



uOttawa

L'Université canadienne
Canada's university

FACULTÉ DES ÉTUDES SUPÉRIEURES
ET POSTDOCTORALES



FACULTY OF GRADUATE AND
POSTDOCTORAL STUDIES

Karim Achab

AUTEUR DE LA THÈSE / AUTHOR OF THESIS

Ph.D. (Linguistics)

GRADE / DEGREE

Department of Linguistics

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

Internal Structure of Verb Meaning: A Study of Verbs of (Change of) State in Amazigh

TITRE DE LA THÈSE / TITLE OF THESIS

Maria-Luisa Rivero

DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Marie-Hélène Côté

Éric Mathieu

Mohamed Guerssel

Paul Hirschbuhler (absent)

Gary W. Slater

Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

Internal Structure of Verb Meaning:
A Study of Verbs of (Change of) State in Tamazight (Berber)

KARIM ACHAB

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
in partial fulfillment of the requirements
for the degree of PhD in Linguistics

Supervisor: Maria-Luisa Rivero

University of Ottawa
Department of Linguistics
Faculty of Arts

©Karim Achab, Ottawa, Canada, 2006



Library and
Archives Canada

Bibliothèque et
Archives Canada

Published Heritage
Branch

Direction du
Patrimoine de l'édition

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

ISBN: 978-0-494-18569-8

Our file Notre référence

ISBN: 978-0-494-18569-8

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

I dedicate this modest dissertation to all those exiled, assassinated and imprisoned by the Arabo-Islamic regimes in North Africa, because they were struggling peacefully for the survival of Tamazight as a language, as an identity, and as a culture.

*“You can fool some of the people all the time,
And all the people some of the time,
But you cannot fool all the people all the time.”*

Abraham Lincoln

Table of contents

Acknowledgements	6
Abbreviations and gloses used	8
Abstract.....	9
Chapter 1: Outline of the dissertation	11
1. Introduction.....	11
2. A brief description of the Tamazight language.....	12
2.1 About the terms ‘Amazigh’, ‘Tamazight’ and ‘Berber’	13
2.1.1 The terms ‘amazigh’ and’ tamazight’	13
2.1.2 The term “berber”	15
2.3 Linguistic phylum	15
3. Verbs of (state and change of) state and their structure	17
3.1 Internal structure of verbs	18
3.2 Predicate-argument structure	18
3.3 verbs of (state and change of) state	19
4. The aims pursued.....	21
4.1 Verbs of quality	21
4.2 Unaccusative verbs.....	25
4.2.1 Split unaccusativity	26
4.3 Verbs of spatial configuration.....	27
4.4 Causative verbs	28
4.4.1 Lexical vs. morphological causatives.....	28
4.4.2 Split lexical causatives	29
4.4.3 Differences across languages.....	30
Chapter 2	31

Verb Structure and the Organization of the Grammar	31
1. Introduction.....	31
2. ES, LS and PAS: state of the art.....	32
3. Confusion between LS, ES and PAS in the literature	41
4. Verb internal structure and the organization of the grammar	42
4.1. Event structure.....	43
4.2 Lexical Structure.....	45
4.3 Predicate-argument structure.....	47
5. Approach and proposals	50
5.1 Verbs of quality	50
5.1.1 Pure stative (or unaccusative) form	50
5.1.2 The inchoative (or nominative) form	52
5.2 Unaccusative verbs.....	54
5.3 Verbs of spatial configuration.....	55
5.4 Causative verbs	56
5. Conclusion	60
Chapter 3	61
Verbs of quality and unaccusative verbs	61
I. Introduction	61
2. Verbs of quality	63
2.1 Simple statives	63
2.2 Inchoatives	67
3. The resultative and the inchoative interpretations	71
4. Dialectical variation between two nominative forms.....	75
5. Unaccusative verbs.....	81

6. Unaccusative / causative alternating verbs.....	86
Chapter 4	88
Nominative v. Accusative Clitics	88
1. Introduction.....	88
2. Evidence in favor of the clitic status of the morpheme <i>i-</i>	89
2.1 Extraction out of clitic-doubled constructions	91
2.2 Evidence from construct state nouns	94
3. Difference between the nominative and the accusative forms	101
3.1 Accusative form and defective T	103
3.2 The nominative clitic and the inchoative form.....	111
4. Conclusion	118
Chapter 5	119
Verbs of spatial configuration.....	119
1. Introduction.....	119
2. Internal structure and predicate-argument structure.....	120
3. Reflexive analysis of verbs of spatial configuration.....	126
3. 1 Reflexive analyses: overview	126
3.1.1 Transitive proposals.....	126
3.1.2 Intransitive proposals	129
3.2 Analysis	130
3.3 More evidence in favour of null reflexives.....	137
4. Conclusion	139
Chapter 6	141
Causative verbs of change.....	141
1. Introduction.....	141

2. Morphological Causatives	143
2.1 causatives derived from verbs of quality and unaccusatives	144
2.2 causatives derived from verbs of spatial configuration.....	150
2.3 Conclusion	153
3. Intransitive alternating causatives	153
4. More on the differences between $\sqrt{\text{ROOT}}$ and SS- lexicalisation.....	160
5. Non-intransitive alternating causatives	162
6. Causative / intransitive alternation across languages	166
7. Conclusion	169
Chapter 7	172
Conclusion	172
1. Introduction.....	172
2. Theoretically relevant proposals	172
3. Verbs of (change of) state in Tamazight	176
3.1 <i>Verbs of quality</i>	176
3.2 <i>Unaccusative verbs</i>.....	177
3.3 <i>verbs of spatial configuration</i>	178
3.4 <i>Causative verbs</i>.....	179
4. Aspect and internal structure	180
4.1 <i>Aspectual structure</i>	180
4.2 <i>Aspect and internal structure</i>	182
4.2.1 <i>Instantaneity and duration</i>	183
4.2.2 <i>Telicity</i>	184
REFERENCES.....	186

Acknowledgements

I would like to thank my supervisor Marisa Rivero for the trust she put on me and for her patience while I was meandering my way out of the present dissertation. I thank her for feedbacks, her suggestions and her advice, as well as for the financial support from her SHRC grant.

I should like to extend my thanks to my internal examiners Marie-Hélène Côté, Paul Hirshbühler and Éric Mathieu, and my external examiner M. Masten Guerssel. Their feedbacks, comments and suggestions helped me improve the final draft. Masten's different works on Tamazight revealed so helpful in my quest to apprehend some conundrums as will be easily seen all along the present dissertation. I thank him for providing us with such insight.

I also wish to express my gratitude to Marie-Hélène Côté and Ana Arregui for giving me the possibility to work on the present dissertation while working as their assistant; to Eta Shneiderman, Paul Hirshbühler and André Lapierre for their availability to listen and help when needed; to Michèle Foley for her advice, suggestions and corrections as she read the first draft of the dissertation; and to the administration staff, notably Jeanne D'Arc, Jennifer, Sylvie and Lise for all their help and kindness.

Needless to specify that the present dissertation would not have seen the light of day without the financial support from the School of Graduate and Postdoctoral Studies, and from the Department of Linguistics. I am so grateful for that.

During my PhD years I had the opportunity to meet pleasant students. I will never forget the evening gatherings at Ian's, with his homemade wine and beer, in company of, by alphabetic order, Abdel, Angela, Anousha, Hank, Jennifer, Linda, Magda and Rok.

Nice people are not limited to those partying at Ian's, I will always remember Alona, Boutheina, Carmen, Christina, Dana, Dawn, Olga, Olesya, Seham, Sheila, Sonya, Toni, Ulyana, and of course all the smiling faces of those whom, unfortunately, I did not have the opportunity to know.

My assiduous students of the Tamazight language at Glebe Collegiate have always stimulated and kept high my motivation with their interest and their questions. I would like to thank them for their kindness and their tenderness: Amayas, Dyhia, Djamila, Farida, Hakim, Hmed, Karima O., Karima T., Ldjouher, Lydia, Meryem, Mouhand, Mourad, Nassim, Saliha, Samia, Samy, Rachid, Yazid, Youssef, and Nna Zehra.

Last but not least, my special gratitude to the blossom that gave my life a new meaning: Djedjiga.

Abbreviations and gloses used

acc.: Accusative

AZK: At Ziyān Kabyle

caus : causative

CL : clitic

cs.: construct state

EPP: Extended Projection Principle

ES: event structure

f : feminine,

fs.: free state

GB: Government and Binding Theory

LS: lexical structure

LCS = lexical conceptual structure

m : masculine

nom.: nominative

perf.: perfective

PAS: predicate-argument structure

pl. : plural

sg. : Singular

Abstract

The dissertation investigates verbs of (change of) state in Tamazight (Berber) from the perspective of their internal structure and its syntactic corollary, which corresponds to predicate-argument structure. The verbs investigated include verbs of quality, unaccusatives, spatial configuration verbs, and causatives. Verbs of quality refer to a special class of intransitive verbs occurring with accusative clitics when they indicate a pure state, and with nominative clitics when they indicate change of state. In the latter situation verbs of quality are undistinguished from unaccusatives.

I argue that while nominative clitics associated with verbs of quality surface in the subject position for EPP reasons, accusative clitics surface in the object position because the category T involved is defective, following an idea proposed by Chomsky (2001). This contradicts the view in Government and Binding Theory that intransitive verbs do not assign unaccusative Case.

I sustain that the pure state form has a monadic structure of the type $[V^{BE}[\sqrt{ROOT}]]$, while the inchoative form, like unaccusatives, is associated with the dyadic structure of the type $[V^{COME}[V^{BE}[\sqrt{ROOT}]]]$. To account for the two different interpretations associated with the inchoative form I argue that its syntactic structure contains a scope operator with two different positions. When the operator has scope over V^{COME} , it yields change of state interpretation; when the operator has scope over V^{BE} , the interpretation is stative (resultative).

Verbs of quality and unaccusatives are contrasted with verbs of spatial configuration which are analyzed as disguised reflexives, with a triadic structure

of the type $[V^{ACT}[V^{COME}[V^{BE}([\sqrt{ROOT})]]]]$. The reflexive interpretation results from the association of the internal argument with two thematic positions $[Spec, V^{ACT}]$ and $[Spec, V^{COME}]$.

The structure postulated for causatives is of the type $[V^{CAUSE}[COME[V^{BE}([\sqrt{ROOT})]]]]$. I argue that lexical causatives have a basic structure while morphological causatives are derived by augmenting their unaccusative counterpart.

Lexical causatives are of two types. I argue that those lacking the unaccusative alternate have their lexical root conflated with the verb CAUSE, while unaccusative-alternating causatives have their lexical root conflated with the lower verbs (BE)COME. This idea is extended to account for the difference between unaccusative-alternating and non-alternating languages.

Chapter 1: Outline of the dissertation

1. Introduction

The topic of the present dissertation is twofold. On the one hand I investigate the various classes of verbs indicating state and change of state in Tamazight¹ from the perspective of their internal structure, and the role of the latter in the projection of their predicate-argument structure in the syntax. On the other hand I propose a model of the organization of the grammar specifying the different levels at which the internal structure of verb meaning, and its syntactic corollary, are represented. The regional variety of the Tamazight language investigated is Taqbaylit, also known as Kabyle, which is spoken in a region of Algeria called “Tamurt n Leqbayel” (literally the “Country of the Kabyles”), more often referred to as Kabylie or Kabylia in the literature. Other regional varieties will also be appealed to where necessary.

The discussion provided in the present chapter is organized as follows. In Section 2 I provide a brief description of the Tamazight language, specifying its socio-historical background and the area where it is spoken (§ 2.1), the various expressions used in the literature to refer to it (§ 2.2), and the linguistic phylum to which it is supposed to belong (§ 2.3). In Section 3 I sketch out my main views regarding the internal structure, its role in the derivation of the predicate-argument structure in the syntax, and how these different components are related together within the model of the organization of the grammar adopted in the present study, and explained in more detail in Chapter 2.

¹A language more often referred to as Berber in western languages. A socio-historical background of the Tamazight language is provided in Section 2.

In Section 4 I introduce in more detail the main objectives pursued in the present study within the context of the various verb classes investigated, and announce some of the proposals and ideas to be made in the subsequent chapters.

2. A brief description of the Tamazight language

The Tamazight language, better known as Berber in western languages, is the language spoken by the Amazigh, who are the indigenous people of North Africa. Tamazight was once spoken all over the area stretching from the Oasis of Siwa (in western Egypt) to the Canary Islands², including Morocco, Algeria, Tunisia and Libya; and from the northern coast of the Mediterranean Sea southwards into Mauritania, Mali and Niger. Although Tamazight is still spoken in its various regional forms in all the aforementioned countries, with the exception of the Canary Islands, the language has by now lost a lot of ground in favor of local varieties of Arabic. Arabic, along with the Islamic religion, was introduced into North Africa as a consequence of successive military conquests by Islamic armies belonging to different dynasties coming from Middle Eastern countries. Although the first conquest goes as far back as the 7th century, the process of massive arabicization started to take place much later, around the 10th and 11th century (see Ibn Khaldun 1927; André Julien 1951; W. Marçais 1932; Guatier 1937; Courtois 1942; G. Marçais 1946; Camps 1983, 1995; Brett and Fentress 1996). As a consequence, the area where Tamazight is spoken today is not continuous, but constitutes islands distant from one another, being interrupted by large arabicized zones. Tamazight has survived in somehow naturally “protected” areas, mostly mountainous or desert regions. Lack of contact between such distant areas has favored a process of

² Islands belonging to Spain situated in the Atlantic off the west coast of North Africa.

dialectalization to a substantial degree. However, the nature of the dialectal variation is more phonological and lexical than syntactic.

2.1 About the terms 'Amazigh', 'Tamazight' and 'Berber'

Berber is not the term used by native speakers who nowadays prefer to use the name *Amazigh* (or its plural form *Imazighen*) to refer to themselves, and its feminine form *Tamazight* to refer to their language.

2.1.1 The terms 'amazigh' and 'tamazight'

We do not know much about the origin of the word *amazigh* and its related forms as the root MZy is not found in the lexical stock of the language. We know that the word was used in ancient times as Herodotus mentions it in the form of *Mazices* or *Maxyes* in *The Histories* in reference to the populations living in Libya. Until recently, the use of the expressions *amazigh*, *imazighen* and *tamazight* had been restricted to some areas such as central Morocco and Island of Djerba in Tunisia. These expressions have also survived among the Tuareg populations who use the phonological variant *Imucagh* or *Imuhagh* instead of the form *Imazighen*, and the form *Tamacaq* / *Tamajaq* instead of *Tamazight*. The Tuareg also refer to themselves as *Kel Tamacaq*, which literally means “those of *Tamacaq*”, i.e. the people belonging to or speaking *Tamacaq*. Elsewhere than in the aforementioned areas, the language and the populations were referred to with names that were given to their regions by the Arab conquerors. This is for instance the case of the regional variety investigated in the present work called *Taqbaylit*, which comes for the Arab word *qabila*, meaning ‘tribe’. The name *Taqbaylit* was translated into French by ‘Kabyle’, when referring to the language and the population, and by ‘Kabylie’ when referring to the region. The adoption of such Arabic names was due to the social and

political organization of the *Amazigh* populations then. As a matter of fact, the most extended political and social entity established as a reference or a landmark by the Amazigh people had always been the confederation of villages, which smaller a unit than a region. Such confederations at that time are to be understood as ‘tiny republics’ in a way similar to those referred to in the literature in relation to Ancient Greece. Therefore, the Amazigh had names for their families, their villages, and their ‘tiny republics’, but not names for larger entities such as a nation and a region because such entities did not exist as socio-political organizations.

Nowadays, however, the use of the expressions *amazigh* and *tamazight* have been extended to refer to the Amazigh populations and their language irrespective of the region or the country. This is also how I use it in the present dissertation. However, whenever I find it necessary to specify the regional variety of the language, I will simply add the name of the region where it is spoken. Accordingly, I will for instance specify Kabyle Tamazight, Middle Atlas Tamazight, Riffan Tamazight, etc.

Finally, I would like to mention that these expressions *amazigh* and *tamazight* are also those that have recently been adopted by official institutions in Algeria and Morocco after many years of strong ideological denial and negativism of Tamazight, not only as a language but also as an identity and as a culture, in favour of the Arabo-Islamic and the *baath* ideologies embraced by the various successive regimes in North Africa, with massive indoctrination consequences on the arabacized populations. Arabo-Islamism tolerates no other language than Arabic. The tenants of the *baath* ideology on the other hand have been struggling for a Pan-Arab nation covering the vast continuous territory stretching from the West coast of Morocco to the frontiers of Iraq in the Middle East,

with one sole language, one sole culture, and one sole identity: Arabic (see Ouerdane 1992).

