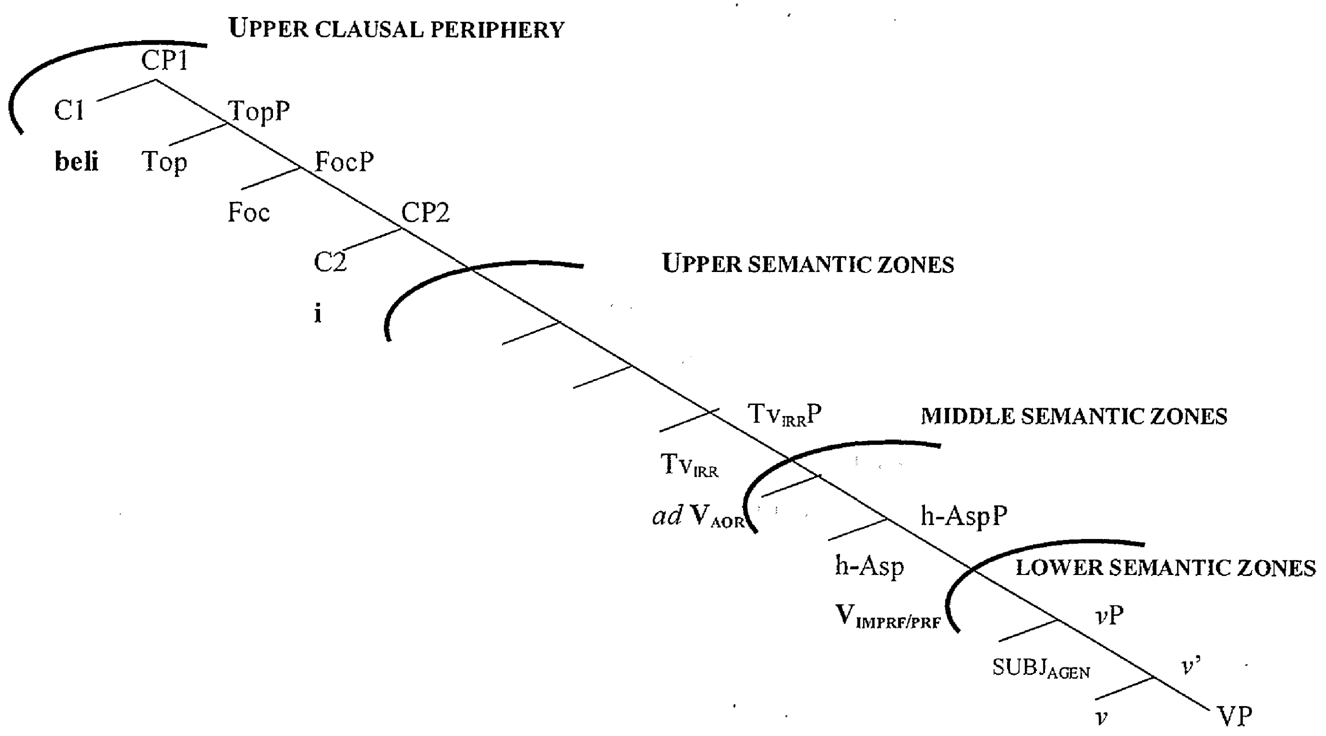
[43] This is generally the case across Berber languages. Note that some Berber languages, suh as Tashelhit, have adverbial clitics (Dell & Elmedlaoui, 1989). They are allowed to occur between the verb and the functional heads which are projected below the lowest complementizer head in Tashelhit. Overall, 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)

(45) **An extended event structure of Taqbaylit and Berber (Version 1)**


UPPER CLAUSAL PERIPHERY
CP1
C1
beli
TopP
Top
FocP
Foc
CP2
C2
i
UPPER SEMANTIC ZONES
TvIRRP
TvIRR
ad VAOR
MIDDLE SEMANTIC ZONES
h-AspP
h-Asp
VIMPRF/PRF
LOWER SEMANTIC ZONES
vP
SUBJAGEN
v'
v
VP

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-run$_{\text{IMPRF}}$ fast
He is running fast.

b. *la/a atas i-ttazel

c. ad y-azel atas
PRT 3SGM-run$_{\text{AOR}}$ 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. la/a =d i-ttruhu *=d
PRT =D 3SGM-go$_{\text{IMPRF}}$
He is coming.

b. a(d) =d i-ruh *=d
PRT =D 3SGM-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, *la* and *a* occur exclusively with imperfective verb forms and are, in most contexts, optional. The particle *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 *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 *ad* and conclude with a description of the particles *la* and *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[46] 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[47] 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 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):

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[46] Siwi Berber (Egypt) and some varieties of Taqbaylit seem not to use the particle (Chaker, 1997).
[47] In French: extensif vs. non-extensif

(48)	ma	y-whš	**ad**	y-gan	ɣur	=nɣ
	if	3SGM-be.scared$_{\text{PRF}}$	PRT	3SGM-sleep$_{\text{IMPRF}}$	to$_{\text{DIR}}$	=CL.1PL;OBL

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

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

The second piece of evidence comes from the languages where, in addition to *ad*, aorist stems can co-occur with another particle (e.g. *rad* in Tashelhit or *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 *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 [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 *ad* and still carries Irrealis mood semantics. Consider for instance the following examples:

(49)	a.	mi=d	t-ers	tbaqit	**y-ečč**	neɣ	**ye-qqim**
		when=D	3SGF-put	dish	3SGM-eat$_{\text{AOR}}$	or	3SGM sit$_{\text{AOR}}$

When the dish is served, one eats or one sits!
(Nait-Zerrad, 2001: 10)

b.	qim !
	sit$_{\text{AOR}}$

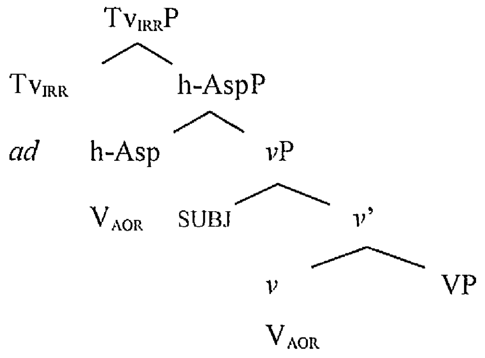
Sit!

In (49a), the aorist verbs *ye-čč* 'one eats' and *ye-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)



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-enter-$_{\text{PRF}}$	3SGF-drink$_{\text{AOR}}$	water

She entered and drank water.

b.

ad	**i-ddu**
PRT	3SGM-go$_{\text{AOR}}$

He will go.

c.

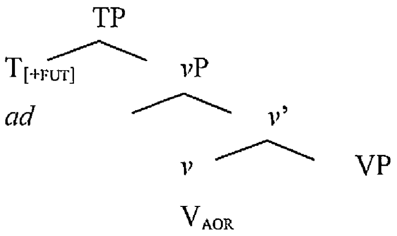
ay	škka-x	ad	**i-ddu**
COMP	doubt$_{\text{PRF}}$-1SG	PRT	3SGM-go$_{\text{AOR}}$

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 *škkax* 'I doubt'.

Because it carries no inherent TAM semantics, she proposes that the aorist verb stem remains in the *v*P 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).

(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 *v*P. 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 *v*P 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 *v*P, 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 *əd* 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[48]. 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.

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[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) **a** i-ttru Islam
PRT 3SGM-cry$_{\text{IMPRF}}$
Islam is crying.
Islam was crying.
Islam often cries.
Islam used to cry.
Islam cries (a lot).

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) a. i-ruh γur lhanut **la** i-ttazel
3sgm-go to$_{\text{DIR}}$ shop PRT 3SGM-run$_{\text{IMPRF}}$
He ran to the shop. (Lit. He went to the shop he was running).

b. mi pde-γ ideli **la** i-ttawam
when arrive$_{\text{PRF}}$-1sg yesterday PRT 3SGM-swim$_{\text{IMPRF}}$
When I arrived yesterday, he was swimming.

c. d imetawen i **la** ttru-γ
COP tears COMP PRT cry$_{\text{IMPRF}}$-1SG
It was tears that I was crying.

---

[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).

d.	uɣal-ɣ	kecme-ɣ	ɣar	taxxamt	aniga
	become$_{PRF}$-1SG	enter$_{PRF}$-1SG	to$_{DIR}$	room	where
	i	**la**	gane-ɣ		
	COMP	PRT	sleep$_{IMPRF}$-1SG		

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$_{IMPRF}$

He is drinking.
(Tamazight Berber: Ouhalla (2005a: 4))

(56)	a.	**ila**[50]	ttari-n	=t
		PRT	write$_{IMPRF}$-3PLM	=CL.3SGM;ACC

They were writing it.

	b.	**ila**	ttessnenna-n	=t
		PRT	cook$_{IMPRF}$-3PLM	=CL.3SG;ACC

They were cooking it.
(Tarifit Berber: Ouhalla (2005a: 4))

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[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$_{IMPRF}$-3PL boys in-house
The boys are in the house.

b. **ila-n** ifruxn g-uxxam
be-$_{PRF}$-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[51]. 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.

(58) **Aspectual paradigms of the verb *ili* in Taqbaylit**

	IMPERFECTIVE STEM	PERFECTIVE STEM
1ST SG	**ttili**-γ	**li**-γ
2ND SG	te-**ttili**-d	te-**li**-d
3RD SGM	i-**ttili**	i-**la**
1ST PL	ne-**ttili**	ne-**la**
2ND PLM	te-**ttili**-m	te-**li**-m
3RD PLM	**ttili**-n	**la**-n

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[52] (following the terminology of Ouali & Pires, 2005 and Ouali & Fortin, 2007).

Complex tense constructions involve two verbs[53], 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.

---

[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$_{\text{PRF}}$1SG go$_{\text{PRF}}$-1SG
I was gone / I had gone.
[lit. I was I left]

b. a i-ttili a i-ttru
PRT 3SGM-be$_{\text{IMPRF}}$ PRT 3SGM-cry$_{\text{IMPRF}}$
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$_{\text{AOR}}$ 3SGM-cry$_{\text{PRF}}$
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[54], 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$_{\text{PRF}}$ V$_{\text{IMPRF}}$][55]. The range of interpretations associated with the constructions is indeed similar to those associated with the particle. Consider, for instance, the following sentences:

---

[54] Hence, if *ili* occurs in the Perfective or Imperfective aspect, the second verb cannot occur in the Aorist. .

[55] This proposal is also implicit in Ouhalla (2005a) and Chaker (1997).

(60) a. i-la i-ttru
3SGM-be$_{\text{PRF}}$ 3SGM-cry$_{\text{IMPRF}}$
He was crying.
**He is crying.*
He had been crying.
?He has been crying.[56]

b. i-la i-ttazel
3SGM-be$_{\text{PRF}}$ 3SGM-run$_{\text{IMPRF}}$
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 [lexical BE$_{\text{PRF}}$ V$_{\text{IMPRF}}$] construction parallels the ambiguity of the *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.

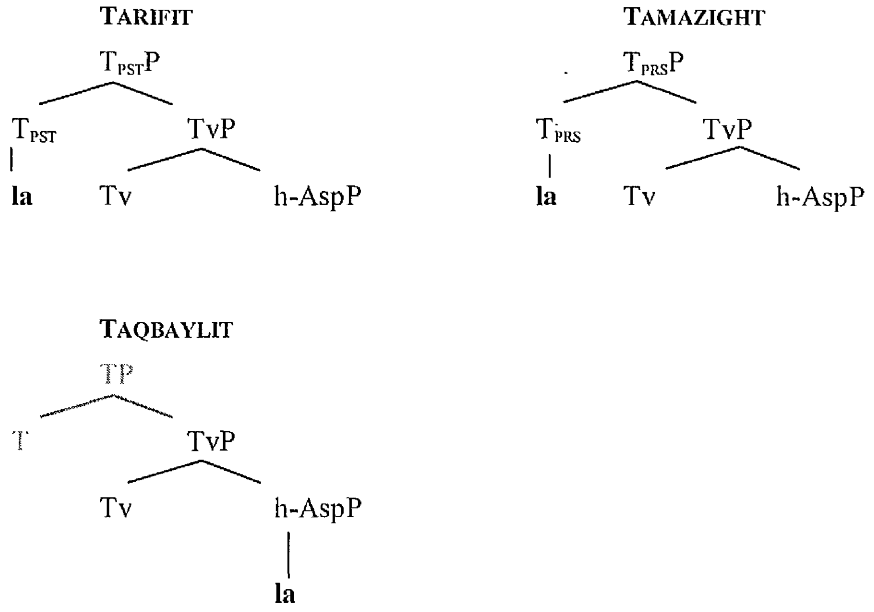
Different Berber languages or varieties may have grammaticalized the particle from different interpretations or semantic functions of the complex tense construction. Thus, in Tamazight Berber, where *la* marks present tense, it may have grammaticalized from the present perfect continuous uses of the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

---

[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 *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.

(61)



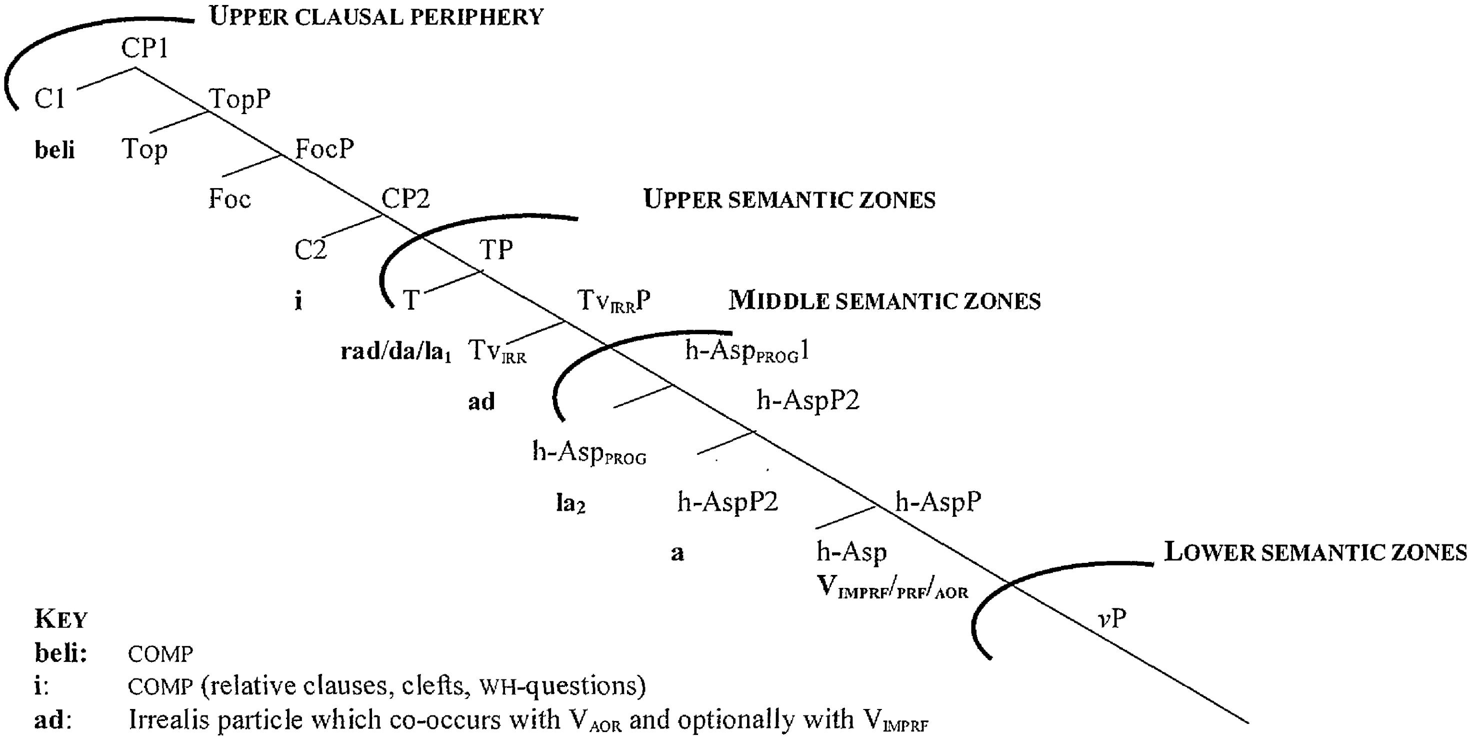
Earlier in this sub-section, I have mentioned the optional occurrence of the particle *a* with imperfective verbs. I have stated there that the particle is employed more often that *la* and seems to be available in more semantic contexts. The example provided there to illustrate its various interpretations is repeated in (62) below for convenience.

(62) **a** i-ttru
PRT 3SGM-cry$_{\text{IMPRF}}$
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.

(63) **An extended event structure of Taqbaylit and Berber (version 2)**


UPPER CLAUSAL PERIPHERY
CP1
C1
beli
TopP
Top
FocP
Foc
CP2
C2
i
UPPER SEMANTIC ZONES
TP
T
rad/da/la$_1$
Tv$_{IRR}$P
Tv$_{IRR}$
ad
MIDDLE SEMANTIC ZONES
h-Asp$_{PROG}$1
h-Asp$_{PROG}$
la$_2$
h-AspP2
h-AspP2
a
h-AspP
h-Asp
V$_{IMPRF/PRF/AOR}$
LOWER SEMANTIC ZONES
vP

KEY

beli: COMP

i: COMP (relative clauses, clefts, WH-questions)

ad: Irrealis particle which co-occurs with V_{AOR} and optionally with V_{IMPRF}

da,rad: Future particle in Tamazight and Tashelhit

la$_1$: Present particle or past particle, co-occurs with V_{IMPRF} (Tamazight, Tarifit)

la$_2$: Continuous aspect particle, optionally co-occurs with V_{IMPRF} (Taqbaylit)

a: Aspectual particle, optionally co-occurs with V_{IMPRF} (Taqbaylit)

2.5 Other expressions of modality

In this section, I describe some of 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$_{\text{MOD}}$ + CP] constructions. Recall from the previous section that verbs which occur in embedded clauses occur in the [ad + aorist].

(64) **OBLIGATION**

a.	**ilaq**	[$_{\text{CP}}$	ad	y-azzel]
	must		PRT	3SGM-run$_{\text{AOR}}$

He must run.

CAPACITY

b.	**i-zmer**	[$_{\text{CP}}$	ad	i-ruh	azeka]
	3SGM-can$_{\text{PRF}}$		PRT	3SGM-go$_{\text{AOR}}$	tomorrow

He can go tomorrow.

ABILITY

c.	**i-ssn**	[$_{\text{CP}}$	ad	y-awum]
	3SGM-know$_{\text{PRF}}$		PRT	3SGM-swim$_{\text{AOR}}$

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[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

---

[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.	[$_{\text{CP}}$	i-na	=yi	=d	[$_{\text{CP}}$	beli	ad
			3SGM-say$_{\text{PRF}}$	=CL.1SG;DAT	=D		COMP	PRT

i-ruh	azeka]]
3SGM-go$_{\text{AOR}}$	tomorrow

He told me he would go tomorrow.

b.	[$_{\text{CP}}$	**milmi**	i-na	=yi	=d
		when	3SGM-say$_{\text{PRF}}$	=CL.1SG;DAT	=D

[$_{\text{CP}}$	ad	i-ruh?]]
	PRT	3SGM-go$_{\text{AOR}}$

When did he told me he would go?

c.	[$_{\text{CP}}$	i-na	=yi	=d
		3SGM-say$_{\text{PRF}}$	=CL.1SG;DAT	=D

[$_{\text{CP}}$	**milmi**	ad	i-ruh?]]
	when	PRT	3SGM-go$_{\text{AOR}}$

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	yiwet	tatefaht
		must	PRT	3SGM-eat$_{\text{AOR}}$	one	apple

He must eat an apple.

b.	[$_{\text{CP}}$	**dacu**	ilaq	[$_{\text{CP}}$	ad	ye-čč]]?
		what	must		PRT	3SGM-eat$_{\text{AOR}}$

What must he eat?

c.	[$_{\text{CP}}$	ilaq	[$_{\text{CP}}$	**dacu**	ad	ye-čč]]?
		must		what	PRT	3SGM-eat$_{\text{AOR}}$

What must he eat?

(67) a. sni-γ ad azl-γ alami d thanut
know$_{\text{PRF}}$-1SG PRT run$_{\text{AOR}}$-1SG until COP shop
I can run until the shop.

b. [$_{\text{CP}}$ **sani** i t-sna-d
where COMP 2SG-know$_{\text{PRF}}$-2SG

[$_{\text{CP}}$ ad t-azle-d]]?
PRT 2SG-run$_{\text{AOR}}$-2SG
Until where can you run?

c. [$_{\text{CP}}$ t-sna-d [$_{\text{CP}}$ **sani**
2SG-know$_{\text{PRF}}$-2SG where

ad t-azle-d]]?
PRT 2SG-run$_{\text{AOR}}$-2SG
Until where can you run?

(68) a. ur i-smir ara ad ye-čč tatefaht
NEG1 3SGM-can$_{\text{PRF}}$ NEG2 PRT 3SGM-eat$_{\text{AOR}}$ apple
He can't eat the apple.

b. [$_{\text{CP}}$ **dacu** ur i-smir ara
what NEG1 3SGM-can$_{\text{PRF}}$ NEG2

[$_{\text{CP}}$ ad ye-čč]]?
PRT 3SGM-eat$_{\text{AOR}}$
What can he not eat?

c. [$_{\text{CP}}$ ur i-smir ara
NEG1 3SGM-can$_{\text{PRF}}$ NEG2

[$_{\text{CP}}$ **dacu** ad ye-čč]]?
what PRT 3SGM-eat$_{\text{AOR}}$
What can he not 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 **PRF**
3SGM-must$_{PRF}$/ 2SG-must$_{PRF}$-2SG PRT 2SG-run$_{AOR}$-2SG
You must run.

b. *la 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-γ ad ruh-γ azeka **PRF**
can$_{PRF}$-1SG PRT go$_{AOR}$-1SG tomorrow
I can go tomorrow.

b. *la zmre-γ ad ruh-γ azeka ***IMPRF**

c. *ad zmre-γ ad ruh-γ 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-γ ad awum-γ **PRF**
know$_{PRF}$-1SG PRT swim$_{AOR}$-1SG
I can swim.

b. *la sne-γ ad awum-γ ***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 know_{AOR}-1SG PRT swim_{AOR}-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 aspectual 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.

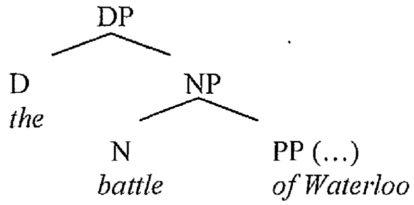
3.1 Overview of the nominal constituent

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) [$_{DP}$ D [$_{NP}$ 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)



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 Gen^0 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 determiners[60] (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*]$_{\text{DP}}$
3SGM-pass$_{\text{PRF}}$ =D man
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.

3.1.1 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[61]. 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*[62] 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'[63] 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.

c. acqic **nni**
boy DEM$_{AMB}$
That/this boy
(The boy I was just talking about or a boy who for some reason the speaker judges as salient)

Demonstrative determiners do not agree (at least overtly) with the noun they modify, as demonstrated in (5).

(5) a. taqcict **aki /** **ahi/ina/** **nni**
girl DEM$_{PROX}$ DEM$_{DIS}$ DEM$_{AMB}$
This/ that girl

b. tullas **aki /** **ahi/ina/** **nni**
girls DEM$_{PROX}$ DEM$_{DIS}$ DEM$_{AMB}$
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[64]. 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.beautiful$_{PRF}$ house
The house is beautiful.

b. i-lɣa uxxam nni [(i) **i-cevehe-n**]$_{RC}$
3SGM-burn$_{PRF}$ house DEM$_{AMB}$ COMP 3SGM-be.beautiful$_{PRF}$-PTCP
The beautiful house burned.

c. axxam nni [(i) **i-cevehe-n**]$_{RC}$ i-lɣa
house DEM$_{AMB}$ COMP 3SGM-be.beautiful$_{PRF}$-PTCP 3SGM-burn$_{PRF}$
The beautiful house burned.

---

[64] 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.room$_{\text{SGM}}$ large$_{\text{SGM}}$
A large living room

b. ***ameqran** asalu
large$_{\text{SGM}}$ living.room$_{\text{SGM}}$

c. isaluyin **imeqranen**
living.room$_{\text{PLM}}$ large$_{\text{PLM}}$
Large living rooms

d. villat **tameqrant**
house$_{\text{SGF}}$ large$_{\text{SGF}}$
A large house

e. villat **timeqranin**
house$_{\text{PLF}}$ large$_{\text{PLF}}$
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** N > DEM > **Adj**
house DEM small
This small house

b. axxam nni **amezwaru** N > NUM > **Adj**
house DEM first
This first house

c. axxam **amezwaru** amectuh N > NUM > **Adj**
house first small
The first small house

d. axxam amectuh **amezwaru** N > **Adj** > NUM
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 **amezwaru**
house$_M$ first$_M$
The first house

b. taxxamt **tamezwarut**
house$_F$ first$_F$
The first bedroom

c. taqcict **tisnat**
girl second$_F$
The second girl

d. argaz **wisin**
man second$_M$
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.

---

[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 a possessors, appear in a strict order with respects to the head: they all obligatorily follow the noun[66]. Sentences (10, a-d) illustrate these orders.

(10)	a.	n-ruh	s	[axxam	n	**temeγra**]	**N >Poss**
		1.PL-go$_{\text{PRF}}$	to	house	OF	party	
		We went to the house of the party.					

b.	ye-swa	[wemγar	**nni**]	**N > DEM**
	3SG-drink$_{\text{PRF}}$	husband	DEM	
	This old man drank (his coffee).			

c.	n-ruh	s	[axxam	**wayed**]	**N> Adj**
	1PL-go$_{\text{PRF}}$	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.

---

[66] Unless they are quantifiers or cardinal numerals. Cf. sections 3.3.2 and 3.3.3

(11) a. aqcic nni amectuh **N > DEM > Adj**
boy DEM small
This small boy

b. aqcic amectuh nni **N > Adj > DEM**
boy small DEM
This small boy

(12) a. avelu nni amelal n dada **N > DEM > Adj > Poss**
room DEM white OF dad
This white bike of dad

b. avelu n dada amelal nni **N > Poss > Adj > DEM**
bike OF dad white DEM
This white bike of dad

c. avelu nni n dada amelal **N > DEM > Poss > Adj**
bike DEM OF dad white
This white bike of dad

d. avelu amelal nni n dada **N > Adj > DEM > Poss**
bike white DEM OF dad
This white bike of dad

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.

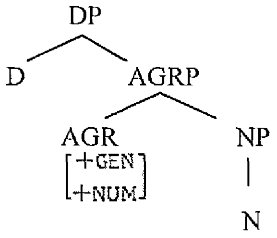
3.2.1 El Moujahid's DP (1997)

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 > DEM > Adj > Poss**:

(13)	ayis	ad	umlil	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)

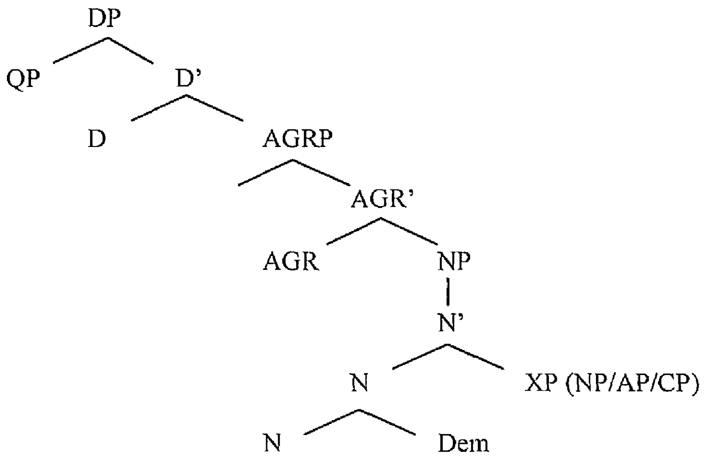


Except for quantifiers which are treated as specifiers of D, El Moujahid argues that all nominal modifiers are merged within the lower NP projection as complements of N[67]. Thus, demonstratives, which as shown in (13) above are strictly adjacent to the noun, attach to the lowest N while other modifiers 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 demonstrative. The structure as proposed is represented in (15) below (El Moujahid, 1997: 233).

---

[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).

(15)



Although his structure can derive the **N** > **DEM** > **Adj** > **Poss** word order as it stands, El Moujahid further argues that, like its Arabic counterpart, N moves and incorporates into a null D[68], 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'.

---

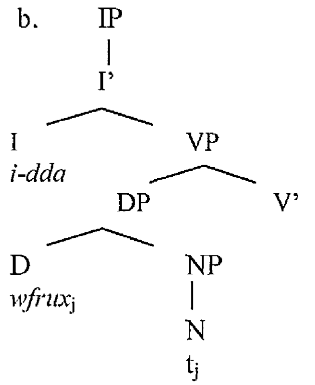
[68] The head of DP is argued to be null because, as mentioned in section 3.1, the language has no D elements whose function is to formally distinguish between definite and indefinite nouns.

(16) a.

i-dda	wfrux
3SGM-leave$_{PRF}$	boy

The boy left.

b.



(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	nni	n	dada	amelal	**N > DEM > Poss > Adj**
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 > DEM > Adj** but **N > Poss > Adj > DEM**).

(19) a. *avilu n dada nni amectuh
bike OF dad DEM$_{AMB}$ small

b. avilu n dada amectuh nni
bike OF dad small DEM$_{AMB}$
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 DEM$_{AMB}$

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.

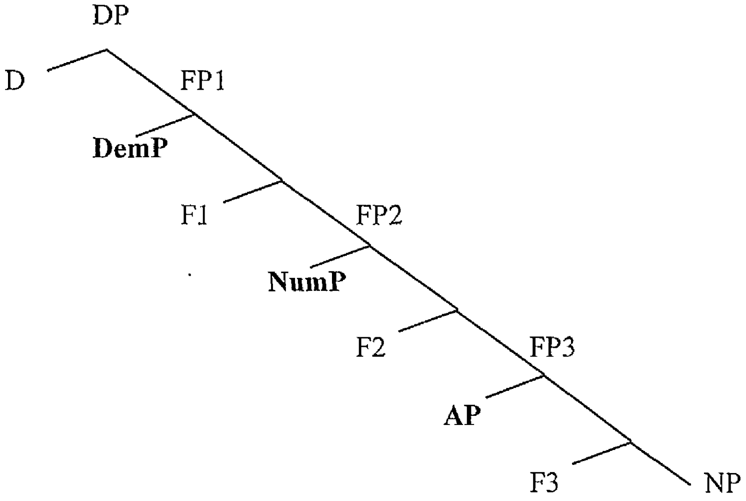
In his Universal 20, Greenberg notices that demonstratives, numerals and adjectives occur in restricted orders cross-linguistically:

(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[69] 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)



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 projection targeted by movement of the noun and (iii) whether the noun moves as a head or as part of the NP[70].

---

[69] 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.

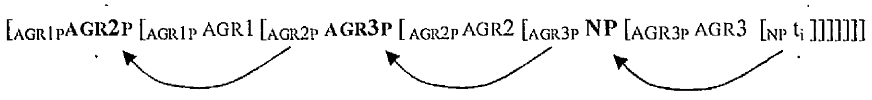
Where the noun remains in situ, modifiers occur as they are merged in the pre-nominal order DEM, NUM, Adj, **N**. In contexts where N/NP moves, they occur in an order different to that in which they are merged. Cinque assumes that many of the FP projections within which the different modifiers are merged project AgrP's through which N/NP movement takes place[71]. 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. $[_{AGR1P}\ \mathbf{N(P)}_i\ [_{AGR2P}\ t_i\ [_{AGR3P}\ t_i\ [_{NP}\ t_i\ ]]]]$

b. $[_{AGR1P}\ [_{AGR2P}\ \mathbf{N(P)}_i\ [_{AGR3P}\ t_i\ [\ t_i\ ]]]]]$

c. $[_{AGR1P}\ [_{AGR2P}\ [_{AGR3P}\ \mathbf{N(P)}_i\ [\ t_i\ ]]]]]$

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) $[_{AGR1P}\mathbf{AGR2P}\ [_{AGR1P}\ AGR1\ [_{AGR2P}\ \mathbf{AGR3P}\ [_{AGR2P}\ AGR2\ [_{AGR3P}\ \mathbf{NP}\ [_{AGR3P}\ AGR3\ \ [_{NP}\ t_i\ ]]]]]]]$

---

[70] 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.

[71] 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 AGREE (Chomsky, 2000).