2.1.2 The term ‘*berber*’

The word *Berber* comes from the Greek *barbaros*, which means ‘foreign’. It was used by the Greeks to refer to foreign populations, including the Romans, who use any language other than Greek. The word, which became *barbarus* in Latin, was later used by the Romans with the same meaning. It is with this meaning that it was applied to the populations of North Africa who later became part of the Roman Empire for a long period of time (185 BC to 345 AD)³. In the meanwhile, the word *barbarus* acquired a derogatory sense when it was applied to designate the populations from central and northern Europe who invaded the territories located within the Roman Empire. The term was later introduced with the latter meaning in western languages in the form of *barbarians* or *barbars* / *barbares* as in the historical episode called “Barbarian Invasions”. When the Latin literature was translated into modern European languages, notably French, the word *barbarus*, which was once applied to designate the populations of North Africa by the Romans, was translated as *berbère* (*berber*) so as to distinguish it from the word *barbare* (*barbarian*).

2.3 Linguistic phylum

Tamazight belongs to the African branch of the so-called Hamito-Semitic, also known as Afroasian, phylum. Among the other languages acknowledged to be part of the African branch are ancient and Coptic Egyptian; Chadic languages such as Hausa (spoken in Niger, Nigeria); Cushitic languages such as Bedawi / Beja (spoken in Sudan,

³ This is the reason why some great Amazigh philosophers and scholars such as Apuleius of Madore, Tertullian and Saint Augustine, to mention but these three, are often referred to as “Roman” philosophers in western literature.

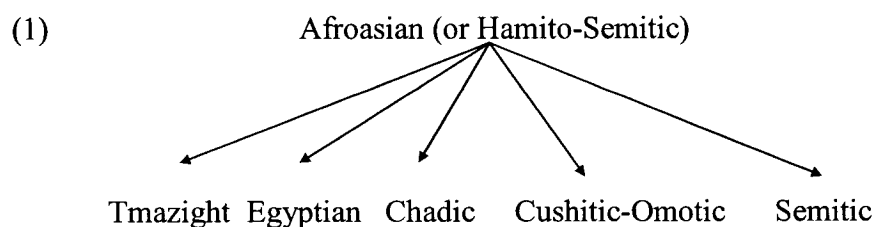
Egypt and Eritrea), Agaw with other related varieties (spoken in Ethiopia and Eritrea); and Omotic languages, which include Dizi, Nayi and Sheko (spoken in South-west Ethiopia in the Kafa region). The second branch of the Hamito-Semitic (or Afroasian) phylum refers exclusively to Semitic languages including Hebrew, Amharic, Arabic, and a number of other extinct languages such as Aramaic, Cananian, Akkadian and Asyrian.

The expressions *Hamito-Semitic* and *Afroasian* are not to be understood as referring to an “ancestor” language from which all the aforementioned languages would have derived, but as a convenient technical term gathering languages spoken in Africa, and which present striking resemblances with Semitic languages located in Asia (the Middle East). The expression Hamito-Semitic is arbitrary and clearly problematic for many reasons. On the one hand, it refers to a religious and mythological history that is located in the Middle East. It is derived from the names Ham and Shem, which correspond to two biblical characters referring respectively to the eldest and the second sons of Noah mentioned in the *Book of Genesis*, (Chapter X). Therefore, the adjective Hamitic is particularly misleading in that it refers to two different concepts, i.e. a biblical name in the Middle East applied to languages spoken in Africa.

Shem is believed to be the ancestor of the Semites, including Arabs and Jews. Schölzer (1781)⁴ introduced the word Sem as a linguistic designation to name the group of languages spoken by the Semites. The adjective Hamitic, also spelled Chamitic, was introduced by Renan (1855) as a linguistic appellation to refer to the Tamazight (Berber) and Egyptian languages because of the affinities they share with Semitic languages. The expression Hamito-Semitic was suggested by Benfey (1869) to name this supposedly demonstrated linguistic phylum.

⁴ Mentioned by D. Cohen (1988a: 1).

On the other hand, the appellation Hamito-Semitic suggests that there is a Hamitic subgroup of languages that is analogous to the Semitic subgroup. A number of linguists working on these languages argued against such an analogy (see for instance Greenberg 1950 and Hayward 2000). In fact, most of the classifications proposed in the linguistic literature put the Semitic group on a par with Tamazight and Egyptian as languages rather than as a branch called Hamitic, as shown in the diagram illustrated below:



Note in passing that such a classification puts Tamazight and Egyptian, which are languages, on a par with Chadic, Cushitic-Omotic, and Semitic, which refer to groups of languages. The question whether the affinities between Semitic and the languages spoken in Africa such as Tamazight stem from the same origin or whether they result from linguistic contacts through history is a matter for ongoing debate (see D. Cohen 1988a: 1-8).

Having provided a brief description of the language investigated, I will now move to the core topic of the dissertation.

3. Verbs of (state and change of) state and their structure

In the present section I introduce the various verb classes investigated while specifying the way internal structure of verb meaning is to be understood in the present dissertation, thus laying the ground for the discussion provided in Chapter 2.

3.1 Internal structure of verbs

Internal structure of verb meaning refers to event structure, lexical structure, and aspectual structure, all three of which are argued for in the literature to encode semantic and syntactic properties that are relevant both at the (pre-syntactic) lexical-conceptual level, and at the syntactic level. In the present dissertation however, only event and lexical structures are considered. The question whether aspectual structure is part of the internal structure of verbs is debatable. In any case, the temporal criteria taken to determine the supposed aspectual structure are irrelevant to the aims pursued in the present dissertation. I will get back to this issue in Chapter 7, which concludes the present dissertation.

3.2 Predicate-argument structure

As will be seen in more detail in Chapter 2 dedicated to the organization of the grammar and its different levels of representation, predicate-argument structure is not part of the internal structure. Unlike the latter, which is pre-syntactic, predicate-argument structure is represented in the syntax. I argue in Chapter 2 that the projection of the predicate-argument structure in the syntax is determined by the verb's internal structure. Moreover, depending on the facts I am seeking to account for, a syntactic analysis going beyond the internal structure and the predicate-argument structure will be necessary. This is for instance the case when I deal with the syntactic differences between the situation where the clitic internal argument associated with verbs of quality surfaces in the accusative and the one where it surfaces in the nominative as will be seen in the next subsection (see the discussion of example (4) below).

3.3 verbs of (state and change of) state

The different verb classes investigated in the present study include the class of intransitive verbs traditionally referred to as verbs of quality in the linguistic literature on Tamazight (see § 4.1), unaccusative verbs (§ 4.2), verbs of spatial configuration (§ 4.3), and causative verbs, both lexical and morphological (§ 4.4).

The verbs belonging to the class called verbs of quality are so peculiar that I need to say a bit more about them now, without getting into the details however since they are further explained in (§ 4.1). They refer to intransitive verbs that may occur with two different forms, one of which indicates pure state, as illustrated in (2a), and the other of which indicates change of state, as illustrated in (2b).

- (2) a. Zeggay-it
 Red.perf-3m.sg.acc.
 It / he is red
- b. I-zwiɣ
 3m.sg.nom.-red.perf
 It / he has become red

The verbs called verbs of state in the present dissertation refer to the verbs of quality as they occur with the form illustrated in (2a) indicating pure state form. They should not be confused with those belonging to the class of stative verbs based on the aspectual classification originally provided by (Vendler 1957, 1967), and which include (the equivalents of) transitive verbs such as *know*, *love*, *see* etc., in English. This latter class of is not included here because they do not form a coherent class with the various

classes investigated in the present dissertation in a sense to become clear shortly. I will get back to Vendler's aspectual classification in Chapter 2.

The reasons why I have chosen to investigate these verb classes are numerous, some of which I will mention here. First, they all involve the notion of state, thus forming a coherent broad class, which cover all the verbs belonging to the two aspectual classes called *accomplishments* and *achievements* in the classification originally proposed by Vendler (1957, 1967) (see Chapter 2). What I would like to demonstrate with respect to this point is that the notion of state common to all these various types of verbs reflects an abstract primitive verb in their internal structure, which, following a long established tradition in lexical semantics, I paraphrase as BE in the present dissertation. What is more, as will be shown in the different subsequent chapters, these verb classes reveal that the internal structure of verb meaning is built up progressively on the basis of this primitive verb BE by adding to it more primitive verbs with other semantic functions such as “(be)coming”, “acting”, and “causing”. Again, following the well established tradition in lexical semantics I will paraphrase such functions using the abstract primitive verbs (BE)COME, ACT and CAUSE, respectively. Accordingly, I will demonstrate that the internal structure of the different types of verbs under investigation is decomposable in the following way:

(3)

a. Stative verbs of quality

[_{State} BE ([$\sqrt{\text{ROOT}}$])] ⁵

⁵ I use the mathematical symbol $\sqrt{}$ for square root to indicate lexical roots, which are devoid of grammatical material, and that give verbs their lexical content. The use of the symbol $\sqrt{}$ in linguistics to indicate lexical roots is by now widespread (see Pesetsky 1995; Marantz 1997; and Hale and Keyser 1998 and 2002 among others.)

- b. Inchoative verbs of quality and unaccusative verbs

[_{Event} COME [_{State} BE ([$\sqrt{\text{ROOT}}$)]]]

- c. Verbs of spatial configuration (or unaccusative-disguised reflexives)

[_{Event} ACT [_{Event} COME [_{State} BE ([$\sqrt{\text{ROOT}}$)]]]]

- d. Causative verbs

[_{Event} CAUSE [_{Event} COME [_{State} BE ([$\sqrt{\text{ROOT}}$)]]]]

In the structures given above the subscripts [_{Event}] and / or [_{State}] are to be understood as indicating the (sub)components of event structure while the primitives BE, COME, ACT and CAUSE indicate the subcomponents of lexical structure. Taken together, event structure and lexical structure compose the internal structure of verb meaning. Much confusion in the literature stems from the fact that these two types of structures are erroneously referred to as one structure, designated under different names. I will elaborate further on these matters in Chapter 2.

4. The aims pursued

In the present section I make more explicit the different objectives pursued in the subsequent chapters, situating the approach adopted within the specific context of each particular verb class.

4.1 Verbs of quality

As was already announced in the previous section, the main morpho-syntactic characteristic of verbs of quality as they occur in Taqbaylit (Kabyle) Tamazight resides in their possibility to combine with two types of clitics, the accusative clitics as illustrated

with the verb *zwɣ* ‘be red’ in (4a), and the nominative clitics as illustrated with the same verb in (4b) below (already given as (4a) and (4b) above)⁶:

- (4) a. *Zeggay-it*
 Red.perf-3m.sg.acc.
 It / he is red
- b. *I-zwiɣ*
 3m.sg.nom.-red.perf
 It / he has become red

Both verb stems *zeggay* in (4a) and *zwiɣ* in (4b) are derived from the same lexical root $\sqrt{\text{ZW}\gamma}$. The form in (4a) always indicate a pure state, while the one illustrated in (4b) may indicate either a resultative state or a change of state depending on the context. In view of this difference, I call the form in (4a) pure stative or accusative, and the one in (4b) inchoative or nominative.

Note in passing that the possibility of verbs of quality to combine with accusative clitics as illustrated in (4a) challenges the standard idea in Government and Binding that intransitive verbs lack the ability to assign accusative Case as was for instance argued for by Burzio (1986). Therefore, the question that arises with respect to (4a) is why is the internal argument, expressed by the accusative clitic, not attracted to the nominative position. I will get back to this question shortly.

⁶ Unless specified otherwise, the verbs of quality exemplified in the present dissertation are from the At Ziyen Kabyle dialect spoken in the eastern part of Kabylia. A description of this dialect is provided by Allaoua (1986). See also Galand (1980, 1990).

The verb stem morphology of the inchoative form in (4b) may differ from one dialect to another. Compare it for instance with the form exemplified in (5) below from Tashelhiyt, a variety of Tamazight spoken in Southern Morocco:

(5) I-zeggay

3m.sg.nom.-red

It / he became red

The questions that need to be addressed with respect to the data introduced so far are the following:

- (6) a. Do the verb forms in (4) have the same internal structure despite their different morphology, or are they associated with two distinct structures?
- b. How to account for the different interpretations associated with the same verb form in (4b), namely the resultative state and the change of state?
- c. Why does the clitic corresponding to the internal argument surface post-verbally as *-it* in (4a) and pre-verbally as *i-* in (4b)?
- d. The form in (5) shares the prefix property with the one in (4b) while its verb stem resembles the one in (4a). How are these facts accounted for?

To the best of my knowledge, the questions listed above have never been addressed in the linguistic literature on the Tamazight language. Let me say briefly how I intend to account for these facts in Chapters 3 and 4.

As an answer to question (6a), I argue in Chapter 3 that the form in (4a) indicating pure state has a monadic stative lexical structure composed of an abstract stative verb and a lexical ROOT of the type illustrated below, where V^{BE} is to be understood as an abstract V head indicating pure state:

$$(7) \quad [V^{BE} [\sqrt{\text{ROOT}}]]$$

By contrast, I sustain in Chapter 3, that the form in (4b) indicating either a resultative state or a change of change has a dyadic lexical structure composed of an abstract inchoative verb indicated as V^{COME} , in addition to the stative verb V^{BE} , and a lexical ROOT of the type illustrated below:

$$(8) \quad [V^{COME} [V^{BE} [\sqrt{\text{ROOT}}]]]$$

I further argue that the lexical structures represented in (7) and (8) are mapped onto their equivalent event structures yielding their corresponding predicate-argument structures in the syntax.

As an answer to the question formulated in (6b), I argue that the syntactic structure associated with the latter form contains a scope operator with two different scope options. If the operator has scope over the higher verb V^{COME} , the structure yields the change of state interpretation; if on the other hand the scope of the operator is restricted to the lower verb V^{BE} , it yields the resultative interpretation.

The question formulated as (6c) is dealt with independently in Chapter 4 where I argue that both the suffix in (4a) and the prefix in (4b) are clitics corresponding to the internal argument. I further argue that the clitic in (4a) surfaces as a prefix in the accusative because it remains in the object position as opposed to the clitic in (4b) which is attracted to the subject position where it is realized as a prefix in the nominative. This

question is akin to the one formulated earlier regarding the reason why the accusative clitic in (4a) is not attracted to the subject position where it would surface with the nominative Case. Adopting the idea of defectiveness proposed by Chomsky (2000 and 2001) I sustain in Chapter 4 that the category T involved is defective, therefore lacking the EPP (Extended Projection Principle) effect.

As to the question formulated in (6d) regarding the dialectical variation between the AZK form *i-zwiɣ* in (4b) and the Tashelhiyt *i-zeggay* form in (5) I show in Chapter 3 that although they share the same dyadic lexical structure of the type illustrated in (8) above, they differ with respect to the type of Aspect they are associated with.

4.2 Unaccusative verbs

The inchoative form of verbs of quality introduced in the previous subsection contrasts with unaccusative verbs such as the one exemplified with the verb *ɾɣ* ‘burn’ in (9):

- (9) I-*ɾya wexxam*
 3m.sg.-burn cs.house

The house has burned down

Unlike verbs of quality, unaccusative verbs such as the one in (9) lack the possibility to combine with accusative clitics. This of course is what to expect from the class of unaccusatives, a property ascribed in Government and Binding to the inability of intransitive verbs to assign accusative Case to their internal argument (Burzio 1986). However, the class of verbs of quality seen above provides evidence that such a claim cannot be maintained since verbs of quality are intransitive verbs and their internal argument, when expressed as a clitic, does show up in the accusative. I argue in Chapter 3 that the reason has not to do with lack of ability to assign case, but with the semantic

content of these verbs in the sense that they do not refer to an inherent property or state of the (internal) argument but to a property that always results from change of state. Consequently, I will sustain that while verbs of quality are associated with two lexical structures, namely the pure stative structure ((7) above) and the inchoative structure ((8) above), unaccusative verbs are only associated with the inchoative structure.

4.2.1 Split unaccusativity

The class of unaccusative verbs in Tamazight may be split into two subclasses depending on whether they have a causative alternate as illustrated in (10) below with the verb *ldi* ‘open’, or their causative counterpart is derived by means of the causative morpheme SS- as illustrated in (11) with the verb *ss-ebbw* ‘cook’⁷:

- (10) a. T-ldi tewwurt
 3f.sg.open cs.door
 The door is open / opened
- b. Y-lli Yidir tawwurt
 3m.sg.open-perf. Yidir fs.door
 Yidir opened the door
- (11) a. T-bwwa lqahwa
 3f.sg. cook coffee
 The coffee is ready
- b. Y-ss-bww Yidir lqahwa
 3ms.caus.make Yidir coffee
 Yidir has made (some) coffee

⁷ Causative verbs will be introduced in § 4.4 below.

The question that arises here is why do some unaccusative verbs alternate with the causative use as in (10) while others cannot as in (11). I demonstrate in Chapter 3 that while the structure of unaccusatives such as *bbw* in (11a) is basic and looks like the one illustrated in (8) for inchoative verbs, the structure of the unaccusative alternate in (10a) is derived by reducing the structure of the causative alternate in (10b). I will get back to the semantic differences between these two types of unaccusatives with respect to their causative counterparts when we deal with causative verbs in (4.4) below.

4.3 Verbs of spatial configuration

The different intransitive verb classes introduced in the previous subsections are contrasted in Chapter 5 with verbs of spatial configuration such as *qqim* ‘sit’, *bedd* ‘stand’, *kker* ‘stand up’, *knu* ‘lean, bend’, etc. There I argue that the latter verbs, which may have up to three different interpretations corresponding to the agentive, the inchoative and the stative. This semantic property singles them out from verbs of quality and unaccusatives, which lack the agentive interpretation. Accordingly, I argue that this class of verbs have the triadic lexical structure represented below:

$$(12) \quad [V^{ACT} [V^{COME} [V^{BE} ([\sqrt{ROOT}])]]]$$

I further argue in Chapter 5 that the nature of verbs of spatial configuration is better understood when they are analyzed as disguised reflexives rather than as unaccusatives despite their lack of reflexive morphology. Accordingly, I demonstrate that this class of verbs in Tamazight has the same internal structure and the same predicate-argument structure as the one I propose for their equivalents in French where such verbs display reflexive morphology. Drawing inspiration from Hornstein (1999, 2001) and Barrie et al. (2004), I further sustain that the differences between this class of verbs in

Tamazight and their equivalents in French stem after Spell-Out, i.e. at the post-syntactic level.

4.4 Causative verbs

In the present section I introduce the different types of causative verbs of change in Tamazight and announce some proposals to be made later in Chapter 6 dedicated to this class of verbs.

4.4.1 Lexical vs. morphological causatives

As already mentioned in Section 4.2, Tamazight has two types of causative verbs. One type, exemplified in (13), alternates with the intransitive use; the other type, illustrated in (14), is derived with the means of the morpheme SS-:

- (13) a. T-lli tewwurt
 3f.sg.open cs.door
 The door is open / opened
- b. Y-lli Yidir tawwurt
 3m.sg.open-perf. Yidir fs.door
 Yidir opened the door
- (14) a. T-bwwa lqahwa
 3f.sg. cook coffee
 The coffee is ready
- b. Y-ss-bww Yidir lqahwa
 3m.sg-caus-make Yidir coffee
 Yidir has made (some) coffee

Following the tradition in linguistics I call the causative type in (13b) lexical and the one in (14b) morphological. I argue in Chapter 6 that the structure of the intransitive alternate in (13b) is derived by reducing its causative counterpart. By contrast, I argue that the lexical structure of morphological causatives such as the one in (14b) is derived by augmenting its intransitive counterpart.

4.4.2 Split lexical causatives

Lexical causatives do not behave coherently. Causatives which alternate with the unaccusative use such as the one in (13) above are compared with another type of lexical causatives such as the verb *ny* ‘kill’ which lack the intransitive alternate as illustrated in (15):

- (15) a. Y-nya wemcic ayerda
 3m.sg-kill.perf cs.cat fs.rat
 The cat killed the rat
- b. *Y-nya uayerda
 3m.sg-kill.perf cs. rat
 *The rat killed

In Chapter 6 I defend the idea that the lexical structure associated with non-alternating causatives such as *ny* ‘kill’ (15a) has a different resulting state subcomponent from the one associated with the lexical structure of causative-intransitive alternating verbs seen in the previous section. More particularly, I argue that the $\sqrt{\text{ROOT}}$ involved in the lexical structure of the verb *ny* ‘kill’ (15a) has conflated with the verb CAUSE at the lexical-conceptual level rather than with the verb BECOME unlike the intransitive-

alternating causative type. This will be shown to explain the differences between the two types of causatives.

4.4.3 Differences across languages

Causative verbs behave differently across languages. In Kabyle Tamazight (taqbayli) the verb *bnu* ‘build’ alternates between the transitive and the intransitive use as shown in (16), while its English equivalent *build* is restricted to the transitive use as shown in (17):

(16) a. Y-bna Yidir axxam
3m.sg-build.perf. Yidir fs.house

Yidir built a house

b. Y-bna wexxam
3m.sg.build.perf. cs.house

The house is built

(17) a. John built the house
*The house built

I argue in Chapter 6 that the Tamazight verb *bnu* and its English equivalent *build* differ with respect to their lexical structures. This difference will explain why the Tamazight verb has an unaccusative alternate, and why its counterpart in English is restricted to the causative use.

Chapter 2

Verb Structure and the Organization of the Grammar

1. Introduction

In the present chapter I articulate the model of the organization of the grammar adopted in the present dissertation, specifying the levels where event structure (ES henceforth), lexical structure (LS henceforth) and predicate-argument structure (PAS henceforth) are represented (§ 4). Once such a model is articulated, I explain how it is applied to account for the derivation of the different verb classes indicating state and change of state under investigation (§ 5). As a background to the discussions provided in Sections 4 and 5, I first retrace in Section 2 the history and the development of the verb internal structure by reviewing some of the outstanding proposals in the linguistic literature. This allows us to highlight the shortcomings of the current analysis in Section 3, namely the confusion often made by a many authors between event structure, lexical structure and predicate-argument structure. It will be clear from the proposals made in Sections 4 and 5 that such confusion is due to the fact that LS and ES have erroneously been taken to form one structure while they should be considered as reflecting two distinct structures.

2. ES, LS and PAS: state of the art

The notion of event has a long history that linguists trace back at least to Aristotle⁸. In *Metaphysics* (1048) and *Nicomachean Ethics* (1074), Aristotle distinguished between two main verb classes, which he called *kineseis* and *energiai* verbs. The class of *kineseis* verbs, supposed to contain an inherent property indicating the final state of the event involved, are contrasted with the class of *energiai* verbs, which do not contain such an inherent property. In modern linguistics *kineseis* verbs correspond to *accomplishments* and *achievements*, while *energiai* verbs correspond to *activities* and *states* (see below). The term ‘achievement’ was coined by Ryle (1949: 149) to designate verbs such as hear, find, win, unearth, cure, convince, etc, which indicate instantaneous events by contrast with activity verbs (task verbs in Ryle’s terminology) such as listen, discover, look, etc, which may last throughout a long period of time. On the other hand, Ryle distinguished between ‘achievements with an associated task’ and ‘purely lucky achievements’, which correspond to Vendler’s (1957, 1967) accomplishments and achievements respectively. I will get back to Vendler’s classification shortly.

Kenny (1963) used the expression ‘performance verbs’ to refer to Ryle’s achievement type, which he first contrasts with activity verbs. Kenny introduced some diagnostic tests based on aspectual values as a tool to distinguish between the different types of events. For instance, Kenny used the incompatibility of meaning between the progressive and the present perfect to distinguish between *performance* and *activity* verbs. With performance verbs, progressive and perfect aspects sound contradictory. In other words the sentence in (18a) below does not entail the meaning in (18b):

⁸ Aristotle’s thoughts on this topic were particularly documented by Kenny (1963: 173-183). The discussion of Aristotle’s ideas provided here is based on Kenny (*op. cit.*), Abush (1985) and Pustejovsky (1995).

- (18) a. John is building a house
b. John has built a house

By contrast, with activity verbs progressive and perfect aspects are not contradictory. In other words, the sentence in (19a) below in the progressive entails the meaning indicated in (19b) in the perfect aspect:

- (19) a. John is running
b. John has run

Kenny also introduced another distinction opposing activity and achievement verbs to verbs of state. Unlike achievement (20a) and activity (20b) verbs, verbs of state do not occur in the progressive aspect as shown in (20c):

- (20) a. John is building a house
b. John is running
c. * John is knowing the truth

Drawing on the classifications proposed by Ryle (1949) and Kenny (1963) recalled above, Vendler (1967)⁹ proposes a new classification distinguishing between four major types of verbs called state, activity, accomplishment, and achievement, which he argues are determined by temporal criteria such as *duration*, *instantaneity* and *delimitation*. Vendler's classification is illustrated with examples below (as listed by Dowty 1979: 54):

⁹ Vendler's (1967), which is a revised version of Vendler (1957), incorporated and refined some of the ideas proposed by Ryle (1947) and Kenny (1963).

(21)	<i>States</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	know	run	paint a picture	recognize
	believe	walk	make a chair	spot
	have	swim	deliver a sermon	find
	desire	push a cart	draw a circle	lose
	love	drive a car	push a cart	reach

Dowty (1979) proposes to capture the aspectual differences highlighted by Vendler using the predicate decomposition as developed by early generative semanticists (Lakoff 1965; McCawley 1968, 1973 among many others). With the exception of stative verbs, which he supposes to involve a simple relation of predication, for each class of verbs Dowty postulates a logical structure composed of a stative predicate, combined with a sentential abstract verb, which he paraphrases as DO, BECOME or CAUSE depending on the semantics of the verb under consideration. Accordingly, Dowty suggests the following correspondences between verb classes and their logical structures:

(22)	<i>Verb class</i>	<i>Logical Structure</i>
a.	Simple statives	Simple relation of predication
b.	Activities	DO
c.	Achievements	BECOME
d.	Accomplishments	[DO] CAUSE [BECOME]

The correspondences shown above read as follows. Verbs of states involve no abstract verb; they are seen as a simple relation of predication. Activities are seen as event predicates under the scope of the verb DO. Achievements are event predicates indicating change of state under the scope of the operator BECOME. Finally accomplishments are seen as complex event predicates composed of an activity, which is

under the operator DO; a change of state under the operator BECOME; and a causative relation between the activity (DO) and the resulting state. In Dowty's analysis, sentential operators are seen as the source where accomplishment, activity and achievement verbs draw their truth-conditions.

Dowty's proposal relating aspectual properties to abstract verbs was later taken up by other linguists. For instance, Rappaport and Levin (1998: 108) proposed the following pairing between event types and event structure templates:

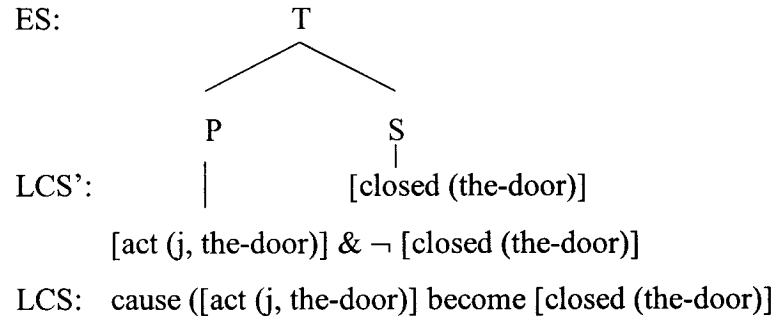
(23)	[x ACT < <i>MANNER</i> >]	(activity)
	[x < <i>STATE</i> >]	(state)
	[BECOME [x < <i>STATE</i> >]]	(achievement)
	[x ACT < <i>MANNER</i> >] CAUSE	
	[BECOME [y < <i>STATE</i> >]]	(accomplishment)
	[x CAUSE [BECOME [y < <i>STATE</i> >]]]	(accomplishment)

Rappaport and Levin referred to the structures above as event templates. In their earlier works however (Rappaport and Levin 1996 for instance), they had referred to the same structures as lexical-conceptual structures. Pustejovsky (1991) and Tenny and Pustejovsky (2000) insist upon the distinction between event structure and lexical-conceptual structure arguing that they convey different types of information. They sustain that events provide information relevant to space, time and causation, while LCSs provide lexical information and determine thematic relations. Pustejovsky (1991) further argues that word meaning is not only a composition of semantic features in the form of primitive constituents, but that it is also highly structured. Consequently, Pustejovsky proposes two distinct representations for LCS and ES at the lexical level, which are

mediated by another representation called LCS-bar in the way illustrated in (24b) for the sentence in (24a) (Pustojovsky 1991: 58):

(24) a. John closed the door

b. ES:



To account for the differences between the aspectual classification of verbs proposed by Vendler (see above), Pustejovsky (1995: 72) extends to event structure the syntactic notion of headedness, which he takes to determine prominence of subcomponents. He suggests for instance that accomplishment verbs (e.g. *build*) have a head-initial event structure, while achievement verbs (e.g. *arrive*) have a head-final event structure. In his analysis, the role of initial headedness is to put the focus of interpretation on the action that brings about the state, while final headedness puts focus on the resulting state (Pustejovsky 1995: 73). Causative / unaccusative alternating verbs such as *break* on the other hand are considered unspecified with regard to headedness, which “makes available two [distinct] grammatical constructions, the unaccusative [...] and the causative [...]” (p. 192). Accordingly, Pustejovsky suggests that the projection of the unaccusative structure results in a left-headed structure whereby the resulting state component gets foregrounded because the causative event is “shadowed”. By contrast, the projection of the causative structure results in a right-headed structure in which the

agentive event gets foregrounded. In the latter situation, both the external and the internal arguments are projected and mapped onto their sub-events.

Unlike the analyses recalled above, other linguists consider event structure syntactic rather than lexical. For instance, Ritter and Rosen (2000) argue that event structure is determined by the functional projections dominating VP, namely Agr-s and Agr-o, by hosting in their specifiers the arguments that identify the initiation and the termination point of events in the way suggested by van Voorst (1988). Borer (1994, 1996), and Benua and Borer (1996) adopted a similar approach arguing that subjects are related to the initiation point of events while objects are related to their delimitation point. Borer (1994) proposes that the argument acting as the originator of the event is in the spec of originator aspect (Asp_{OR}), while the argument acting as the event measurer (Tenny 1994) or delimiter (Van Voorst 1988) is associated with a spec of another type of aspect called measure aspect (Asp_{EM}). Tenny (1987, 1994) and Ritter & Rosen (2000) adopted a similar approach.

Van Hout (2000) adopts an intermediate view between the lexical and the syntactic views mentioned previously. She suggests that event structure is determined semantically, while acknowledging that it is identified in the syntax by mapping the participants involved onto the external and the internal positions. Van Hout argues that such a mapping obtains by raising the external and the internal arguments from the domain of VP to the Specifier positions of AgrS and AgrO, respectively. She considers AgrO to be the domain where telicity and strong Case features are checked. Objects of unaccusative verbs get the telic feature checked in AgrO but are assigned Case in AgrS because of the Extended Projection Principle (EPP), thus following Borer (1994).

However, in Van Hout's view, the projection of AgrO is mandatory only in as much as the verb or the predicate has a telic interpretation, which is determined by the semantics of the event.

Like Van Hout, Travis (2000) also adopts an intermediate view acknowledging that event structure is pertinent at both the lexical (or semantic) and the syntactic levels. Travis suggests that event structure is first represented in the semantic domain, but doubled by the VP architecture in the syntax. The latter corresponds to the standard predicate-argument structure. Travis proposes a direct mapping between event subcomponents, which are represented at the lexical level, and the VP subcomponents, which are represented in the syntax. She further argues that the VP subcomponents in the syntax reflect the semantic sub-events CAUSE and BE / BECOME of the LCS. Levin & Rappaport (1999:112) adopts a similar view, arguing that each subevent in the event structure must be identified by a lexical head (e.g. a V, an A, or a P) in the syntax.

A number of linguists¹⁰ operating within the lexical semantic approach argue that thematic relations are better captured with the predicate decomposition analysis, as an alternative to the one based on theta role labels proposed by Stowell (1981) and Williams (1981). The predicate decomposition approach was inspired by earlier work in generative semantics (see for instance Lakoff 1965; McCawley 1968, 1973 among many others). Within such a view, thematic relations are seen as holding between primitive constituents paraphrased as CAUSE, COME, BECOME, BE, etc., which compose the verb, and their variables, indicated as *x* and *y*, that act as placeholders for arguments. Getting inspiration

10 Hale and Laughren (1983); Hale and Keyser (1986, 1987); Guerssel (1986); Zubizarreta (1987); Grimshaw (1990); Booij (1992); Rappaport et al. (1993); Levin and Rapaport (1986); and Pustejovsky (1988, 1991, 1995) among many others.

from Jackendoff's (1976) conceptual structures, lexical semanticists¹¹ suggest that thematic relations are represented in the form of Lexical-Conceptual Structures (LCS), which they suppose to be listed in lexical entries of verb. Such LCSs are defined as a means that "provides a representation of the meaning of a verb through a predicate decomposition, allowing arguments of a verb to be identified with respect to substructures in the decomposition." (Rappaport et al. 1993: 52). An example of LCS is illustrated below with the causative (25a) and the non-causative (25b) alternates of the verb 'break', keeping in mind that *x* and *y* are variables acting as placeholders for arguments:

- (25) a. Causative BREAK: [*x* cause [*y* become BROKEN]]
 b. Intransitive BREAK: [*y* become BROKEN]

Unlike LCS, which refers to semantic relations between predicators and their variables, PAS refers to syntactic relations between predicators and their arguments. The relation between LCS and PAS therefore corresponds to the mapping between the variables in the LCS, and the arguments associated with predicators in the syntax. For this reason, PAS is viewed as the interface between semantics and syntax (see for instance Levin and Rappaport 1995). Because of this dual relevancy, linguists do not always agree as to the level where the PAS is represented. While some linguists assume a lexical representation¹², others argue in favour of a syntactic representation¹³.