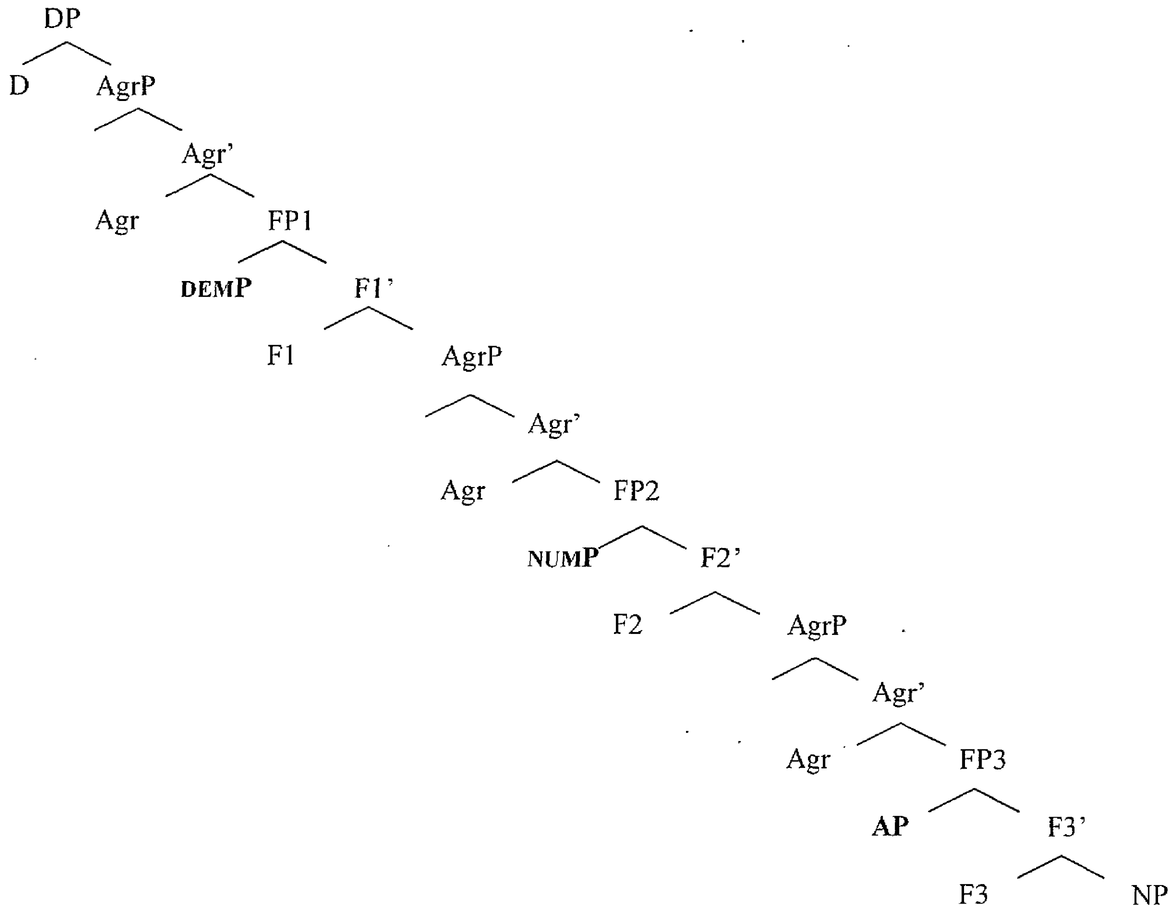
Depending whether the N/NP undergoes total or partial movement and whether pied-piping is involved or not, demonstratives, numerals and adjectives appear in various orders[72]. In (25) below, I provide the DP template that Cinque proposes.

---

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

Movement	**Target**	**Derived order**
Movement	highest F^0 (D?)	N > DEM > NAdj > NP
N-movement	intermediate F^0	DEM > NUM > N > Adj > NP
		DEM > N > NUM > Adj > NP
NP-movement	highest Spec-FP	NP > DEM > NUM > Adj
NP-movement	intermediate Spec-FP	DEM > NP > NUM > Adj
		DEM > NUM > NP > Adj
Roll-up NP-movement	highest Spec-FP	NP > Adj > NUM > DEM
Roll-up NP-movement	intermediate Spec-FP	DEM > NP > Adj > NUM
No movement	in-situ	DEM > NUM > Adj > NP

(25) **Cinque's DP template (2000)**


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[73] template to be as follows:

(26) $[_{DP}\ \mathbf{D}\ [_{AGR1P}\ \mathrm{AGR1}\ [_{FP1}\ \mathbf{DEMP}\ [_{FP1}\ \mathrm{F1}\ \ [_{AGR2P}\ \mathrm{AGR2}\ [_{FP2}\ \mathrm{NUM}\mathbf{P}\ [_{FP2}\ \mathrm{F2}\ \ [_{AGR3P}\ \mathrm{AGR3}\ [_{FP3}\ \mathbf{AP}\ [_{FP3}\ \mathrm{F3}\ [_{NP}\ \mathbf{N}\ ]]]]]]]]]]]$

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. N > DEM > **Adj**

b.	argaz	nni	amectuh
	man	DEM	small
	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. N > DEM > Adj > **Poss**

b.	**avilu**	nni	amelal	**n**	**dada**
	bike	DEM	white	OF	dad
	This white bike of dad				

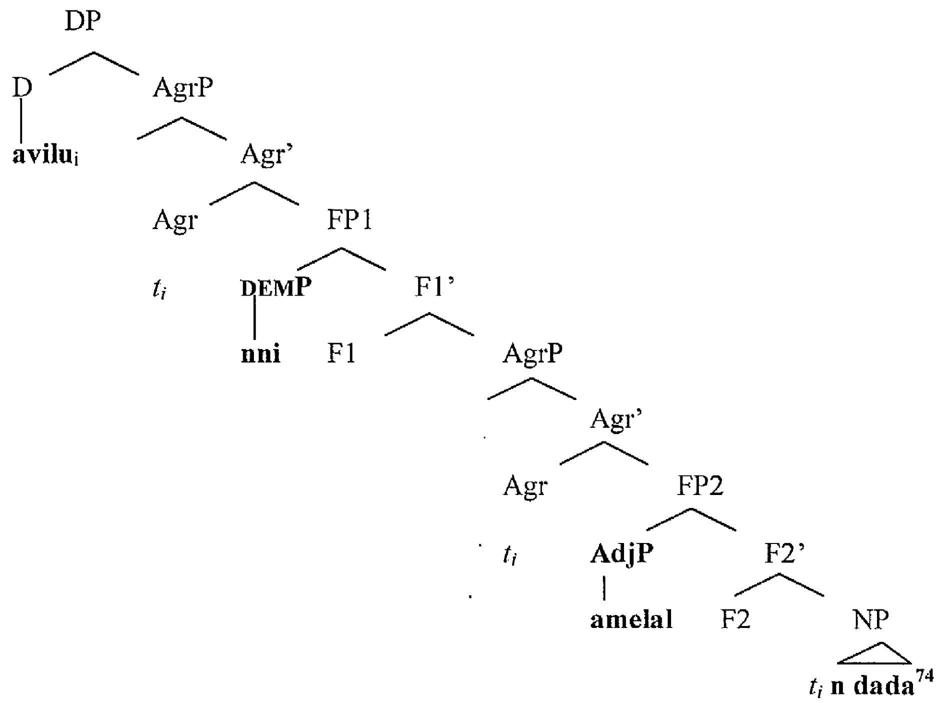
Separation of N from its arguments is as a rule taken as a sign of head movement (cf. Cinque, 1994). In fact, N-movement in the DP of other Berber languages has been independently argued for (El Moujahid, 1997; Ouhalla, 1997; Ennaji, 2001).

---

[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^0 position. I demonstrate the derivation of Taqbaylit DPs below with a representation of (28b) in (29).

(29)	avilu$_i$	[~~avelu~~$_i$ nni	[~~avelu~~$_i$ amelal	[~~avelu~~$_i$ n	dada]
	bike	DEM	white	OF	dad



DP
D
avilu$_i$
AgrP
Agr'
Agr
t_i
FP1
DEMP
nni
F1'
F1
AgrP
Agr'
Agr
t_i
FP2
AdjP
amelal
F2'
F2
NP
t_i n dada[74]

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[75]. Following Cinque, I will take this movement to target the Specifier of the highest AgrP and will assume that form this position N further moves as a head to the D position. This movement is illustrated in (30b) below, representing (27a).

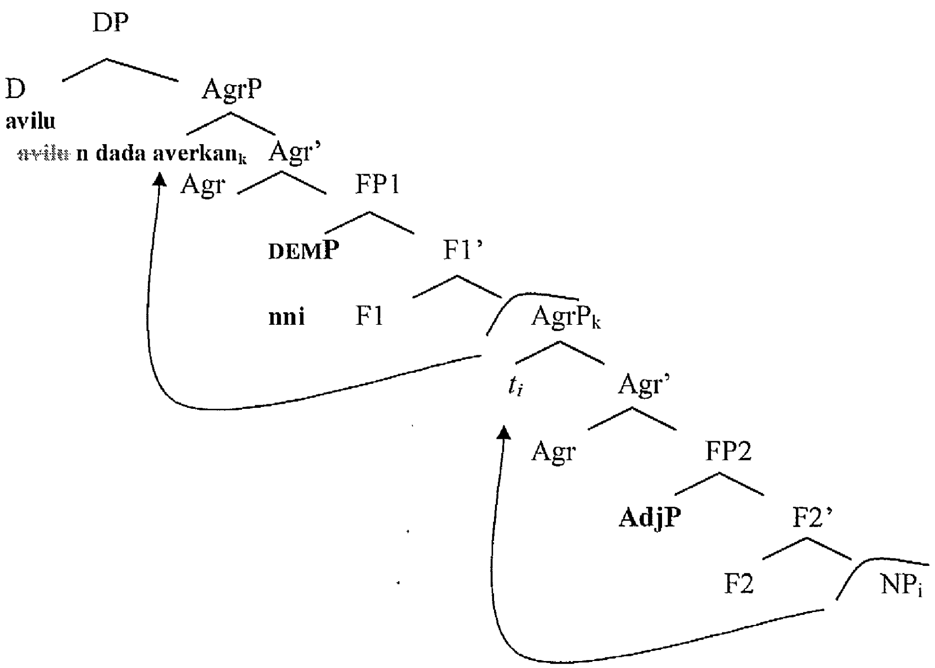
---

[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.

(30)	a.	avilu	n	dada	averkan	nni
		bike	OF	dad	black	DEM$_{AMB}$
		This black bike of my father				

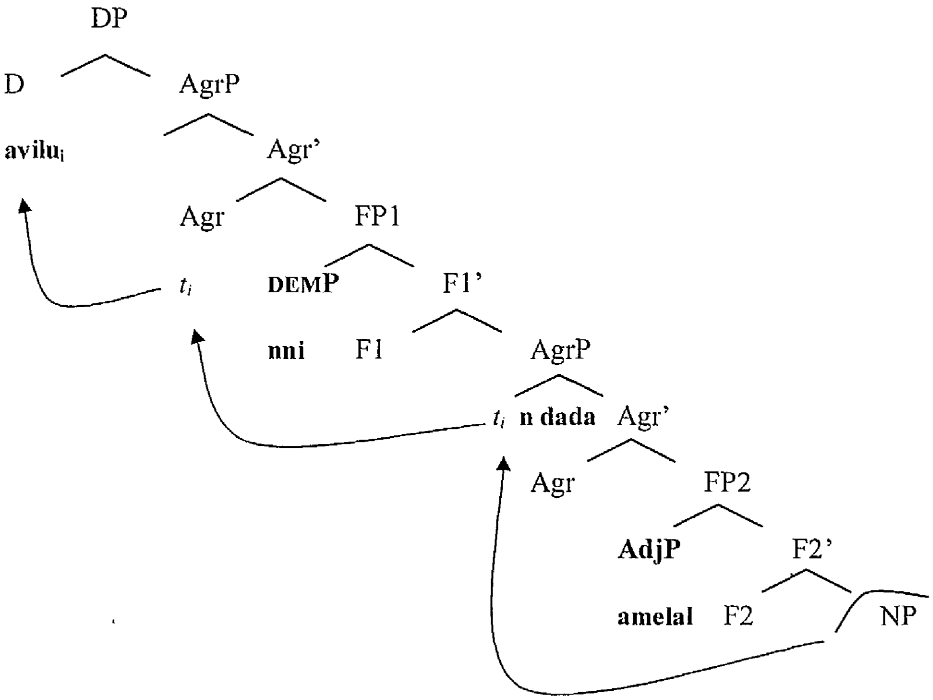
b.



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.

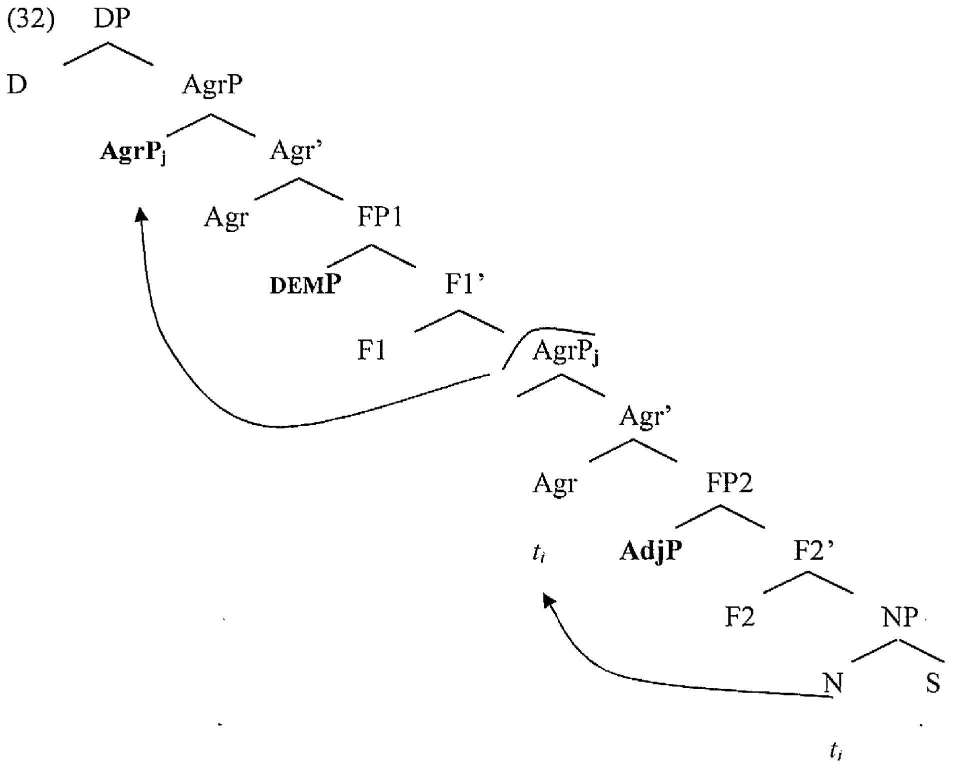
(31) N > DEM > Poss > Adj

$avilu_k$	[nni	[	$_k$ n	$dada_i$	amelal	[~~avilu n dada~~$]_i$]]
bike	DEM		OF	dad	white	



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)



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	DEM$_{AMB}$	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) [DP axxam amelal nni] n wergaz
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** [$_{\text{AGR1P}}$ AGR1 [$_{\text{FP1}}$ **DEMP** [$_{\text{FP1}}$ F1 [$_{\text{AGR2P}}$ AGR2 [$_{\text{FP2}}$ **NUMP** [$_{\text{FP2}}$ F2 [$_{\text{AGR3P}}$ AGR3 [$_{\text{FP3}}$ **AP** [$_{\text{FP3}}$ F3 [$_{\text{NP}}$ **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.

(36) a. [*yiwen*] n wergaz
one OF man
One man

b. [*atas*] n meden
many OF people
Many people

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'[76] 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 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-verbal and in the CS form *wrgaz* when it is post-verbal:

---

[76] Also referred to in the French literature as 'l'État d'annexion'.

(37)	a.	**argaz,**	i-ruh
		man$_{FS}$	3SGM-go$_{PRF}$
		The man, he left.	
	b.	i-ruh	**wrgaz**
		3SGM-go$_{PRF}$	man$_{CS}$
		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[77], 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.	**tamtut/ taqcict/ tilawin,**	te-ruh /	ruh-ent
		woman / girl/ women	3SGF-go$_{PRF}$	go$_{PRF}$-3PLF
		The woman/girl/ women, she/they left.		
	b.	te-ruh/	ruh-ent	**tmtut/tqcict/tlawin**
		3SGF-go$_{PRF}$	go$_{PRF}$-3PLF	woman$_{CS}$/ girl$_{CS}$ / women$_{CS}$
		The woman/girl/ women left.		

---

[77] Note that some feminine nouns have an unmarked CS form.

Table 5 CONSTRUCT STATE PATTERNS (TAQBAYLIT)

VOCALIZATION PATTERN	FREE STATE	CONSTRUCT STATE
/a/ → /u/ → /w/	azemur (olive) aqcwal (basket)	uzemur weqcwal[78]
/u/ → /wu/ /u/ → /w/	ul (heart) ultma (sister)	**wul** weltma
/i/ → /y/ /i/ → /y/	Irgazen	yirgazen

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*] **POSSESSIVE DP**
bicycle OF boy$_{CS}$.
The boy's bicycle

b. kess n [**w***eman*] **PRTV**
glass OF water$_{CS}$
A glass of water

c. atas n [*werac*] **QUANTIFIED DP**
many OF children$_{CS}$
Many children

d. i-fka avelu i [*weqcic*] **PREP$_{DAT}$**
3SGM-give$_{PRF}$ bicycle to$_{DAT}$ boy$_{CS}$
He gave a bicycle to the boy.

e. qim sufela n [*tevla*]! **LOCATIONAL**
sit$_{AOR}$ on PREP table$_{CS}$
Sit on the table!

---

[78] The CS initial vowel of singular masculine nouns, /w/, can be phonologically realized as $/p^w/$ in the variety of Taqbaylit presented here. The phonological variant is, however, only available inside genitive DPs.

f. tamɣart d [*wemɣar*] **PREP$_{\text{COM}}$**
old woman with old man$_{\text{CS}}$
The old woman and the old man

g. y-engha =t [*wẓrem*] nni **CLITIC-DOUBLED DP**
3SGM-kill$_{\text{PRF}}$ =CL.3SGM;ACC snake$_{\text{CS}}$ DEM$_{\text{AMB}}$
He killed the snake.
(Achab, 2004: 2)

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 *ɣur* 'to$_{\text{DIR}}$' — as well as (iv) with the quantifier *kul* 'each', as illustrated by the following examples.

(40) a. i-čča [*aqviẓ*] nni **OBJ**
3SGM-eat$_{\text{PRF}}$ bread$_{\text{FS}}$ DEM$_{\text{AMB}}$
He ate the bread.

b. i-ruh s [*axxam*] **PREP$_{\text{DIR}}$**
3SGM-go$_{\text{PRF}}$ to$_{\text{DIR}}$ house$_{\text{FS}}$
He went home.

c. kul [*aqcic*] **QUANTIFIER 'kul'**
each child$_{\text{FS}}$
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:

(41) **HEBREW**[79]

a. **ha-bayit** fel ha-mora **FREE STATE**
DEF-house of DEF-teacher
The house of the teacher

b. **beyt** ha-mora **CONSTRUCT STATE**
house$_{CS}$the-teacher
The teacher's house

CLASSICAL ARABIC

c. **al-kalb-u** li-l-malik-i **FREE STATE**
DEF-dog-ABS to-DEF-king-GEN
The king's dog

d. **kalb-u** l-malik-i **CONSTRUCT STATE**
dog-ABS DEF-king-GEN
The king's dog

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).

(42) **HEBREW**

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

TAQBAYLIT

b. avilu n [***weqcic***]
bike OF boy$_{CS}$
The boy's bike

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-eat$_{PRF}$ man$_{CS}$ bread
The man ate bread.

b. i-fka avilu i [***weqcic***] **PREP$_{DAT}$**
3SGM-give$_{PRF}$ bicycle to$_{DAT}$ boy$_{CS}$
He gave a bicycle to the boy.

c. tamγart d [***wemγar***] **PREP$_{COM}$**
old woman with old man$_{CS}$
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[80] (Ouhalla, 1997; Ennaji, 2001). In the following sub-section, I discuss some of the proposed accounts of the Berber CS.

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[80] 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 $[_{AGRP}$ DP$_{GEN}$ AGR$_{GEN}$ $[_{NP}$ N …]]]
b. $[_{IP}$ e I $[_{AGRP}$ DP$_{GEN}$ AGR$_{GEN}$ $[_{VP}$ V …]]]
(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 [***weqcic***]
3SGM-give$_{PRF}$ bread to$_{DAT}$ boy$_{CS}$
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 =[***(y)as***] aqviz
3SGM-give$_{PRF}$ =CL.3PLM;DAT bread
He gave them bread.

b. *i-fka =[***is***] 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	=[*t*]	[***wzrem***]	nni
	3SGM-kill$_{\text{PRF}}$	=CL.3SGM;ACC	snake$_{\text{CS}}$	DEM$_{\text{AMB}}$
	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) [$_{\text{KP}}$ K [$_{\text{DP}}$]]

K^0, 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^0 (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^0 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 *zru* 'stone'.

(50) a. [$_{KP}$ s [wzru]] 'with a stone' (Case marker: instrumental *s*)

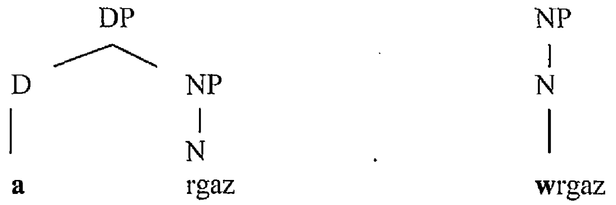
b. [$_{KP}$ a [zru]] 'stone' (Case marker: default *a*)

c. [$_{KP}$ ∅ [wzru]] 'stone' (Case marker: empty)

(Guerssel, 1992: 117)

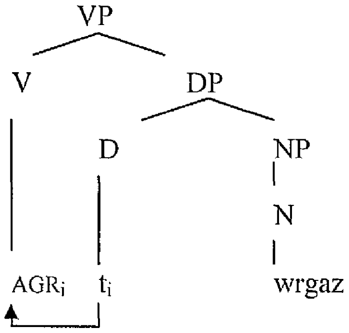
An analogous proposal (minus the case association) is that put forward by Achab (2004; 2006). Achab takes the state alternation between nouns to be a reflection of their different internal structures. Thus, nouns which occur within an NP projection are argued to occur in their CS form while those additionally 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* b. *Construct State*

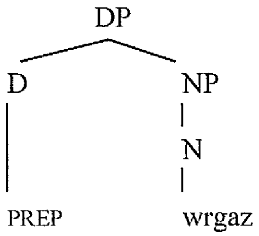


On the surface, however, CS nouns do not occur as 'deficient' NPs but as complex DPs headed by either a preposition or, when they are post-verbal subjects, the agreement marker affixed onto the verb. This is illustrated in the following tree structures:

(52) a.

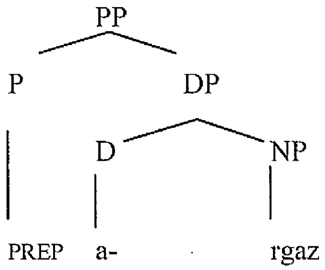


b.



Similarly to Guerssel, Achab positions prepositions which do not occur with the CS in an independent PP projection selecting DP as their complement.

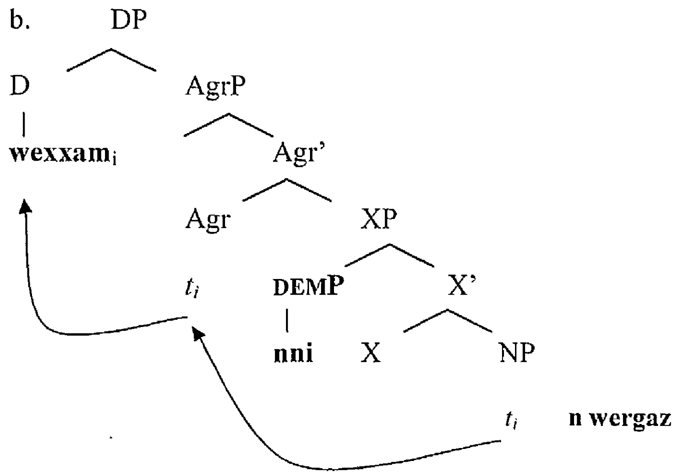
(53)



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-ɾɣa [***wexxam***] nni n [***wergaz***]
3SGM-burn$_{\text{PRF}}$ house$_{\text{CS}}$ DEM$_{\text{AMB}}$ OF man$_{\text{CS}}$
This/ the man's house burned.

b.



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-ɣya* '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.	[$_{KP}$ s [wzru]]	'with a stone'	(Case marker: instrumental *s*)
	b.	[$_{KP}$ a [zru]]	'stone'	(Case marker: default *a*)
	c.	[$_{KP}$ ∅ [wzru]]	'stone'	(Case marker: empty)
		(Guerssel, 1992: 117)		

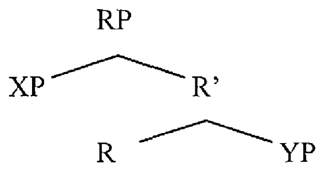
However, as explained by El Moujahid (1997, after Jebbour, 1988), the masculine FS form of a noun constitutes the form from which its other morphological forms (i.e. feminine, plural and CS forms) are derived. This means that the CS form of a noun does not exist in parallel with their FS form, as assumed 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.

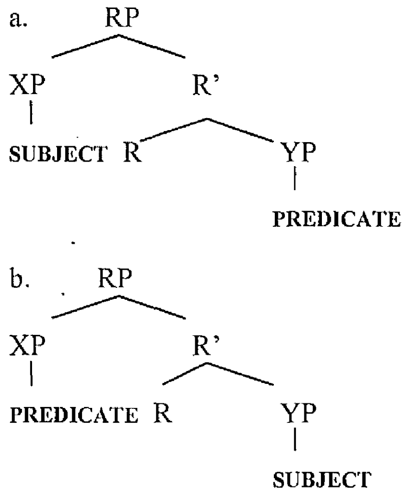
Den Dikken's analysis reposes on the assumption that constituents which are involved in predication – namely the predicate, defined as the constituent that denotes a particular property of another constituent, and the subject, defined as the constituent modified by the predicate – occur as dependents of a functional head, the relator, whose main role is to mediate syntactically and semantically between them. The structure is represented in (56) below.

(56)



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).

(57)



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.

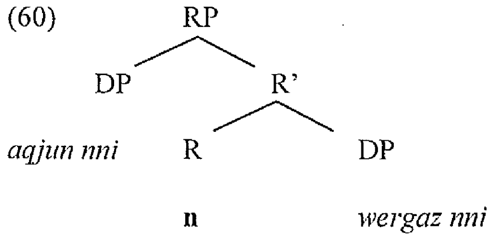
(58)	a.	i-wala	wergaz	aqjun
		3SGM-see$_{PRF}$	man$_{CS}$	dog
		The man saw a dog.		
	b.	argaz,	i-wala	aqjun
		man$_{FS}$	3SGM-see$_{PRF}$	dog
		The man, he saw a dog.		

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	dem$_{AMB}$,	OF	man$_{CS}$	DEM$_{PROX}$
		This dog belongs to this man.				
	b.	axxam	n	wergaz		
		house	OF	man$_{CS}$		
		The house of the man				

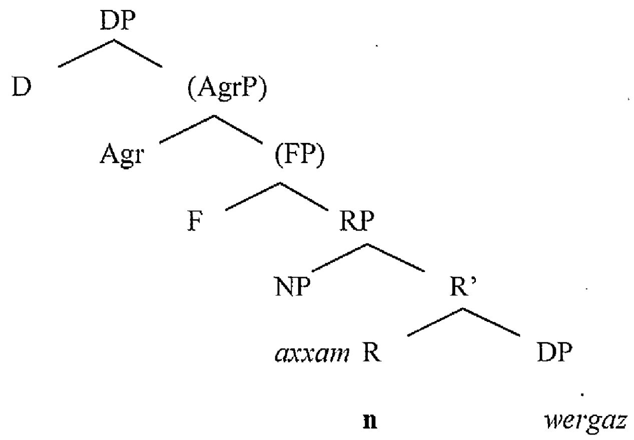
Given that the present chapter is concerned with nominal structures, I will briefly attempt to explain how Den Dikken's proposal could be extending to the nominal contexts involving CS in Berber. For that I will concentrate on the two examples (59a) and (59b) provided above. (59a) contains two DP constituents *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)



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)



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 θ-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.

(62)	a.	ayyis	**n**	ufllah
		horse	OF	farmer

The horse of the farmer

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-see$_{PRF}$ picture OF girl$_{CS}$ yesterday
He saw the picture of a girl yesterday.

b. ***n** tqcict i i-wala lafutu ideli
OF girl$_{CS}$ C 3SGM-see$_{PRF}$ picture yesterday
It is of the girl that he saw a picture yesterday.

c. i-fka tatefaht **i** hanna
3SGM-give$_{PRF}$ apple to$_{DAT}$ Hanna
He gave an apple to Hanna.

d. **i** hanna i i-fka tatefhat
to$_{DAT}$ Hannah C 3SGM-give$_{PRF}$ 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 children$_{CS}$
Many children

b. yiwen n wexxam
one OF house$_{CS}$
One house

c. sufela n wexxam
on.top OF house$_{CS}$
On top of the 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.

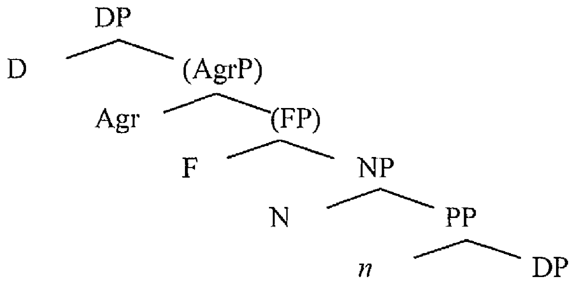
Because the structures proposed above require more elaboration, in the remainder of this chapter (and thesis), for DP internal CS, I will adopt more established analyses (Chaker, 1983; Kossman, 1997; Nait-Zerrad, 2003; Ouhalla, 2005a amongst others) and consider *n* to be a preposition. However, given 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 tha 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.

(65)



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-sit$_{\text{AOR}}$
Each of these women will stay.

b. kul ***[yiwet]*** ahi a te-qim
each one DEM PRT 3SGF-sit$_{\text{AOR}}$
Each of these ones will stay.

(67) a. ***[axxam]*** n wergaz
house OF man$_{\text{CS}}$
The man's house

b. ***[yiwen]*** n weqcic
one OF boy$_{\text{CS}}$
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 weqcic
one$_{\text{M}}$ OF boy$_{\text{CS}}$
One boy

b. **[yiwet]** n tqcict
one$_{\text{F}}$ OF girl$_{\text{CS}}$
One girl

c. [*tleta*] n warac
three OF children$_{\text{CS}}$
Three children

d. [*tleta*] n 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. [*kera*] n werac
some OF children
Some children

b. [*atas*] n 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. **kul** argaz
each man$_{\text{FS}}$
Each man

b. **yarek** irgazen
all men$_{\text{FS}}$
All men

Given the formal similarities between *kul* 'each/every' and the Semitic quantifier *kull 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) [$_{QP}$ Q *kul /yarek* [$_{DP}$ ...]]

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) **[NEG COP N]**

(73)	a.	ula	d	tametut
		NEG	COP	woman
		No woman		
	b.	ursa	d	aqcic
		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-agreement[84]. This is illustrated in (74) below.

(74)	a.	[*ursa/ula d*	***tametut***]	i	=d	y-usa-n	
		NEG COP	woman	COMP	=D	3sgm-come$_{\text{PRF}}$-PTCP	
		No woman came (Lit. There is no woman who came).					
	b.	*t-usa	=d	[***ursa/ula***	***d***	***tametut***]	
		3SGF-come$_{\text{PRF}}$	=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[85] 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.

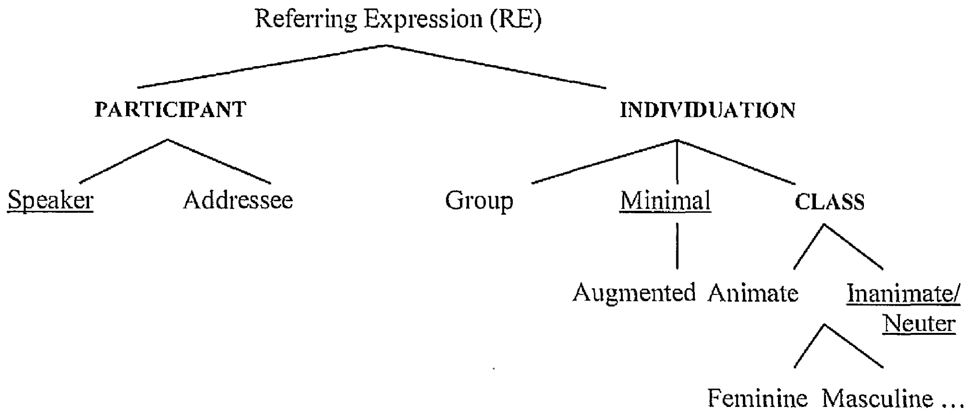
3.4.1 Berber feature geometry

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 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.

---

[85] From those generally activated in Berber

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



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[86], i.e. a dependent corresponding to a default interpretation. Thus, speaker and addressee which represent 1st and 2nd person features are dependents of the PARTICIPANT node, with speaker being the underspecified dependent[87]. 3rd 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 have it in the structure and, given that gender features are dependent on CLASS, will not encode gender distinction[88].