The relation between variables, which are associated with LCS, and arguments, which are associated with PAS, is supposed to be established through a set of rules often

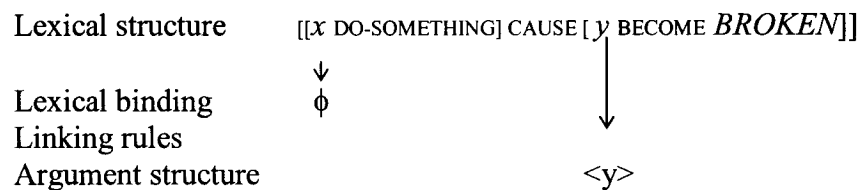
¹¹ See references mentioned in note 3.

¹² Hale and Keyser (1986), Zubizarreta (1987); Grimshaw (1990); Booij (1992); Rappaport et al. (1993), Levin and Rappaport (1986, 1995); and Rappaport et al. (1993).

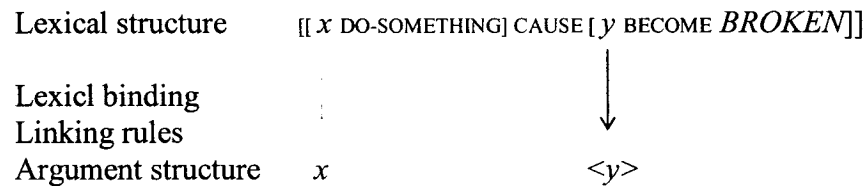
¹³ Marantz (1984), Stowell (1981), Williams (1981), Chomsky (1981) among many others

called linking or mapping rules. The two structures are not necessarily identical. For instance, unaccusative verbs alternating with the causative use are said to have a transitive LCS but an intransitive PAS (Hale and Laughren 1983; Hale and Keyser 1986; Guerssel 1986; Levin and Rappaport 1995). Levin and Rappaport (1995: 108) suggest that in such a case, the position of the external argument associated with unaccusative alternates is bound at the LCS level, which prevents it from being projected into argument structure. This proposal is illustrated in (26) below with the intransitive alternate of the verb *break*, as compared to the representation given in (27) for the transitive alternant (from Levin and Rappaport 1995: 108):

(26) Intransitive *break*



(27) Transitive *break*



The lexical view recalled above contrasts with the one adopted in Government and Binding (GB), which supposes predicate-argument structure of verbs to be derived in the syntax. In GB, PAS is seen as the projection of lexical properties of verbs (Projection Principle). Such a principle stipulates that the lexical category V projects a syntactic (complement) position destined to host the object (or internal) argument associated with the verb. If the verb is transitive, the maximal projection [_{VP} V-NP] thus formed projects

a specifier position to host the subject (or external) argument (Marantz 1984) yielding the structure [_{VP} NP-V-NP]. Ultimately, the external argument of the transitive or the internal argument of the intransitive verb ends up in the subject position for EPP (Extended Projection Principle) reason, where they surface with the nominative Case.

Within the syntactic approach just recalled, thematic relations are seen as specified in the lexicon but realized in the syntax (Williams 1981). Stowell (1981) and Williams (1981) formulated this idea in terms of theta role labels. Stowell (1981) suggests that each predicator has its own *theta grid* in the lexicon. For instance, he proposes that the verbs *put* or *hit* have the theta grids illustrated in (28a) and (28b) below, respectively:

- (28) a. PUT: <Agent, Theme, Location>
b. HIT: <Agent, Theme>

Chomsky (1981) proposes that theta roles are assigned in the syntax by predicators to syntactic positions, which ultimately host their appropriate arguments.

3. Confusion between LS, ES and PAS in the literature

The definitions and descriptions recalled in the previous section regarding the composition of the verb internal structure reveal that event structure and lexical structure have often been confused. As a matter of fact, what is taken to correspond to lexical structure by one author is referred to in terms of event structure by another. The same representations are alternately called lexical-conceptual structures (Jackendoff 1976, 1983, 1990; Guerssel 1987; Rappaport and Levin 1996 among many others) logical structures (Dowty 1979); event structures (Pustejovsky 1988, 1991, 1995); lexical cores (Pinker 1989) and Event templates (Rappaport and Levin 1998). The reason for such

confusion is due to the fact that LS and ES have been erroneously taken to form one structure while they should be considered as forming two distinct structures, with two different origins. As recalled in the previous section, the idea that ES and LS are distinct was stressed by some linguists among whom Pustejovsky (1991), Tenny and Pustejovsky (2000), Grimshaw (1993) and Talmy (2000). Tenny and Pustejovsky (2000) argued that event structure conveys information relevant to space, time, causation while lexical structure conveys lexical information and thematic relations.

Another type of confusion observed in the literature is the one related to the linguistic levels where event, lexical, and predicate-argument structures are represented. While some authors suggest that lexical-conceptual structure is pre-syntactic¹⁴, others argue in favour of a syntactic level¹⁵. Yet some other authors take an intermediate stand arguing that event structure is relevant to both levels¹⁶.

As will be clearly shown in the next section, the ambiguities just highlighted disappear in the model proposed in the present dissertation.

4. Verb internal structure and the organization of the grammar

In the present section I outline the model of the organization of the grammar adopted in the present dissertation by specifying the levels of representation for ES, LCS and PAS.

14 Jackendoff (1976 1983, 1990); Hale and Laughren (1983); Hale (1986); Guerssel (1987); Rappaport and Levin (1986, 1996, 1998 and subsequent work); Pustejovsky (1988, 1991, 1995); Pinker (1989) among many others

15 Ritter and Rosen (2000); Borer (1994, 1996); Benua and Borer (1996); Tenny (1987, 1994) and Ritter & Rosen (2000) among others.

16 For instance Van Hout (2000) and Travis (2000)

4.1. Event structure

Following Jackendoff (1983, 1990) and Pinker (1989) I adopt the idea that event structure is drawn from the mental representation of events, which are established from experience or memorized as conceptualized mental schemas. Mental schemas are structured in a way that makes possible their pairing with lexical structures, which are part of the speaker's lexical knowledge. Jackendoff (1983, 1990) suggests that events are organized on the basis of ontological categories, which he defines as the conceptual counterparts of syntactic categories. He proposes the following correspondence between the two types of categories:

(29)	<i>Ontological categories</i>		<i>Syntactic categories</i>
	EVENT	⇒	Sentence
	STATE-Function	⇒	V
	EVENT-Function	⇒	V
	THING	⇒	NP
	PATH	⇒	PP
	PLACE	⇒	PP
	PROPERTY	⇒	Adjectives or lexicalized as verbs
	MANNER	⇒	Adverbs or lexicalized as verbs

Using the categories above as devices, Jackendoff proposes conceptual representations of the type illustrated in (30b) for the event indicated in (30a) (Jackendoff 1990: 45, (2)):

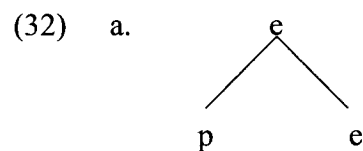
- (30) a. John ran into the room
- b. [_{Event} GO [_{Thing} JOHN], [_{Path} TO ([_{Place} IN ([_{Thing} ROOM])]])]

The way event and lexical structures are represented differ from an author to another. Compare for instance the representational system adopted by Jackendoff as illustrated above, with the one adopted by Pustejovsky (1995) as illustrated below:

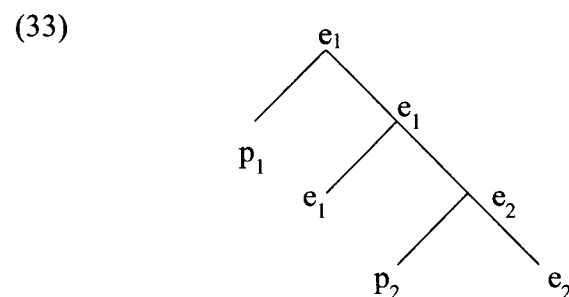
(31)

$$\left[\begin{array}{c} \text{run} \\ \text{EVENTSTR} = \left[\text{E1} = \text{process} \right] \end{array} \right]$$

In the present dissertation, I keep the bracketed representation for lexical structure, while adopting the arboreal representation similar to the one used for syntactic for event structure to highlight its resemblance with the predicate-argument structure in the syntax. Accordingly, the monadic the structure of the event indicated by the verb ‘run’ will be represented as in (32), the letters *e* and *p* stand for event and participant, respectively:



The representation in (32) is monadic, therefore appropriate activity and stative event types. They latter contrast with accomplishment and achievement events, which have a dyadic structure. Adopting the same arboreal representation, the dyadic event structure corresponding to accomplishment and achievement verbs will look as follows:

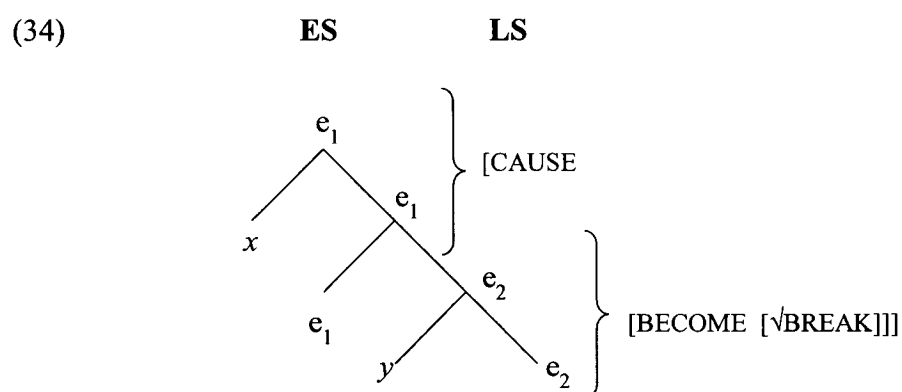


Here arise the question of how to determine the order or the hierarchy of the two subcomponents composing a dyadic event such as those indicated as e_1 and e_2 in (33). Two types of explanations are available in the literature regarding this question. Grimshaw (1990: 26-27) assumes by definition that activity or causative subevents are always more prominent than result sub-events. Pustejovsky (1995) on the other hand accounts for such a hierarchy in terms of internal aspectual (temporal) properties. In Pustejovsky's view, the higher and the lower subevents are temporally ordered in such a way that the subevent that takes temporal precedence is always realized higher in the structure. My view of internal structure as adopted in the present work does not include aspectual structure; therefore I do not subscribe to Pustejovsky's proposal. The view I adopt here is simple. Since verbs of change of state indicate events that culminate into change of state, therefore it is reasonable to suppose that the event subcomponent indicating the change of state is the one that comes last. This view is of course akin to Grimshaw's as recalled above, but it is formulated in a simpler and more rational way. Having clarified the way event structure is viewed in the present dissertation, I will now move to the lexical structure, which is the topic of the next subsection.

4.2 Lexical Structure

As already stated in the previous subsection, event structure is not part of the lexical knowledge corresponding to verbs but a mental representation of events happening in the external world. Therefore, event structure has to be distinguished from the representation of lexical knowledge that enables the speaker to express events linguistically by means of verbs that are available in the language. Viewed this way,

lexical structure is an intermediate stage between conceptualized events and the verbs by means of which they are expressed. Being analogous to the mental representation of events, lexical structure of verbs must reflect the event composition. Therefore, the most appropriate way to represent their structure is the one provided by the predicate decomposition approach viewing internal structure as a compound of primitive predicates associated with variables acting as shareholders for arguments in the syntax in the way recalled in Section 2 above. Primitive predicates, which are often indicated in the form of BE, COME, ACT, CAUSE, etc. in the literature are to be considered as abstract verbs indicating semantic functions such as ‘being’, ‘coming’, ‘acting’, ‘causing’, however deprived of any lexical or morphological content. In the present work, such content is provided by the lexical ROOT, which is also part of the lexical structure of verbs. Once an event is represented at the conceptual level, a lexical structure that matches best with the event is then retrieved from the mental dictionary or lexicon to be mapped onto the event structure. I illustrate the mapping between event structure and lexical structure with the verb ‘break’ as follows:



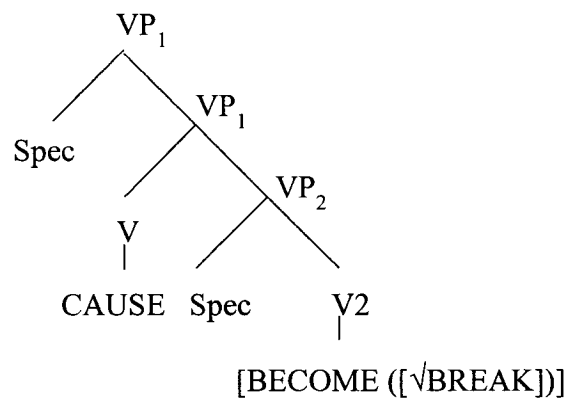
Lexical structure and event structure together compose the internal structure of verbs. Together, they determine their corresponding predicate-argument structure, which is the topic of the next subsection.

4.3 Predicate-argument structure

The mapping of the event structure and the lexical structure illustrated in (34) above yields the predicate-argument structure represented in (35b) below, where the abstract verbs are lexicalised by the lexical root following the Morphological Constraint formulated in (35a):

(35) *Morphological Constraint*

Abstract verbs encoded in the LCS component of verbs must be lexically or morphologically identified by their lexical roots in the syntax.

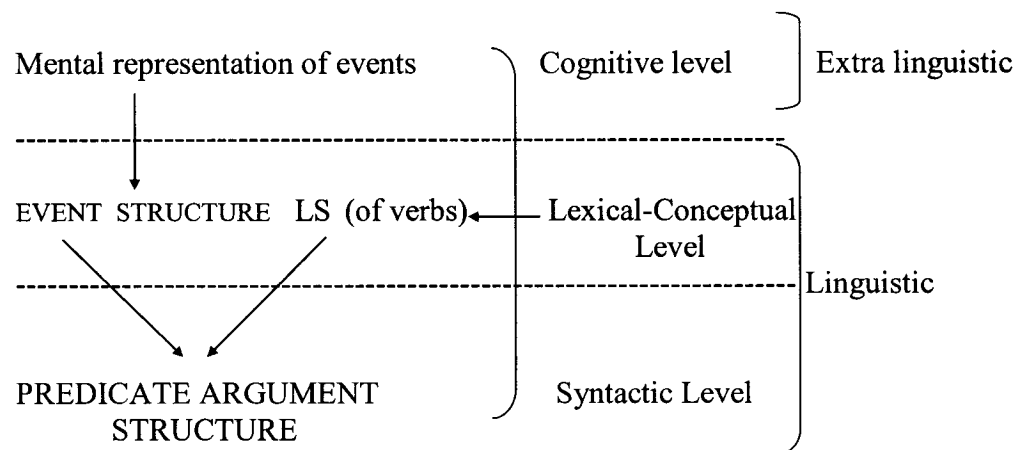


As may be seen from the structures illustrated above, ES, LS and PAS are in a way analogous, which is no surprise given that they describe different successive stages of the same derivation. This explains why event structure is sometimes viewed both as semantic and as syntactic by some linguists as recalled in Section 2. As a reminder, Levin & Rappaport (1999:112) propose that each subevent in the event structure must be identified by a lexical head (e.g. a V, an A, or a P) in the syntax. Likewise, Travis (2000)

argues that event structure is doubled by the VP architecture in the syntax in such a way that the VP subcomponents reflect the semantic sub-events of the lexical-conceptual structure.

The different levels of representation composing the organization of the grammar are illustrated with the diagram shown below:

(36)



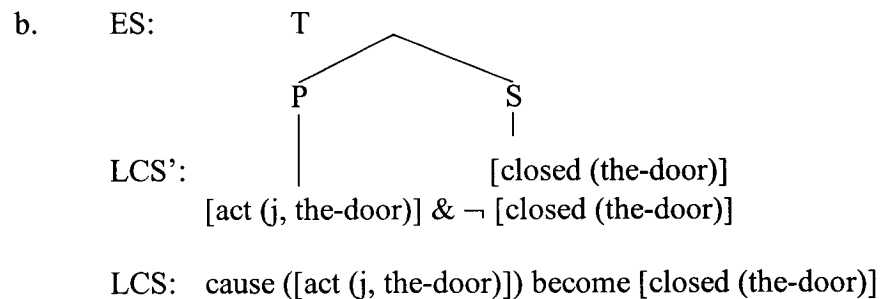
In the diagram above, event structure results from the projection of the mental representation of events into the linguistic component (or level) from the cognitive level, which is extra-linguistic. Once the event structure construed, the lexical structure (LS) of verbs that matches best with (or which translates best) the event is retrieved as a lexical entry from the lexicon / mental dictionary or whatever part of the memory is responsible for storing lexical entries. Event structure and its lexical structure counterpart are then mapped together at the lexical-conceptual level; the resulting structure is projected into the syntactic component as the predicate-argument structure. The ES provides the structural frame, while the LS provides the appropriate semantic primitives.