---

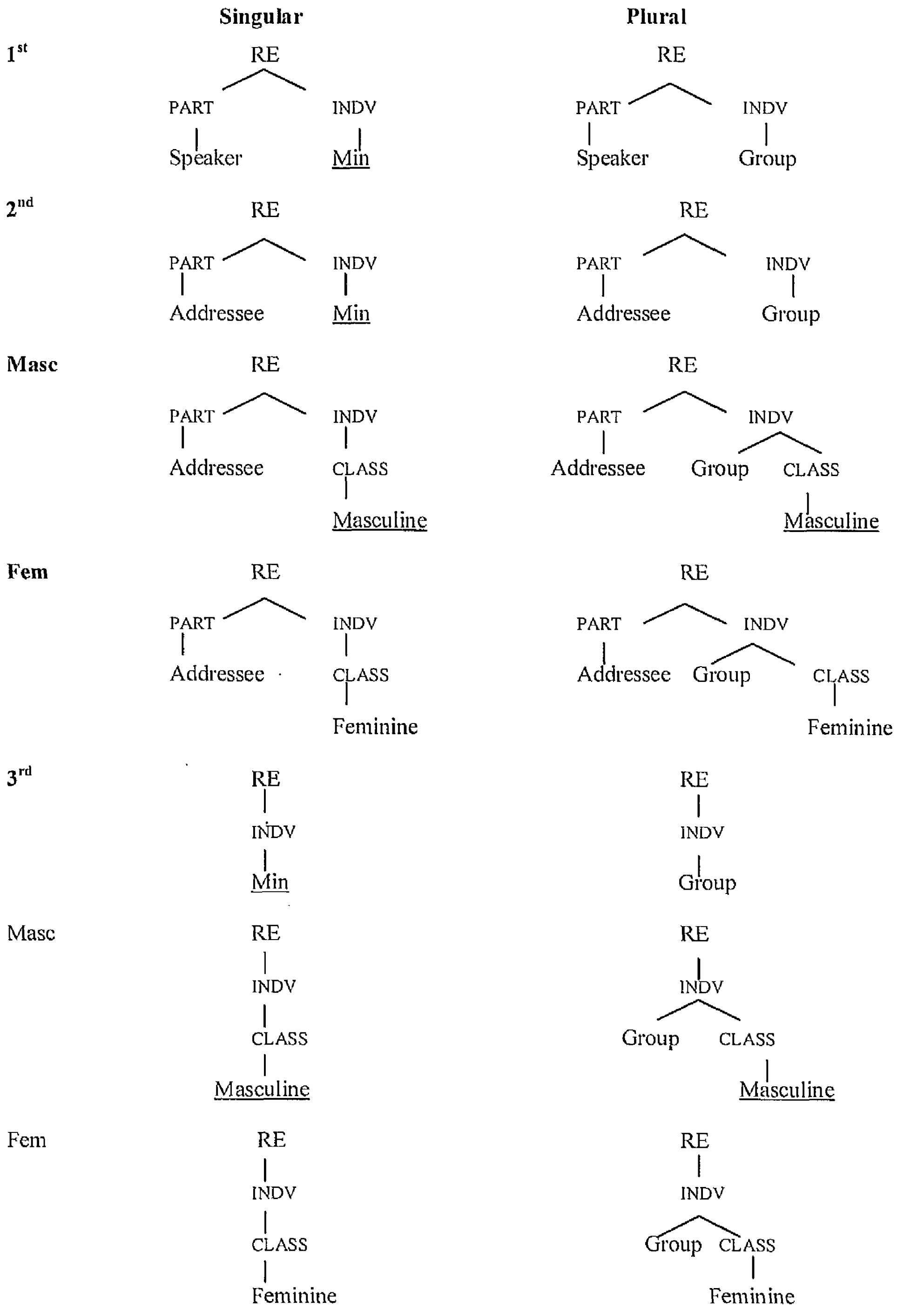
[86] Underspecified dependents are underlined in the structure.
[87] Speaker and Minimal are not necessarily underspecified dependents in all languages.

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[89]


Singular
Plural
1st
RE
PART
INDV
Speaker
Min
RE
PART
INDV
Speaker
Group
2nd
RE
PART
INDV
Addressee
Min
RE
PART
INDV
Addressee
Group
Masc
RE
PART
INDV
Addressee
CLASS
Masculine
RE
PART
INDV
Addressee
Group
CLASS
Masculine
Fem
RE
PART
INDV
Addressee
CLASS
Feminine
RE
PART
INDV
Addressee
Group
CLASS
Feminine
3rd
RE
INDV
Min
RE
INDV
Group
Masc
RE
INDV
CLASS
Masculine
RE
INDV
Group
CLASS
Masculine
Fem
RE
INDV
CLASS
Feminine
RE
INDV
Group
CLASS
Feminine

---

[89] Features on pronominal forms are overall fairly constant across Berber languages (cf. amongst others Kossman, 1997 and El Moujahid, 1997 for Tashelhit; Boukhris, 1998 for Tamazight; Heath, 2002 and Aghali-Zakara, 2004 for Tuareg).

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. [***nekkini***] i i-ss-pwe-n imensi
PRN.1SG COMP 3SGM-CAUS-cook$_{PRF}$-PTCP dinner
It is me who cooked dinner.

c. [***nettat***], ur t-hmir ara aγrum
PRN.3SGF NEG1 3SGF-like$_{PRF}$ 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	*NEKKINI*]!
3SGM-give$_{\text{PRF}}$	=CL.3SGM;ACC=D		to$_{\text{DAT}}$	PRN.1SG

He gave the book TO ME!

b.

čči-γ	[*NEKKINI*]	tatefaht
eat$_{\text{PRF}}$-1SG	PRN.1SG	apple

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. **OVERT CONTRAST**

t-ttel	[*NETTA*	***maččì***	***nettat***]
3SGF-bandage$_{\text{PRF}}$	PRN.3SGM	NEG	PRN.3SGF

She bandaged him not him!

b. **COORDINATED**

t-ttel	[*NETTA*	***aq***	***nettat***]
3SGF-bandage$_{\text{PRF}}$	PRN.3SGM	and	PRN.3SGF

She bandaged him and her.

c. **CONTRASTED**

ala	t-ttel	[*NETTA*]
no,	3SGF-bandage$_{\text{PRF}}$	PRN.3SGM

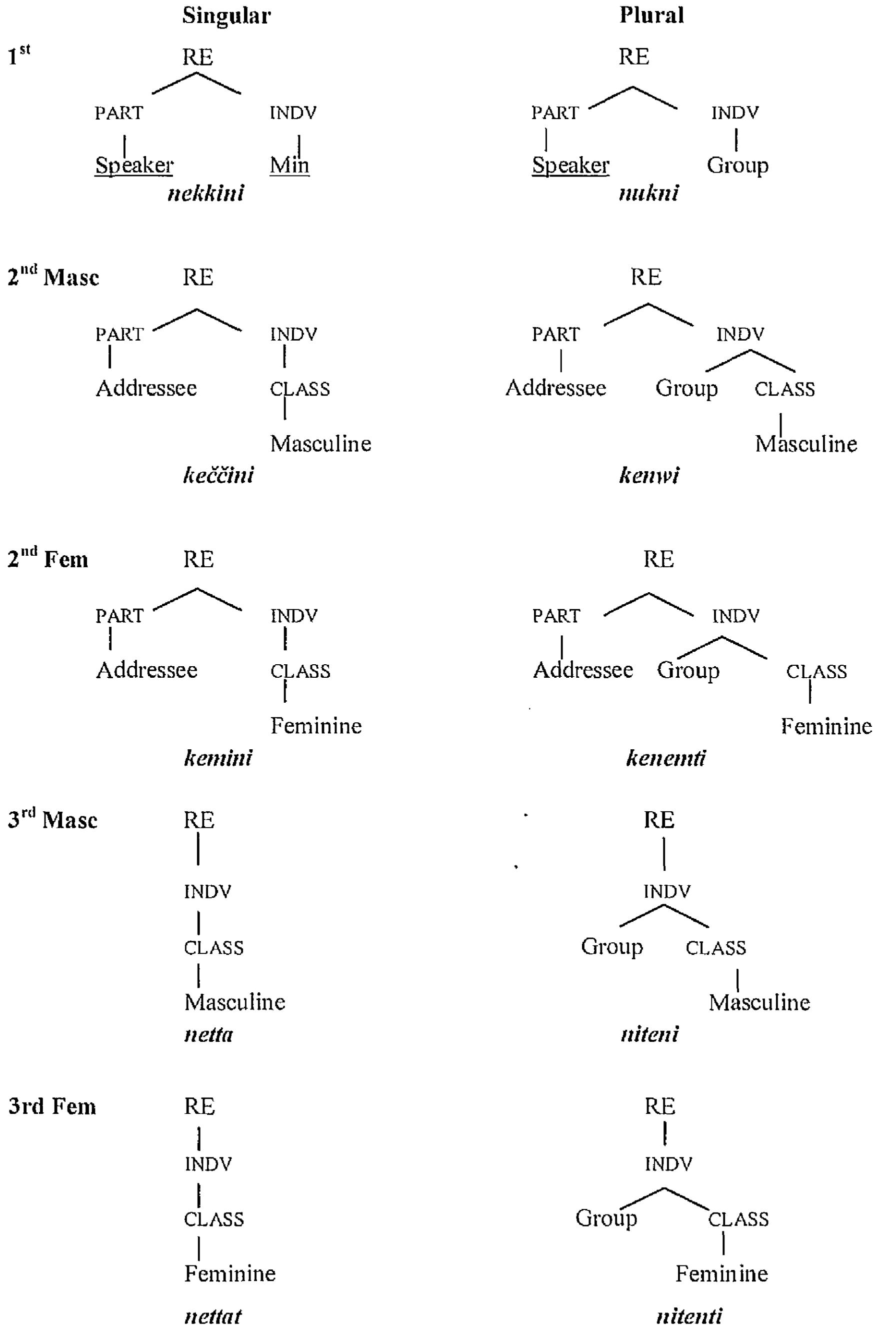
No, she bandaged ***HIM****!*

In terms of the features they encode, independent pronouns make full use of the features available in Taqbaylit. Thus, they make a distinction between 1st, 2nd and 3rd 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 6: INDEPENDENT PRONOUNS

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	nekkini *(I, me)*		nukni *(we, us)*	
2nd Pers	keččini *(you)*	kemini *(you)*	kenwi *(you)*	kenemti *(you)*
3rd Pers	netta *(he, him)*	nettat *(she, her)*	niteni *(they, them)*	nitenti *(they, them)*

Table 7: THE FEATURE GEOMETRY OF INDEPENDENT PRONOUNS


Singular
Plural
1st
RE
PART
INDV
Speaker
Min
nekkini
RE
PART
INDV
Speaker
Group
nukni
2nd Masc
RE
PART
INDV
Addressee
CLASS
Masculine
keččini
RE
PART
INDV
Addressee
Group
CLASS
Masculine
kenwi
2nd Fem
RE
PART
INDV
Addressee
CLASS
Feminine
kemini
RE
PART
INDV
Addressee
Group
CLASS
Feminine
kenemti
3rd Masc
RE
INDV
CLASS
Masculine
netta
RE
INDV
Group
CLASS
Masculine
niteni
3rd Fem
RE
INDV
CLASS
Feminine
nettat
RE
INDV
Group
CLASS
Feminine
nitenti

Clitic personal pronouns

Clitic pronouns correspond to (semantically unmarked) DP's which are either complements of a verb or of a preposition (eg. *ɣur* 'to', *ɣid* '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-zemed [***tadut*** ***nni***]
3SGF-bind$_{\text{PRF}}$=D wool DEM$_{\text{AMB}}$
She bound the wool.

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

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

b. fka-n =[***as***] cwiya n wksum
give$_{\text{PRF}}$-3PLM =CL.3SG;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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	(i)ɣ (me)		aɣ (us)	
2nd Pers	(i)k (you)	(i)kem (you)	(i)ken (you)	(i)kent (you)
3rd Pers	(i)t (him, it)	(i)tt (her, it)	(i)ten (them)	(i)tent (them)

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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	iyi *(to me)*		aɣ *(to us)*	
2nd Pers	ak *(to you)*	am *(to you)*	awen/aken *(to you)*	awent/akent *(to you)*
3rd Pers	as *(to him/ her / it)*		asen *(to them)*	asent *(to them)*

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**

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
DATIVE	(a)k *(to you)*	(a)m *(to you)*	aken *(to you)*	akent *(to you)*
ACCUSATIVE	(i)k *(you)*	(i)kem *(you)*	(i)ken *(you)*	(i)kent *(you)*

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**

	SINGULAR		PLURAL	
	2nd	3rd	2nd	3rd
DATIVE		(a)m *(to you)*	(a)kent *(to you)*	(a)ssent *(to you)*
ACCUSATIVE	(i)kem *(you)*	(i)tt *(you)*	(i)kent *(you)*	(i)tent *(you)*

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

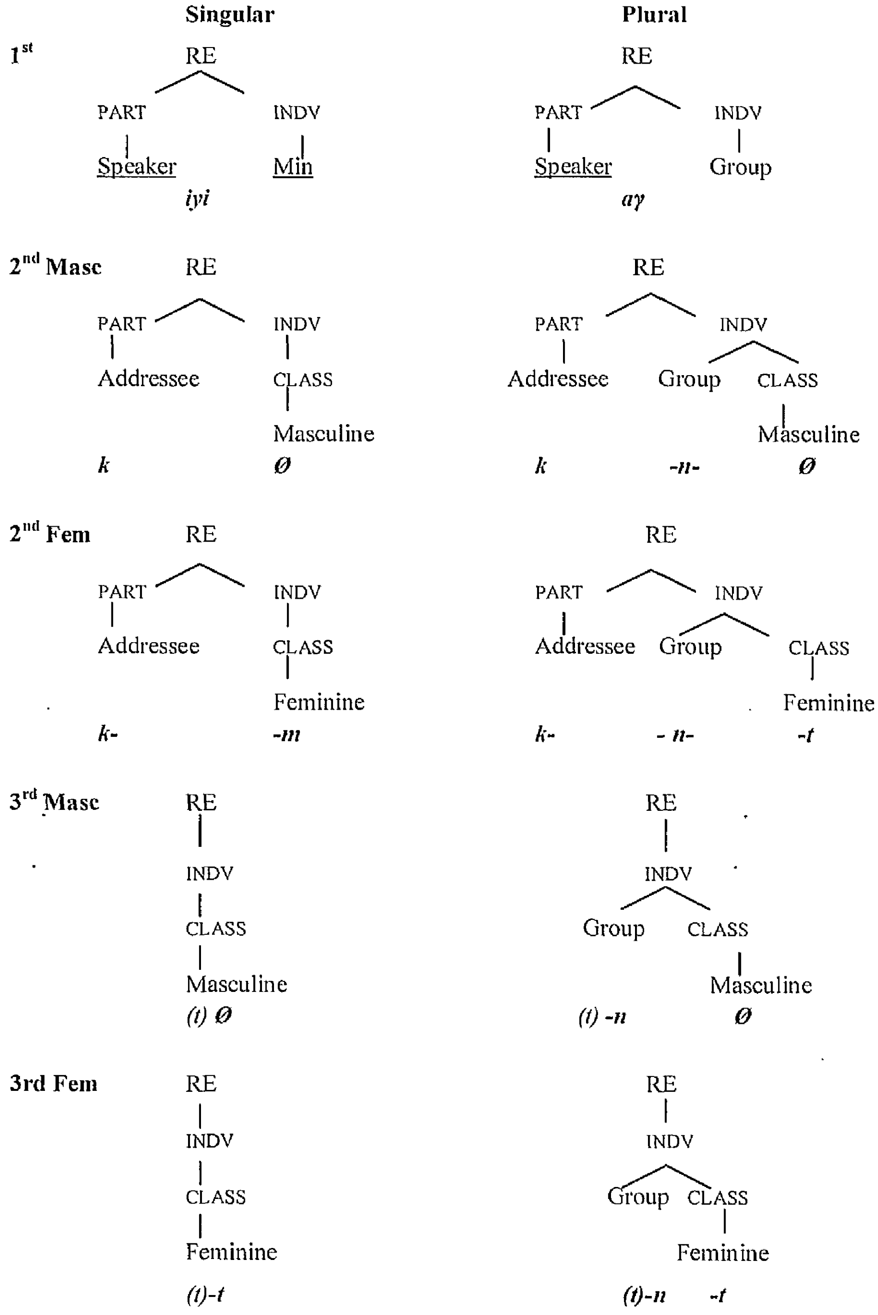
Table 12: **INDIVIDUATION FEATURE: GROUP**

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
DATIVE	(a)k *(to you)*	(a)m *(to you)*	(a)ken *(to you)*	(a)kent *(to you)*
ACCUSATIVE	(i)k *(you)*	(i)kem *(you)*	(i)ken *(you)*	(i)kent *(you)*

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 (-*t*-) 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.

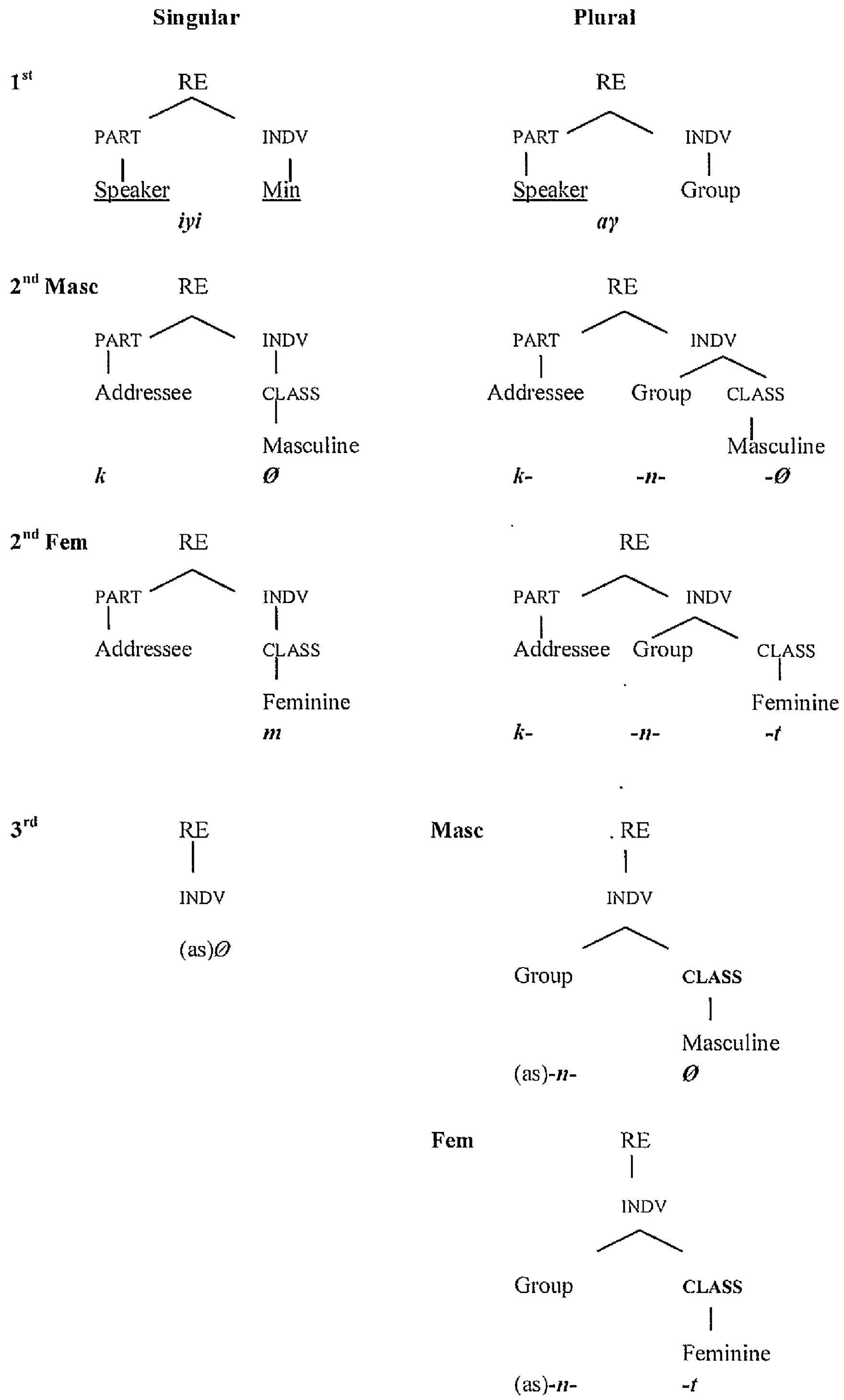
Table 13: THE FEATURE GEOMETRY OF ACCUSATIVE CLITICS[92]


Singular
Plural
1st
RE
PART
INDV
Speaker
Min
iγi
RE
PART
INDV
Speaker
Group
aγ
2nd Masc
RE
PART
INDV
Addressee
CLASS
Masculine
k
Ø
RE
PART
INDV
Addressee
Group
CLASS
Masculine
k
-n-
Ø
2nd Fem
RE
PART
INDV
Addressee
CLASS
Feminine
k-
-m
RE
PART
INDV
Addressee
Group
CLASS
Feminine
k-
- n-
-t
3rd Masc
RE
INDV
CLASS
Masculine
(t) Ø
RE
INDV
Group
CLASS
Masculine
(t) -n
Ø
3rd Fem
RE
INDV
CLASS
Feminine
(t)-t
RE
INDV
Group
CLASS
Feminine
(t)-n
-t

---

[92] Note that the schwa /ə/ 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


Singular
Plural
1st
RE
PART
INDV
Speaker
Min
iyi
RE
PART
INDV
Speaker
Group
aγ
2nd Masc
RE
PART
INDV
Addressee
CLASS
Masculine
k
Ø
RE
PART
INDV
Addressee
Group
CLASS
Masculine
k-
-n-
-Ø
2nd Fem
RE
PART
INDV
Addressee
CLASS
Feminine
m
RE
PART
INDV
Addressee
Group
CLASS
Feminine
k-
-n-
-t
3rd
RE
INDV
(as)Ø
Masc
RE
INDV
Group
CLASS
Masculine
(as)-n-
Ø
Fem
RE
INDV
Group
CLASS
Feminine
(as)-n-
-t

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***]/ *[***əsen***]
3SGM-go$_{\text{PRF}}$ to$_{\text{DIR}}$ =CL.3SGM;OBL
He went to their (house).

b. i-ruh γur =[***əs***]/ *[***s***]
3SGM-go$_{\text{PRF}}$ to$_{\text{DIR}}$ =CL.3SG;OBL
He went to his/ her (house).

(82) a. fki-γ =[***as***]/ *[***s***]!
give$_{\text{PRF}}$-1SG =CL.3SG;DAT
I gave him!

b. fki-γ =[***asen***]/ *[***sen***]!
give$_{\text{PRF}}$-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).

(83) a. i-dda Rr ali
3SGM-go$_{PRF}$ to ali
He went to Ali ('s house).

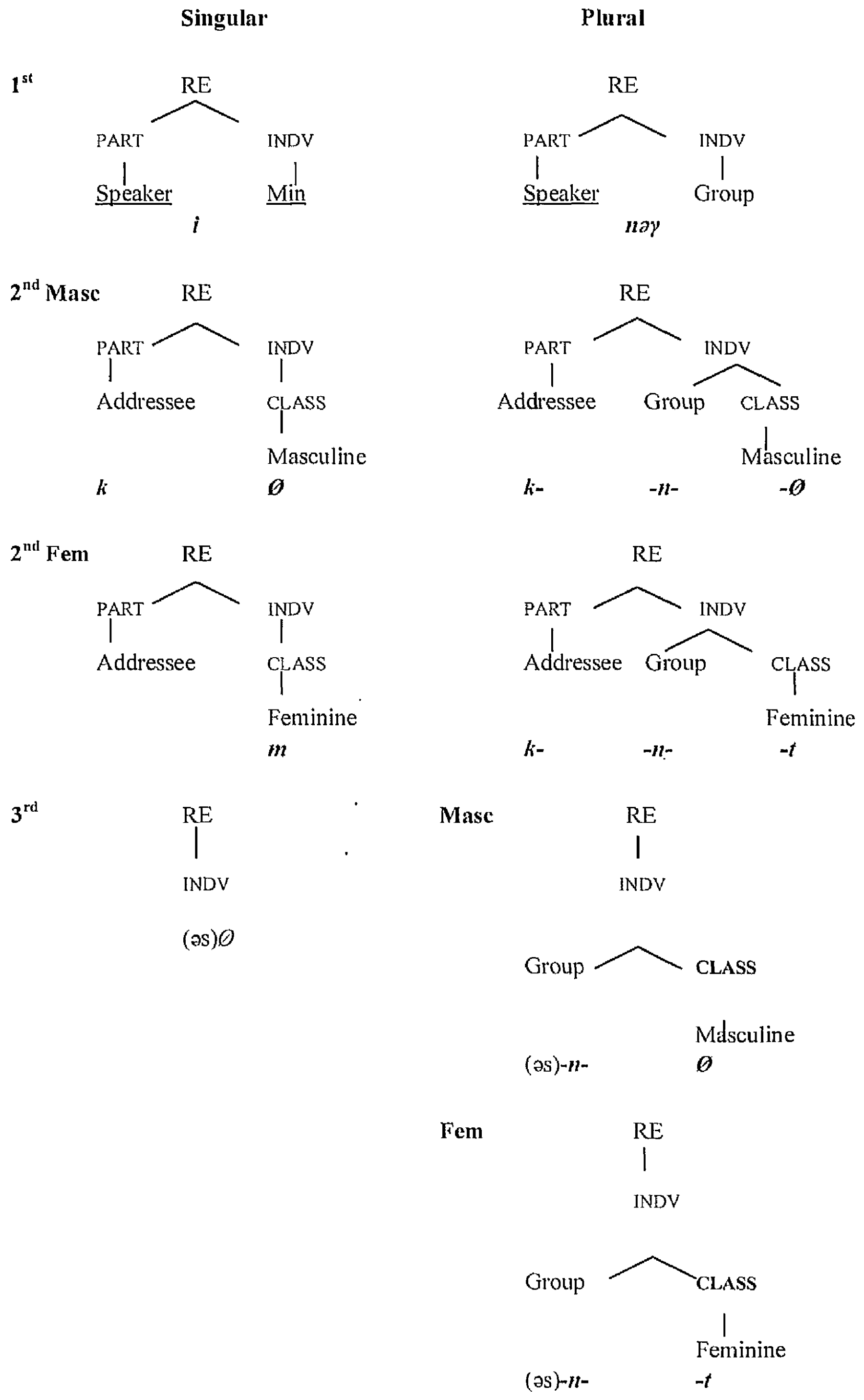
b. i-dda Rir =[*s*]
3SGM-go$_{PRF}$ to =CL.3SG;OBL
He went to his (house).

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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	i		(ə)nɣ	
2nd Pers	(ə)k	(ə)m	(ə)wen/ken	(ə)went/kent
3rd Pers	(ə)s		(ə)sen	(ə)sent

Table 16: THE FEATURE GEOMETRY OF OBLIQUE CLITICS


Singular
Plural
1st
RE
PART
INDV
Speaker
Min
i
RE
PART
INDV
Speaker
Group
nəγ
2nd Masc
RE
PART
INDV
Addressee
CLASS
Masculine
k
Ø
RE
PART
INDV
Addressee
Group
CLASS
Masculine
k-
-n-
-Ø
2nd Fem
RE
PART
INDV
Addressee
CLASS
Feminine
m
RE
PART
INDV
Addressee
Group
CLASS
Feminine
k-
-n-
-t
3rd
RE
INDV
(əs)Ø
Masc
RE
INDV
Group
CLASS
Masculine
(əs)-n-
Ø
Fem
RE
INDV
Group
CLASS
Feminine
(əs)-n-
-t

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 [***nni***]
3SGM-be.beautiful$_{\text{PRF}}$ boy DEM$_{\text{AMB}}$
The boy is beautiful.

b. i-čveh [***wagi***]
3SGM-be.beautiful$_{\text{PRF}}$ 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.

(85) a. muqel aqcic [***aki/agi***]!
look$_{\text{AOR}}$ boy DEM$_{\text{PROX}}$
Look at this boy!

b. muqel [***wagi***]!
look$_{\text{AOR}}$ PRO.DEM$_{\text{PROX}}$
Look at this (one)!

(86) a. muqel aqcic [***ahi/ ina***]!
look$_{\text{AOR}}$ boy DEM$_{\text{DIS}}$
Look at that boy!

b. muqel [***wahi***]!
look$_{\text{AOR}}$ PRO.DEM$_{\text{DIS}}$
Look at that (one)!

(87) [CONTEXT: Speaker and addressee are looking at dresses in a shop]

a. muqel taqendurt [***nni***]!
look$_{\text{AOR}}$ dress DEM$_{\text{AMB}}$
Look at that/this dress!

b. muqel [***tina***]!
look$_{\text{AOR}}$ PRO.DEM$_{\text{AMB}}$
Look at this one!

As pronouns, demonstratives encode a number of Φ-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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
Proximal	wagi *(this)*	tagi *(this)*	wigi *(these)*	tigi *(these)*
Distal	wahi *(that)*	tahi *(that)*	wihi *(those)*	tihi *(those)*
Ambient	wina	tina	tinek	tidek

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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	inu/inw[93] (my)		neɣ (our)	
2nd Pers	(i)n=k (your)	(i)n=m (your)	n=wen (your)	n=went (your)
3rd Pers	(i)n=s (his)	(i)n=s (her)	n=ssen (their)	n=ssent (their)

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 1st person singular occur in this irregular form across all Berber languages and with 2nd and 3rd 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 Ihbachen variety of Taqbaylit spoken in the south-eastern part of the Kabylie region.

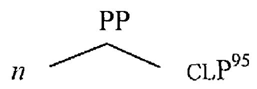
The examples in (89) demonstrate that, in the singular, the complex formed by the preposition *n* and the oblique clitic, [*n*= CL], can be reanalyzed as a synthetic entity [*n-cl*] and occur with the dummy preposition *n* ([*n* + [*n-cl*]]). Note from (90) below that the same constructions are ungrammatical when a 'true' [*n* + DP] complex is involved.

(90) a. *axxam n [*n* *wrgaz*]
house OF OF man
The house of the man

b. *avilu n [*n* *dada*]
bike OF OF dad
The bike of dad

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):

(91)



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.

(92) a. axxam aki, [*inu* / *n inu*]
house DEM$_{\text{PROX}}$ POSS.1SG
This house is mine.

b. [*in-u* / *n inu*], axxam =iw!
POSS.1SG house =CL.1SG;POSS
My house is mine!

c. axxam [*inu*/ *n inu*] aq (y)inem / n inem
house POSS.1SG and POSS.2SGF
The house of you and me

(93) axxam aki [*inu/n inu*] mačči inek / n inek
house DEM$_{\text{PROX}}$ POSS.1SG NEG POSS.2SGM
This house is mine not yours.

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:

(94) a. axxam =[*ik*] aki
house =CL.2SGM;POSS DEM$_{\text{PROX}}$
This house of yours'

b. *axxam aki =[*ik*]

Table 19: **POSSESSIVE CLITICS**

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	(i)w *(my)*		neγ *(our)*	
2nd Pers	(i)k *(your)*	(i)m *(yours)*	nwen *(your)*	nkent *(your)*
3rd Pers	(i)s *(his, hers, its)*		nsen *(their)*	nsent *(their)*

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_{PROX}
This house of mine
#This house of MINE[97]

b. axxam [***inu***] aki
house POSS.1SG DEM_{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 =[***nssen***] aki
house =CL.3PLM;POSS DEM_{PROX}
This house of theirs

b. axxam =[***nssen***] 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, 1st, 2nd and 3rd person singular clitics correspond to their strong counterparts minus the preposition *n*, as demonstrated in Table 20 below (cf. Ouhalla, 2005a for a similar observation).

---

[97] The capital script represents semantic markedness, not stress.

Table 20: CLITICS AND STRONG POSSESSIVE FORMS

	CLITIC		STRONG FORMS	
	MASC	FEM	MASC	FEM
1st Pers	(i)w		inu/inw	
2nd Pers	(i)k	(i)m	inek	inem
3rd Pers	(i)s		ines	

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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	iman=iw *(myself)*		iman=neɣ *(ourselves)*	
2nd Pers	iman=ik *(yourself)*	iman=im *(yourself)*	iman=nwen *(yourself)*	iman=nkent *(yourself)*
3rd Pers	iman=is *(himself, herself, itself)*		iman=nsen *(themselves)*	iman=nsent *(themselves)*

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[98]. 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	lqahwa
3SGM-go$_{\text{PRF}}$=D	Yanis.	3SGM-drink$_{\text{PRF}}$	coffee

Yanis came. He drank a coffee.

b. **Q:**

anida	=tt	***Hanna***?
where	=CL.3SGF;ACC	Hanna

Where is Hanna?

A:

te-feɣ
3SGF-exit$_{\text{PRF}}$
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[99]. 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.

---

[98] Cf. Chapter 5 for a more detailed discussion of the referential properties of subject agreement.
[99] Cf. Ouhalla (2005b) for a possible derivation of the Berber agreement system.

(99) a. **t**-tt-m-wali-**m**

2PL-REC-see$_{\text{IMPRF}}$-2PLM

You are seeing each other.

b. **AGR** > ASP$_{\text{IMPRF}}$ > 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**

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	-γ/*i* *(I)*		n- *(we)*	
2nd Pers	t…..d *(you)*		t…..m *(you)*	t……mt *(you)*
3rd Pers	i/y- *(he)*	t- *(she)*	-en *(they)*	-ent *(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*-[100], 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$_{IMPRF}$
We are seeing each other

b. AGR > IMPRF > **REC** > V$_{ASP}$

Unlike all the pronominals described above, the reciprocal category does not exhibit any Φ-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$_{PRF}$
We saw each other

b. te-**m**-wala-m
2PLM-REC-see$_{PRF}$-2PLM
You saw each other

c. te-**m**-wala-mt
2PLF-REC-see$_{PRF}$-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 [*s*]' aim-e-nt
John and Mary se love-PRS-3PL
John and Mary love each other
John and Mary love themselves

ii. [*m*]-ss-kra-n werac
REC-CAUS-hate$_{PRF}$-3PLM boys
The boys hate each other
**The boys hate themselves*

d. **m**-wala-n
REC-see$_{PRF}$-3PLM
They saw each other

e. **m**-wala-nt
REC-see$_{PRF}$-3PLF
They saw each other

(102) *m-wala-γ
REC-see$_{PRF}$-1SG

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[101] 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 between clitics and affixes on the one hand and between clitics and words on the other.

---

[101] 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'.

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[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[103]:

(i) **Binding**. Like affixes, clitics are bound to their host and can never occur as independent morphemes[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, 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)).

---

[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.

[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.

[104] Note that the Binding property logically follows from the prosodic deficiency of clitics.

Nevertheless, clitics differ from affixes in a number of ways. Zwicky (1977) distinguishes several domains in which clitics differ from bound affixes[105]:

(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[106].

(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 (Pelmutter, 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,):

i.
$$\left\{\begin{matrix}1st\\ 2nd\\ REFL\end{matrix}\right\} > 3^{rd}\,\text{ACC} > 3^{rd}\,\text{DAT} > \text{LOC} > \text{GEN}$$

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 (*'nt*) 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^{w}ak$^{w'}$ala (Northern Wakashan), pronominal reference is only marked by clitics as no full pronominal forms exist:

i.	la-ʔ	=**ən**	kw'ixʔid	=**uʔ**	yəs	=gada	kwixayu	=k
	AUX-FUT	=I	strike	=you	with	=DEM	club	=DEM
	I'll strike you with this club							

ii.	la-'mis	=**əs**	λiqala-ʔə-s	aʔa'nəm	gax	=ən
	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[110]. Morphosyntactic clitics, in contrast, are clitics which fulfil the second criteria[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.

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[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.

[111] Note that most morphosyntactic clitics will also fulfil the first criteria.

Second Position clitics

Second position clitics[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) PASHTO[113]

a.	*kushal*	=[*mee*]	zyaati	ne	wah-i
	Khoshal	=CL.1SG	anymore	NEG	hit-PRES.3SG

Khoshal does not hit me anymore

TAGALOG[114]

b.	*Ganu*	=[*ka*	=*na*	=*ba*]	kakinis?
	How	=CL.2SG	=already	=int	clever?

How clever are you?

MEDIEVAL ROMANCE[115]

c.	*ançois*	=[*se*]	parti	de	nostre	ost	touz	seux
	rather	=CL.REFL	he-departed	from	our	troops	all	alone

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 (Halpern & 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, 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).

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[112] Also often referred to as Wackernagel clitics.

[113] From Roberts (2000: 69)

[114] Anderson (in press) citing Bloomfield (1917: 143)

[115] Wanner (1996: 539)

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)[116]:

(2)	a.	[Taj]	=[*je*]	covek	voleo	Mariju
		that	=AUX.3s	man	love.pple	Maria

That man loved Maria.

	b.	[Taj	covek]	=[*je*]	voleo	Mariju
		that	man	=AUX.3s	love.pple	Maria

That man loved Maria.

Languages, such as Pashto, allow the two orders (W2 vs. D2) in complementary distributions:

(3)	a.	[Ağa	šəl kaləna	danga	aw xáysta peğla]	=[*me*]	nen	byá wəlida
		that	20 year	tall	and pretty girl	=I	today	again saw

I saw that 20-year old tall and pretty girl again today

	b.	[Tel]	=[*me*]	wáhə

I pushed

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.	Ten	básník	=[*mi*]	ète	ze	své	knihy
		that	poet	=to.me	reads	from	his	book

That poet reads to me from his book

b. *Ten =[*mi*] básník ète ze své knihy

---

[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.ART$_{DEF}$		
		The books			
	b.	interesni	=[***te***]	knigi	
		interesting	=CL.ART$_{DEF}$	books	
		The interesting books			
	c.	mnogo	=[***to***]	interesni	knigi
		many	=CL.ART$_{DEF}$	interesting	books
		The many 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 relation to a host — i.e. whether they are proclitics or enclitics — also depends on the host they attach to.

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[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).

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$_{PRES}$-3SG	to	Mary

John gives it to Mary.

ITALIAN[118]

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$_{IMP}$	=CL.3SG;DAT	the	catalog

Show her the catalog!

b.

puede	mostrar	=[*le*]	el	catalogo
can	show$_{INF}$	=CL.3SG;DAT	the	catalog

He can show her the catalog.

c.

Velasquez	pintando	=[*lo*]
Velasquez	paint$_{GER}$	=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)

FRENCH

d.
En [*le*]= voyant, elle pleura
in CL.3SGM;ACC= see$_{GER}$ she cry-PAST-3SG
When she saw him, she cried.

e.
Il voulait [*lui*]= donner un livre
He want$_{IMPRF}$-3SG CL.3SG;DAT= give$_{INF}$ a book
He wanted to give her a book.

f.
Donne =[*lui*] le livre
give$_{IMP}$ =CL.3SG;DAT the book
Give him/her the book!

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)[121].

(8) **FRENCH**

a.
Pierre [*l*]= a mangée
Pierre CL.3SGF;ACC= AUX eat$_{PTCP}$
Pierre has eaten it.

ITALIAN[122]

b.
Maria [*l*]= ha mangiato
Maria CL.3SG;ACC= AUX eaten
Maria has eaten it.

(9) **EUROPEAN PORTUGUESE**

c.
O Paulo deu =[*no=lo*]
the Paulo gave =CL.2PL;DAT=CL.3SGM;ACC
Paulo gave it to us.

---

[121] The Portuguese examples are edited from Luis & Sadler (2002).

[122] Data from Monachesi (1999)

d. O Paulo não= [*no=lo*] deu
the Paulo NEG CL.2PL;DAT=CL.3SGM;ACC gave
Paulo didn't give it to us.

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*]
could have wanted show =CL.3SG;DAT=CL.3SGM;ACC
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).

(11) **PALESTINIAN ARABIC**

a. fhimt [***l-mʕalme***]
understand$_{\text{PRF}}$1SG the-teacher
I understood the teacher.

b. fhimt =[***ha***]
understand$_{\text{PRF}}$1SG =CL.3SGF
I understand her.

c. beet [***l-mʕalme***]
house the-teacher
The teacher's house

d. beet =[***ha***]
house =CL.3SGF
Her house

In (11 b-d) above, the clitic *ha* replaces the lexical DP *l-mʕalme* 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 understandCAUS$_{PRF}$3SGM the-lesson to-the-girl
The teacher explains the lesson to the girl.

b. ʔil-mudarris fahhim l-bint l-dars
the-teacher understandCAUS$_{PRF}$3SGM the-girl the-lesson
The teacher explains the lesson to the girl.

c. ʔil-mudarris fahhim =[*u*] li-l-bint
the-teacher understandCAUS$_{PRF}$3SGM =CL.3SGM to-the-girl
The teacher explains it to the girl.

d. ʔil-mudarris fahhim =[*ha*] l-dars
the-teacher understandCAUS$_{PRF}$3SGM =CL.3SGF the-lesson
The teacher explains the lesson to her.

e. *ʔil-mudarris fahhim =[*u*] =[*ha*]
the-teacher understandCAUS$_{PRF}$3SGM =CL.3SGM =CL.3SGF
The teacher explains it to the girl.

f. *ʔil-mudarris fahhim =[*ha*] =[*u*]
the-teacher understandCAUS$_{PRF}$3SGM =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 =[*eha*] tluyot ʕal ha-kir
picture =CL.3SGF hang$_{PASS}$-FS on the-wall
Her picture hands on the wall.

b. xašavnu ʕal =[*eha*]
think$_{PAST}$-1PL about =CL.3SGF
We thought about her.

(14) PALESTINIAN ARABIC

a. fhimt =[*ha*]
understand$_{\text{PRF}}$1SG =CL.3SGF
I understood her.

b. kull =[*hin*]
all =CL.3PL
All of them

c. ?in =[*ha*]
that =CL.3SGF
That 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 *ʕal* when it occurs within the PP. Similarly, the Palestinian clitics *ha* and *hin* combine with the head of VP when they are verbal objects, the head of QP[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.

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[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 23 **VP CLITIC HIERARCHY**

	EDGE-ORIENTED CL	V-TAM CL	HEAD-ORIENTED CL
hosts	- prosodic: 1st word or XP *e.g. P2 languages* - semantic: operators *e.g. European Portuguese*	morphosyntactic: V or T *e.g. Romance languages*	lexical: V *e.g. Semitic*

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-adjoined 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)[124]. Halpern's derivation is illustrated below.

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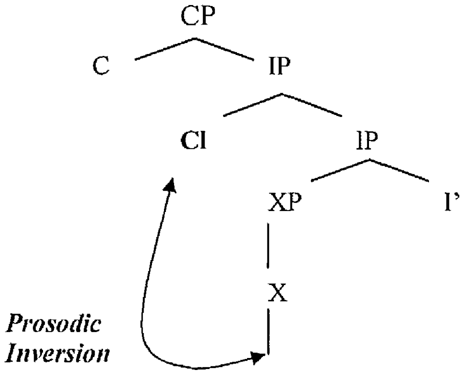
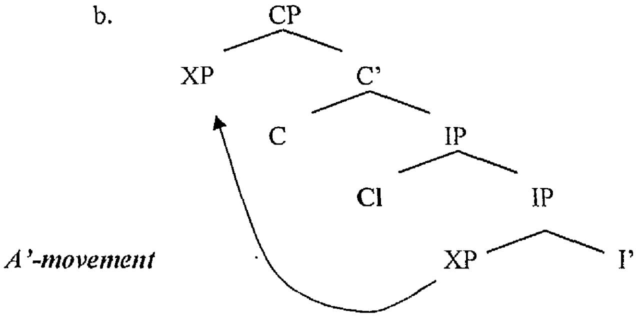
[124] Within this approach, the threefold distinction between 2P clitics cross-linguistically can be explained by a Specific syntactic transformation — movement of a phrase to the Specifier position of CP — and whether it is allowed, excluded or made compulsory by the grammatical rules of the language. 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

(15) a.



b.



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:

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obligatory movement of a phrase in the Specifier of CP. Languages where the two alternations are freely accepted and in complementary distributions respectivelyallow for an optional movement to take place or have an obligatory movement, forbidden in some contexts.

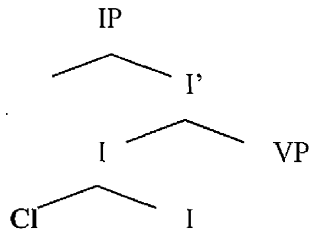
(i) **EDGEMOST**, a syntactic constraint, stipulates that clitics must occur at the edge of a specific domain. The domain in question is argued to be IP for clitics occurring within the clause and DP for those occurring in nominal projections.

(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.

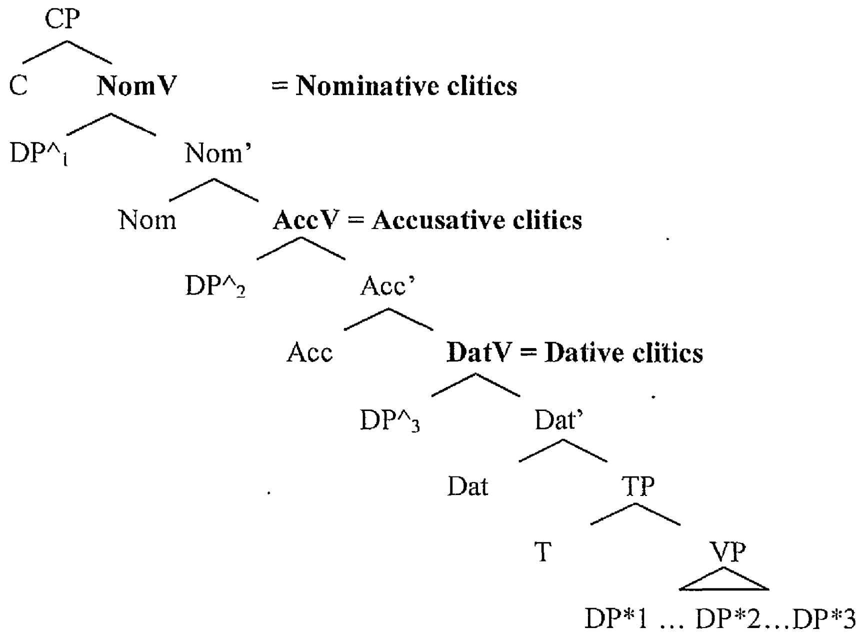
Movement approaches argue that clitics are merged in their θ-position within VP but move to attach to a specific host. Amongst others, Kayne (1975; 1991) proposes that clitics are functional heads which occur within VP in corresponding argument positions but move to IP. He assumes a split IP hypothesis (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.

(16)



In base-generation accounts, clitics are merged directly in the position in which they occur on the surface (Jaeggli, 1986; Sportiche, 1996, 1999; Legendre, 2000; Monachesi, 2000; 2006; Miller & Sag, 1997; Manzini & Savoia, 1999 *etc*). 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[125]. Sportiche's clitic template (1996: 237) is illustrated in (17) below.

(17)



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,

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[125] Sportiche (1996: 238) proposes the following rule for cliticization:

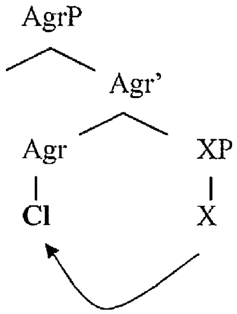
Clitic Criterion

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)



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 adverbial, prepositional, aspectual, and participial elements (Dell & Elmedlaoui, 1989; Ouhalla, 1989; 2005a; 2005b):

(19) TUAREG

a.	i-uri	=[*t*]	arrau		**PRONOMINAL**
	3SGM-open$_{\text{PRF}}$	=CL.3SGM;ACC	boy		

The boy opened it.
(Ouhalla, 2005a: 7)

TASHELHIT

b.	ur	=[*a*]	=dis	i-shtta		**AUXILIARY**
	NEG	CL.AUX	with-her	3SGM-eat$_{\text{IMPRF}}$		

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$_{\text{PRF}}$	

Did he finally put it into it?
(Dell & Elmedlaoui, 1989: 173)

d.	!mqqar	hra	ra	[***sr-s***]	y-afk	**PREPOSITIONAL**
	even:if	just	PRT	toward-3SG	3SGM-go$_{\text{AOR}}$	

Even if he goes to it only now.
(Ibid: 172)

TAQBAYLIT

e.	Ala	nekk	ur	=[*n*]	i-ghl	**PARTICIPLE**
	only	PRO.1SG	NEG	=PTCP	3SGM-fall$_{\text{PRF}}$	

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.

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[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

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	iy (me)		aγ (us)	
2nd Pers	ik (you)	ikem (you)	iken (you)	ikent (you)
3rd Pers	it (him, it)	itt (her, it)	iten (them)	itent (them)

Table 9: DATIVE CLITICS

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	iyi *(to me)*		aγ *(to us)*	
2nd Pers	ak *(to you)*	am *(to you)*	awen/aken *(to you)*	akent *(to you)*
3rd Pers	as *(to him/ her / it)*		asen *(to them)*	asent *(to them)*

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-run$_{\text{IMPRF}}$
He is running (towards here).

b. y-awed =[*as*] melih tamuɣeli
3SGM-repeat$_{\text{PRF}}$ =CL.3SG;DAT good look
He gave him a good look.

c. *[*as*]= y-awed melih tamuɣeli

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 *la*/*a* 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. ad =[*gen*] dehku-γ *=[*gen*]
PRT =CL.2PL;ACC tell$_{\text{AOR}}$-1SG
I will tell you (the story).

Complementizer *i*

b. acuγer i =[*s*] sefre-n *=[*s*]?
why COMP =CL.3SG;DAT whistle$_{\text{PRF}}$-3PLM
Why did they whistle at him?

c. amba i =[*d*] iruhen
who COMP =D go$_{\text{PTCP}}$
Who came?

Negation *ur*

d. ur =[*ten*] i-vγa *=[*ten*] ara
NEG =CL.3PLM;ACC 3SGM-want$_{\text{PRF}}$ NEG
He didn't want them.

Other elements which occur within the CP projection do not constitute appropriate clitic hosts. Such elements as WH-operators and the complementizer *beli*, even when they occur adjacent to the verb, never host clitics. Consider for instance the following sentences:

(22) a. i-na =d beli t-ruh =[*d*]
3SGM-say$_{\text{PRF}}$ =D COMP 3SGF-go$_{\text{PRF}}$ =D
He said that she came.

b. *i-na =d beli =[*d*] t-ruh
3SGM-say$_{\text{PRF}}$ =D COMP =D 3SGF-go$_{\text{PRF}}$
He said that she came.

c. *acuγer =[*as*] t-fka tatefaht?
why =CL.3SG;DAT 3SGF-give$_{\text{PRF}}$ apple
Why did she give her/him an apple?

That WH-operators and the complementizer *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 *beli* instead of the verb *t-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-uɣal[127] y-ukr =[*as*] yiwen uqcwal
3SGM-become$_{\text{PRF}}$ 3SGM-rob$_{\text{PRF}}$ =CL.3SG;DAT one basket
Then/after he robbed one basket from him.

b. *y-uɣal =[*as*] y-uker yiwen uqcwal
3SGM-become$_{\text{PRF}}$ =CL.3SG;DAT 3SGM-rob$_{\text{PRF}}$ one basket

c. i-la i-ruh =[*d*]
3SGM-be$_{\text{PRF}}$ 3SGM-go$_{\text{PRF}}$ =D
He had gone.

d. *i-la =[*d*] i-ruh
3SGM-be$_{\text{PRF}}$ =D 3SGM-go$_{\text{PRF}}$

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 *la* and the negation *ur*.

(24) a. ur la =[*s*] i-ttak ara aqviz
NEG PRT =CL.3SG;DAT 3SGM-give$_{\text{IMPRF}}$ NEG2 bread
He doesn't give her/him bread.

b. *ur =[*s*] la i-ttak ara aqviz

c. argaz i ur =[*s*] i-ttak ara aqviz
man COMP NEG1 =CL.3SG;DAT 3SGM-give$_{\text{IMPRF}}$ NEG2 bread
It is the man who he doesn't give bread to.

d. *argaz i =[*s*] ur ittak ara aqviz

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[127] In Taqbaylit, the lexical verb *uɣal* '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, *uɣal* can be followed by the particles *la/a* and ad.

i. y-uɣal a / la i-ttru
3SGM-become$_{\text{PRF}}$ PRT 3SGM-cry$_{\text{IMPRF}}$
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-send$_{\text{PRF}}$	CL.1SG;DAT	CL.3SG;ACC
		He sent me to her.		
	b.	i-cga	=[*yi*]	γur=es
		3SGM-send$_{\text{PRF}}$	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**

1	**2**	**3**
Dative	Accusative	Locational (=*d*)

(27)	a.	i-fka	=[*(y)as*]	=[*tt*]	=[*id*]
		3SGM-give$_{\text{PRF}}$	=CL.3SG;DAT	=CL.3SGF;ACC	=D
		He gave it to him/her			
	b.	*i-fka	=[*tt*]	=[*(y)as*]	=[*id*]
		3SGM-give$_{\text{PRF}}$	=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*]		[*wzrem*	*nni*][128]
		3SGM-kill$_{\text{PRF}}$	=CL.3SGM;ACC		snake$_{\text{CS}}$	DEM$_{\text{AMB}}$

He killed the snake.
(Achab, 2004: 2)

	b.	te-gezm	=[*as*]	[*i*	*weqcic*]	timit
		3SGF-cut$_{\text{PRF}}$	=CL.3.SG;DAT	to$_{\text{DAT}}$	boy	navel.string

She cut the boy's navel string.
(Lit: she cut the navel string to the boy)

(29)	*wala-γ	=[*t*]	wergaz
	see$_{\text{PRF}}$-1SG	=CL.3SGM;ACC	man$_{\text{CS}}$

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 *v*P and TP (Boukhris, 1998), AspP (Achab, 2007), ClPs (Ouali, 2006) and a null FP (Ouhalla

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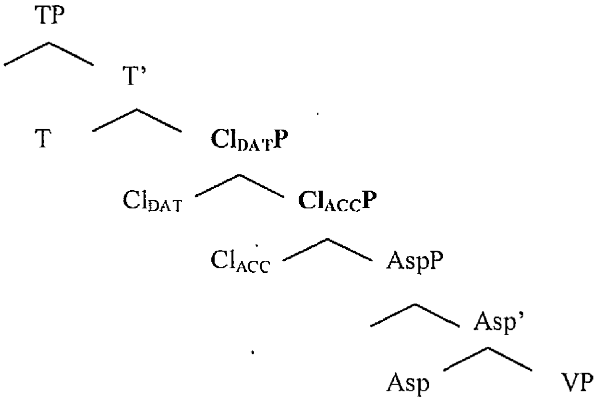
[128] Note that accusative clitic-doubling, when allowed, requires that the noun heading the doubled DP occurs in it Construct State form.

(1989; 2005a). Next, I describe three of the main hypotheses brought forward on the topic, in that order: Ouali (2006)'s clitic template, Ouhalla (1989, 2005)'s and Boukhris (1998)'s movement approaches.

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, $\text{Cl}_{\text{DAT}}\text{P}$ and $\text{Cl}_{\text{ACC}}\text{P}$ occurring just below TP.

(30)



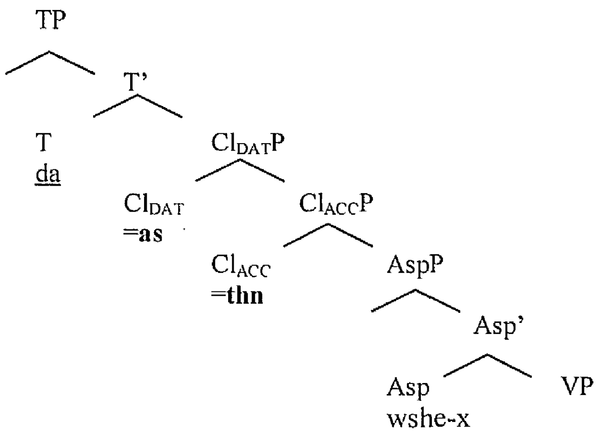
Within this approach, the preverbal and post-verbal clitic orderings are derived as follows. Heads of functional projections occurring above the proposed clitic projections, when they are overt, host the clitics. In all other contexts, the verb undergoes PF movement to the head position of TP in order to be a prosodic host for the clitics. The derivation can be illustrated with the following examples (Ouali, 2006: 102-104).

(31) a.

da	=[*as*]	=[*thn*]	wshe-x
FUT	=CL.3SG;DAT	=CL.3PLM;ACC	give_{PRF}-1SG

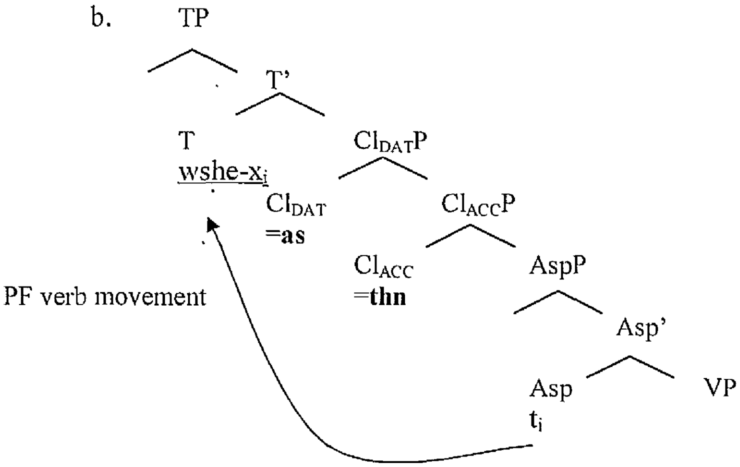
I will give them to him.

b.


TP
T'
T
da
ClDATP
ClDAT
=as
ClACCP
ClACC
=thn
AspP
Asp'
Asp
wshe-x
VP

(32) a. wshi-x =[*as*] =[***thn***]
give$_{PRF}$-1SG =CL.3SG;DAT =CL.3PLM;ACC
I gave them to him

b.


TP
T'
T
wshe-xi
ClDATP
ClDAT
=as
ClACCP
ClACC
=thn
AspP
Asp'
Asp
ti
VP
PF verb movement

The clitics =*as* and =*thn* are merged as the respective heads of Cl_{DAT}P and Cl_{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):

(33) a. [$_{CP}$ [$_{NegP}$ **ur=** [$_{TP}$ Ø [$_{CLPDat}$ as- [$_{CLPAcc}$ thn [$_{AspP}$ wshix [$_{VP}$ ~~wshix~~]]]]]]

b. [$_{CP}$ **ay=** [$_{TP}$ Ø [$_{CLPDat}$ as- [$_{CLPAcc}$ thn [$_{AspP}$ wshan [$_{VP}$ ~~wshix~~]]]]]]

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 Cl$_{ACC}$P, 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-give$_{AOR}$ present to$_{DAT}$ bride
We will give a present to the bride.

b. *[*n*]-a fka akadu i tislit
1PL-PRT give$_{AOR}$ present to$_{DAT}$ bride

(35) a =[*s*] n-fka akadu
PRT =CL.3SGM;DAT 1PL-give$_{AOR}$ 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 throw$_{PRF}$-3PLM in=CL.3SG;OBL
They didn't threw it to him inside it.

b. ur =as =t =[*dis*] gri-n
NEG =CL.3SG;DAT CL.3SGM;ACC =PREP.CL throw$_{PRF}$-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: *v*P, 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.

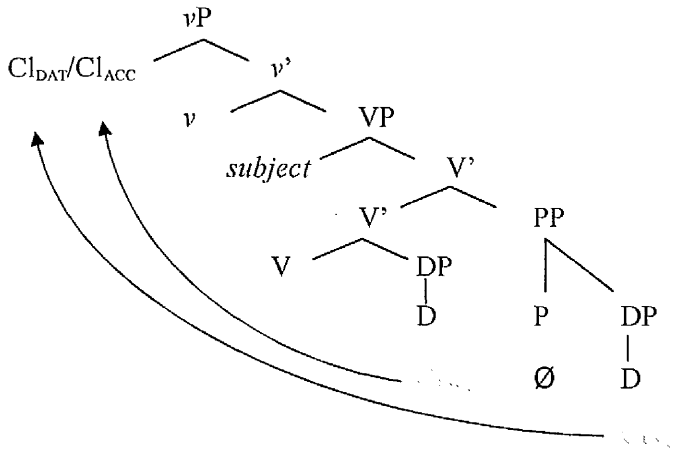
(ii) V moves to Asp and T if they carry strong features – respectively [+Perf] and [-Fut].

(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 *v*P. The derivation is illustrated below in (37) (adapted from Boukhris, 1998: 389).

(37)

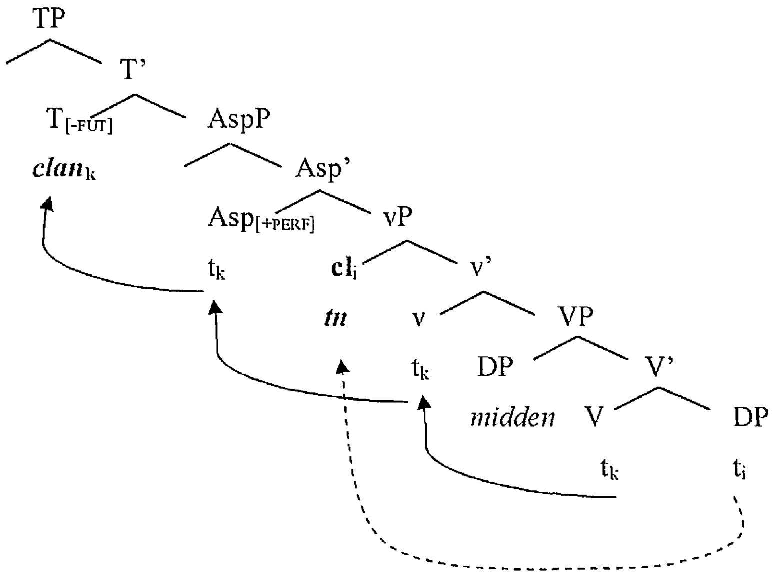


Similarly to V-raising, clitic-raising is motivated by feature checking. As functional heads, clitics require their case and Φ-features to be checked. Reciprocally, little *v* carries a [D] feature that also needs to be checked. Hence, clitics are attracted by *v* to check its [D] feature and in the 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 *tn* raises to Spec *v*P 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.	cla-n	=[***tn***]	middn
		see$_{PRF}$-3PLM	=CL.3SGM;ACC	people
		People saw them.		

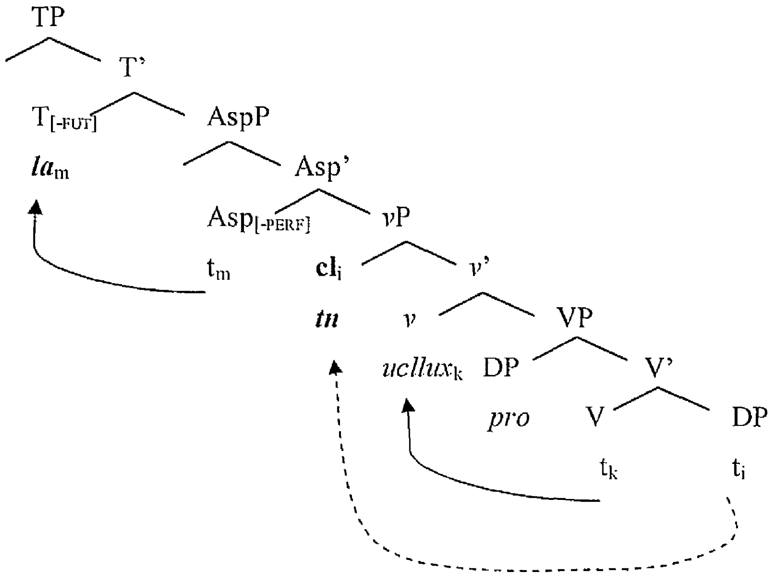
b.


TP
T'
T[-FUT]
clan_k
AspP
Asp'
Asp[+PERF]
t_k
vP
cl_i
tn
v'
v
t_k
VP
DP
midden
V'
V
t_k
DP
t_i

Now in (39) (Ibid: 321-325) below, the clitic also raises to Spec-*v*P, 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. la =[*tn*] . ucllu-x
PRT =CL.3PLM;ACC see$_{\text{IMPRF}}$-1SG
I am seeing them.

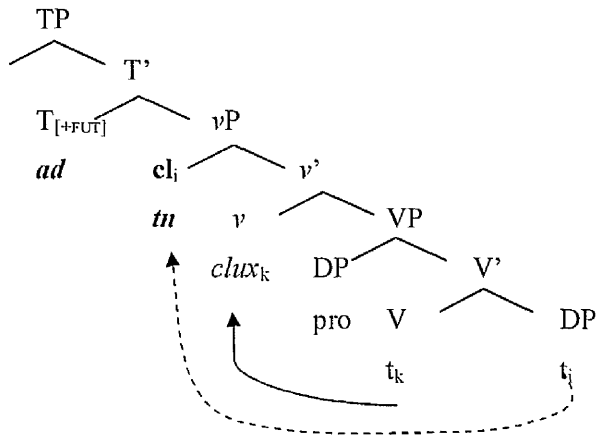
b.


TP
T'
T[-FUT]
la_m
AspP
Asp'
Asp[-PERF]
t_m
vP
cl_i
tn
v'
v
ucllux_k
VP
DP
pro
V'
V
t_k
DP
t_i

Finally in the structure below (Ibid: 329), the verb is moved to little *v* while the clitic in Spec *v*P is hosted at PF by *ad*, the overt realization of [+Fut] T.

(40) a. ad =[***tn***] clu-x
PRT =CL.3PLM;ACC see$_{\text{AOR}}$-1SG
I will see them.

b.

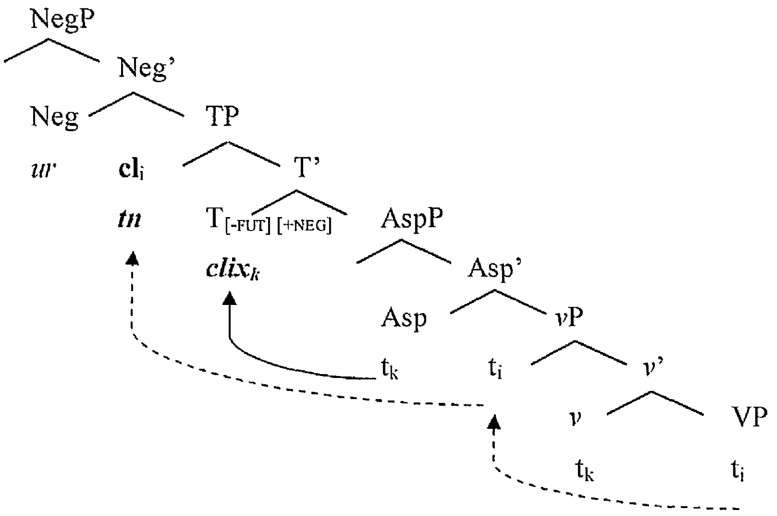


Movement to Spec-*v*P accounts for all the orders in which a clitic is hosted by either the verb or one of its TAM particles (i.e. *la/a* and *ad*). However, in contexts where negation and complementizer heads are hosts, an additional movement to a higher target is necessary. Indeed, in Boukhris's structure, 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-*v*P. 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).