The three-level based model of the organization of the grammar I proposed above has much in common with the views expressed by Talmy (2000), Pustejovsky (1991) and

Grimshaw (1993), although these latter authors did not provide diagrams. Talmy (2000) postulates three distinct levels, which he referred to as the *Cognitive Representation* (CR), the *Lexical Subsystem*, and the *Grammatical Subsystem*. He proposes that lexical elements contribute lexical content to the CR, while grammatical specifications provide a “skeletal structure or scaffolding for the conceptual material that is lexically specified.” (p. 21). The previously mentioned levels suggested by Talmy would correspond to the cognitive level, the lexical-conceptual level and the syntactic level, respectively, in the diagram I proposed in (36).

Likewise, Pustejovsky (1991) takes LCS of verbs to refer to semantic primitives such as ACT / CAUSE / BECOME, while taking event structure to represent event sub-components. In his analysis, the two structures are mediated by another level referred to as the LCS-bar. These three levels as suggested by Pustejovsky are illustrated with the structure in (37b) for (37a) below ((16b) in Pustejovsky 1991: 58):

(37) a. John closed the door



Grimshaw (1996) also distinguished between the ‘semantic structure’ and the ‘semantic content’ of verbs, which I take to correspond to our ES and LS, respectively, in the model proposed above (36).

Having outlined the model of the organization of the grammar specifying the levels at which ES, LS and PAS are represented; I will now show how this model is applied to the verb classes of state and change of state investigated in the subsequent chapters.

5. Approach and proposals

The aim of the present section is to explain how I intend account for to the various verb classes under investigation using the model of the organization of the grammar presented in the previous section. I start with verbs of quality (§ 5.1), followed by unaccusative verbs (§ 5.2), verbs of spatial configuration (§ 5.3) and causative verbs (§ 5.4).

5.1 Verbs of quality

As already mentioned in the previous chapter, in Kabyle Tamazight (Taqbaylit) verbs of quality may occur in two different forms, which I have so far referred to as pure stative (or accusative) and inchoative (or nominative).

5.1.1 Pure stative (or unaccusative) form

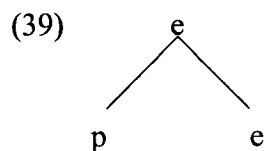
As already mentioned in the previous chapter, the class of verbs occurring with accusative clitics such as the one exemplified below indicate pure state:

(38) Zeggay-it

Red.perf-3m.sg.acc.

It is red

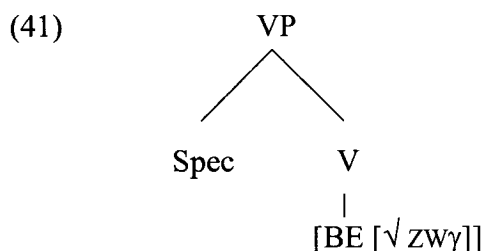
As a recall, the form in (38), which I called pure stative or accusative, indicates pure state. Therefore, it is to be expected that its ES be monadic, and correspond to the one I proposed in (32) for stative verbs, repeated below:



The LS corresponding to the verb *Zeggay* is also monadic. Instead of considering stative verbs to involve a simple relation of predication as for instance proposed by Dowty (1979) and followed by Rappaport and Levin (1998) (see Section 2), I argue in the next chapter that LS of the verb exemplified in (38) contains an abstract stative verb, which I call BE, and the lexical root $\sqrt{ZW\gamma}$ that provides the lexical content to the verb as illustrated below, keeping in mind that x is a variable acting as a placeholder to be replaced by an argument in the syntax (see Section 2):

(40) [BE x [$\sqrt{ZW\gamma}$]]

Following the proposal made in the previous section, the LS in (40) is mapped onto the ES in (38) yielding the following PAS in the syntax:



The lexical $\sqrt{ROOT}$ in (41) is generated as the complement of the verb BE. Hale and Keyser (1998, 2002) suggest that lexical roots are projected in the complement position of VP. Embick (2004) admits that they might as well be projected as the complement of V. The structure associated with stative verbs will be dealt with in more detail in Chapter 3.

5.1.2 The inchoative (or nominative) form

As already mentioned in Chapter 1, verbs of quality in Taqbaylit (or Kabyle) Tamazight also occur with nominative clitics in the suffix position when they indicate change of state as exemplified in (42a) below, to be compared with the (accusative) stative form exemplified in (42b) and dealt with in previously:

- (42) a. I-zwiɣ
CL.3m.sg.nom-red
It / he reddened
- b. Zeggay-it
Red.perf-3m.sg.acc.
It is red

Unlike the (accusative) stative form (42b), which always indicates pure state, the (nominative) inchoative form in (42a) may indicate either a resultative state or a change of state. Accordingly, the event structure associated with the nominative structure must be composed of two subevents, which correspond to the resulting state, and the transition process leading to it. In the linguistic literature inchoative verbs such as the English verb exemplified below in (43) are supposed to contain the abstract verb BECOME (see Dowty 1979; Pustejovsky 1991, 1995; Rappaport and Levin 1998 among many others.)

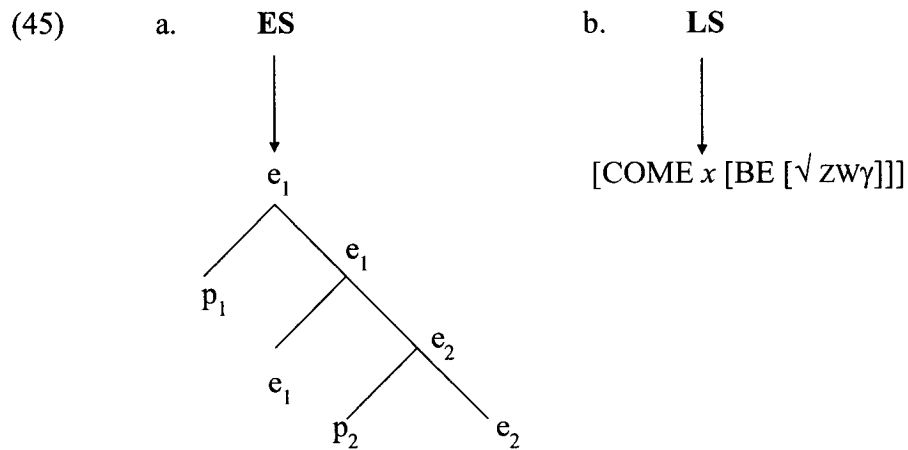
- (43) The door closed

Pustejovsky (1995: 53) argues that sentence (43) indicates transition from the state *not closed* to the state *closed* involving the same logical interpretation as the one indicated by the operator BECOME. Accordingly, he proposes the ES illustrated in (44) below, where E₁ and E₂ indicate the transition process and the resulting state (from Pustejovsky 1995: 80, (35)):

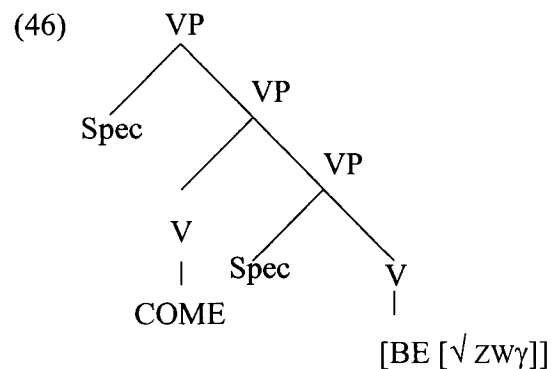
(44)

$$\text{EVENTSTR} = \begin{bmatrix} E_1 = \text{process} \\ E_2 = \text{state} \end{bmatrix}$$

Accordingly, within the approach proposed in the present chapter, the verb *i-zwiɣ* exemplified in (43a) above has the following dyadic ES and LS:



As in the previous situation, the constituents of the event structure indicated as e_1 and e_2 above will be substituted in the syntax by the abstract primitive constituents COME and BE, respectively, yielding the following predicate-argument structure:



The inchoative form is discussed in more detail in Chapter 3.

5.2 Unaccusative verbs

In Chapter 1, I distinguished between the inchoative verbs of quality introduced in the previous, and unaccusative verbs such as the verb *rrez* ‘break’ exemplified in (47a), which also refer to verbs of change, but which lack the simple stative (or accusative) alternative as evidenced by the ungrammaticality shown in (47b):

- (47) a. T-errez tebburt
 3f.sg.-break door
 The door broke / is broken
- b. *errez-itt tebburt
 break-3f.sg.ACC door
 The door is broken

Like the inchoative verb considered in the previous subsection, the unaccusative verb in (47a) may indicate either change of state or resultative state. Therefore, its ES and LS are also dyadic, similar to the one proposed for the inchoative verb *i-zwiγ* in (45) above. However, the fact that the unaccusative verb in (47) lacks the simple stative form suggests that such verbs have only the inchoative LS illustrated in (48a) while lacking the simple stative LS shown in (48b):

- (48) a. [COME [BE x [$\sqrt{\text{RRZ}}$]]]
- b. [BE x [$\sqrt{\text{RRZ}}$]]]

Unaccusative verbs are discussed in more detail in Chapter 3.

5.3 Verbs of spatial configuration

As stated in the first chapter, by unaccusative-disguised reflexives I refer to verbs of change of configuration such as those listed below:

(49)	qqim	‘sit down’	qummec	‘to squat’
	senned	‘to lean against’	knu	‘to bow’
	bedd	‘to stand’	kker	‘to stand up’
	tinez	‘to bend’		

As will be shown in Chapter 5, verbs of spatial configuration such as those listed in (49) are acknowledged to involve an agentive interpretation, in addition to the inchoative and the resultative interpretations described in the previous sections with respect to unaccusative verbs mentioned. The agentive interpretation refers to the action undertaken by the argument on its own self in order to get in the specific position indicated by the verb. Following the notation adopted in the present work, I paraphrase the abstract verb involved in the agentive interpretation as ACT. Accordingly, I argue in Chapter 5 in favour of the ES and LS illustrated below, admitting for the moment the verbs BE and COME to have conflated into BECOME:

- (52) a. John closed the door
 b. ES:
- ```

 T
 / \
 P S
 | |
 | |
LCS': | |
 | |
[act (j, the-door)] & ¬ [closed (the-door)]'

```
- LCS: cause ([act (j, the-door)] become [closed (the-door)])

As already mentioned in Chapter 1, there are two types of causative verbs in Tamazight, which correspond to those known across languages as lexical and morphological causatives (see Dixon 2000 and Shibatani & Pardashi 2002). Morphological causative verbs of change are derived from unaccusative verbs by means of the causative morpheme SS- as shown in (53):

- (53) a. T-bwwa lqahwa (unaccusative)  
 3f.sg. cook coffee  
 The coffee is ready
- b. Y-ss-bww Yidir lqahwa (Causative)  
 3m.sg.caus.make Yidir coffee  
 Yidir has made (some) coffee

Morphological causatives contrast with lexical causatives, which do not display the causative morpheme as illustrated with the verb *ldi* 'open' in (54):

- (54) a. T-lli tewwurt (unaccusative)  
 3f.sg.open fs.door  
 The door is open / opened

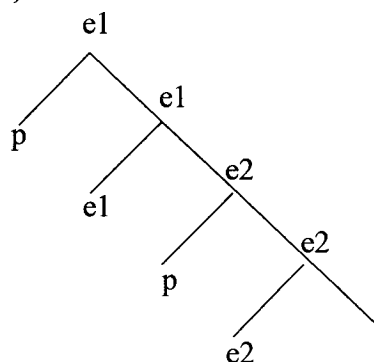
b. Y-lli Yidir tawwurt (Causative)

3m.sg.open-perf. Yidir fs.door

Yidir opened the door

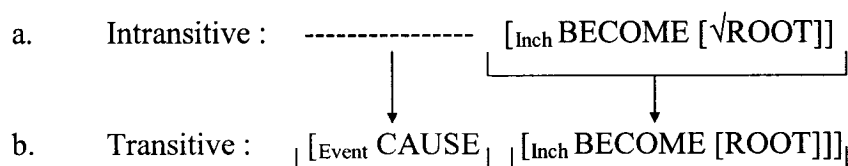
Assuming that both types of causatives (53b) and (54b) have a dyadic structure composed of a CAUSE and a RESULT subcomponent, I represent their ES as follows:

(55)



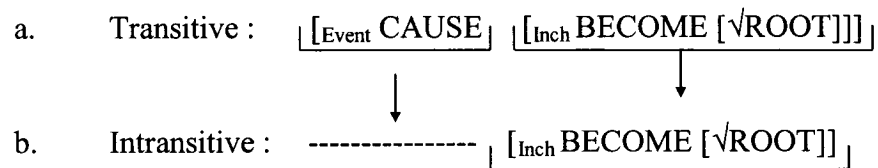
However, as I argue in Chapter 6 the LS structure corresponding to the morphological causative in (53b) is basically intransitive, therefore derived by augmenting the LCS of its unaccusative counterpart in (53a) with the causative subcomponent in the way illustrated below:

(56) *SS-causativization*:



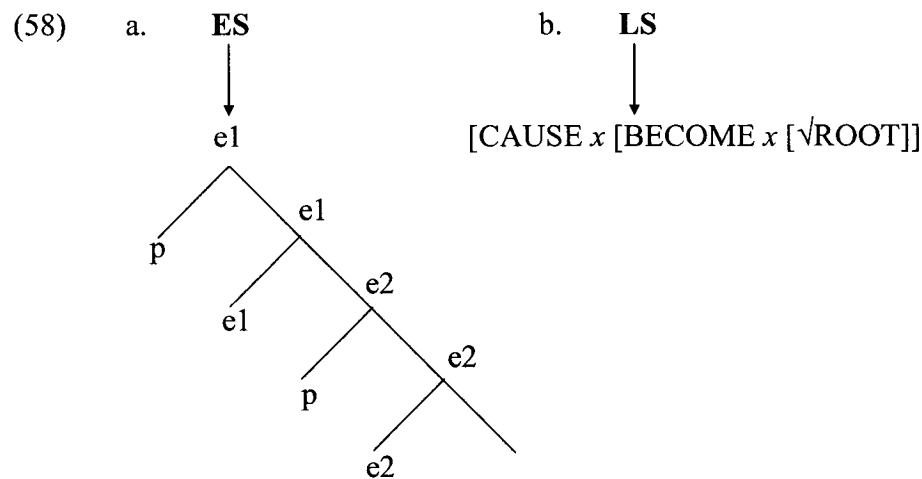
By contrast, the LS of the lexical causative in (54b) is basically transitive. Accordingly, it is the LS of the intransitive alternate that is derived by reducing the transitive structure in the way illustrated below:

(57) LCS of *lexical causatives*:



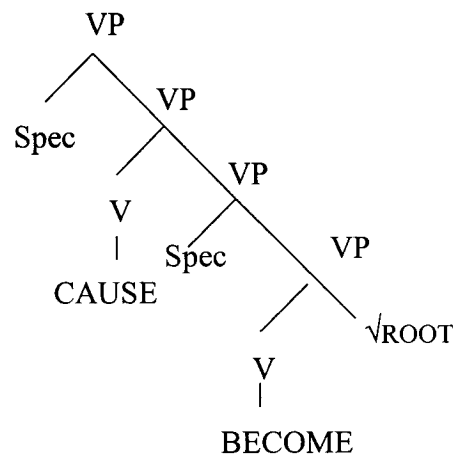
The structures above are discussed in more detail in Chapter 6.

The question whether the derived structures (56b) and (57b) are lexicalised at the LS level or whether only their basic counterparts (56a) and (57a) are lexicalised is not relevant. What is relevant is the fact that when the projected ES is causative, it will be expressed with the appropriate LS, which corresponds to the causative verb in both situations as illustrated below:



As in the previous situations the mapping between the LS and the ES in (58) yields the syntactic PAS illustrated below:

(59)



Causative verbs are discussed in more detail in Chapter 5.

## 5. Conclusion

In the present chapter I first provided an overview regarding the way event structure, lexical structure and predicate-argument structure have been considered in the literature. I outlined the model of the organization of the grammar adopted in the present dissertation and specified the levels of representations of ES, LS and PAS. I also showed how the approach suggested here applies to the different classes of verbs of (change of) state under investigation. In the next chapters I delve into the details by considering each class of verbs individually.



## Chapter 3

### Verbs of quality and unaccusative verbs

#### I. Introduction

In the present chapter I examine two classes of intransitive verbs indicating state and change of state, which I referred to as verbs of quality and unaccusative verbs in the previous chapters. As a recall, verbs of quality have two distinct forms. The form exemplified in (60a), which I referred to as pure stative or accusative, and the one exemplified in (60b), which I called inchoative or nominative:

- (60) a.     Zeggay-it  
              Red.perf-3m.sg.acc.  
              It / he is red
- b.     I-zwiγ  
              3m.sg.nom.-red.perf  
              It / he has become red

The simple stative form in (60a) always indicates simple state with no reference made to a prior event that leads to it. By contrast, the inchoative form in (60b) may indicate either a state resulting from a prior event, or the process of change leading to the current state, depending on the context. I will argue in § 2.3 that these two interpretations are distinguished with the help of an operator associated with the syntactic structure, with two different scope positions. Verbs of quality are dealt with in § 2.