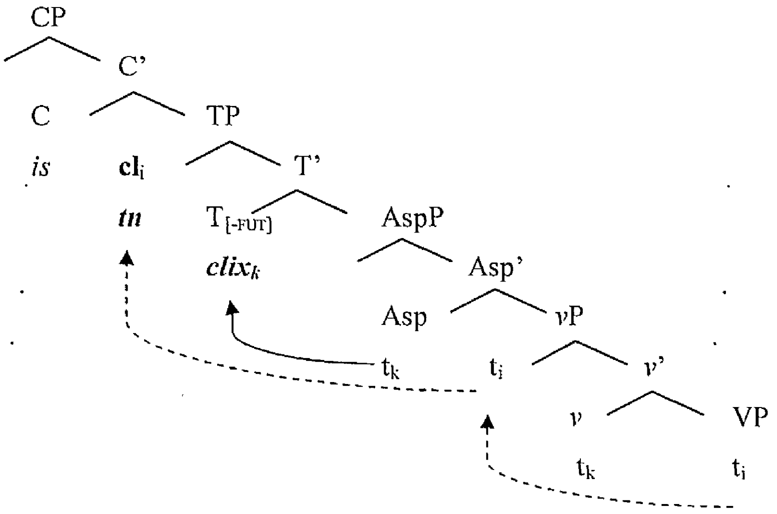
(41) a. ur =[***tn***] cli-x
NEG =CL.3PLM;ACC see$_{\text{PRF}}$-1SG
I didn't see them.

b. is =[***tn***] cli-x
COMP =CL.3PLM;ACC see$_{\text{PRF}}$-1SG
Have I seen them?

(42) a.


NegP
Neg'
Neg
TP
ur
cli
T'
tn
T[-FUT] [+NEG]
AspP
clixk
Asp'
Asp
vP
tk
ti
v'
v
VP
tk
ti

b.


CP
C'
C
TP
is
cli
T'
tn
T[-FUT]
AspP
clixk
Asp'
Asp
vP
tk
ti
v'
v
VP
tk
ti

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-*v*P, 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[129].

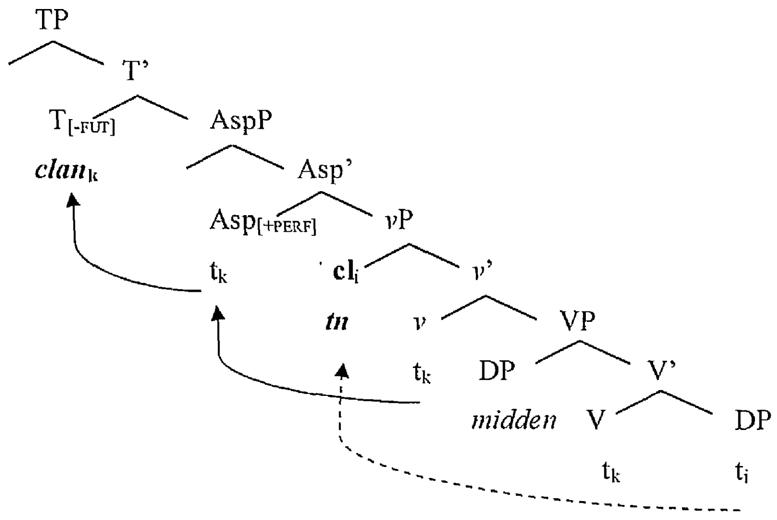
This feature-based movement, assuming it occurs, poses an additional problem. Clitics never move overtly to Spec-TP in contexts where the TAM particles are realized, even where T is selected by Neg or C. Boukhris is aware of that and to explain this absence of clitic attraction, she argues that clitics 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-*v*P 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:

---

[129] 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.

(43) a. cla-n =[*tn*] middn
see$_{PRF}$-3PLM =CL.3SGM;ACC people
People saw them.

b.



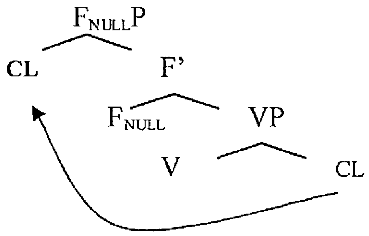
Boukhris suggests that movement does not happen here because no attraction from T is triggering it. Yet, bearing in mind that the requirement for clitics to be in a Specifier-Head relationship with V seems to outrank attraction in the presented analysis, movement to Spec-TP should be expected to occur. 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-*v*P, 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 over 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.

(44)



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):

(45) a. $[_{FP}$ [[CL] [F]] $[_{XP}$ V…]]

Clitic-host Inversion

b. $[_{FP}$ [[F] [=CL]] $[_{XP}$ V…]]

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.

(46) a. $[_{FP}$ [[**CL**] $[F_{NULL}]]$ $[_{XP}$ V…]] **Clitic-Verb Inversion**

b. $[_{FP}$ [[V] [=**CL**] F_{NULL} $[_{XP}$ …]]

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/*v*P. 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 *v*P. 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.

la	=[*d*]	i-ttazel	*=[*d*]
PRT	=D	3SGM-run$_{\text{IMPRF}}$	

He is running (toward here).

b.

ad	=[***gen***]	dehku-γ	*=[***gen***]
PRT	=CL.2PL;ACC	tell$_{\text{AOR}}$-1SG	

I will tell you (the story)

(48) **FRENCH**

a.

Je	[*le*]=	donnerai	à	Marie.
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.

c. *J' ai [*le*]= donné à Marie

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.	ye-fka	=[*(y)as*]	=[*it*]
		3SGM-give$_{\text{PRF}}$	=CL.3SG;DAT	=CL.3SGM;ACC

He gave it to him.

b.	ur	la	=[*(a)s*]	=[*it*]	i-ttak	ara
	NEG1	PRT	=CL.3SG;DAT	=CL.3SGM;ACC	3SGM-give$_{\text{IMPRF}}$	NEG2

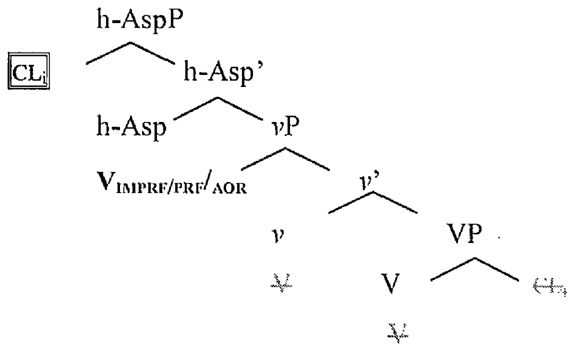
He is not giving it to him.

c.	*ur	=[*(a)s*]	=[*it*]	la	i-ttak	ara
	NEG1	=CL.3SG;DAT	=CL.3SGM;ACC	PRT	3SGM-give$_{\text{IMPRF}}$	NEG2

Verbal adjacency can be observed from the examples in (50) above. In (50a) the clitic directly follows the lexical verb *yefka* '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 *ur*), 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 *v*P. 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)



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[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

a.

amba	i	=[*d*]	iruhen	=*[*d*]?
who	COMP	=D	go$_{PTCP}$	

Who came?

b.

ur	=[*ten*]	i-vγa	*=[*ten*]	ara
NEG	=CL.3PLM;ACC	3SGM-want$_{PRF}$		NEG

He didn't want them.

---

[130] Since Chomsky (2001), transitive *v*Ps (along with CPs) are considered to be phases. If *v*P is considered to be a phase, the clitic in ϕP, 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-*v*P 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 *v*P in Berber is not a phase because the verb has its aspectual feature unchecked and ϕP can therefore move out of *v*P.

(53) **FRENCH**

a.

Qui	est-ce	qui	[*le*]=	veut?
who	is-this	COMP	CL.3SGM;ACC	wants

Who is it that wants it?

b. *Qui est-ce [*le*]= qui veut?

c.

Il	prétend	ne	pas	[*le*]=	savoir
he	claims	NEG1	NEG2	CL.3SGM;ACC	know

He claims not to know it.

d. *Il prétend ne [*le*]= pas savoir.

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.

(54) a.

...penisku	*koji*	=[*je*]	napisao	knjigu	ove	godine
poet	who	=AUX	wrote	book	this	year

... *a poet who has written a book this year.*

b.

Ja	mislim	*da*	=[*je*]	ona	kupila	šešir
I	think	comp	=aux	she	buy.ppl	hat

I think that she bought the hat.

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.

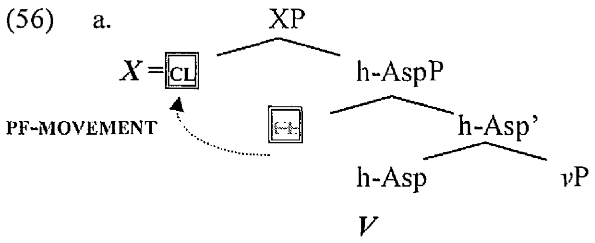
(55) *CL cannot be the first element in the minimal domain within which they occur.*
(Ouhalla, 2005a: 10)

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).

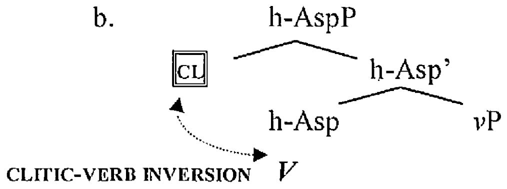
Adopting Ouhalla's view, it can be concluded that Taqbaylit clitics, like Berber clitics in general, are governed by a phonological constraint and as such are not allowed to be the first prosodic elements in h-AspP; i.e. their minimal domain in the present analysis. Now, like Edge-oriented systems, the 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=CL
h-AspP
PF-MOVEMENT
CL
h-Asp'
h-Asp
vP
V

b.


h-AspP
CL
h-Asp'
h-Asp
vP
CLITIC-VERB INVERSION
V

(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-γ ara
NEG1 =CL.3SG;DAT call$_{\text{PRF}}$-1SG NEG2
I didn't call him.

b. *ur sawl-γ=[*as*] ara

c. a(d) =[*(a)s*] sawle-γ
PRT =CL.3SG;DAT call$_{\text{AOR}}$-1SG
I will call him.

d. *ad sawl-γ =[*as*]

e. sawl-γ =[*as*]
call$_{\text{PRF}}$-1SG =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[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[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 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: Σ^0, the locus of prosodic features[133], 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).

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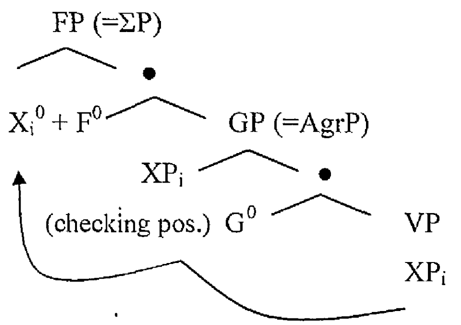
[131] Their proposal is described in details in Chapter 5.

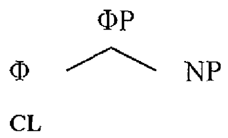
[132] In this context, C&S adopts the term CP to refer to DP (cf. chapter 5).

(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)



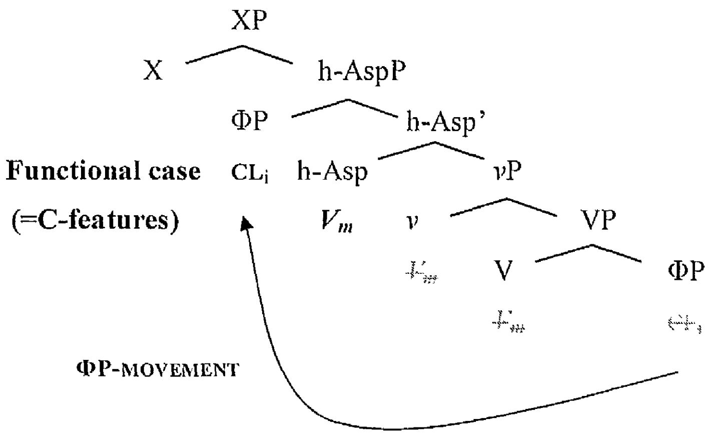
As ΦPs, clitics simply consist of a bundle of Φ-features such as Person, Number and Gender (for pronominal clitics). The need for recovering their missing features can account for the distribution of clitics in Taqbaylit and Berber in general. Clitics being deficient, they lack C-features and prosody 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.

---

[133] Σ^0 is also thought to be associated with focus, negation and mood heads (Condoravdi & Kiparsky)

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).

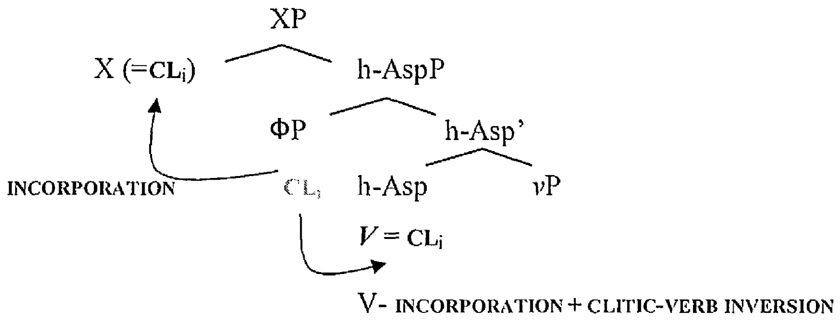
(61) **Syntactic ΦP-Movement**



The second types of features clitics must recover are prosodic ones. C&S argue that prosodic features are recoverable from incorporation into Σ^0 – the head of ΣP that they take to be the locus of prosody in the clause and to occur below CP – or V^0. 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^0, 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^0. 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**



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 Σ^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.

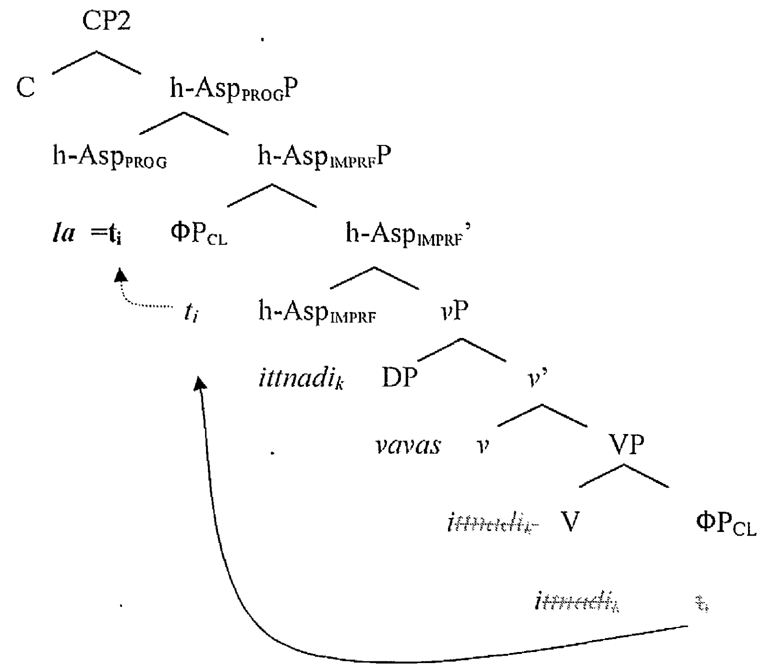
As an initial conclusion to this section, Berber clitics can be said to syntactically belong to the V-TAM category of the clitic hierarchy presented earlier but, also display the phonological properties of Edge-oriented systems. These two characteristics are straightforwardly explained by the analysis 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 ΦP 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 *la/a* in (63) below.

(63)	a.	la/a	=[*t*]	i-ttnadi	vava=s
		PRT	=CL.3SGM;ACC	3SGM-look.for$_{\text{IMPRF}}$	father=CL.3SG;POSS
		His father is looking for him.			

b.


CP2
C
h-Asp$_{\text{PROG}}$P
h-Asp$_{\text{PROG}}$
h-Asp$_{\text{IMPRF}}$P
la =t$_i$
ΦP$_{\text{CL}}$
h-Asp$_{\text{IMPRF}}$'
t$_i$
h-Asp$_{\text{IMPRF}}$
*v*P
ittnadi$_k$
DP
v'
vavas
v
VP
~~*ittnadi$_k$*~~
V
ΦP$_{\text{CL}}$
~~*ittnadi$_k$*~~
~~t$_i$~~

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*.

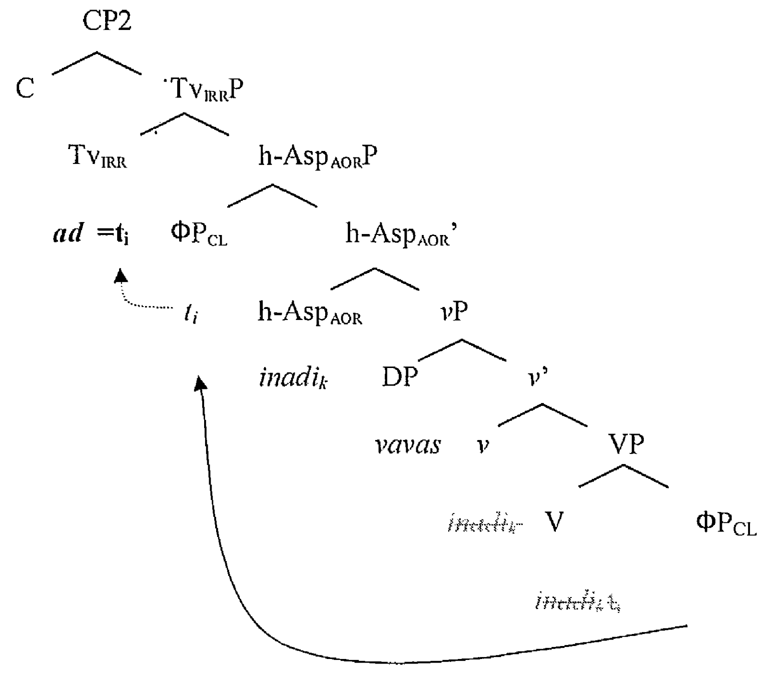
The same derivation is illustrated by (64) below. The aorist verb moves into the head of h-AspP and the clitic moves as a ΦP in order to get its case feature. The prosodic head which occurs above h-AspP being the Irrealis marker *ad* in the head of TvP, the clitic incorporates to it at PF.

(64) a.

a(d)	=[*t*]	i-nadi	vava=s
PRT	=CL.3SGM;ACC	3SGM-look.for$_{\text{AOR}}$	father=CL.3SGM;POSS

His father will look for him.

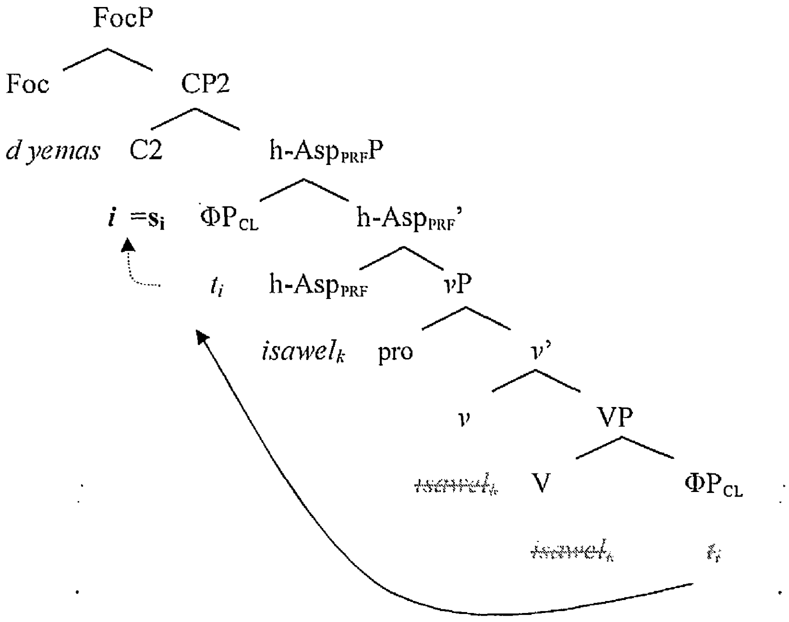
b.


CP2
C
Tv$_{\text{IRR}}$P
Tv$_{\text{IRR}}$
h-Asp$_{\text{AOR}}$P
ad =t$_i$
ΦP$_{\text{CL}}$
h-Asp$_{\text{AOR}}$'
t_i
h-Asp$_{\text{AOR}}$
*v*P
inadi$_k$
DP
v'
vavas
v
VP
~~inadi$_k$~~
V
ΦP$_{\text{CL}}$
~~inadi$_k$ t$_i$~~

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 yemas i =[*s*] i-sawel
COP mother COMP =CL.3SGM;ACC 3SGM-call$_{PRF}$
It is his mother that he called.

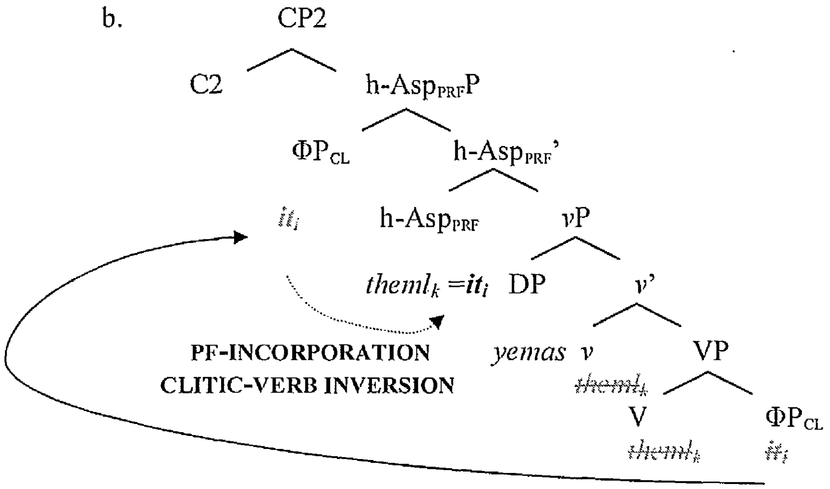
b.


FocP
Foc
CP2
d yemas
C2
h-Asp$_{PRF}$P
i =s$_i$
ΦP$_{CL}$
h-Asp$_{PRF}$'
t$_i$
h-Asp$_{PRF}$
vP
isawel$_k$
pro
v'
v
VP
~~isawel$_k$~~
V
ΦP$_{CL}$
~~isawel$_k$~~
~~t$_i$~~

Now consider the examples and derivations below, both involving incorporation to the lexical verbal head and clitic-verb inversion:

(66) a. t-heml =[*it*] yema=s
3SGF-love$_{PRF}$ =CL.3SGM;ACC mother=CL.3SG;POSS
His mother loves/loved him.

b.

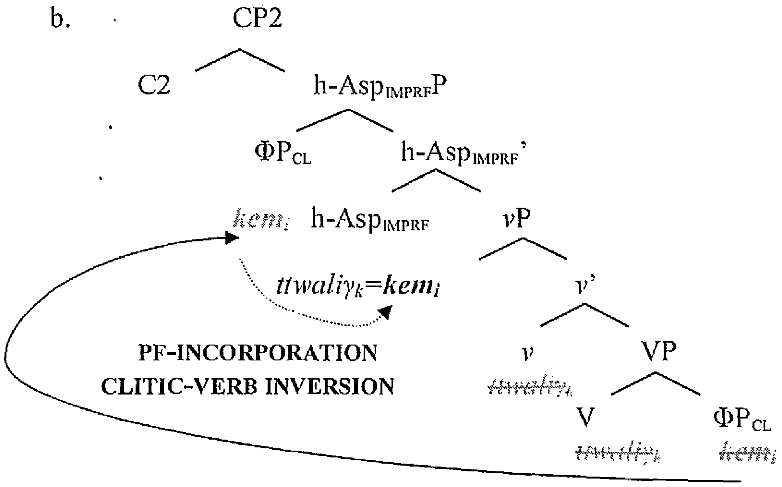

CP2
C2
h-Asp$_{PRF}$P
ΦP$_{CL}$
h-Asp$_{PRF}$'
it$_i$
h-Asp$_{PRF}$
vP
theml$_k$ =it$_i$
DP
v'
PF-INCORPORATION
CLITIC-VERB INVERSION
yemas
v
VP
~~theml$_k$~~
V
ΦP$_{CL}$
~~theml$_k$~~
~~it$_i$~~

(67) a. ttwali-γ =[***kem***]

loveIMPRF-1SG =CL.2SGF;ACC

I'm seeing you.

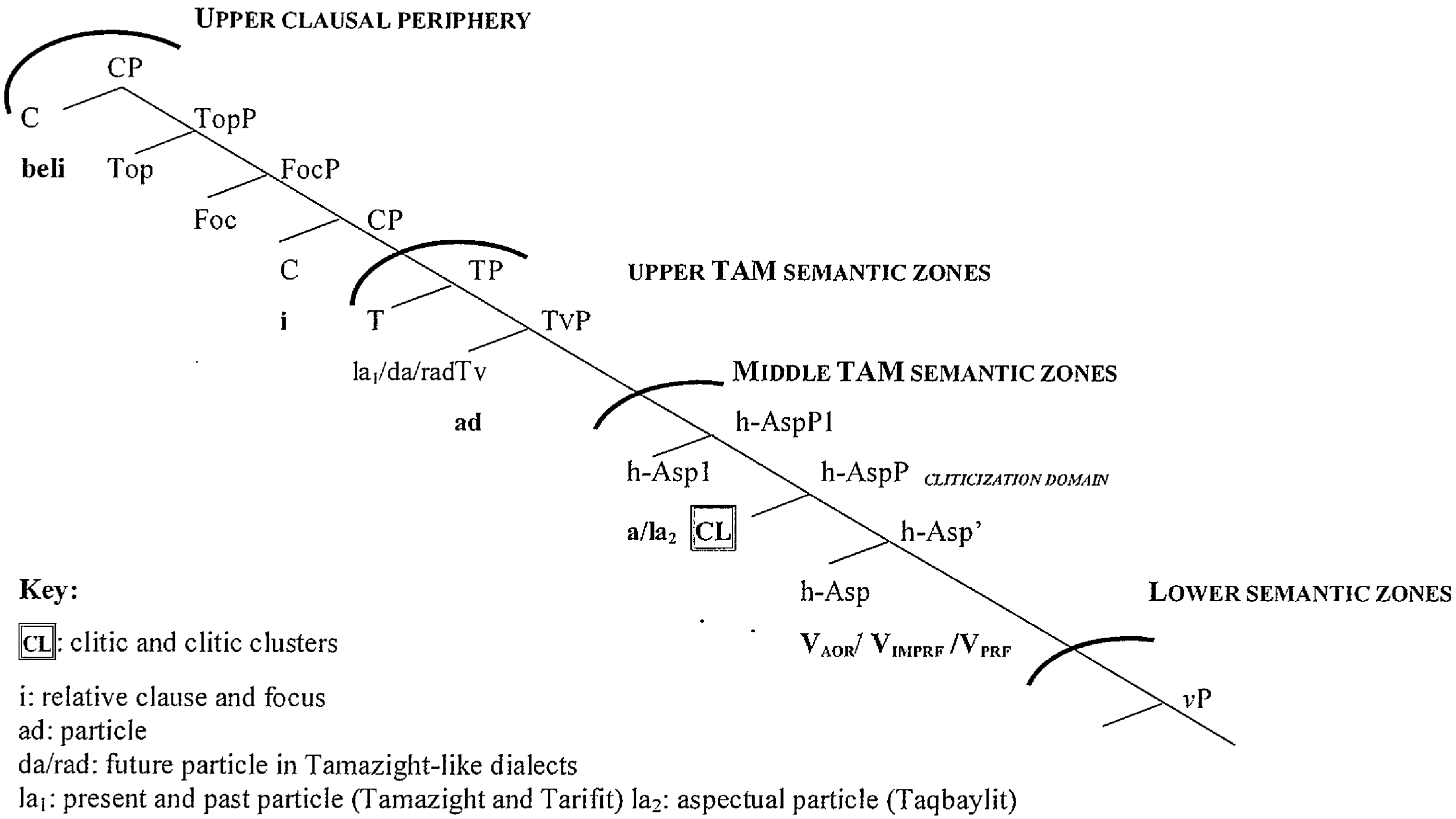
b.


CP2
C2
h-Asp$_{IMPRF}$P
ΦP$_{CL}$
h-Asp$_{IMPRF}$'
kem$_i$
h-Asp$_{IMPRF}$
vP
ttwaliγ$_k$=kem$_i$
v'
PF-INCORPORATION
CLITIC-VERB INVERSION
v
VP
~~ttwaliγ$_k$~~
V
ΦP$_{CL}$
~~ttwaliγ$_k$~~
~~kem$_i$~~

In (66) and (67) the lexical verbs, respectively *thmel* (she loves) and *ttwaliγ* (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 ΦPs 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 the Specifier 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)**


UPPER CLAUSAL PERIPHERY
CP
C
TopP
beli
Top
FocP
Foc
CP
C
TP
UPPER TAM SEMANTIC ZONES
i
T
TvP
la1/da/radTv
ad
MIDDLE TAM SEMANTIC ZONES
h-AspP1
h-Asp1
h-AspP
CLITICIZATION DOMAIN
a/la2
CL
h-Asp'
h-Asp
LOWER SEMANTIC ZONES
VAOR/ VIMPRF /VPRF
vP

Key:

CL: clitic and clitic clusters

i: relative clause and focus
ad: particle
da/rad: future particle in Tamazight-like dialects
la$_1$: present and past particle (Tamazight and Tarifit) la$_2$: 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*[134], which must be strictly adjacent to the verb. This is illustrated by the examples in (69b) and (69c).

(69) a.

i-fka	tatefaht	i	islam	ideli
3SGM-give$_{PRF}$	apple	to$_{DAT}$	Islam	yesterday

He gave an apple to Islam yesterday.

b.

ur	i-fka	**ara**	tatefaht	i	islam	ideli
NEG1	3SGM-give$_{PRF}$	NEG2	apple	to$_{DAT}$	Islam	yesterday

He didn't give an apple to Islam yesterday.

c.

ur	la	i-ttak	**ara**	daimen	tatefaht	i	islam
NEG1	PRT	3SGM-give$_{IMPRF}$	NEG2	always	apple	to$_{DAT}$	Islam

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.

(70)

t-na	=d	beli	d	čučuka$_{T}$	i	[*ur*]
3SGF-say$_{PRF}$	=D	COMP	cop	čučuka	COMP	NEG1

la	i-tett	ara	seddik
PRT	3SGM-eat$_{IMPRF}$	NEG2	Seddik

She said that Seddik, he will not eat čučuka.

---

[134] In most Berber languages, NEG2 is either never (e.g. Touareg and Tashelhit) 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:

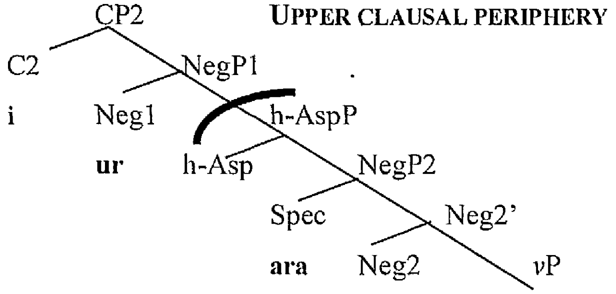
iv.

argaz	nni	**ur**=t	hmile-γ
man	DEM$_{AMB}$	NEG1=CL.3SGM:ACC	love$_{PRF}$-1SGM

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 *v*P. There are two main reasons for hypothetizing on a second NegP which directly dominates *v*P. 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 *v*P and that lexical verbs move to higher TAM projections, NegP2 must occur between *v*P and the highest projection targeted by the verb. The structure involving negation heads in Taqbaylit is represented in (71) below.

(71)



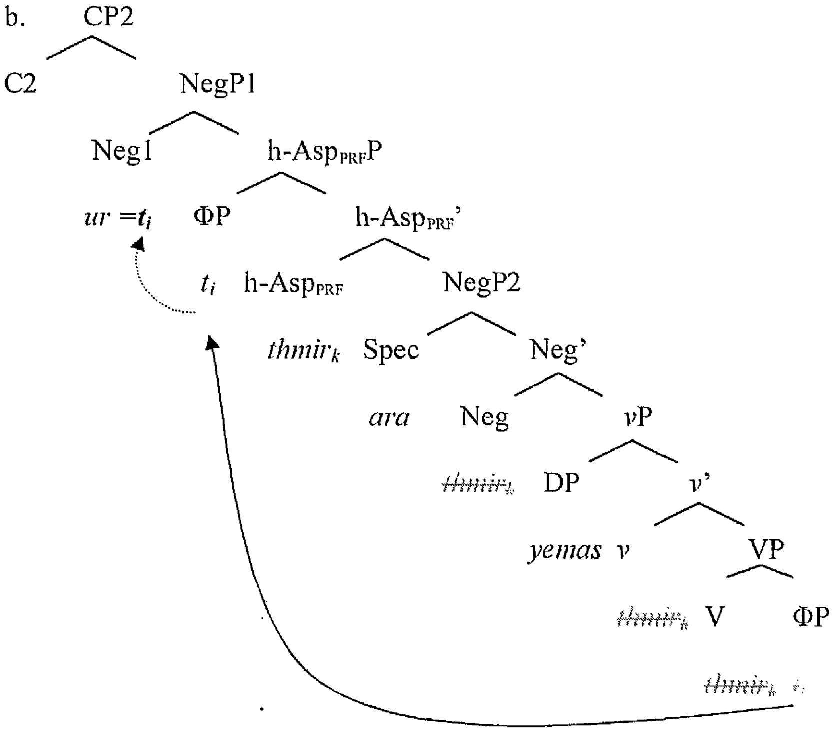
Let's focus now on how the clitic orders involving negation are derived. To that effect, consider (72):

(72) a.

ur	=[*t*]	t-hmir	ara	yema=s
NEG1	=CL.3SGM;ACC3SGF-love$_{PRF}$	NEG2	mother=CL.3SG;POSS	

His mother doesn't love him.

b.