In other dialects than Kabyle Tamazight, the simple state (or accusative) form in (60a) has been lost in favour of the inchoative (or nominative) form in (60b). This is for instance the case in Tashelhiyt Tamazight (spoken in the south of Morocco) where verbs

of quality occur with nominative clitics only. However, and curiously enough, the verb stem of the verb *zwy* in Tashelhiyt, exemplified in (61) below, differs morphologically from the AZK inchoative form exemplified in (60b):

- (61) I-zeggay (Tashelhiyt, nominative)  
 CL.3m.sg.nom.-red  
 It / he became red

I argue in Section 3 that the Tashelhiyt form in (61) and the AZK form in (60b) are associated with two different types of aspects.

In contrast to verbs of quality, unaccusative verbs have only the inchoative form as illustrated with the verb *ry* ‘burn’ in (62a) while lacking the simple stative form such as the one exemplified in (60a) as evidenced by the ungrammaticality of the sentence in (62b):

- (62) a. T-rya lqahwa-ya  
 3f.sg.-burn coffee-this  
 This coffee is burning / too hot
- b. \*Rya-t lqahwa-ya  
 Hot.3f.sg.nom. coffee-this  
 This coffee is too hot

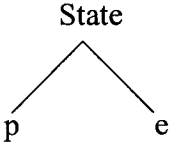
Like the inchoative form of verbs of quality exemplified in (60b), the unaccusative verb in (62) may also indicate either a state resulting from a prior event, or the process of change of state leading to it, depending on the context. I argue in § 4 that unaccusative verbs share the same structure as the inchoative form of verbs of quality.

## 2. Verbs of quality

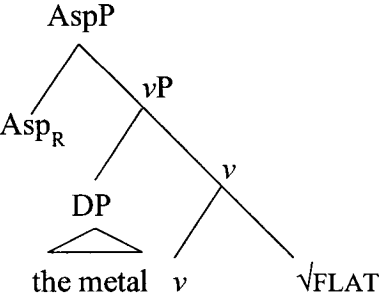
In the present section I examine the ES, the LS and the PAS associated with the simple stative and the inchoative forms of verbs of quality exemplified in (60).

### 2.1 Simple statives

As mentioned in the previous chapter, the simple stative (accusative) form exemplified in (60a) has a monadic event structure of the STATE type illustrated in (63a) below, where *e* and *p* mean head and participant of the event respectively, and a monadic LS composed of the abstract verb BE and a lexical root represented in (63b):

- (63) a. 
- b. [BE *x* [ $\sqrt{\text{ROOT}}$ ]]

In the approach outlined in Chapter 1 I adopted the idea that lexical roots merge with V. The idea that lexical roots merge directly with the head V is defended by Embick (2004: 374) with respect to deadjectival verbs. Embick proposes that the eventive and the resultative interpretations associated with the verb *flatten* in (64a) and (64b) have the structure illustrated in (64c):

- (64) a. The metal flattened  
b. The metal is flattened
- c. 

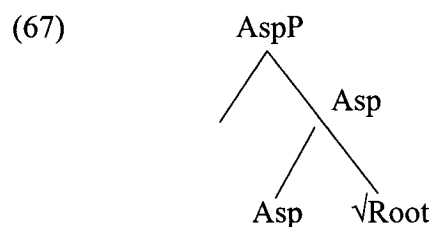
In the structure represented in (64c) the inchoative  $\nu$  selects the root  $\sqrt{\text{FLAT}}$ . The verb and the root conflate in order to yield the lexical verb *flatten*, while the DP *the metal* in [spec,  $\nu\text{P}$ ] is interpreted as the internal argument. Embick (2004: 367) adopts the structure in (64c) for the passive participles exemplified in (65a) and (65b):

- (65) a. The door is opened  
b. The metal is hammered

Embick (2004: 363) proposes that the sentences in (65a) and (65b) contrast with their simple stative counterparts exemplified in (66a) and (66b) below, respectively:

- (66) a. The door is open  
b. The metal is flat

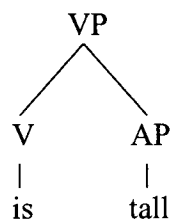
Embick argues that the stative predicates in (66a) and (66b) lack head  $\nu$ , which contrasts them with the passive participles in (65a) and (65b), respectively, which have one. Accordingly, he proposes that in the sentences in (66) the lexical root conflates directly with aspect as illustrated with the structure represented below (Embick's 2004: 363, (23)):



The structure above proposed by Embick contrasts with the one represented in (68b) proposed by Ouhalla (1994: 31 (67b)) for the adjective predicate exemplified in (68a):

(68) a. John is tall

b.



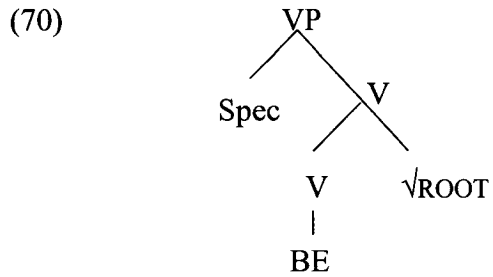
The auxiliary verb BE in the English sentences in (66a-b) and (68a), it may be argued, is not a verb but simply the spelling out of tense. However, such an argument does not hold with the Tamazight simple stative verb of quality illustrated in (61a), reproduced below as (69), because the form *zeggay* is a verb not an adjective:

(69) *Zeggay-it*

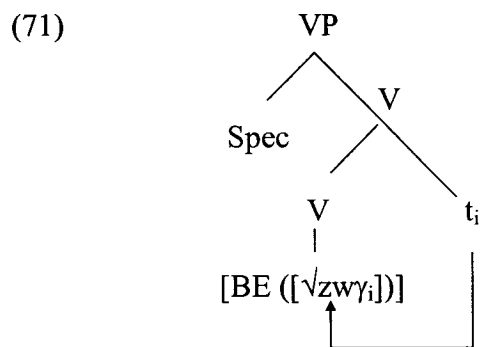
Red.perf-3m.sg.acc.

It / he is red

Therefore, as far as the simple stative verb exemplified in (69) is concerned, the structure represented in (68b) has the advantage of showing the stative verb BE, which confers the category feature [+V] to the lexical root. Embick's hypothesis that the lexical root in (67) merges directly with Aspect would leave the lexical root in the Tamazight verb in (69) without the category feature [+V]. For this reason, I adopt the structure represented in (68) over the one proposed by Embick, represented in (67). In view of these remarks, I propose that the mapping of the monadic ES and the LS represented respectively in (63a) and (63b) for the simple stative sentence in (69) yield the following monadic PAS:

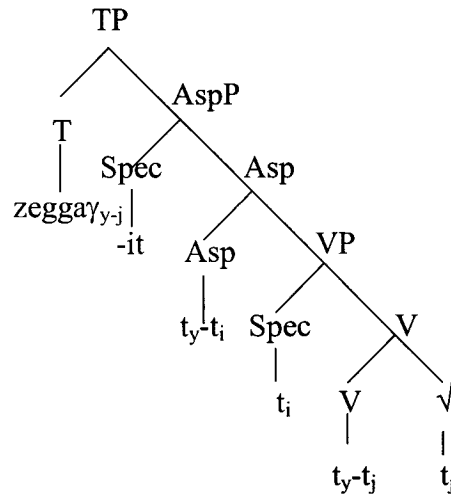


In the structure above, the lexical root, which contains only semantic features, is generated as the complement of the abstract verb BE. The two elements are then conflated together in the following fashion:



In order to give a full representation of the simple stative verb in (69) I have to consider the rest of the elements involved in the structure such as aspect and the accusative clitic *-it*. I argue in Chapter 4 that accusative clitic *-it* is an argument, and as such, it is generated in the specifier position of the abstract verb BE. Following the proposal made by Travis (2000) that features of the object arguments are checked in Spec of Aspect, as opposed to features of subject arguments, which are checked in the spec of T, I assume that the clitic *-it* subsequently moves to the specifier position of Aspect where it checks the accusative case feature. At this level, the syntactic structure under derivation looks as follows:

(72)



I will return to the structure above in Chapter 4 devoted to the position of clitics, where I consider the possibility that the verb *zeggay* and the accusative clitic *-it* move to C and Spec of T, respectively.

## 2.2 Inchoatives

In the present subsection I consider the ES, the LS and the PAS associated with inchoative (or nominative) form of verbs of quality exemplified below, which is a reproduction of the example in (61) above:

- (73) I-zwiγ  
 3m.sg.nom.-red.perf  
 It / he has become red

As previously mentioned, the inchoative form exemplified in (73) may yield either an inchoative or a resultative interpretation depending on the context. Resultative interpretation is a property of verbs of change (of state) indicating a transition from a state to another. Verbs of change are known to have a dyadic event structure composed of two subevent components, one of which indicates the transition process, while the other

indicates the resulting state. The inchoative form in (73) is therefore to be compared with the English inchoative sentence exemplified in (74a) as opposed to its stative counterpart exemplified in (74b):

- (74) a. The soup cooled  
b. The soup is cool

It has been acknowledged in the linguistic literature (Lakoff 1965; Dowty 1979; Jackendoff 1983, 1990; Pinker 1989 among many others) that the semantics of the sentence (74a) contains an abstract inchoative verb or operator with the same role as the verb ‘become’ involved in the sentence (75) below:

- (75) The soup became cool

Using the change-of-state T-calculus formulated by von Wright (1963; 1968) Dowty (1979: 75) defines the abstract operator BECOME involved in the sentence (84a) as follows:

- (76)  $\text{BECOME}(P) =_{\text{def.}} \neg pTp$

In the definition above  $p$  refers to a state; the symbol  $\neg$  to negation; and  $T$  to a dyadic operator paraphrased as “And NEXT”. Remember from the previous chapter (see Chapter 2, § 4.1.2) that Pustejovsky (1995: 53) adopts a similar view in his discussion of the inchoative sentence below:

- (77) The door closed

As a recall, Pustejovsky suggests that the semantics of the verb *close* include the transition from the predicate *not-closed* to the predicate *closed* of the same type as Dowty’s (1979) operator BECOME. The structure given by Pustejovsky for such



transition type events, which include accomplishments and achievements, was already presented in the previous chapter (§ 4.1.2), it is reproduced below as a recall:

$$(78) \quad \left[ \text{EVENTSTR} = \begin{bmatrix} E_1 = \text{process} \\ E_2 = \text{state} \end{bmatrix} \right]$$

Jackendoff (1990) expresses the same idea in his discussion of the difference between the state reading and the inchoative event reading associated with the sentences below:

- (79) a. The weathervane pointed north  
 b. The enemy surrounded the city  
 c. Bill stood on the table  
 d. Snow covered the hills

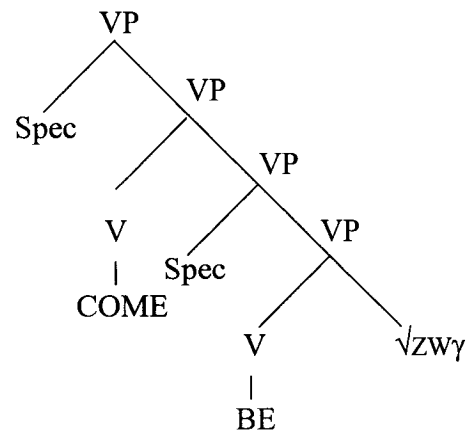
Jackendoff (1990: 75) argues that the “[inchoative] event reading describes a change taking place whose final state is the State reading — the familiar inchoative reading.” He concludes that the inchoative interpretation has the dyadic structure in (80a) as opposed to the simple stative interpretation, which has the monadic conceptual structure in (80b):

- (80) a. EVENT → [Event INCH ([State X])  
 b. STATE → [State X]

Both Pustejovsky’s and Jackendoff’s structures, illustrated above respectively as (78) and (80), contain two event subcomponents corresponding to the process of change and the resulting state. Following the approach outlined for inchoative verbs in Chapter 2, the two subevent components are matched with their corresponding abstract verbs, which I have been paraphrasing as BE and COME, in the lexical structure of the appropriate

verb. The mapping of the event structure and its corresponding lexical structure yields the predicate-argument structure in the syntax of the type illustrated below:

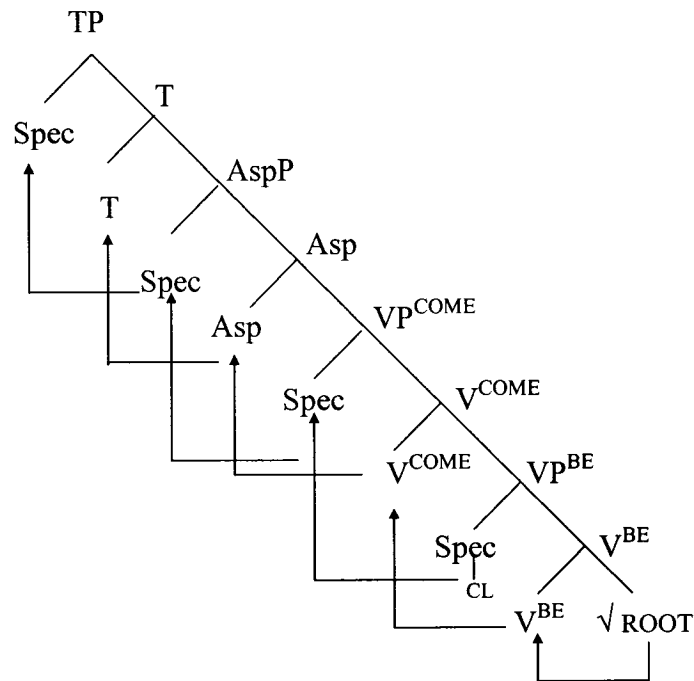
(81) Inchoative



Like in the stative situation dealt with in the previous section, the lexical root  $\sqrt{ZW\gamma}$  in (81) conflates with the abstract verb BE yielding  $[BE ([\sqrt{ZW\gamma}])]$ . The complex thus formed subsequently conflates with the verb COME yielding a structure  $[COME [BE ([\sqrt{ZW\gamma}])]]$ . As described in the previous subsection with respect to the simple stative form, the syntactic structure above will be augmented with other syntactic material such as Aspect and Tense.

In the inchoative form under consideration the clitic, which corresponds to the logical object (internal argument), surfaces in the prefix position, which means that it has to be higher than the verb. Supposing the verb to be under T, the candidate position to host the nominative clitic *i-* is Spec of T. Admitting for the time being that the abstract features corresponding to the clitic *i-* are base-generated in the spec of the lower verb BE, the complete structure of the nominative form *i-zwiγ* will look as follows:

(82)



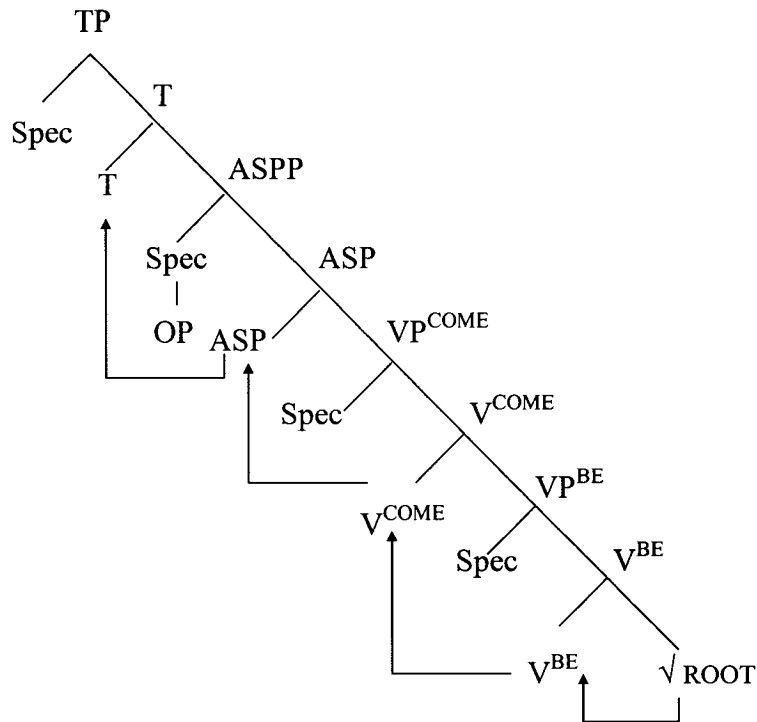
Unlike the accusative clitic *-it*, dealt with in the previous section, which occurs as a suffix, the nominative clitic *i-* in (82) has to move to the spec of T to surface as a prefix. Given that the same dyadic structure in (82) may indicate either an inchoative interpretation or a resultative (stative), it is important to determine how these two interpretations are distinguished in structural terms.