CP2
C2
NegP1
Neg1
h-Asp$_{PRF}$P
ur =*t$_i$*
ΦP
h-Asp$_{PRF}$'
t$_i$
h-Asp$_{PRF}$
NegP2
thmir$_k$
Spec
Neg'
ara
Neg
*v*P
~~*thmir$_k$*~~
DP
v'
yemas
v
VP
~~*thmir$_k$*~~
V
ΦP
~~*thmir$_k$*~~

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 it perfective morphology and semantics. The accusative clitic is merged as the head of ΦP 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 *la*, 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 *la* which, indeed, is the closest available preceding head:

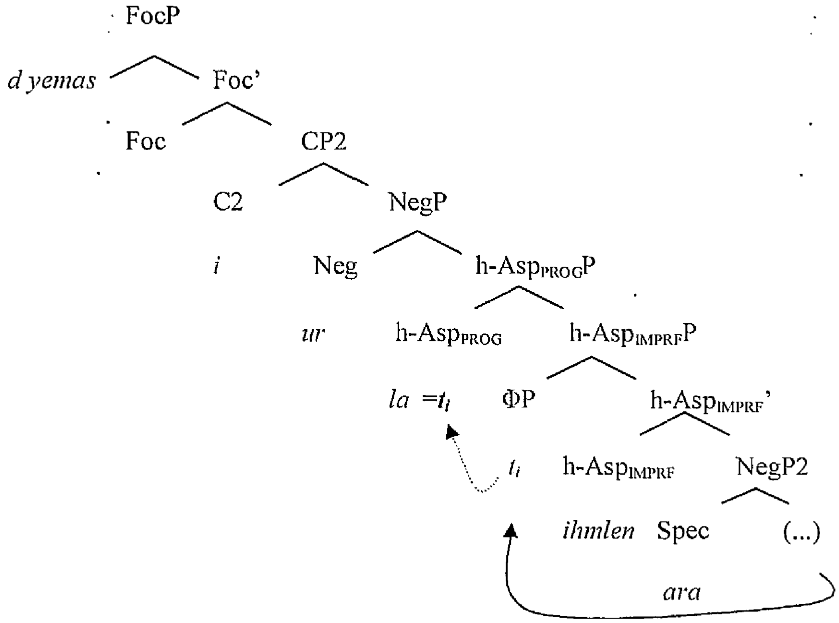
(73) a.

d yema=s	i	ur	la	=[*t*]
COP mother=CL.3SG;POSS	COMP	NEG1	PRT	=CL.3SGM;ACC

ihmlen	ara
love$_{PTCP}$	NEG2

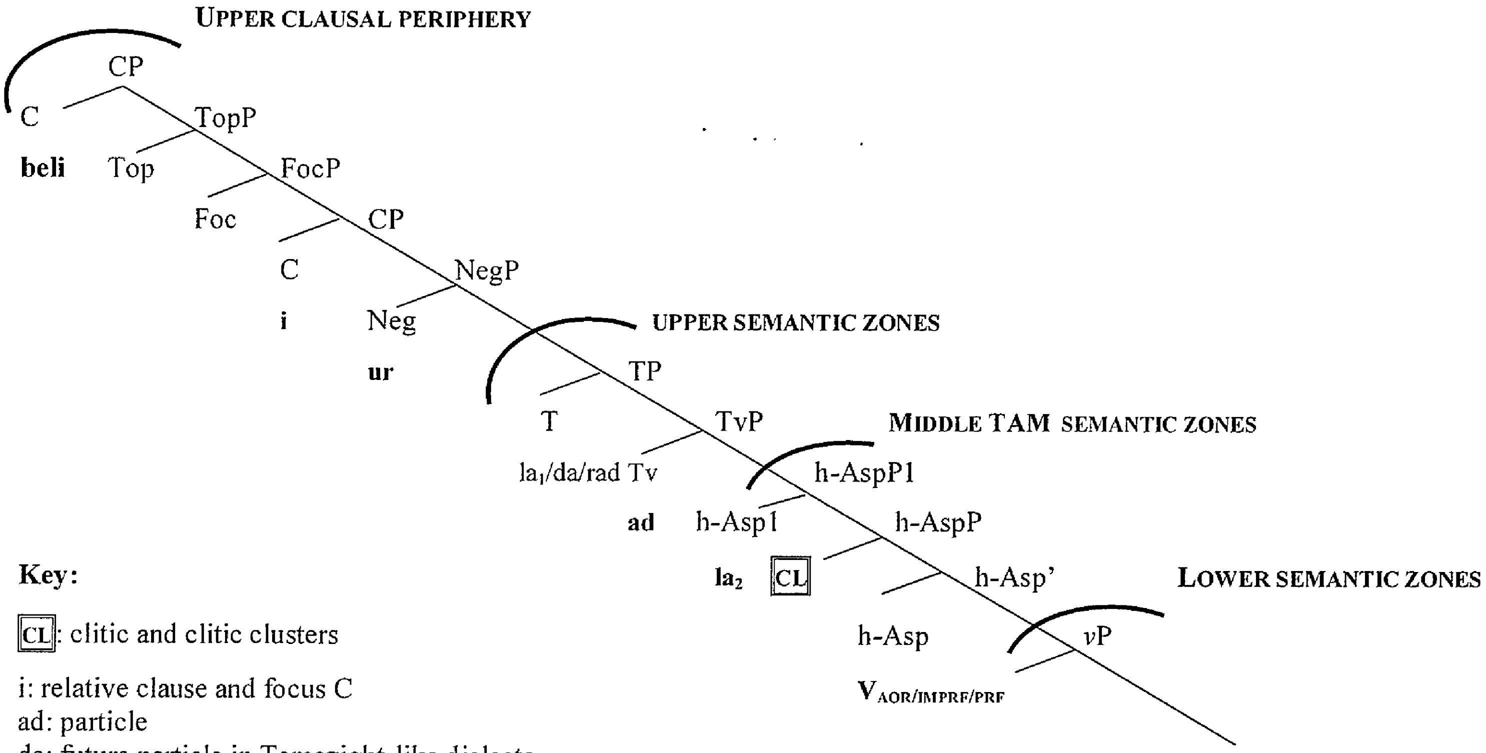
It is his mother who doesn't love him.

b.


FocP
d yemas
Foc'
Foc
CP2
C2
NegP
i
Neg
h-Asp$_{PROG}$P
ur
h-Asp$_{PROG}$
h-Asp$_{IMPRF}$P
la =t$_i$
ΦP
h-Asp$_{IMPRF}$'
t$_i$
h-Asp$_{IMPRF}$
NegP2
ihmlen
Spec
(...)
ara

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
CP
C
beli
TopP
Top
FocP
Foc
CP
C
i
NegP
Neg
ur
UPPER SEMANTIC ZONES
TP
T
TvP
la1/da/rad Tv
MIDDLE TAM SEMANTIC ZONES
h-AspP1
ad
h-Asp1
h-AspP
la2
CL
h-Asp'
LOWER SEMANTIC ZONES
h-Asp
vP
V AOR/IMPRF/PRF

Key:

CL: clitic and clitic clusters

i: relative clause and focus C
ad: particle
da: future particle in Tamazight-like dialects
la_1: present and past particle (Tamazight and Tarifit)
la_2: 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*[135] 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	**[in**	**=[*s*]]**
		house	OF	=CL.3SG;OBL
		His house		
	b.	axxam	=[*is*]	
		house	=CL.3SG;POSS	
		His house		

The paradigm for possessive clitics in Taqbaylit given in Table 19 (section 3.4) is repeated in (24) below for convenience.

---

[135] According to Chaker (1983). the *i* 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.

Table 24: POSSESSIVE CLITICS

	SINGULAR		PLURAL	
	MASC	FEM	MASC	FEM
1st Pers	(i)w *(my)*		neγ *(our)*	
2nd Pers	(i)k *(your)*	(i)m *(yours)*	nwen *(your)*	nkent *(your)*
3rd Pers	(i)s *(his, hers, its)*		nsen *(their)*	nsent *(their)*

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 =[*iw*] aki
house =CL.1SG;POSS DEM$_{PROX}$
#This house is mine!
This house of mine.

b. *i-čveh uxxam =[*IW*] maččí n wergaz
3SGM-be.beautiful$_{PRF}$ house =CL.1SG;POSS not OF man
MY house is beautiful, not the man's.

c. * i-čveh uxxam =[*iw*] aq n wergaz
3SGM-be.beautiful$_{PRF}$ house =CL.1SG;POSS and OF man
?My and the man' house is beautiful.

d. *axxam =[*IS*] wahd =is
house =CL.3SG;POSS one =CL.3SG;POSS
The house of him only.

(77) Q: [***bumi***] =t tektef?
whom =CL.3SGM;ACC book
Whose book is this?

A: ***ines/ n ines*** / #tektef=[***is***]
POSS.3SGM / book =POSS.3SG
His / # his book

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 *wahd=is* 'him only' makes the construction infeliciteous. 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 DEM$_{PROX}$ 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 =[***is***]
each house =CL.3SG;POSS
Each of his houses

b. *kul =[***is***] axxam

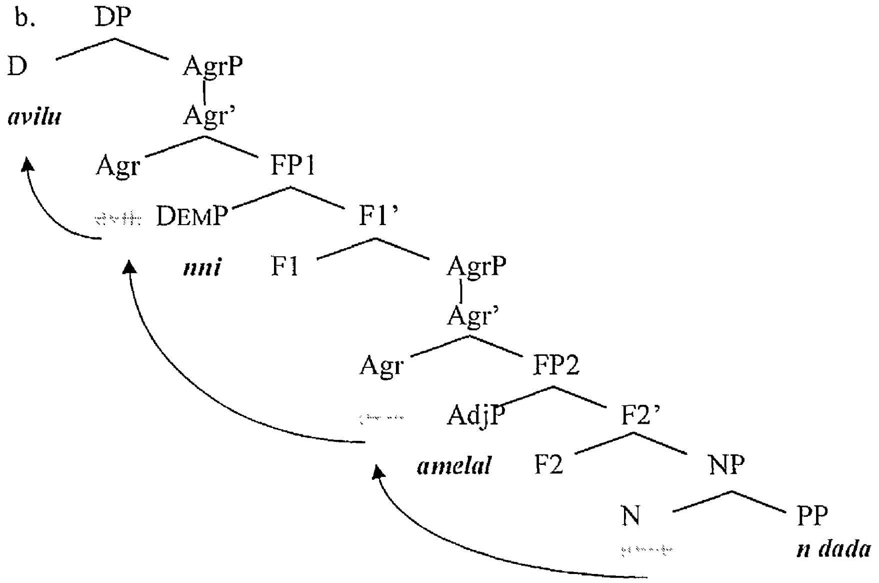
From a typological point of view, the Taqbaylit possessive clitic system is interesting because its presents the properties of both Head-oriented and Edge-oriented sytems. Thus, the obligatory attachment of clitics to the nominal head makes them appear similar to Head-oriented clitics, but their occurrence 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	amelal	n	dada
		bike	DEM$_{AMB}$	white	OF	dad
		This white bike of dad.				

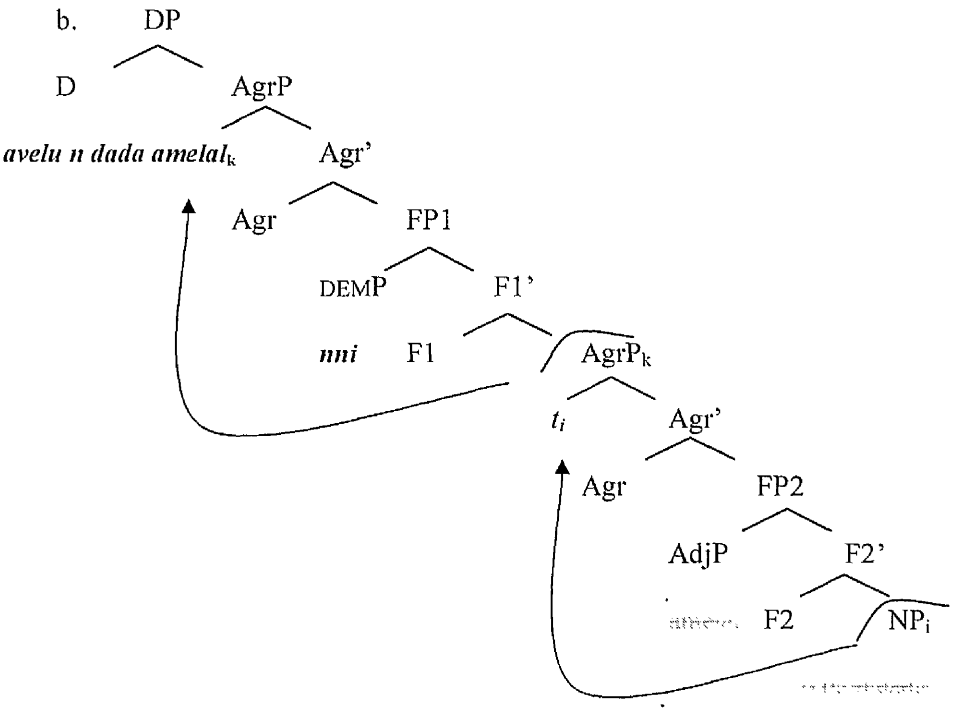
b.


DP
D
AgrP
avilu
Agr'
Agr
FP1
DEMP
F1'
nni
F1
AgrP
Agr'
Agr
FP2
AdjP
F2'
amelal
F2
NP
N
PP
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.

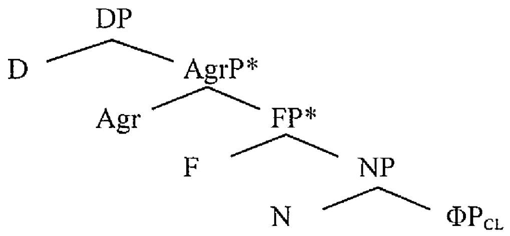
(81) a. avilu n dada amelal nni
bike OF dad white DEM$_{AMB}$
This white bike of dad.

b.


DP
D
AgrP
avelu n dada amelal$_k$
Agr'
Agr
FP1
DEMP
F1'
nni
F1
AgrP$_k$
t_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.

(82)

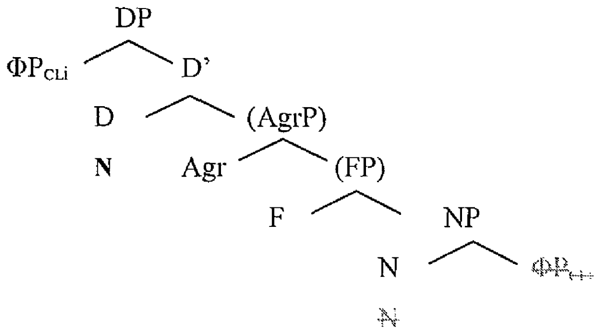


As explained in section 4.2, I take ΦP's to correspond to Cardinaletti & Starke (1999)'s projections which are deficient in both C-features and prosody, and must move to higher positions in order to recover these missing features. Adapting from C&S's hypothesis and Ouhalla (2005a) and Boukhris (1998)'s 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 ΦP 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^0. 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)

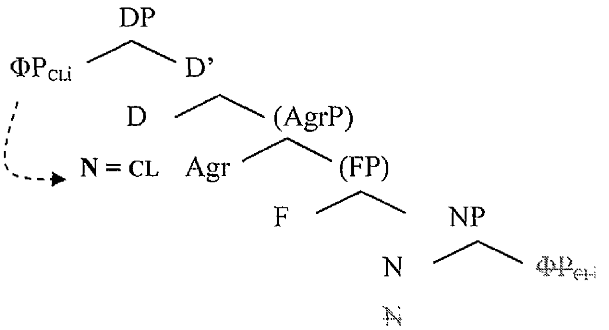


The second step in the derivation of clitic placement is prosodic incorporation. Now recall that, in the clausal domain, clitics incorporate at PF into a prosodic head which is either the preceding functional head or, as a last resort, the verb they are associated with. Inside DP, however, the noun occupies 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) *CL cannot be the first element in the minimal domain within which they occur.*
(Ouhalla, 2005a: 10)

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:

(85)


DP
ΦP CLi
D'
D
(AgrP)
N = CL
Agr
(FP)
F
NP
N
~~ΦP CLi~~
~~N~~

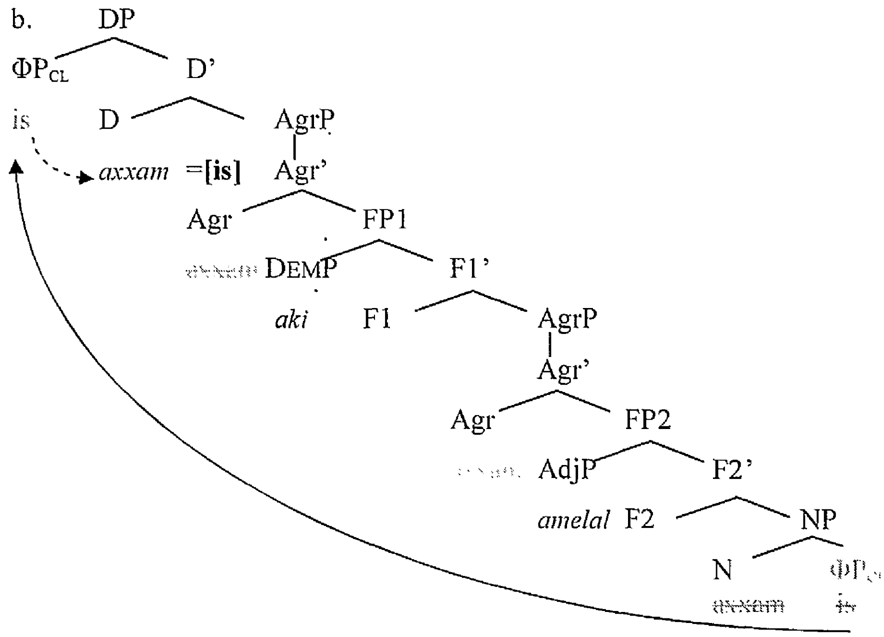
Following this analysis, the DP in (86a) can be derived as in (86b) below.

(86) a.

axxam	=[*is*]	aki	amelal
house	=CL.3SG;POSS	DEM$_{PROX}$	white

This white house of his

b.

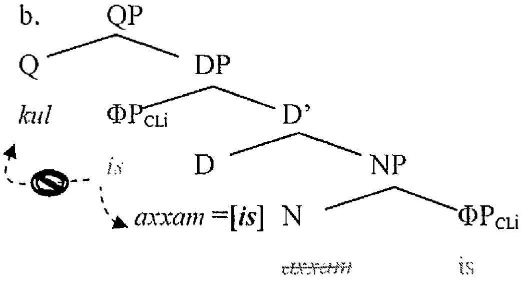

DP
ΦP CL
D'
is
D
AgrP
axxam
=[is]
Agr'
Agr
FP1
~~axxam~~
DEMP
F1'
aki
F1
AgrP
Agr'
Agr
FP2
~~axxam~~
AdjP
F2'
amelal
F2
NP
N
ΦP CL
~~axxam~~
~~is~~

In the structure above, the noun *axxam* 'house' is merged as the head of NP. Its modifiers, the demonstrative *aki* 'this' and the adjective *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 direcly 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)	a.	kul	(*=[***is***])	axxam =[***is***]
		each		house =CL.3SG.POSS
		Each of his houses		

b.



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 their Specifier 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:

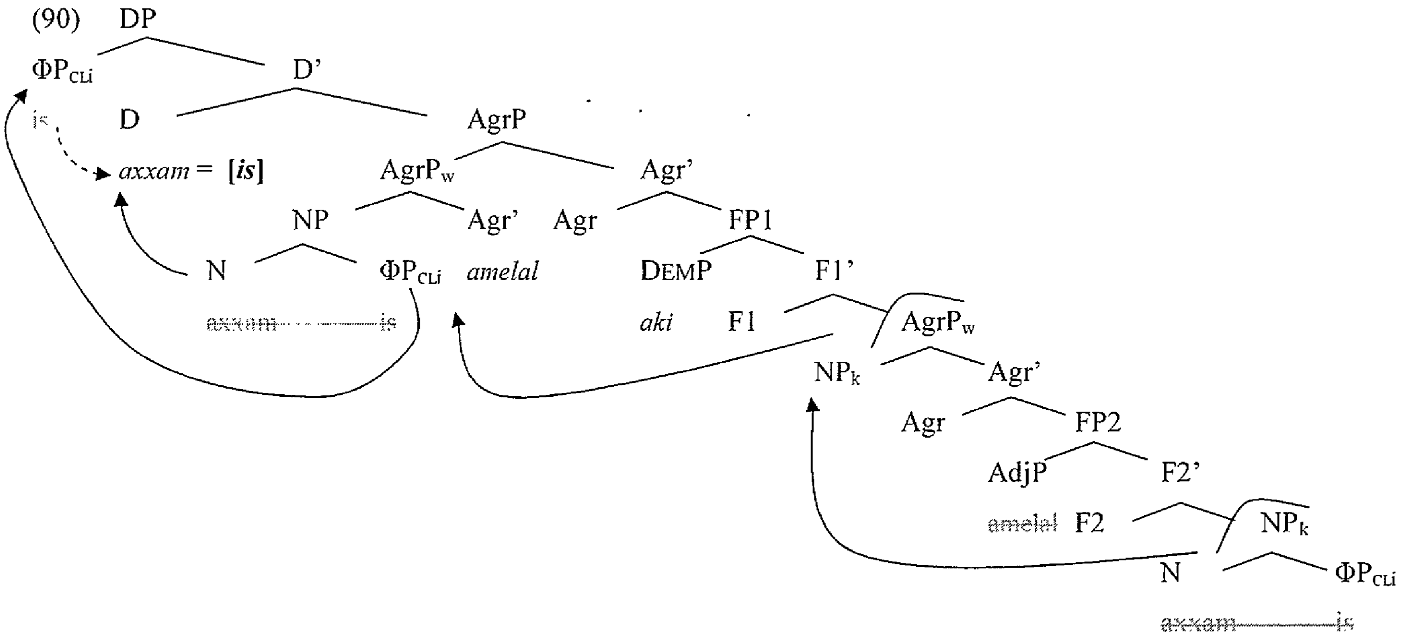
(88) axxam n wergaz amelal aki
house OF man white DEM_{PROX}
This white house of the man

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_{PROX}
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.

(90)


DP
ΦP$_{CLi}$
D'
~~is~~
D
AgrP
axxam = [***is***]
AgrP$_w$
Agr'
NP
Agr'
Agr
FP1
N
ΦP$_{CLi}$
amelal
DEMP
F1'
~~axxam~~ ~~is~~
aki
F1
AgrP$_w$
NP$_k$
Agr'
Agr
FP2
AdjP
F2'
~~amelal~~
F2
NP$_k$
N
ΦP$_{CLi}$
~~axxam~~ ~~is~~

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 behaviours 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/DP$_{POSS}$]]]]

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.

(94) [DP D [N [CL/DP$_{POSS}$]]]

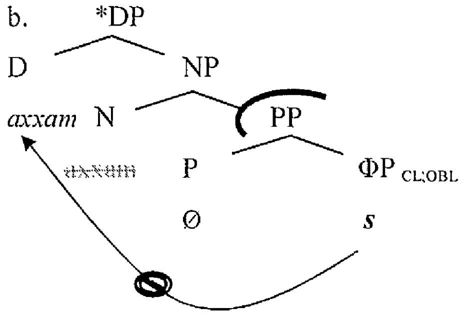
The analysis being developed throughout the present dissertation offers two possible alternative explanations for the differences between Taqbaylit and other Berber languages when it comes to possessive cliticization.

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.



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 $[_{PP}$ P $[_{\Phi P}$ $CL_{OBL}]]$ can, as in Taqbaylit, be a synthetic deficient structure $[_{\Phi P}$ $CL_{POSS}]$ 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 *di* 'inside' and the clitic =*s* 'it' in (96a) is cliticized in (96b) but still occurs in the same form: *dis*.

(96)	a.	ur	=as	=t	gri-n	[***di=s***]
		NEG	=CL.3SG;DAT	CL.3SGM;ACC	throw$_{PRF}$-3PLM	in=CL.3SG;OBL
		They didn't threw it to him inside it.				
	b.	ur	=as	=t	=[***dis***]	gri-n
		NEG	=CL.3SG;DAT	CL.3SGM;ACC	=PREP.CL	throw$_{PRF}$-3PLM
		They didn't throw it to him inside it.				

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 preposition *n*. 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[136] (Bentolila, 1969; Chaker, 1983; Ouhalla, 2005a; El Mountassir, 2000). Consider, for instance, the following sentences:

(98)	a.	i-ruh	kinzo	ɣur	thanut
		3SGM-go$_{\text{PRF}}$	Kinzo	to	shop

Kinzo went to the shop.
Kinzo left for the shop.

b.	i-ruh	=[*d*]	kinzo	ɣur	thanut
	3SGM-go$_{\text{PRF}}$	=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[137]. 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 (Aktionsarts) 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[138]. Hence, here, I only concentrate on its four main interpretations.

---

[136] In most Berber languages, the =*d* clitic is opposed to an =*n* clitic (whose meaning is almost always translated as 'away form speaker'). The variety of Taqbaylit described here, the =*n* 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[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*[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	umɣar=im	Allah	ye-rehmu
		3SGM-ascend$_{PRF}$	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	=[*d*]	umɣar=im	Allah	ye-rehmu
	3SGM-ascend$_{PRF}$	=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)

---

[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)).

[140] In terms of Talmy's typology (2000), Taqbaylit allows path encoding in both verb-framed (i) and satellite-framed (ii) constructions.

i.	**i-fcɣ**	kinzo	
	3SGM-exit$_{PRF}$	Kinzo	
	Kinzo went out		
ii.	y-uzzel	**ɣur**	**tehanut**
	3SGM-run$_{PRF}$	to	shop
	He ran to the shop		

Note, however that not all verbs can occur in these constructions :

iii.	*te-čdeh	Sarah	**ɣur**	**tameɣra**
	3SGF-dance$_{PRF}$	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**	[la	i-ttzel]
	3MS-go$_{PRF}$	PRT	3SGM-run$_{IMPRF}$
	He ran away	(lit. *he went he was running*)	

c.

y-uzel	γur	tehanut
3SGM-run$_{\text{PRF}}$	to	shop

He ran to the shop.

(Speaker or addressee is not at the shop)

d.

y-uzl	=[*d*]	γur	tehanut
3SGM-run$_{\text{PRF}}$	=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'[141] (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	=(y)as	=[*d*]	acadu	i	Khaled
3SGM-sent$_{\text{PRF}}$	=CL.3S;DAT	**=D**	present	to	Khaled

He sent a present to Khaled.

b.

sefer-n	=as	=[*d*]	warac	nni
whistle$_{\text{PRF}}$-3PLM	=CL.3S;DAT	**=D**	boys	DEM

These boys whistled at him.

c.

i-sli	=(y)as	=[*d*]
3SGM-hear$_{\text{PRF}}$	=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 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.

---

[141] 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*)

(101) a.

#ruh-n	=[*d*]	γur	tameγra	n	Mohand
go_{PRF}-3PLM	=D	to	wedding	OF	Mohand

Yesterday, they went to the Mohand's wedding.
(discourse participants not a the wedding)

b.

i-na	=d	Mohand	'ruh-n	=[*d*]	γur	tameγra=s'
3SGM-say_{PRF}	=D	Mohand	go_{PRF}-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 deixis[142].

(102) a.

#fki-γ	=as	=[*d*]	tektef	i	ella
give_{PRF}-1SG	=CL.3SG;DAT	=D	book	to_{DAT}	Ella

I gave a book to Ella.

b.

fki-γ	=am	=[*d*]	tektef
give_{PRF}-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$_{\text{PRF}}$ coffee
The coffee is cool.
The coffee cooled.

b. t-semd =[*d*] lekahwa
3SF-cool$_{\text{PRF}}$ =D coffee
The coffee cooled.
**The coffee is cool.*

(104) a. i-ker[143] Salem
3SGM-stand$_{\text{PRF}}$ Salem
Salem stands.
Salem stood up.

b. i-kr =[*d*] Salem
3SGM-stand$_{\text{PRF}}$ =D Salem
Salem stood up.
**Salem is standing.*

The verbs contained in (103) and (104) above are ambiguous between stative and inchoative readings[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 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.

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[143] The verb also means ‘to wake up’. Since this is not relevant here, I will ignore this meaning.
[144] Recall from Chapter 2 that the ambiguity between stative and inchoative readings does not appear in the Imperfective aSpect.

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.wet$_{\text{PRF}}$ 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.wet$_{\text{PRF}}$ =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 tameγra
3SGF-dance$_{\text{PRF}}$ Sarah at wedding
Sarah danced at the wedding.

b. te-čdeḥ =[*d*] Sarah di tameγra
3SGF-dance$_{\text{PRF}}$ =D Sarah at wedding
Sarah danced at the wedding and came back.

c. i-telm Didine Taglisit
3SGM-learn$_{\text{PRF}}$ Didine English
Didine learned English.

d. i-telm =[*d*] Didine Taglisit
3SGM-learn$_{\text{PRF}}$ =D Didine English
Didine learned English and came back.
Didine arrived and he had learned English.

e. i-čča Saeed
3SGM-eat$_{\text{PRF}}$ Saeed
Saeed ate.

f. i-čča =[*d*] Saeed
3SGM-eat$_{\text{PRF}}$ =D Saeed
Saeed ate and came back.

Note that coerced motion can also be construed in other aspects and moods (cf. 108):

(108) a. ad y-ečč
PRT 3sgm-eat$_{AOR}$
I will eat.

b. a(d) =[*d*] y-ečč
PRT =D 3SGM-eat$_{AOR}$
I will eat and come (back).

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 Boukhris'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 the Specifier 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[145] 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*.

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[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*]$_i$'s work. [*He*]$_i$ 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***]$_i$ to behave [***himself***]$_i$

b. *[***His father***]$_k$ wants John to behave [***himself***]$_k$

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) [*Everyone here*]$_i$ thinks [*he*]$_i$'s a nice fellow

(4) a. [*Lucie*]$_i$ adores [*herself*]$_i$
b. [*Alfred*]$_i$ promised [*PRO*]$_i$ 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) Alfred$_i$ thinks he$_i$ is a great cook
a. *Alfred* (λx (*x thinks x is a great cook*))
b. *Alfred*$_i$ (λx (*x thinks he*$_i$ *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 (λx (x thinks x is a great cook)) & Felix (λy (y thinks y is a great cook))*

b. *Alfred*$_i$ *(λx (x thinks he*$_i$ *is a great cook)) & Felix ((λy (y thinks he*$_i$ *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 morpho-syntactic 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

θ-POSITION

a. non diro mai tutto ***a Gianni*** / ***a loro***
not (I)will-say never everything Gianni / them
I will never say everything to Gianni / them.

CLEFT

b. E' ***Maria*** / ***lei*** che è bella
It.is Mary / she that is pretty
It is Mary / her who is pretty.

COORDINATION

c. lei e(d) ***Maria*** / ***lei*** sono belle
she and Mary are pretty
Her and Mary / her are pretty.

C-MODIFICATION

d. solo ***Maria*** / ***lei*** è bella
only Mary / she is pretty
Only Mary/ her is pretty.

(9) FRENCH

θ-POSITION

a. Jean estime ***son*** ***étudiant*** / ***lui***
Jean estimates his student / him
Jean estimates his student / him.

CLEFT

b. C' est ***Jean*** / ***lui*** qui est intelligent
it is Jean / he who is clever
It is Jean / him who is clever.

C-MODIFICATION

c. Seul ***Jean*** / ***lui*** est intelligent
only Jean / he is clever
Only Jean / him is clever.

COORDINATION

d. Lui et ***Jean*** / ***lui*** sont intelligents
He and Jean / he are clever
Him and Jean / him are clever.

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)

CLEFT

a. *E' ***essa*** che è bella
It.is she$_D$ that is pretty

COORDINATION

b. *lei e(d) ***essa*** sono belle
she and she$_D$ are pretty

C-MODIFICATION

d. *solo ***essa*** è bella
only she$_D$ 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):

(12) a. ***Il*** / ****lui*** pleut
It / *he rains
It rains.

b. ***Ils***/ ***Eux** m' ont vendu un livre pas
They they to.me have sold a book not
cher
expensive
I was sold a cheap book.

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)[146]. 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^0 nor D^0. 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 Wiltschko (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					
		She came.							
	b.	elle	et	celles	d'	à	côté	sont	venues
		she	and	those	from	of	side	have	come
		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[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.