### 3. The resultative and the inchoative interpretations

As already mentioned in the introduction the inchoative form of verbs of quality discussed in the previous subsection may have either a stative or an inchoative interpretation. In the present section I will argue that the structure proposed in (82) for the form *i-zwiγ* is associated with an operator with two different scope options. If the operator has scope over the higher verb COME, the structure yields the inchoative interpretation; if on the other hand the scope of the operator is restricted to the lower verb BE it yields the resultative interpretation. Such an operator-based approach has for

Following Chierchia I further assume the operator to be in the Spec position of the lower VP when the interpretation is stative, and in the Spec position of ASP when the interpretation is inchoative. Accordingly, the structure represented in (94) for the inchoative form *i-zwiγ* will look like (83) when the interpretation corresponds to the resultating state; and like (84) when the interpretation is inchoative:

(84)



Like in the structure proposed for the stative form in § 2.1, the lexical  $\sqrt{\text{ROOT}}$  conflates with the verb BE to yield the stative lexical verb whose structure is [BE ([ $\sqrt{\text{ROOT}}$ ])]. As previously mentioned, the complex [BE ([ $\sqrt{\text{ROOT}}$ ])] further conflates with the inchoative verb COME to yield [BECOME ([ $\sqrt{\text{ROOT}}$ ])]. However, adopting such an assumption for the structure in (83) seems to compromise the resultative state interpretation in the sense that it would drive the abstract verb BE out of the lower stative VP which is the scope domain of the operator. Two different solutions are available in order to solve this problem depending on whether or not we allow a “de-conflation” process between the lexical root and the stative verb BE to take place.

The first solution would be to keep the stative  $V^{\text{BE}}$  within the scope of the operator, while allowing the root to conflate with the  $V^{\text{COME}}$ . Applying this hypothesis to the inchoative verb BECOME, supposedly derived from the incorporation of BE onto

COME, we would obtain a structure that is similar to [COME [Op [BE]]] whereby the stative verb BE is still within the scope of the operator at the surface level. Such a verb structure exists in the English periphrastic form COME TO BE, which has also been adopted in the past as the LCS of verbs of change of state. For instance, Guerssel (1986) proposed the LCS shown in (85b) for verbs of change, as opposed to the one in (85a) proposed for simple stative verbs:

- (85) a. [x BE IN STATE y]  
 b. [x COME [TO BE IN STATE y]]

Unlike the structure I proposed in (83) where the verb BE conflates with the verb COME, the stative verb in (85b) remains within the scope of the lower VP, thus accounting for the resultative interpretation.

The alternative solution would be to accept the idea that the stative BE conflates with COME in the syntax as shown in (83), while assuming some kind of reconstruction to take place subsequently at LF. Reconstruction is a syntactic phenomenon applying at LF to elements derived by movement (Hornstein 1984, Barss 1986, Chomsky 1995 and Aoun & Benmamoun 1998). It means, “the moved phrase [is] treated “as if” it were in the position of its trace.” (Chomsky 1995: 71). Viewed this way, the stative interpretation of the nominative form we are seeking to account for here is an LF property.

Having explained how the resultative and the inchoative interpretations are distinguished on the basis of the operator, I will now investigate the differences between the AZK inchoative form *i-zwiγ* and the Tashelhiyt inchoative form *i-zeggaγ*.

#### 4. Dialectal variation between two nominative forms

As already mentioned in the introduction, the accusative form of verbs of quality has been lost in Tashelhiyt Tamazight in favor of the inchoative form. However, as shown below, the morphology of the inchoative form in Tashelhiyt is different from the AZK one considered previously. The AZK simple stative form is given in (86c) for comparison:

- (86)
- |    |                     |                          |
|----|---------------------|--------------------------|
| a. | I-zeggay            | (Tashelhiyt, inchoative) |
|    | CL.3m.sg.nom.-red   |                          |
|    | It / he reddened    |                          |
| b. | I-zwiγ              | (AZK, inchoative)        |
|    | CL.3m.sg.nom.-red   |                          |
|    | It / he reddened    |                          |
| c. | Zeggay-it           | (AZK, simple stative)    |
|    | Red perf.-CL.3m.sg. |                          |
|    | It is red           |                          |

The Tashelhiyt form has the same inchoative prefix *i-* as the one involved in the AZK inchoative form, but the forms differ with respect to the morphology of verb stem. The Tashelhiyt form *i-zeggay* has the same verb stem as the AZK simple stative form *zeggay-it*, but they differ with respect to the clitics involved. The idea I will explore here is that the difference between the two stems *zeggay* (86a, c) and *zwiγ* (86b) is aspectual in the sense that they indicate two types of perfective aspect. The palatal sound *gg* appearing on the stem *zeggay*, in both the Tashelhiyt inchoative form and the AZK simple stative form

results from the reduplication of the second consonant *w* of the lexical root  $\sqrt{\text{ZW}\gamma}$ , following a general phonological rule in the language. The reduplication involved here corresponds to the strategy used in the language to derive the perfective aspect with verbs of quality when they occur in the accusative form. Compare for instance the accusative forms of the verb roots listed below with their nominative counterparts in Kabyle Tamazight:

|      |                                 |                       |                   |                    |
|------|---------------------------------|-----------------------|-------------------|--------------------|
| (87) | <b>Root</b>                     | <b>Simple stative</b> | <b>Inchoative</b> |                    |
|      | $\sqrt{\text{zw}\gamma}$        | <i>zeggay</i>         | <i>izwiγ</i>      | (be red)           |
|      | $\sqrt{\text{m}\gamma\text{r}}$ | <i>meqqar</i>         | <i>imγur</i>      | (be big; grown up) |
|      | $\sqrt{\gamma\text{zf}}$        | <i>γezzif</i>         | <i>iγzif</i>      | (be tall; long)    |
|      | $\sqrt{\text{wzl}}$             | <i>wezzil</i>         | <i>iwzil</i>      | (be small)         |
|      | $\sqrt{\text{brk}}$             | <i>berrik</i>         | <i>ibrik</i>      | (be black)         |

As seen from the table above, reduplication in Kabyle Tamazight applies only in the simple stative, not in the inchoative form. The situation in Kabyle Tamazight contrasts with the situation in Tashelhiyt where the reduplicated form *zeggay* is used with the inchoative form. Although the possibility of combining verbs of quality with accusative clitics in Tachelhiyt Tamazigh has been lost, as mentioned previously, the reduplication strategy deriving the perfective aspect with accusative forms has been retained.

Taking into consideration the aspectual differences just highlighted, I now turn to the differences between the syntactic structures associated with the Tashelhiyt and the AZK inchoative forms. The idea that a syntactic structure may be associated with two different types of aspect is familiar from the literature. For instance, in her discussion of



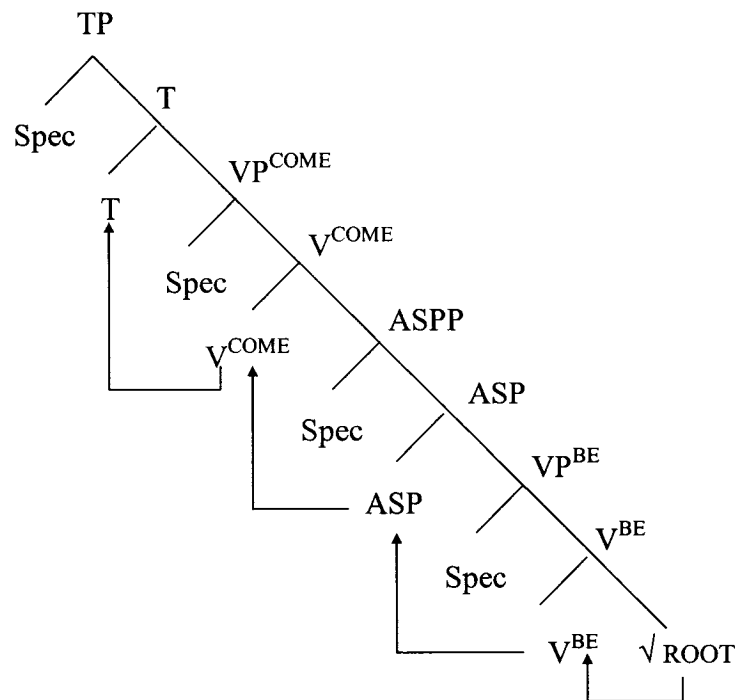
causatives in tagalog Travis (1992) suggests that lower V is associated with inner aspect, while higher V is associated with outer aspect. Without necessarily subscribing to the idea that the same structure contains both aspects, dubbed inner and outer aspect by Travis, the idea I adopt here<sup>17</sup> is that there is only one aspect head, yet equipped with two types of morphosyntactic features, selecting two different types of verbs. One type of aspect selects the stative verb  $V^{BE}$ , while the other selects the inchoative verb  $V^{COME}$ . If Aspect selects the stative  $V^{BE}$ , the perfective is indicated with reduplication as in the form *zeggaγ*. If on the other hand Aspect selects the inchoative  $V^{COME}$ , the perfective is indicated with vowel alternation as in the form *i-zwiγ*. The fact that both the Tashelhiyt inchoative form *i-zeggaγ* and the AZK simple stative form *zegga-it* have the same aspectual morphology means that they are associated with the same type of stative aspect. By contrast, the AZK nominative form *i-zwiγ* is associated with inchoative or non-stative aspect. According to this analysis, the Tashelhiyt form *i-zeggaγ* will have the syntactic structure represented in (88), which contrasts with the structure in (89) associated with the AZK inchoative form *i-zwiγ*<sup>18</sup>:

---

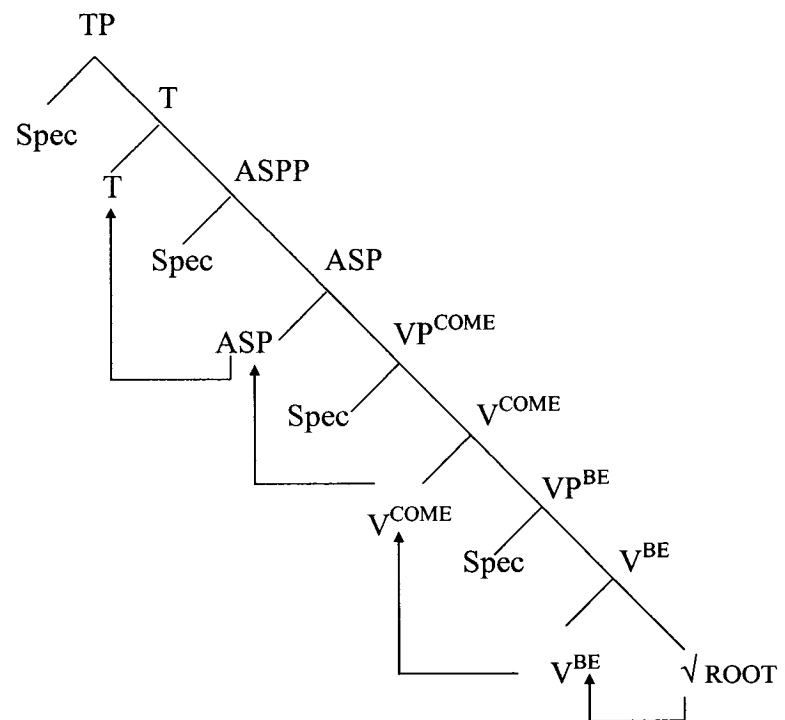
17 Suggested to me by M.L. Rivero.

18 The clitic *i-* associated with the verb forms is omitted in both structures; it will be dealt with in the following chapter.

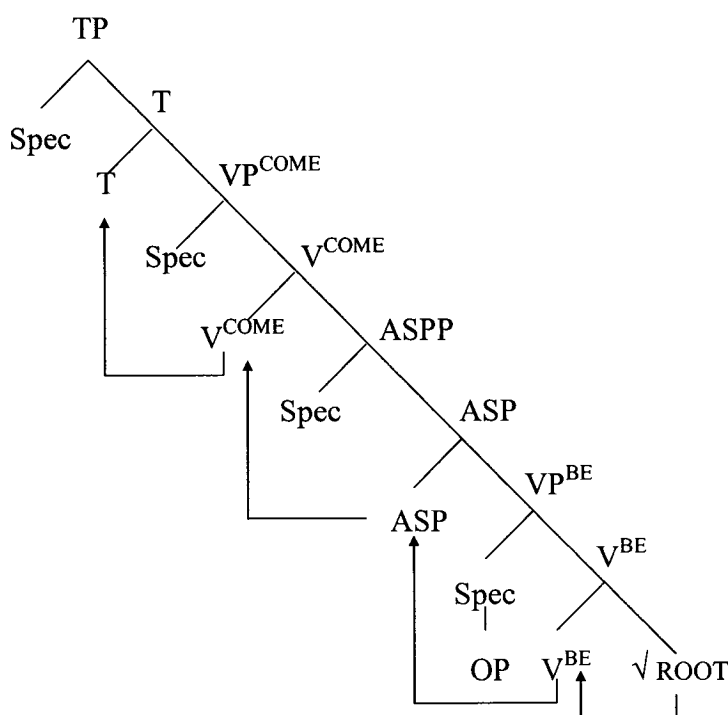
(88)



(89)



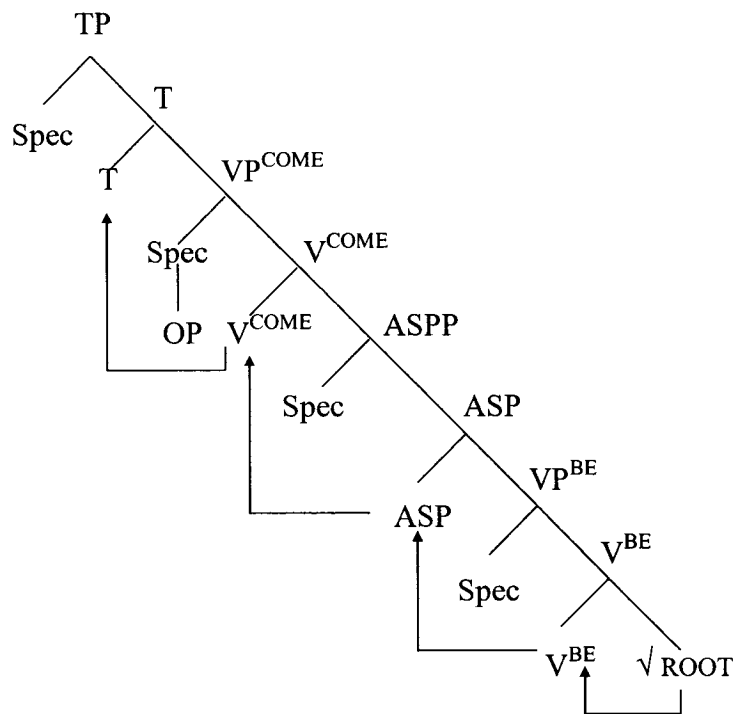
Like in the situation with the AZK form *i-zwiγ* considered previously, the structure associated with the Tashelhiyt inchoative form *i-zeggaγ* may yield two different interpretations, corresponding to a resultative or an inchoative interpretation depending on the context. Therefore, its structure must also contain the same type of operator as the one postulated for the form *i-zwiγ*. In order to distinguish between the two interpretations, the operator has to have two different scope domains, in the same way as suggested in the previous section with respect to the AZK form *i-zwiγ*. Accordingly, considering the structure in (88), I will assume the operator to be located in the Spec of VP<sup>BE</sup> when the interpretation is resultative as shown in (90):



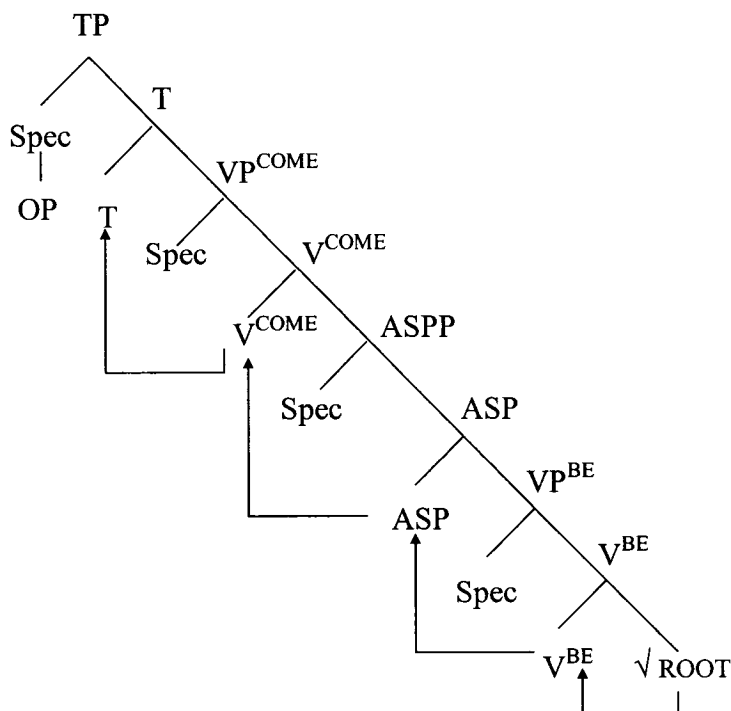
Given that the nominative clitic in the form *i-zwiγ* shows up as a prefix, it is reasonable to assume at this level of discussion that this nominative clitic is in the [Spec, TP].