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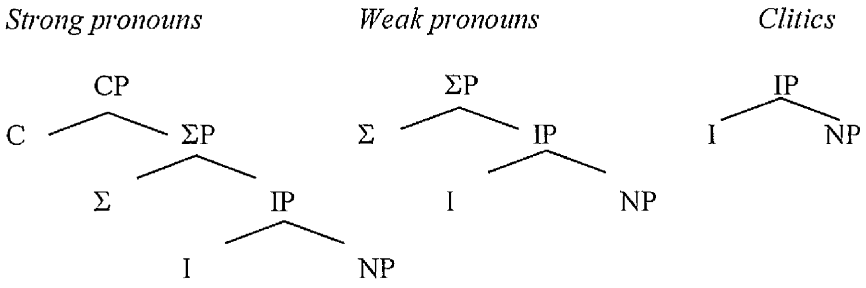
[146] 'SELF' reflexives, for instance, have been argued not to project onto full DPs on their own and to combine with a pronoun to form a DP (cf. Reinhart & Reuland, 1993)

(14)



Strong pronouns *Weak pronouns* *Clitics*

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 *a*. Thus the strong pronoun *a loro* corresponds to the weak version *loro* plus *a*. Whether the dummy marker occurs or not has specific effects on the distributional properties of the pronoun. With *a*, *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.

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[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 [$_{CP}$ C [$_{IP}$ I [$_{VP}$ V], nominal structures can consist of [$_{CP}$ C [$_{IP}$ I [$_{NP}$ N].

(15) a. Ho parlato *[a loro e a loro]*
I.have spoken (to) them and them
I have spoken to them and to them.

b. Ho parlato solo **[a loro]**
I.have spoken (to) only them
I have spoken only to them.

c. Ho parlato [a LORO], non [a loro]
I.have spoken (to) them not them
I have spoken to them no them.
(Cardinaletti & Starke, 1999: 181)

(16) a. *Ho parlato [loro e loro]
b. *Ho parlato solo [loro]
c. *Ho parlato [ORO], non [loro]
(Cardinaletti & Starke, 1999: 180)

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[148], 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).

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[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.

(18) **Strong and deficient pronouns distributions (Cardinaletti & Starke, 1999)**

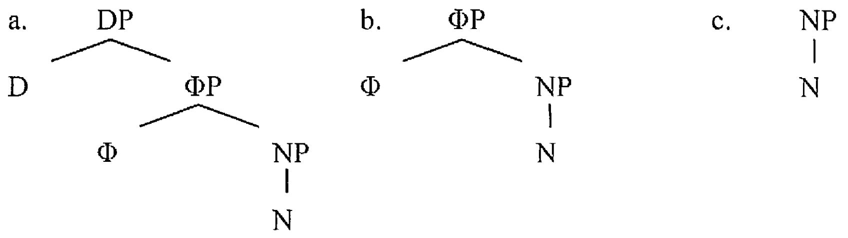
	STRONG	WEAK	CLITIC
Structural deficiency	no	mild	severe
Features			
Case feature	√	no	no
Prosodic features	√	√	no
Φ-features	√	√	√
Semantic			
Range	√	no	no
Independent reference	√	no	no
[+human] restriction	√	no	no
Non referential contexts	no	√	√
Prosody			
Word stress	√	√	no

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).

(19)



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. *thú-tl'ò* consists of the determiner *thú* and the 'bundle' of features *-tl'ò*) (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.

(20)	a.	Tl'ó-cha-l-su	qwemcíwe-t	**thú-tl'ò**	**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

(21) Wík.w.k-t-0-en **re** **n-tséts-we7**
see (REDUP)-TRANS-3SG.OBJ-1SG.SUBJ DET 1SG-EMPH-DEIC
I saw him

(22) a. Yirí7 te **[sqélemcw]** l wí.w.k-t-sem-s
DEIC OBL man C SEE(REDUP)-TRANS-1SG.OBJ-3SG.SUBJ
That's the man that saw me.

b. *Yirí7 te **[newí7-s]** l wí.w.k-t-sem-s
DEIC OBL EMPH-3 C SEE (REDUP)-TRANS-1SG.OBJ-3SG.SUBJ
That's the man that saw me.
(p.416)

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.
(p. 417)

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-ΦPs 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. 1st and 2nd 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) a. *we* linguists
b. *you* linguists (p. 421)

Moreover, 1st and 2nd personal pronouns resemble other DP's as to their binding properties. As well discussed in the literature, 1st and 2nd pronouns cannot be freely interpreted as bound variables. In the following sentence, a sloppy identity reading (25b) is not available precisely because the 1st person pronoun *me* is not be bound.

(25) a. I know that John saw me and Mary does too
b. *I know that John saw me and Mary knows that John saw her
λx [x knows that John saw x] & λy [y knows that John saw y]
c. I know that John saw me and Mary knows that John saw me
λx [x knows that John saw me] & λy [y knows that John saw me](p. 423)

Other personal pronouns, such as third person, show on the other hand the properties of pro-ΦPs. As predicted 3rd person pronouns can occur as predicates or as arguments. In (26) below, *he* and *her* are arguments.

(26) [*He*]$_{\text{ARG}}$ saw [*her*]$_{\text{ARG}}$
(p.425)

---

[150] The presented Japanese, Shuswap and Halkomelem pronouns share the characteristics of respectively NPs, ΦPs 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 ΦPs they can, furthermore, freely function as bound variables or co-refer to an antecedent:

(28) a. [*Every candidate*]$_i$ thinks that [*he*]$_i$ will win
∀x, candidate(x), x thinks that x will win

b. [*John*]$_i$ thinks that [*he*]$_i$ will win
(p. 423)

Finally *one*[151] 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. some*one*
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*]$_i$ thinks [*one*]$_i$ is a genius
≠ ∀x, x thinks that x is a genius

---

[151] After Postal (1966), D&W assume that *one* is a pronoun

b. [*Mary*]$_i$ thinks [*one*]$_i$ is a genius
(p.420)

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*[152] is argued to be a pro-NP while accusative clitics ('l-clitics) are argued to be pro-ΦPs[153]. 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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[152] *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*]$_i$		pense	que	Jean	[*en*]$_i$	a	vu
	each.one		thinks	that	Jean	*en*	has	seen
iv.	[*Marie*]$_i$		pense	que	Jean	[*en*]$_i$	a	vu
	Marie		thinks	that	Jean	*en*	has	seen

[153] French l-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		it	will.be	too
vii.	[*Chaque homme*]$_i$			pense	que	Marie	[*l'*]$_i$	a	vu
	each	man		thinks	that	Marie	him	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 1st 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).

(31) a. čči-γ [***nekkini***] tatefaht **INDEPENDENT**
eat$_{PRF}$-1SG PRN.1SG apple
I ate an apple.

b. čči-γ [***pro***] tatefaht **pro**
eat$_{PRF}$-1SG pro apple
I ate an apple.

c. i-sna =[*γi*] **CLITIC**
3SGM-knows$_{PRF}$ =CL.1SG;ACC
He knows me.

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[155], semantically marked (contrastive topic or focus).

(32) a. t-ttel =it [*netta*] **OBJ**
3SGF-bandage$_{PRF}$ =CL.3SGM;ACC PRN.3SGM
Him, she bandaged him.
# She bandaged him.

b. t-fka aγrum i [*NETTA*] **IND.OBJ**
3SGF-give$_{PRF}$ flatbread to$_{DAT}$ PRN.3SG
She gave the flatbread TO HIM.

---

[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[156] and right-dislocations —, in coordinated structures and be c-modified, as illustrated in (33) below with the strong pronoun *nettat* 'her'.

(33) a. [*nettat*] i g-sp^{w}e-n cerba **cleft**
PRN.3SGF COMP 3SGM-cook$_{\text{PRF}}$-PTCP soup
It is her who cooked the soup.

b. [*netta*]$_{i}$ feγ-γ fel=as$_{i}$ **left-dislocation**
PRN.3SG exit$_{\text{PRF}}$-1SG on=CL.3SG;DAT
As for him, I pleased him.

c. a t-qim [*nettat*] d tilawin **coordination**
PRT 3SGF-sit$_{\text{AOR}}$ PRN.3SGF with women
Her and the women will sit.

d. t-lhu meme [*nettat*] sufela uvelo **c-modification**
3SGF-walk$_{\text{PRF}}$ even PRN.3SGF on bike
Even she left on a bike.

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.

(34) a. zik la=n la=d ttkre-n zik
early be$_{\text{PRF}}$=3PL.M PRT=D stand.up$_{\text{IMPRF}}$-3PL.M early
In the old days, they got up early.

---

[156] Clefts and left-dislocations in Berber are covered in Chapter 2.

b. zik [*niteni*] la=n la=d ttkre-n
early PRN.3PLM be$_{\text{PRF}}$=3PLM PRT=D stand.up$_{\text{IMPRF}}$-3PLM
zik
early
In the old days, them, they got up early.

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$_{\text{PRF}}$-PTCP
Who came?

A: d [*netta*] (i=d i-ruh-n)
COP PRN.3SG COMP=D 3SGM-go$_{\text{PRF}}$-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$_{\text{PRF}}$-PTCP soup
It is her who cooked the soup.

***left-dislocation**
b. *[*iyi*]$_i$, veda-n =iyi$_i$ lehlak
CL.1SG;DAT start$_{\text{PRF}}$-3PLM =CL.1SG;DAT disease
Me, the pain started on me.

***coordination**
c. *a t-qim [*pro*] d tilawin
PRT 3SGF-sit$_{\text{AOR}}$ pro with women
Her and the woman will sit.

***c-modification**

d.

anu	=[*(y)as*]	kan	aman
add$_{\text{AOR}}$	=CL.3SG;DAT	only	water

**Add water only to it!*
Add only water to it!

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$_{\text{PRF}}$=3PL.M	pro	PRT=D	stand.up$_{\text{IMPRF}}$-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$_{\text{PRF}}$-PTCP

Who came?

A:

#t-ruh=d	[*pro*]
3SGF-go=D	

She came.

c. Q:

anta	i	t-wala-d?
who	COMP	2SG-see$_{\text{PRF}}$-2SG

Who did you see?

A:

# wala-γ	=[*t*]
see$_{\text{PRF}}$-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-go$_{PRF}$ =D one / pro
Someone came.

b. ye-ruh =d [*yiwen aqcic*] / *[*pro*]
3SGM-go$_{PRF}$ =D one boy / pro
A boy came.

c. i-čveh [*wagi*] / *[*pro*][157]
3SGM-be.beautiful$_{PRF}$ DEM$_{PROX}$ / pro
This is beautiful.

d. te-čveh [*nettat*] / *[*pro*][158]
3SGF-be.beautiful$_{PRF}$ 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

strong		**weak**		**clitic**
independent pronouns	>	*pro*	>	clitics

---

[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.beautiful$_{PRF}$
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 to.

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 see Mary
I have seen Mary.

b. J' ai vu [*elle*]
I have seen her
I have seen HER.

c. *Je [*elle*] / [*Mary*] ai vu
I her Mary have seen

d. Je [*l*]= ai vu *[*l*]
I her have see her
I have seen her.

In (40a), the strong pronoun *elle* 'she' occurs in the position associated with object DP arguments but in (40b) the deficient pronoun *l* 'her' occurs in a pre-verbal 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 [*nuam*]
3SGF-bandage=CL.3SGM;ACC Nuam
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*] [*netta*][159]
3SGF-bandage =CL.3SGM;ACC PRN.3SGM
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[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

(43) a. i-čča [***khaled***] sfenj
3sgm-eat$_{PRF}$ Khaled doughnut
Khaled ate the doughnut.

b. i-čča [***netta***] sfenj
3sgm-eat$_{PRF}$ PRN.3SG doughnut
(Him) he ate the doughnut.

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[161]. 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[162]. 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 examples is best analyzed, not as an agreement marker needed for referential specification, but as a resumptive pronoun.

---

[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 θ-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.

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-see$_{PRF}$-2SG
Who did you see?

b. [***netta***]
PRN.3SG
Him.

(45) a. t-fka ayrum i weqcic
3SGF-give$_{PRF}$ flatbread to$_{DAT}$ boy
She gave a flatbread to the boy.

b. t-fka ayrum i [***nettaf***]
3SGF-give$_{PRF}$ flatbread to$_{DAT}$ PRO.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:

(46) **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[163],[164] or coordinated, the independent form of an accusative pronoun is allowed in the object position. Consider the following examples:

(47)

OVERT CONTRAST

a.	t-ttel	[*NETTA*]	mačči	nettat
	3SGF-bandage	PRN.3SGM	NEG	PRN.3SGF
	She bandaged HIM not her!			

COORDINATED

b.	t-ttel	[*NETTA*]	aq	nettat
	3SGF-bandage	PRN.3SGM	and	PRN.3SGF
	She bandaged HIM and her.			

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	[*NETTA*]	**CONTRASTED**
		no,	3SGF-bandage$_{\text{PRF}}$	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)

				OVERT CONTRAST
a.	*t-ttel	=[*IT*]	mačči	nettat
	3SGF-bandage$_{\text{PRF}}$	=CL.3SGM;ACC	NEG	PRN.3SGF
	She bandaged HIM, not her!			
				COORDINATION
b.	*t-ttel	=[*IT*]	aq	nettat
	3SGF-bandage$_{\text{PRF}}$	=CL.3SGM;ACC	and	PRN.3SGF
	She bandaged HIM and her.			

				CONTRASTED
c.	#ala	t-ttel	=[*IT*][165]	
	no,	3SGF-bandage$_{\text{PRF}}$	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.

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[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?’

(50) a. i-čča [*pro*] aγrum
3sgm-eat$_{PRF}$ pro bread
He ate bread.
#Him, he ate bread.

b. i-čča [***netta***] aγrum
3sgm-eat$_{PRF}$ PRN.3SG bread
Him, he ate bread.
#He ate bread.

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.

(51) a. Je vois [*lui*]
I see PRN.3SGM
I see HIM.
#I see him.

b. Je [*le*] vois
I CL.3SGM see
I see him.
#I see HIM.

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.

Table 25: PERSONAL PRONOUNS DISTRIBUTION

	independent pronouns	*pro* / clitic
Overtly contrasted	√	**no**
Covertly contrasted	√	**no**
Coordinated	√	**no**
Left dislocation	√	**no**
Clefts	√	**no**
Right-dislocations	√	**no**
Neutral	**no**	√

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*] **OBJ**
I see PRN.3SGM
(pointing) *I see HIM.*

b. Je l ai donne a [*lui*] **IND.OBJ**
I CL.3SGM;ACC have given to PRN.3SGM
(pointing) *I have given it to HIM.*

c. ?[***Lui***] est arrive a neuf heures **?SUBJ**
PRN.3SGM is arrived at nine hours
(pointing) *HE arrived at 9 o'clock.*

d. [***Lui***], **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_{OBL}], 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*.

(54)

CLITIC

a.	ye-lhu	sufela	uvilu	=[*s*]
	3SGM-walk$_{PRF}$	on	bicycle	=CL.3SG;POSS
	He went on his bike.			

***n* CL$_{OBL}$**

b.	ye-lhu	sufela	uvilu	[***ines***]
	3SGM-walk$_{PRF}$	on	bicycle	POSS.3SG
	He went on his bike.			

n **[*n* CL$_{OBL}$]**

c.	ye-lhu	sufela	uvilu ***n***	[***ines***]
	3SGM-walk$_{PRF}$	on	bicycle OF	POSS.3SG
	He went on his bike.			

The complex and clitic forms of the possessives share formal similarities in that the latter corresponds to a reduced form of the former [166] 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	[***inu*** /	***n inu***]
		house	DEM$_{PROX}$	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. [***inu* / *n inu***] axxam aki
POSS.1SG house DEM$_{PROX}$
This house is mine!

c. axxam aki [***inu/n inu***] macči inek / n inek
house DEM$_{PROX}$ POSS.1SG NEG POSS.2SGM
This house is mine, not yours.

d. axxam [***inu/ n inu***] aq (y)ine-m / n inem
house POSS.1SG and POSS.2SGF
The house of you and me.

e. tilifun [***inu / 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 =[*iw*] aki
house =CL.1SG;POSS DEM$_{PROX}$
#This house is mine!

b. *i-čveh uxxam =[*IW*] macči n wergaz
3SGM-be.beautiful$_{PRF}$ house =CL.1SG;POSS NEG OF man
MY house is beautiful, not the man's.

c. * i-čveh uxxam =[*iw*] aq n wergaz
3SGM-be.beautiful$_{PRF}$ house =CL.1SG;POSS and OF man
?My and the man' house is beautiful.

d. *axxam =[*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:

(57) Q: [***bumi***] =t tektef
whom =CL.3SGM;ACC book
Whose book is this?

A: ***ines/ n ines*** / #tektef=[***is***]
PRO.3SGM / book =POSS.3SG
His / # his book

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 (ΦPs); 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*] aɣrum nni
3SGF-eat$_{PRF}$ marwa bread DEM$_{AMB}$
Marwa ate this bread.

b. te-čča [*nettat*] aɣrum nni
3SGM-eat$_{PRF}$ PRN.3SGF bread DEM$_{AMB}$
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) d ***[nettat]***
COP PRN.3SGF
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) d [***nettat***]
COP PRN.3SGF
#It's a her.
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. d [***axxam*** ***nni***]
COP house DEM$_{AMB}$
#This is a house.
It's this house.

b. d [***Ahmed***]
COP Ahmed
It's Ahmed.
#It's a Ahmed.

Instead, strong pronouns, like the DP's in (62), ought to be considered as clefted[167] 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-ɣ}	
		COP	PRN.3SGM	COMP	see$_{\text{PRF}}$-1SG	
		It's him that I saw.				
	b.	d	axxam nni	{i	g-cevehe-n}	
		COP	house DEM$_{\text{AMB}}$	COMP	3SGM-be.beautiful$_{\text{PRF}}$-PTCP	
		It's this house that is beautiful.				
	c.	d	Ahmed	{i	=d	i-ruh-n}
		COP	Ahmed	COMP	=D	3SGM-go$_{\text{PRF}}$-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***]$_i$	ye-na=d	[***netta***]$^{*}_{i/k}$	i-vra	ad
		every boy	3SGM-say$_{\text{PRF}}$=D	PRO.3SGM	3SGM-want$_{\text{PRF}}$	PRT
		i-ruh[168]				
		3SGM-go$_{\text{AOR}}$				

Every boy said that he wanted to go.

$*\forall(x)\ [\text{boy}\ (x) \rightarrow x \text{ said } x \text{ wants to go}]$

$\forall(x)\ [\text{boy}\ (x) \rightarrow \exists(y)\ [\text{male}\ (y) \wedge x \text{ said } y \text{ wants to go}]$

---

[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 complentizer *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**]$_i$	i-nad	i-vra	[*netta*]$_i$	ad	i-ruh
	every boy	3SGM-say$_{\text{PRF}}$=D	3SGM-want$_{\text{PRF}}$	PRN.3SGM	PRT	3SGM-go$_{\text{AOR}}$
	Every boy said that he wanted to go					
ii.	*[**kul aqcic**]$_i$	inad	ivra	ad	iruh	[*netta*]$_i$

b.	i-zra	[*didine*]$_i$	beli	sarah	te-wala
	3SGM-know$_{PRF}$	Didine	that	sarah	3SGF-see$_{PRF}$

[*netta*]$_{*i/k}$
PRN.3SGM
Didine knows that Sarah saw him.[169]

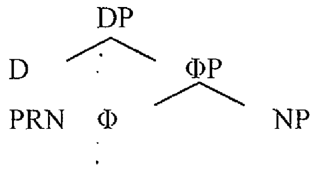
*Didine$_i$ (λx (x knows that Sarah saw him$_i$))

Didine$_i$ (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 aqcic* '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)



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[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 construed as bound variables. In (66a) below, the covert pronoun *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.

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[169] The sentence might be possible if contrasted but I leave that aside for further development.

[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.

(66) a. i-na=d **[kul aqcic]**$_i$ [*pro*]$_{i/k}$ i-vra ad
3SGM-say$_{\text{PRF}}$=D every boy pro 3SGM-want$_{\text{PRF}}$ PRT

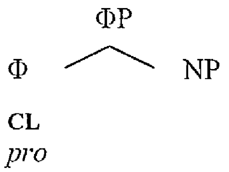
i-ruh
3SGM-go$_{\text{AOR}}$
Every boy said that he wanted to go.
$\forall(x)\ [\text{boy}\ (x) \rightarrow x \text{ said } x \text{ wants to go to}]$
$\forall(x)\ [\text{boy}\ (x) \rightarrow \exists(y)\ [\text{male}\ (y) \wedge x \text{ said } y \text{ wants to go}]$

b. [***kul aqcic***] i-zra beli
every boy 3SGM-know$_{\text{PRF}}$ COMP

t-wala =[*t*]
3SGF-see$_{\text{PRF}}$ =CL.3SGM;ACC
Every man knows that she saw him
$\forall(x)\ [\text{boy}\ (x) \rightarrow x \text{ knows Miriam saw } x]$
$\forall(x)\ [\text{boy}\ (x) \rightarrow \exists(y)\ [\text{male}\ (y) \wedge x \text{ knows Miriam saw } y]$

After D&W clitics and pros can be represented as (67) below:

(67)



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	[*netta*]$_{i/k}$	a
[every boy]	3SGM-say$_{\text{PRF}}$=D	PRO.3SGM	PRT

i-ttazal-n	atas
3SGM-run$_{\text{IMPRF}}$- PTCP	a.lot

Every boy said that he was the fastest runner.

a. $\forall(x)$ [boy (x) $\rightarrow$ x said x was the fastest runner]

b. $\forall(x)$ [boy (x) $\rightarrow \exists(y)$ [male (y) $\wedge$ x said y 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-ttazale-n	atas
3SGM-say$_{\text{PRF}}$=D	every	boy	PRT	3SGM-run$_{\text{IMPRF}}$-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 ΦPs. 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.

Conclusion

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 & Wiltschko (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.

Appendix

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, *Tameɣra 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, *Taqcict n temurt*, is an autobiographical story told by a Taqbaylit woman in her sixties living in the region of Algiers.

Narrative 1: Tameɣra n Hassan (Hassan's wedding)

[TnH_N.B_200708]

(1)	asaki	a	=wen	=d	heku-ɣ	f	temeɣra	n	Hassan,
	today	PRT	=CL.2PL;DAT	=D	tell$_{AOR}$-1SG	about	party	OF	Hassan

	amik	i-tada
	how	3SGM-happen$_{PRF}$

Today, I will tell you the story of Hassan's wedding, how it happened

(2)	deg	ass	ahi,	anida	deg	ass	n	temeɣra	(y)ahi
	in	day	DEM$_{DIS}$	where	in	day	OF	party	DEM$_{DIS}$

	ne-kr	=d	seveh
	1PL-get.up$_{PRF}$	=D	morning.

That day, the day of this party, we got up in the morning

(3)	imaren,	jewahi	n	lacera	n-qim	a	n-ttrağu
	after	around	OF	ten	1PL-sit$_{PRF}$	PRT	1PL-wait$_{IMPRF}$

	milmi	a	=d	t-as	yemma	d	kahina	wihi	n	Bouzareah
	when	PRT	=D	3SGF-come$_{AOR}$	mother	CONJ	Kahina	those	OF	Bouzareah

After, at around ten o'clock, we were waiting for mother and Kahina and those of Bouzareah to come

(4)	imaren,	fel	acera	pede-n	=d	aken	ad	ruh-n	ɣar	Lila
	after	at	ten	arrive$_{PRF}$-3PLM	=D	in.order	PRT	go$_{AOR}$-3PLM	to$_{DIR}$	Lila

At ten o'clock they arrived (at our house) before going to Lila's

(5)	imaren	ruh-n	ɣar	Lila
	after	go$_{PRF}$-3PLM	to$_{DIR}$	Lila

After, they went to Lila's.

(6)	imaren	tamedit	ahi	n-mlal	=iten	=id
	after	evening	DEM$_{AMB}$	1PL-meet$_{PRF}$	=CL.3PLM;ACC	=D

	deg	uxxam	n	Hassan	anida	i	te-la	temeɣra
	in	house	OF	Hassan	where	COMP	3SGF-be	party

After, that evening we met them in Hassan's house, where the party took place

(7)

imaren	mi	n-ruh	tamedit	ahí,	n-ruh	nukni
after	when	1PL-go$_{\text{PRF}}$	evening	DEM$_{\text{AMB}}$	1PL-go$_{\text{PRF}}$	PRN.1PL

s	uxxam=neɣ	n-ruh	s	axxam	n	temeɣra
with	house=CL.1PL;POSS	1.PL-go$_{\text{PRF}}$	to$_{\text{DIR}}$	house	OF	wedding

After, that evening, when we went, us and (those from) our house, we went to the house of the wedding

(8)

n-ruh	s	axxam	n	temeɣra	anida	n-kcem
1PL-go$_{\text{PRF}}$	to$_{\text{DIR}}$	house	OF	party	where	1PL-enter$_{\text{PRF}}$

ɣar	yiwet	n	texxamt.
to$_{\text{DIR}}$	one	OF	bedroom.

We went to the house of the wedding party (and) there we got into a bedroom.

(9)

n-ufa	deg=s	atas	n	telawin,	timɣarin
2PL-find$_{\text{PRF}}$	inside=CL;3SG	many	OF	women	old.women

Inside, we found many women (and) old women.

(10)

imaren	lla-n	a	cethe-n
after	be$_{\text{PRF}}$-3PLM	PRT	dance$_{\text{AOR}}$-3PLM

aq	a	cenu-n	taɣect	n	cherifa	‘sniwa	ifenğanen’
and	PRT	sing$_{\text{AOR}}$-3PLM	song	OF	Cherifa	tray	little.glasses

After, they were dancing and singing Cherifa’s song ‘tray of little glasses’.

(11)

imaren	qim-n	ak	nni,	qim-n
after	sit$_{\text{PRF}}$-3PL	like	DEM$_{\text{AMB}}$	sit$_{\text{PRF}}$-3PL

after, they sat like that, they sat.

(12)

n-qim	di	txxamt	ahí	alami	d	lawan	imensi
1PL-sit$_{\text{PRF}}$	in	room	DEM$_{\text{DIS}}$	until	COP	time	diner

We sat in that room until dinner time.

(13)

n-ruh	s	axxam	wayed	zdat=nssen
1PL-go$_{\text{PRF}}$	to$_{\text{DIR}}$	house	other	next=CL.3PLM;POSS

We went to the other house next to them (the house of party)

(14)

n-ruh,	n-čča	dina	seksu	aq	carba
1PL-go$_{\text{PRF}}$	1PL-eat$_{\text{PRF}}$	SD$_{\text{DIS}}$	couscous	and	soup

We went, there we ate couscous and soup.

(15)	imaren	mi	n-kfa	n-uγal	γar	taxxamt,	s	asalu
	after	when	1PL-finish$_{\text{PRF}}$	1PL-return$_{\text{PRF}}$	to$_{\text{DIR}}$	room	to$_{\text{DIR}}$	living.room

After, when we were finished, we went back to the room, to the living room

(16)	daγen	rna-n	xedem-n	cedih	ak	aki	alama	qerib
	and	add$_{\text{PRF}}$-3PL	work$_{\text{PRF}}$-3PL	dance	like	DEM$_{\text{PROX}}$	until	nearly
	d	tnac						
	COP	midnight						

And they started to dance again, like this, until nearly midnight.

(17)	uli-n	γar	latiras
	go.up$_{\text{PRF}}$-3PL	to$_{\text{DIR}}$	roof

They went up to the roof.

(18)	keml-n	dina	zehwa=nsen
	finish$_{\text{PRF}}$-3PL	SD$_{\text{DIS}}$	celebration=CL.3PLM;POSS

There, they finished their celebration.

(19)	ma	nukni	n-sub	s	asalu	aken
	COMP	PRN.1PL	1PL-go.down$_{\text{PRF}}$	to$_{\text{DIR}}$	living room	in.order
	a	n-tes				
	PRT	1PL-sleep$_{\text{AOR}}$				

But, us, we went down to the living room to sleep.

(20)	imaren	azeka	seveh	n-ekr	=d
	after	tomorrow	morning	1PL-stand$_{\text{PRF}}$	=D

Then, the following morning, we got up.

(21)	n-swa	leqahwa
	1PL-drink$_{\text{PRF}}$	coffee

We had breakfast.

(22)	imaren	ruh-n	a	=d	awi-n	tislit
	after	go$_{\text{PRF}}$-3PL	PRT	=D	bring$_{\text{AOR}}$-3.PLM	bride

Then, they went to bring the bride.

(23)	qela-n	f	rebeεa,	f	lefğer
	start$_{\text{PRF}}$-3PL	at	four	at	lfjir

They departed at four (in the morning), at sunrise.

(24) imaren ruh-n a =tt =id awi-n si tisemsilt
after go$_{\text{PRF}}$-3PL PRT =CL.3SGF;ACC =D bring$_{\text{AOR}}$-3PL from Tisemsilt
Then, they went to bring her from Tisemsilt.

(25) mi ruh-n a =tt =id awi-n
when go$_{\text{PRF}}$-3PL PRT =CL.3SGF;ACC =D bring$_{\text{AOR}}$-3PL

n-qim nukni
1PL-sit$_{\text{PRF}}$ PRN.1PL

Then, while they were going to get her, us we stayed.

(26) t-ruh yema aq yema werdiya
3SGF-go$_{\text{PRF}}$ mother and mother Ouardia
My mother and my mother Ouardia went.

(27) ruh-nt
go$_{\text{PRF}}$-3PLF
They went (there).

(28) qim-nt tiyad deg uxxam a ttrağu-nt
sit$_{\text{PRF}}$-3PLF other in house PRT wait$_{\text{IMPRF}}$-3PLF

milmi a =d t-awed tiselit
when PRT =D 3SGF-arrive$_{\text{AOR}}$ bride

The others stayed in the house (and) they were waiting for the arrival of the bride

(29) imaren qime-n deg salu a hedre-nt
after sit$_{\text{PRF}}$-3PLM in living.room PRT speak$_{\text{AOR}}$-3PLF

a hedre-nt
PRT speak$_{\text{AOR}}$-3PLF

Then, they sat in the living room they were talking (and) talking.

(30) imaren f leftur n-čča seksu aq carba
after at lunch 1PL-eat$_{\text{PRF}}$ couscous and soup
Then, at lunch time, we ate couscous and soup.

(31) imaren alami (i) =d t-awed tiselit ğewayeh teleta
after until COMP =D 3SGF-arrive$_{\text{PRF}}$ bride around three
After, until the arrival of the bride at about three o'clock.

(32) imbeseh yiwet n tunubil t-heves umpan di tisemsilt
but one OF car 3SGFM.stop$_{\text{PRF}}$ en.panne in Tisemsilt
but, one car broke down in Tisemsilt.

(33)

t-qim	umpan
3SGF-stay$_{PRF}$	en.panne

It remained broken.

(34)

ur	t-pid	ara	alami	d	degid,	alami	d	tessa
NEG1	3SGF-arrive$_{PRF}$	NEG2	until	COP	night	until	COP	nine
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$_{PRF}$	sit$_{PRF}$-3PLM

Then, we sat, they sat.

(36)

mi	t-ped	tislit	t-seder
when	3SGF-arrive$_{PRF}$	bride	3SGF-catwalk$_{PRF}$

When the bride arrived, she cat-walked.

(37)

imaren	a	t-ttdir	a	t-tthetit	di
after	PRT	3SGF-catwalk$_{IMPRF}$	PRT	3SGF-wear$_{IMPRF}$	in
levesa					
clothes					

Then, she cat-walked, she wore beautiful clothes.

(38)

a	te-ttruhu	ɣar	texxamt=is
PRT	3SGF-go$_{IMPRF}$	to$_{DIR}$	room=CL.3SG;POSS

She went to her room.

(39)

a	=d	t-ttuɣal	anida	dahi	i
PRT	=D	3SGF-return$_{IMPRF}$	where	SP$_{DIS}$	COMP
nejema-nt	yarek	tilawin			
group$_{PRF}$-3PLF	all	women			

She came back to where all the women were grouped

(40)

imaren	mi	t-ped	kan	tiselit	
after	when	3SGF-arrive$_{PRF}$	just	bride	
fka-n	=as	a	t-ečč	cwiya	pkesum
give$_{PRF}$-3PLM	=CL.3SG;DAT	PRT	3SGF-eat$_{AOR}$	little.bit	meat

As soon as the bride arrived, they gave her a little bit of meat to eat.

(41)	rna-n	=as	ayifk	rna-n	=as
	add$_{\text{PRF}}$-3PLM	=CL.3SG;DAT	milk	add$_{\text{PRF}}$-3PLM	=CL.3SG;DAT

	tabat	n	lakrim
	box	OF	ice.cream

They also gave her some milk, they also gave her a pot of ice cream

(42)	t-čča	=ten	alami	i	t-rwa	aken
	3SGF-eat$_{\text{PRF}}$	=CL.3PLM;ACC	until	COMP	3SGF-be.full$_{\text{PRF}}$	in.order

	a	t-ssa	leğehd
	PRT	3SGF-have$_{\text{AOR}}$	strength

She ate them until she was full in order to have strength

(43)	aken	a	te-ssa	leğehd	ɛlaxxaterc	t-aya
	in.order	PRT	3SGF-have$_{\text{AOR}}$	strength	because	3SGF-be.tired$_{\text{PRF}}$

	mi	=d	t-usa	si	tisemsilt
	when	=D	3SGF-come$_{\text{PRF}}$	from	tisemsilt

	ɛlaxxaterc	avwayaj	n	rwa	swaya,	atas	atas
	because	journey	OF	four	hours	a.lot	a.lot

In order to have strength because she got tired when she came from Tisemsilt, because the journey (lasted) four hours, it's a lot!

(44)	imaren	kul	ma	te-kcem	s	asalu	a
	after	every	COMP	3SGF-enter$_{\text{PRF}}$	to$_{\text{DIR}}$	living.room	PRT

	t-seder	a	te-ziken	i	tilawin
	3SGF-catwalk$_{\text{AOR}}$	PRT	3SGF-show$_{\text{AOR}}$	to$_{\text{DAT}}$	women

	levesa	i	t-uɣ	ɛlaxxaterec	d	tiselit
	clothes=POSS.3SG	COMP	3SGF-buy$_{\text{PRF}}$	because	COP	bride

	tajedidt
	new

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.

(45)	a	t-uɣal
	PRT	3SGF-return$_{\text{AOR}}$

She returned.

(46)

a	t-awed	ɣar	taxxamt=is	a	t-ečč
PRT	3SGF-arrive$_{\text{AOR}}$	to$_{\text{DIR}}$	room=CL.3SG;POSS	PRT	3SGF-eat$_{\text{AOR}}$

haǧa	tasemad	iwaken	a	te-zmer	a	te-kmel
something	cold	in.order	PRT	3SGF-can$_{\text{AOR}}$	PRT	3SGF-finish$_{\text{AOR}}$

She arrived at her room to eat something cold in order to be able to go on

(47)

imaren	deɣa	te-seder	ak	nni
after	then	3SGF-catwalk$_{\text{PRF}}$	like	DEM$_{\text{AMB}}$

Then, she cat-walked like that.

(48)

di	leweqt	tilawin	qime-nt	a	hedre-nt	fel	=s
in	time	women	sit$_{\text{PRF}}$-3PLF	PRT	speak$_{\text{IMPRF}}$-3PLF	on	=CL.3SG

During this time, women kept speaking about her

(49)

'te-ceveh	neɣ	te-cemt'
3SGF-be.beautiful$_{\text{PRF}}$	CONJ	3SGF-be.ugly$_{\text{PRF}}$

'She is beautiful or she is ugly'

(50)

imaren	t-aya	ɛlaxxaterc	ahaqel	u	=s
after	3SGF-be.tired$_{\text{PRF}}$	because	perhaps	NEG1	=3SG;DAT

fki-n	ara	atas
give$_{\text{PRF}}$-3PL	NEG2	many

Then, she was tired perhaps because they didn't give her many (...)

(51)

neɣ	t-aya	ɛlaxaterc	te-seder	atas
CONJ	3SGF-be.tired	because	3SGF-catwalk$_{\text{PRF}}$	a.lot

or she was tired because she cat-walked a lot.

(52)

te-lha	tiselit	di	sxana	daɣen	ulahed	aklimatisur
3SGF-walk$_{\text{PRF}}$	bride	in	heat	also	no	air-conditioning

The bride walked in the heat and (there was) no air-conditioning.

(53)

i-la	haca	avuntilatur
3SGM-be$_{\text{PRF}}$	only	fan

There was only a fan.

(54)

imaren	te-qim	ak	nni	di	texxamt=is
after	3SGF-sit$_{\text{PRF}}$	like	DEM$_{\text{AMB}}$	in	room =CL.3SG;POSS

Then, then, she sat in her room, like that.

(55)	te-stafa,	t-ruh	te-bedel	levesa=s
	3SGF-rest$_{PRF}$	3SGF-go$_{PRF}$	3SGF-change$_{PRF}$	clothes=CL.3SG;POSS

She rested, she changed her clothes

(56)	tilawin ahi,	kul	yiwet	tahi	i	g-qrev	wexxam=is
	womenDEM$_{DIS}$	each	one	PRN$_{DIS}$	COMP	3SGM-be.next$_{PRF}$	house=CL.3SG;POSS

a	te-qim	a	t-ens
PRT	3SGF-sit$_{AOR}$	PRT	3SGF-sleep.over$_{AOR}$

tina	i	g-vad	wexxam=is	a	t-ruh
PRN$_{AMB}$	COMP	3SGM-be.far$_{PRF}$	house=CL.3SG;POSS	PRT	3SGF-go$_{AOR}$

(Amongst) those women, those who were near their houses stayed to sleep over, those who were far from their houses left.

(57)	a	=d	ttase-n	imeγaren=nsent
	PRT	=D	come$_{IMPRF}$-3SGM	old.men=CL.3PLF;POSS

a	=ten	ttawi-n
PRT	=CL.3PL;ACC	take$_{IMPRF}$- 3.PL.MS

Their husbands picked them up.

(58)	imaren	qim-n	tilawin	qereve-nt
	after	sit$_{PRF}$-3PLM	women	be.near$_{PRF}$-3PLF

Then, the women who lived nearby stayed.

(59)	rna-nt	cwitah	n	lhul	d	zehwa	di
	add$_{PRF}$-3PLF	some	PREP	movement	and	celebration	in

txxamt	s	ubendir	aq	tuγac	n	cerifa
room	with	drum	and	songs	OF	cherifa

am	sniwa	ifenğalen
such as	tray	little glasses

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'.

(60)	taγect	aki	seg	mi	n-ruh	nettat	te-cal
	song	DEM$_{DIS}$	from	when	1PL-go$_{PRF}$	PRN.3SGF	3SGF- be.switched.on$_{PRF}$

That song, since we got there, it was switched on.

(61)	ye-εni	zeha-n	ye=s
	3SGM-mean$_{PRF}$	celebrate$_{PRF}$-3PLM	with=CL.3SG

It means (that) they had fun with it.

(62)

imaren	n-arğa	ak	nni	n-arğa
after	1PL-wait$_{\text{PRF}}$	like	DEM$_{\text{AMB}}$	1PL-wait$_{\text{PRF}}$

n-qim	alami	tamedit
1PL-sit$_{\text{PRF}}$	until	evening

Then, we waited, like that, we waited, we stayed until the evening.

(63)

fka-n	=aγ	imensi
give$_{\text{PRF}}$-3PLM	=CL.2PL;DAT	dinner

They gave us dinner.

(64)

ce-čče-n	layevad
CAUS-eat$_{\text{PRF}}$-3PLM	people

They made people eat.

(65)

zeware-n	deg	rgazen	imaren	tilawin
start$_{\text{PRF}}$-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$_{\text{DIS}}$	3SGF-come$_{\text{PRF}}$	=D	PRT	3SGF-sit$_{\text{AOR}}$

nettat	d	tilawin	i	=d	igran
PRN.3SGF	and	women	COMP	=D	stay$_{\text{PTCP}}$

Then, the bride came to sit, her, and the women who stayed.

(67)

t-qim,	t-qeser	kid=sent
3SGF-sit$_{\text{PRF}}$	3SGF-chat$_{\text{PRF}}$	with=CL.3PLF

She sat, she chatted with them.

(68)

t-dha	yid=sent	aq
3SGF-have.fun$_{\text{PRF}}$	with=CL.3PLF	and

te-qedm	=itent	i	temγart=is
3SGF- introduce$_{\text{PRF}}$	=CL.3PLF;ACC	to$_{\text{DAT}}$	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	rna-nt	cwiya	n
after	in	night	DEM$_{\text{DIS}}$	PRT	add$_{\text{AOR}}$-3.PLM	some	OF

zehwa	di	latiras
celebration	on	roof

Then, that night they continued their celebration on the roof.

(70)	imaren	tess-ent
	after	sleep$_{\text{PRF}}$-3PLMF

After, they slept.

(71)	azeka	(y)ahi	daγen	a	xedm-en	lftur	n	teslit
	tomorrow	DEM$_{\text{DIS}}$	also	PRT	work$_{\text{AOR}}$-3PLM	lunch	OF	bride

The following day, they also prepared the bride's meal.

(72)	t-sep	wetmas	n	leεris
	3SGF-cook$_{\text{PRF}}$	sister	OF	groom

The groom's sister cooked.

(73)	t-sep	hem	lehlu,	t-sep	carba,	seksu,	lburak
	3SGM-cook$_{\text{PRF}}$	meat	prunes	3SGF-cook$_{\text{PRF}}$	soup	couscous	bourek

lkefta	aken	a	=s	ziken-n	i
kefta	in.order	PRT	=CL.3SG;DAT	show$_{\text{AOR}}$-3PLM	to$_{\text{DAT}}$

teslit	acu	zaεma	i	la	xdem-n
bride	what	so.called	COMP	PRT	work$_{\text{IMPRF}}$-3PLM

qudre-n	=tt
respect$_{\text{PRF}}$-3PLM	=CL.3SGF;ACC

She cooked meat with prunes, she cooked a soup, couscous, bourek, kefta in order to show the bride that they respected her.

(74)	xedme-n	=as	lftur	ahi
	work$_{\text{PRF}}$-3PLM	=CL.3SG;DAT	lunch	DEM$_{\text{DIS}}$

They made her that meal.

(75)	rna-n	hem	lehlu
	add$_{\text{PRF}}$-3PLM	meat	prunes

They added meat with prunes.

(76)	sepu-n	ak	nni
	cook$_{\text{PRF}}$-3PLM	like	DEM$_{\text{AMB}}$

They cooked like that.

(77)	t-sep	wetmas	n	tislit
	3SGF-cook$_{\text{PRF}}$	sister	OF	bride

The bride's sister cooked.

(78)	m-yawan-ent	yarek	temγarin	ahi
	REC-help$_{\text{PRF}}$-3PLF	all	old.women	DEM$_{\text{DIS}}$

All those old women helped each other.

(79)	kul	yiwet	t-fka	=d	cwiya	si	leğehd=is
	each	one	3SGF-give$_{\text{PRF}}$	=D	some	from	strength=CL.3SG;POSS

	aken	deqiqa	ad	y-kfu	cγel
	in.order	one.minute	PRT	3SGM-finish$_{\text{AOR}}$	work

Each one gave some of her strength in order to finish the work quickly

(80)	imaren	mi	d	lawen	n	lftur	ruh-nt
	after	when	COP	time	OF	lunch	go$_{\text{PRF}}$-3PLF

Then, at lunch time, they left.

(81)	qim-nt	a	se-ččay-ent	wihi	iyuz-en
	sit$_{\text{PRF}}$-3PLF	PRT	CAUS-eat$_{\text{AOR}}$-3PLF	PRN$_{\text{DIS}}$	be.near$_{\text{PRF}}$-3PLM

	seg=sent,	a	=s	nettili-n	atas	atas
	from=CL.3PLF	PRT	=CL.3SG;DAT	be.related$_{\text{AOR}}$-3PLM	many	many

They were making their relatives eat, (those) closely related.

(82)	ruh-n	pi-n	=ten	s	asalu
	go$_{\text{PRF}}$-3PLM	bring$_{\text{PRF}}$-3PLM	=CL.3PLM;ACC	to$_{\text{DIR}}$	living room

They took them to the living room.

(83)	se-čče-n	=ten	si	kul	xxir
	CAUS-eat$_{\text{PRF}}$-3PLM	=CL.3PLM;ACC	from	all	good.thing

They made them eat from all the good things.

(84)	imaren	rena-n	fka-n	=asen
	after	add$_{\text{PRF}}$-3PLM	give$_{\text{PRF}}$-3PLM	=CL.3PLM;DAT

	disir	lgazuz	čina	lfequs	dela
	dessert	soda	orange	melon	watermelon

After, they also gave them dessert, soft drinks, oranges, melon, watermelon

(85)	imaren	mi	kefa-n	acečči	la-nt	tilawin
	after	when	finish$_{\text{PRF}}$-3PLM	meal	be$_{\text{PRF}}$-3PLM	women

	ahí	a	hedre-nt	f	lvena	n	lqut	ahí
	DEM$_{\text{DIS}}$	PRT	speak$_{\text{AOR}}$-3PLF	on	goodness	OF	food	DEM$_{\text{AMB}}$

Then, when they finished the service, those women were speaking about the goodness of the food

(86)

imi	d	lftur	n	teslit	ye-zuzr	=as
because	COP	lunch	OF	bride	3SGM-season$_{\text{PRF}}$	=CL.3SG;DAT

appi	aqa	n	lvena
God	some	OF	goodness

Since it was the bride's meal, God gave it some goodness.

(87)

imaren	nukni	dayen	a	n-ker	a	n-ruh
after	PRN.2PL	that.is.it	PRT	1PL-stand$_{\text{AOR}}$	PRT	1PL-go$_{\text{AOR}}$

εlaxaterec	tameγra	t-kefa
because	party	3SGF-finish$_{\text{PRF}}$

Then, we started to leave because the party ended.

(88)

t-kefa	temeγra
3SGF-finish$_{\text{PRF}}$	party

The party ended.

(89)

i-laq	a	n-ruh
3SG-must	PRT	1PL-go$_{\text{AOR}}$

We had to go.

(90)

imaren	n-nejema	ak	nṇi
after	1PL-group$_{\text{PRF}}$	like	DEM$_{\text{AMB}}$

wihi	a	iruhen	γar	lezzayer
PRN$_{\text{DIS}}$	PRT	go$_{\text{PTCP}}$	to	Álgiers

ad	ruh-n,	wihi	a	i-qim-n
PRT	go$_{\text{AOR}}$-3PLM	PRN$_{\text{DIS}}$	PRT	3sgm-sit$_{\text{AOR}}$-PTCP

di	lbira	ad	qim-n
in	Bouira	PRT	sit$_{\text{AOR}}$-3PL

Then, we assembled. Those who were going to Algiers went, those who were staying in Bouira stayed.

(91)

mi	=d	n-usa	a	n-ruh
when	=D	1PL-come$_{\text{PRF}}$	PRT	1.PL-go$_{\text{AOR}}$

ra-n	=aγ	=d	tibadin	n	lpatiseri
add$_{\text{PRF}}$-3PLM	=CL.1PL;DAT	=D	boxes	PREP	macaroons

When we were leaving, they gave us boxes of macaroons.

(92) kul yiwen fka-n =as
each one give$_{\text{PRF}}$-3PLM =CL.3SG;DAT

tabatt n lpatiseri
box OF macaroons

Everyone received a box of macaroons.

(93) rna-n =as snat n tibadin
add$_{\text{PRF}}$-3PLM =CL.3SG;DAT two OF boxes

timecetah n lgatu n temγra
small OF cakes OF party

In addition, they also received two small boxes of cakes from the party.

(94) imaren ruh-nt snat n tumubilat γar lezzayer
after go$_{\text{PRF}}$-3PLF two OF cars to$_{\text{DIR}}$ Algiers
Then, two cars went to Algiers.

(95) t-qim tumubil=neγ n-ruh s axxam
3SGF-sit$_{\text{PRF}}$ car=CL.1PL;POSS 1PL-go$_{\text{PRF}}$ to$_{\text{DIR}}$ house
Our car stayed, we went to our house.

(96) ak aki i-tada temeγra n Hassan
like DEM$_{\text{PROX}}$ 3SGM-pass$_{\text{PRF}}$ party OF Hassan
This is how Hassan's wedding party took place.

Narrative 2: Taqcict n temurt (A girl from the village)

[TnT_Y.O_200708]

(1)	d	taqcict	n	puxxam
	COP	girl	OF	house

I was a house girl.

(2)	leqeraya,	ur	n-γeri	ara
	studies	NEG1	1PL-study$_{\text{PRF}}$	NEG2

Studies, we didn't study.

(3)	n-xdem	ceγel	puxxam
	1PL-work$_{\text{PRF}}$	work	house

We did the housework.

(4)	n-efred	iduman
	1PL-sweep$_{\text{PRF}}$	rubbish

We swept the rubbish.

(5)	a	n-essired	lehwal
	PRT	1PL-wash$_{\text{AOR}}$	dishes

We washed the dishes.

(6)	a	n-nenγel	iduman s	agudu	d	iqecwalen
	PRT	1PL-throw.away$_{\text{AOR}}$	rubbish to	bin	COP	baskets
	f	izugar=neγ				
	on	backs=CL.1PL;POSS				

We threw the rubbish in the bin, (carrying) the baskets on our backs.

(7)	imaren	i-la	leweqet	n-ttruhu	γar	lexxela
	after	3SGM-be$_{\text{PRF}}$	time	1PL-go$_{\text{IMPRF}}$	to$_{\text{DIR}}$	field

After there were times, we went to the field.

(8)	a	ttdu-γ	nek	d	hepu	yemma=s	n	vava
	PRT	go.with$_{\text{IMPRF}}$-1SG	PRN.1SG	PREP$_{\text{COM}}$	granny	mother=CL.3SG;POSS	OF	dad

We were going, me and my grandmother, my father's mother.

(9) a n-ruh lawan n zit,
PRT 1PL-go$_{\text{AOR}}$ time OF oil

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

We went, at the time of oil, we went to pick-up olives.

(10) a n-čar iqecwalen n uzemur
PRT 1PL-fill$_{\text{AOR}}$ baskets OF olives
We filled up baskets of olives.

(11) tamedit, a =ten =id n-awi f izugar=neɣ
evening PRT =CL.3PLM;ACC =D 1PL-bring$_{\text{AOR}}$ on backs=CL.1PL;POSS
In the evening, we brought them on our backs.

(12) daɣen azekka nni, daɣen kifkif
also tomorrow DEM$_{\text{AMB}}$, also same
The following day, it was also the same.

(13) lawan pejerad n usaɣur, a n-ruh daɣen
time harvest OF mache PRT 1PL-go$_{\text{AOR}}$ also

a n-jered asaɣur
PRT 1PL-harvest$_{\text{AOR}}$ mache
At the time of the mache harvest, we also harvested mache.

(14) lawan n tevexesisin a n-ruh a n-kes lexrif
time OF figs PRT 1PL-go$_{\text{AOR}}$ PRT 1PL-pick$_{\text{AOR}}$ fig
At the time of figs, we picked up figs.

(15) a n-kes lexrif
PRT 1PL-pick$_{\text{AOR}}$ fig
We picked up figs.

(16) lawan n uvelud d avelud
time OF acorn COP acorn
At the time of acorn, it was acorn.

(17) lawan n heblemluk (...)
time OF cherries
At the time of cherries (...)

(18) dima nekini di lexela, nek d hepu di lexela
always PRN.1SG in field PRN.1SG with grandma in field
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-go$_{\text{PRF}}$ granny go.with$_{\text{PRF}}$-1SG with=CL.3SG
Where grandma went, I went with her.

(20) t-fehme-d?
2SG-understand$_{\text{PRF}}$-2SG
Do you understand?

(21) lamer i=(i)y te-ği deg uxxam ad reyehe-γ
never COMP=CL.1SG;ACC 3SGF-leave$_{\text{PRF}}$ in house PRT rest$_{\text{AOR}}$-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$_{\text{PRF}}$-1SG
Me, at my age, I was young.

(23) nettat te-ra=yi tametut tameqrant
PRN.3SGF 3SGF-consider$_{\text{PRF}}$=CL.1.SG;ACC woman tall
Her, she considered me as a mature woman.

(24) a n-ruh ad n-jered asaγur
PRT 1PL-go$_{\text{AOR}}$ PRT 1PL-harvest$_{\text{AOR}}$ mache
We went to harvest the mache.

(25) a n-lqed azemur
PRT 1PL-pick$_{\text{AOR}}$ olives
We picked olives.

(26) a n-lqed heblemluk
PRT 1PL-pick$_{\text{AOR}}$ cherry
We picked cherries.

(27) a n-ekes avelud, lekermus, kulec kulec
PRT 1PL-pick$_{\text{AOR}}$ acorn, figs, everything, everything
We picked acorn, figs, everything, everything.

(28) ad ruhe-γ s axxam ad uγal-γ γar lexxela
PRT go$_{\text{AOR}}$-1SG to$_{\text{DIR}}$ house PRT return$_{\text{AOR}}$-1SG to$_{\text{DIR}}$ field
I would go to the house, I would return to the fields.

(29) a =sent awi-γ lftur ad fetr-nt
PRT =CL.3PLF;DAT bring$_{\text{AOR}}$-1SG lunch PRT eat$_{\text{AOR}}$-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=neγ	i-vad
3sgm-add$_{PRF}$	field=CL.1PL;POSS	3SGM-be.far$_{PRF}$

i-vad	atas	te-fehme-d
3SGM-be.far$_{PRF}$	a.lot	2SG-understand$_{PRF}$-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-γ	deg	uxxam	ad	niwele-γ
PRT	stay$_{AOR}$-1SG	inside	house	PRT	sift$_{AOR}$-1SG

I stayed at home, I sifted.

(34)

ad	niwele-γ	seksu
PRT	sift$_{AOR}$-1SG	couscous

I sifted couscous.

(35)

ad	ge-γ	tametunt
PRT	knead$_{AOR}$-1SG	bread

I kneaded bread.

(36)

ad	ge-γ	aγrum
PRT	knead$_{AOR}$-1SG	flat cake

I kneaded flat cakes.

(37)

ttare-γ	=asent	awal
buy$_{IMPRF}$-1SG	=CL.3PLF;DAT	request

I was answering their requests.

(38)

a	=(i)yi	cka-nt	sanga	i	vγa-nt
PRT	=CL.1SG;ACC	send$_{AOR}$-3PLF	where	COMP	want$_{PRF}$-3PL

te-fehme-d
2.SG-understand-2.SG

They sent me where they wanted, do you understand?

(39)	d	ayaki
	COP	that

That's all.

(40)	as	mi	i	meqre-γ	uγal-n
	day	when	COMP	be.tall$_{\text{PRF}}$-1SG	become$_{\text{PRF}}$-3PL

heğev-en	=iyi	=d	heğev-en	=iyi	=d
veil$_{\text{PRF}}$-3PLM	=CL.1SG;DAT	=D	veil$_{\text{PRF}}$-3PLM	=CL.1SG;DAT	=D

When I grew up, they veiled me, they veiled me.

(41)	n-ruh	=d
	1PL-go$_{\text{PRF}}$	=D

We left.

(42)	t-ker	=d	legira	legira	n	fransa
	3SGF-stand$_{\text{PRF}}$	=D	war	war	OF	France

The war, the war with France started.

(43)	uγal-n,	n-ruh	=d	γar	lebira
	become$_{\text{PRF}}$-3PL	1PL-go$_{\text{PRF}}$	=D	to$_{\text{DIR}}$	Bouira

We came to Bouira.

(44)	lebira,	n-la	dina	cehal
	Bouira,	1PL-be$_{\text{PRF}}$	there	how.much

Bouira, we were there for a long time.

(45)	ye-fka	=yi	=d	appi	inexdaven
	3SGM-give$_{\text{PRF}}$	=CL.1SG;DAT	=D	God	fiancé

God gave me a fiancé.

(46)	ye-fka	=yi	=d	appi	inexdaven
	3SGM-give$_{\text{PRF}}$	=CL.1SG;DAT	=D	God	fiancé

God gave me a fiancé.

(47)	inexdaven	nni,	as	mi	(i)	=iy
	fiancé	DEM$_{\text{AMB}}$when	day	when	(COMP)	=CL.1SG;ACC

xdev-en	ur	=ten	i-vγa	ara	wul=iw
propose$_{\text{PRF}}$- 3PLM	NEG	=CL.3PLM;ACC	3SGM-want$_{\text{PRF}}$	NEG	heart=CL-1SG;POSS

This fiancé (and his family), when they asked for my hand in marriage my heart didn't want them.

(48)	d	imetawen	i	la	ttru-γ
	COP	tears	COMP	PRT	cry$_{\text{IMPRF}}$-1SG

mačči	d	lferh	i	ferehe-γ
NEG	COP	happiness	COMP	be.happy$_{\text{PRF}}$-1SG

It was tears that I was crying it was not joy that I was feeling.

(49)	d	imetawen	i	la	tteru-γ
	COP	tears	COMP	PRT	cry$_{\text{imprf}}$-1SG

It was tears that I was crying.

(50)	simi	(i)	=iyi	=d	iqedce-n	imawlan=iw
	time	COMP	=CL.1SG;DAT	=D	prepare$_{\text{PRF}}$-3PLM	parents=CL.1SG;POSS

It was time that my parents prepared me.

(51)	qedce-n	=iyi
	prepare$_{\text{PRF}}$-3PLM	=CL.1SG;DAT

They prepared me.

(52)	uγ-en	=iyi	icetiden
	buy$_{\text{PRF}}$-3PLM	=CL.1SG;DAT	clothes

They bought me clothes.

(53)	xade-γ	imendyal
	sew$_{\text{PRF}}$-1SG	scarves

I sewed scarves.

(54)	xade-γ	tiqendyar
	sew$_{\text{PRF}}$-1SG	dresses

I sewed dresses.

(55)	simi	d	agur	n	lmulud	ameγar=iw	i-har
	time	COP	month	OF	Mulud	father.in.law=CL.1SG;POSS	3SGM-be.hurry$_{\text{PRF}}$

During the month of Mulud, my fathe- in-law hurried

(56)	a	=s	i-qar	‘ilaq	a	=tt
	PRT	=CL.3SG;DAT	3SG-tell$_{\text{AOR}}$	must	PRT	=CL.3SGF;ACC

awi-γ	skud	mmi=w	ur	=t	ttawi-n
take$_{\text{AOR}}$-1SG	before	son=CL.1SG;POSS	NEG1	=CL.3SGM;ACC	take$_{\text{IMPRF}}$-3PLM

ara	γar	lasker’
NEG2	to$_{\text{DIR}}$	army

He was telling him (my father): ‘I have to take her before my son is taken away by the army’.

(57) imaren ye-pd =(e)d wagur n lmulud
after 3SGM-arrive$_{\mathrm{PRF}}$ =D month OF mulud
After the month of Mulud arrived.

(58) qedece-n =iyi
prepare$_{\mathrm{PRF}}$- 3PLM =CL.1SG;DAT
They prepared me.

(59) n-uqem seksu n pudi d skur d aksum
1PL-make$_{\mathrm{PRF}}$ couscous OF butter with sugar with meat
We made couscous with butter, sugar and meat.

(60) nek lesi-γ lheta levesa n lqevayel amehdil
PRN.1SG wear$_{\mathrm{PRF}}$-1SG beautiful clothes OF Kabyle scarf

buceruren lefeta
frou-frou silver

Me, I wore beautiful (things), Kabyle clothes, a scarf with frou frou, silver.

(61) di-γ =d
go.with$_{\mathrm{PRF}}$-1SG =D
I went away (as a bride).

(62) imaren zewere-γ =d alehaf leεğar
after wear$_{\mathrm{PRF}}$-1SG =D scarf veil
After, I wore a (long) scarf, a veil.

(63) lesi-γ =d asendal d lisukat imelalen
wear$_{\mathrm{PRF}}$-1SG =D sandals with socks white
I wore sandals and white socks.

(64) di-γ =d
go.with$_{\mathrm{PRF}}$-1SG =D
I went away (as a bride).

(65) imaren di lavidat lavidat n dada taverkant
after in lavidat lavidat OF father black
After, in my father's black lavidat, lavidat

(66) deg=s i =d rekve-γ
in=CL.3SG COMP =D ride$_{\mathrm{PRF}}$-1SG
It is in it that I rode/travelled.

(67) ye-ppi =(i)y =id dada

3SGM-bring$_{PRF}$ =1SG;ACC	=D	father

My father brought me.

(68)	netta	i	=(i)y	=id	=id	ipin	s	axxam=iw
	PRN.3SG	COMP	=1SG;ACC	=D	=D	bring$_{PTCP}$	to$_{DIR}$	house=CL.1SG;POSS

It was him who brought me here to my house.

(69)	di	tumubil=is	i	=d	di-γ
	in	car=CL.3SG;POSS	COMP	=D	go.with$_{PRF}$-1SG

It is in his car that I went away (as a bride).

(70)	ruhe-γ	=d	imaren	γar	benichu,
	go$_{PRF}$-1SG	=D	after	to$_{DIR}$	Benichu

axxam	n	lγaci,	timeγarin	tinudin	tilewsat=iw
house	OF	people	old.women	sisters.in.law	sisters.in.law=CL.1SG;POSS

After, I came to the Benichu's, a house full of people, old women, brother-in-laws' wives, husband's sisters.

(71)	nkkini	di	sah=iw	d	tamectuht
	PRN.1SG	in	truth=CL.1SG;POSS	COP	small

Me, honestly, I was young.

(72)	imani	lehmdulah	zemre-γ	yarek	i	lγaci	nni
	but	thank God	can$_{PRF}$-1SG	all	to$_{DAT}$	people	DEM$_{AMB}$

But thank God, thank God, I could cope with all those people.

(73)	zemre-γ	=asen
	can$_{PRF}$-1SG	=CL.3PLM;DAT

I satisfied them.

(74)	zemre-γ	i	nuva=w
	can$_{PRF}$-1SG	to$_{DAT}$	turn=CL.1SG;POSS

I fulfilled my task.

(75)	zemre-γ	i	leqdic	lhemdulah	yappi
	can$_{PRF}$-1SG	to$_{DAT}$	work	thank God	God

I could work, thank God.

(76)	zemre-γ	i	(y)iman=iw	te-fehm-ed	lehmedulah
	can-1SG	to$_{DAT}$	self=CL.1SG;POSS	2SG-understand-2SG	thank God

I was smart, do you understand, thank God.

(77)	argaz	nni,	ursa	d	acu	i	=d
	man	DEM$_{\text{AMB}}$	NEG	cop	what	COMP	=D

	y-ka-n	seg=s
	3sgm come$_{\text{PRF}}$-PTCP	from=CL.3SG

That man too, nothing bad came from him.

(78)	feγ-γ	fel=s
	exit$_{\text{PRF}}$-1SG	on=CL.3SG

I pleased him.

(79)	netta,	feγ-γ	fel=s
	PRN.3SG	exit$_{\text{PRF}}$-1SG	on=CL.3SG

Him, I pleased him.

(80)	netta,	ye-feγ	fel=i
	PRN.3SG	3SGM-exit$_{\text{PRF}}$	on=CL.1SG

Him he pleased me.

(81)	n-uqem	axxam
	1PL-make$_{\text{PRF}}$	house

We built a home.

(82)	ye-fkay	=aγ	=d	appi	derga
	3SGM-give$_{\text{PRF}}$	=CL.1PL;DAT	=D	God	children

God gave us children.

(83)	n-ssa	hdec	pwaraw=neγ
	1PL-have$_{\text{PRF}}$	twelve	children=CL.1PL;POSS

We had twelve children.

(84)	sima	appi	a=s	i-zeγzef	lamer=is
	time	God	PRT=CL.3SGM;DAT	3SGM-prolonge$_{\text{AOR}}$	age=CL.3SG;POSS

	ye-pi	=t	f	zik	lehal
	3SGM-take$_{\text{PRF}}$	=CL.3SGM;ACC	on	early	time

	teleta	w	xxmsin	sna
	three	CONJ	fifty	year

(instead) of prolonging his life, God took him early, in his fifty third year.

(85)	ye-mut
	3SGM-die$_{\text{PRF}}$

He died.

(86) n-grad ak nni
1PL-stay$_{\text{PRF}}$ like DEM$_{\text{AMB}}$
We stayed like this.

(87) ye-ǧǧa =d sin d imectuhen
3SGM-leave$_{\text{PRF}}$ =D two COP young
He left two who were young.

(88) kahina d sofyan, ye-ǧǧa =ten =id
Kahina CONJ Sofian 3SGM-let$_{\text{PRF}}$ =CL.3SGM;ACC =D

d imectuhen
COP young

Kahina and Sofian, he left them (when) they were young.

(89) nunu, ye-ǧǧa =tt =id deg uxxam=is
Nunu 3SGM-let$_{\text{PRF}}$ =CL.3SGF;ACC =D in house=CL.3SG;POSS

s waraw=is
with children=CL.3SG;POSS

Nunu, he left her in her house with her children

(90) saliha aken i=tt xedeve-n
Saliha as soon COMP=CL.3SGF;ACC engage$_{\text{PRF}}$-3PLM
Saliha, she had just got engaged.

(91) i-ruh ami d amayen i te-da tislit
3SGM-go$_{\text{PRF}}$ until COP two years COMP 3SGF-go$_{\text{PRF}}$ bride
Two years passed until she went away as a bride.

(92) tura aqel=iyi=n llehemdulah aqel=iyi=n
now be=CL.1SG;ACC=PTCP thank God be=CL.1SG;ACC=PTCP
Now, thank God, I am (well).

(93) araw=iw d meqerit
children=CL.1SG;POSS COP old
My children are older.

(94) yessi a =tent ih yarek deg uxxam=nsent
daughters PRT =CL.3PLFM;ACC be all in house=CL.3PLF;POSS
My daughters are all in their homes.

(95)	tura	aqel=iyi=n	s	waraw	pwra(w)=iw
	now	be=CL.1SG;ACC=PTCP	with	children	Children=CL.1SG;POSS

Now, I am with my grandchildren.

(96)	aqel=iyi=n	s	teslatin=iw	alah	ibarek
	be=CL.1SG;ACC=PTCP	with	daughters.in.law=CL.1SG;POSS	God	bless

I have daughters-in-law, God bless them.

(97)	tura	aqel	=aɣ	lehem	dulah	yappi	lehemdulah	yappi
	now	be	=CL.1PL;ACC	thank	God	God	thank.God	God
	ad	i-fuk	api	lehif	necelah	f	kul	yiwen
	PRT	3SGM-finish$_{\text{AOR}}$	God	misery	Inch Allah	on	each	one
	ncalah							
	inch allah							

Now, we are well, thank God, thank God, thank God, God will prevent misery Inch Allah, for each one, inch Allah.

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