Unlike the AZK situation, the operator associated with the inchoative interpretation in Tashelhiyt cannot be located in the spec of Aspect otherwise the operator would fail to have scope on the inchoative abstract verb  $V^{COME}$ , the latter being higher than ASPECT as shown in (90). This remark suggests that the operator must be in a position higher than the  $V^{COME}$ . Two possibilities are available, the spec position of  $V^{COME}$  as shown in (91) or the spec of T as illustrated in (92):

(91)



(92)



The analysis of the different structures presented in this chapter will be extended in the following chapter, which focuses on the position of clitics.

## 5. Unaccusative verbs

The inchoative verbs of quality dealt with in the previous sections contrast with other intransitive verbs of change that lack the simple stative (or accusative) form. Compare for instance the verb of quality exemplified in (93), which has both the accusative and the nominative forms exemplified in (93a) and (93b) respectively, with the unaccusative verb in (94) which has only the nominative form exemplified in (94b), the accusative form in (94a) not being an option:

- (93) a.      Səmd-itt          lqahwa-ya  
                  Cold-3.f.sg.acc. coffee-this  
                  This coffee is cold

- b.      Tismid-d                      lqahwa-ya  
             3.f.sg.nom.cold-particle. coffee-this  
             This coffee has cooled off
- (94) a.      \*Rya-tt              lqahwa-ya  
             Hot.3f.sg.nom. coffee-this  
             This coffee is too hot
- b.      T-rya lqahwa-ya  
             3f.sg.-burn coffee-this  
             This coffee is burning / too hot

In order to highlight this difference, I keep referring to the form of verbs of quality exemplified in (93b) as inchoative verbs, while calling unaccusative verbs such as the one exemplified in (94b), which lack the accusative (or pure stative) form. Both the inchoative verb of quality in (93b) and the unaccusative verb in (94b) obtain their causative counterparts by means of the morpheme SS as shown respectively in (95a) and (95b):

- (95) a.      I-ss-ismid-d                      Yidir      lqahwa-nni  
             3.f.sg.caus.nom.cold-particle Yidir      coffee-deic  
             Yidir has cooled off the coffee
- b.      I-ss-ry-d                      Yidir      lqahwa-ya  
             3.f.sg.caus-burn-pticle Yidir coffee-this  
             Yidir has overheated this coffee

The unaccusative verb in (94b) has the same LS structure as the one proposed for inchoatives in § 2.2, which is represented below:

(96) [Inch COME [State BE ([√ROOT])]]

As in the situation with inchoatives, the unaccusative verb in (93a) may indicate either change of state or resultative state, depending on the context. These two interpretations are accounted for with the same analysis proposed for inchoative verbs in § 2.2.

As previously mentioned, the accusative (or simple stative) form has disappeared in other Tamazight dialects in favor of the inchoative form. However, in his discussion of verbs of state and change of state in one of these dialects<sup>19</sup>, Guerssel (1986: 81) proposes the simple stative structure represented in (97b) for the verb *y-zyert* ‘be long’ exemplified in (97a):

- (97) a. Y-zyert wfuli  
           3ms-be.long CS.string  
           The string is long
- b. zyert:           x BE LONG

There is a divergence here between our analysis and the one proposed by Guerssel. On the one hand the verb *zyert* in (97a) is combined with the nominative clitic *y-* in the suffix position, which is the variant of the nominative clitic *i-* occurring with inchoative and unaccusative verbs seen previously. On the other hand, the structure in (97b) proposed by Guerssel parallels the one we proposed for pure stative (or accusative) verbs in § 2.1. In our analysis, the verb *y-zyert* exemplified in (97a) cannot have the pure

---

19 Ayt Seghrouchen Tamazight, spoken in central Morocco.

stative structure illustrated in (97b) because we take the combination verbs of quality with the nominative clitic *i-* as a sign that the lexical structure of these verbs contains the inchoative verb COME, in addition to the stative verb BE.

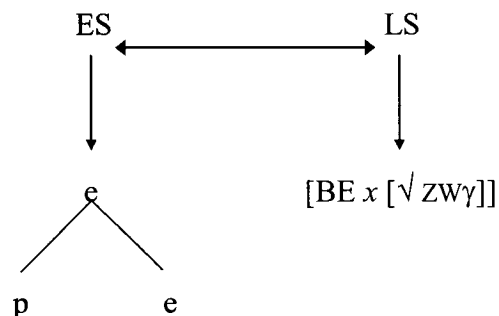
Unlike verbs of quality, which have both the inchoative and the simple stative LS represented respectively in (98a) and (98b), unaccusative verbs have only the inchoative LS, which is the same as the one in (98b):

- (98) a. [State BE ([√ROOT])]  
 b. [Inch COME [State BE ([√ROOT])]]

Consequently, inchoative verbs of quality and unaccusative verbs share the same type of structure represented in (98b), which accounts for their similarities as previously seen. As far as pure stative verbs of quality in Kabyle Tamazight are concerned, choice between (98a) and (98b) is determined by the type of event structure that is projected. If the event indicates simple state, the monadic LS in (98a) is selected. If on the other hand the event indicates change of state, the structure that is selected corresponds to the dyadic one in (98b).

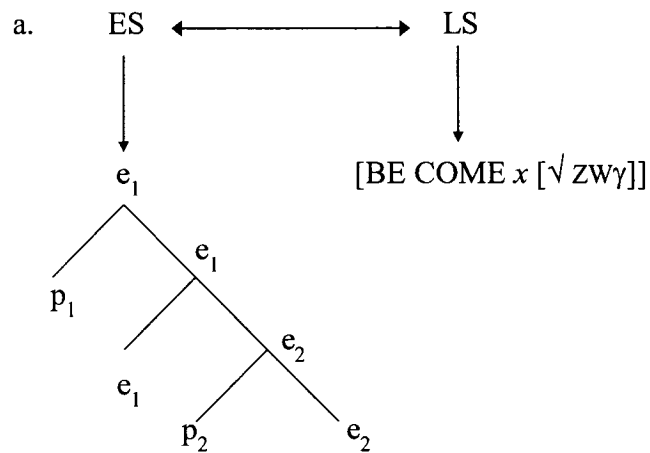
Using the model of the organization of the grammar postulated in Chapter 2, we can illustrate the stative situation as in (99), and the inchoative with the unaccusative situations just described as in (100):

(99) Stative:



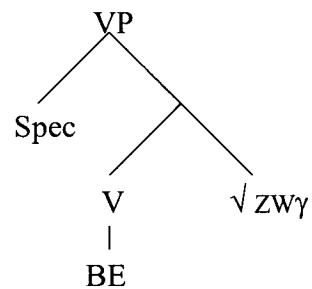


(100) Inchoative / unaccusative:

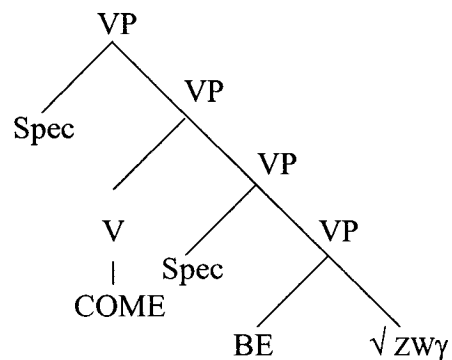


The mapping of the stative LS onto the ES in (90) yields the PAS represented in (101) below, while and the mapping of the inchoative ES onto its corresponding LS in (100) yields the PAS represented in (102):

(101) Stative :



(102) Inchoative



## 6. Unaccusative / causative alternating verbs

The class of unaccusatives dealt with previously form their causative counterpart by adding the causative morpheme SS to the intransitive base as clearly seen by comparing the intransitive examples in (93) and (94) with those in (95a) and (95b), respectively, above. They contrast with another type of unaccusative verbs, which alternate with the causative counterpart as illustrated below with the verb *rrez* ‘break’:

- (103) a. T-errez      tebburt      (unaccusative)  
             3f.sg.-break cs.door  
             The door broke / is broken
- b. Y-rrza      Yidir      tabburt      (causative)  
             3f.sg.-break Yidir      fs.door  
             Yidir broke the door

Other causative-alternating unaccusatives are listed below:

- (104)      ffer      ‘hide’      bnu      ‘build’  
             gzem      ‘cut’      aru      ‘write’  
             nyel      ‘spill’      sfed      ‘clean’  
             kkfu      ‘finish’      ccar      ‘fill’

Like the class of unaccusative verbs dealt with previously, unaccusative / causative alternating verbs also lack the simple stative (or accusative) form as shown in (105b):

- (105) a. T-errez      tebburt      (unaccusative)  
                  3f.sg.-break cs.door  
                  The door broke / is broken
- b. \*errez-itt tebburt      (stative / accusative)  
                  break-3f.sg.acc door  
                  The door is broken

Unlike the unaccusatives dealt with previously, which are derived by augmenting the stative structure, the class of causative-alternating unaccusative are derived by reducing the causative component in the way illustrated below:

- (106) a. Transitive :  $\left[ \begin{array}{c} \text{Event CAUSE} \\ \downarrow \end{array} \right] \left[ \begin{array}{c} \text{Inch COME} \\ \downarrow \end{array} \left[ \begin{array}{c} \text{State BE} ([\sqrt{\text{ROOT}}]) \end{array} \right] \right] \right]$
- b. Intransitive : -----  $\left[ \begin{array}{c} \text{Inch COME} \\ \downarrow \end{array} \left[ \begin{array}{c} \text{State BE} ([\sqrt{\text{ROOT}}]) \end{array} \right] \right] \right]$

Considered this way, the reason why causative-alternating unaccusatives lack the simple stative form becomes straightforward. Their semantic content does not indicate a simple state but a state that results from a change undergone by the (internal) argument.

The analysis of unaccusative verbs presented here will be extended in Chapter 7 devoted to causative verbs.

## Chapter 4

### Nominative v. Accusative Clitics

#### 1. Introduction

In the previous chapter I assumed that the accusative morpheme *-it* in (107a) and the nominative morpheme *i-* in (107b) are not agreement markers but internal arguments expressed as clitics:

- (107) a.     Zeggay-it  
              Red perf.-3.m.sg.acc  
              It is red
- b.     I-zwiγ  
              3m.sg.nom.-red  
              It / he reddened

In order to account for their respective prefix and suffix positions, I provisionally concluded that the accusative clitic in (107a) is in [Spec, Asp] and the nominative clitic in (107b) is in [Spec, TP].

In the present chapter I investigate the reasons that forces the clitic in (107b) to surface as a nominative subject in the prefix position on the one hand, and those that keep the accusative clitic in the suffix position in (107a) on the other. In passing, it is worth mentioning that the difference between the suffix and the prefix status of the clitics under consideration are not merely phonological. Given that both clitics correspond to internal arguments, if they were a mere phonological process they would both occur either as prefixes or as suffixes. What I would like to account for is why in one instance the clitic is forced to move to the nominative (subject) position but not in the other where it occurs

in the accusative object position. As will be shown shortly, the reason for this movement is syntactic.

The hypothesis I explore in Section 3 is based on the difference between the types of category T involved in each structure. As a background to the discussion provided in Section 3, I first present more evidence in Section 2 in favor of the clitic status of the subject morpheme *i-* occurring with the inchoative form in (107b). The conclusions reached in the first three sections will give me the opportunity to elaborate further on the position of the nominative and the accusative clitics in Section 5.

## 2. Evidence in favor of the clitic status of the morpheme *i-*

The accusative clitic status of the suffix occurring with the simple stative form in AZK exemplified in (119a) is the same as the one occurring with transitive verbs where they are in complementary distribution with lexical objects as shown in the examples below:

- (108) a.      I-wwet                      Yidir    ccir  
                  3m.sg.nom-hit.perf.    Yidir    ball  
                  Yidir hit the ball
- b.      Iwwet-it                      Yidir  
                  3m.sg.nom-hit-perf.3m.sg.acc Yidir  
                  Yidir hit it

In AZK, all the accusative clitics occurring with the simple stative form of verbs of quality as in (107a) coincide with those used with transitive verbs in the way exemplified in (108b). Unlike the accusative clitic *-it* in (107a), the clitic status of the

nominative morpheme *i-* occurring in the prefix position as in (107b) is not so obvious because it is always compulsory; that is, it is not in complementary distribution with a lexical argument as illustrated with the examples in (109):

- (109) a.      I-wwet                      Yidir   ccir  
                  3m.sg.nom-hit.perf.    Yidir ball  
                  Yidir hit the ball
- b.      I-wwet                      ccir  
                  3m.sg.nom-hit.perf. ball  
                  He hit the ball
- c.      \*wwet    Yidir   ccir  
                  hit.perf.   Yidir ball  
                  Yidir hit the ball

In (109b) the lexical subject is omitted and the sentence is grammatical because the subject function is indicated by the nominative morpheme *i-*. In (109c) however, the morpheme *i-* is omitted and the sentence is ungrammatical. What the sentence (109c) shows is that the subject morpheme is compulsory irrespective of the presence or absence of the lexical subject. Galand (1969) argues that the morpheme *i-* is the real subject while calling the lexical argument its referential or explicative complement.

Because such morphemes cannot be separated from the verb they have often been viewed as agreement markers that are part of the verbal inflection, with the exception of Guerssel (1995) and Achab (2003). Guerssel (1995) provides evidence in favor of their clitic status on the basis of extraction out of clitic-doubled constructions. His analysis is

reviewed in § 2.1. Achab (2003) on the other hand provides other type of evidence based on construct state nouns; which is reviewed in § 2.2.

## 2.1 Extraction out of clitic-doubled constructions

Guerssel (1995) first provides evidence showing that non-clitic-doubled object constructions allow extraction as illustrated in (110), by contrast with clitic-doubled constructions which disallows extraction as shown in (111):

- (110) a. Walay amcic (Guerssel 1995: 121-22, (11))  
 Saw-1sg.cat  
 I saw the cat
- b. Acu<sub>i</sub> ay walay t<sub>i</sub>?  
 What that saw-1sg.  
 What did I saw
- (111) a. Walay-t wemcic  
 Saw-1sg.-him cat  
 I saw [him] the cat
- b. \*Acu<sub>i</sub> ay t<sub>i</sub><sup>20</sup> .walay t<sub>i</sub>?  
 What that him-saw-1sg. [literally, “what did I see him?”]  
 What did I see him

In Guerssel’s view, extraction in (111b) is prohibited because the object *wemcic* doubles the clitic *-t*. Extending the extraction test to subjects, Guerssel pointed out that

---

20 The clitics *t-* in (123b) is displaced from the postverbal to the preverbal position because of the complementizer *ay* which acts as a clitic attractor in the language.

the subjects in (112) resist extraction as shown in (113) because they are also instances of clitic doubling:

- (112) a.      y-ssnw wryaz                      (Guerssel 1995: 121, (12))  
                  3m.sg.cooked man  
                  ‘The man cooked’
- b.      t-ssnw temttutt  
                  3f.sg-cooked woman  
                  ‘The woman cooked’
- (113) a.      \*w ay y-ssnw?                      (Guerssel 1995: 124, (19a))  
                  Who that 3m.sg-cooked.  
                  Who cooked?
- b.      \*w ay t-ssnw?                      (Guerssel 1995: 124, (20))  
                  Who that 3f.sg-cooked.  
                  Who cooked?

For extraction of subjects to be possible in (113a-b), Guerssel points out, a special neutral form of the verb, traditionally called participle, has to be used. Indeed, when the verbs in (113) are replaced with the participial form, extraction of the subject becomes possible as shown in (114):

- (114) W ay y-ssnw-n?                      (Guerssel 1995: 124, (19b))  
                  Who that cooked:neutral  
                  Who cooked?



The particularity of the participial form in Tamazight such as the one in (114) is that it has default  $\varnothing$  features, i.e. neutral with respect to person, gender and number. Derivation of the participial form obtains by suffixing the morpheme *n* to the 3sg.m. form of the verb in the way illustrated below:

(115) *y-V-n*

Guerssel (1995: 122) suggests that the participial form in (114) involves the discontinuous morpheme *y---n* and the verb *ssnw* ‘cook’. He takes the discontinuous morpheme *y---n* to be a neutral subject clitic<sup>21</sup> in the sense that it has default value for  $\varnothing$ -features. To accommodate the sentence in (114), which in fact is an instance of clitic doubling, with the principle prohibiting extraction out of clitic doubling constructions, Guerssel argues that extraction is not prohibited because of the clitic itself, but because extracted DPs leaves a trace with default  $\varnothing$ -features. In other words, according to Guerssel, the sentences in (113) are ungrammatical because the default  $\varnothing$ -features of the trace left by the extracted DP do not match those of the clitic, which is specified 3m.sg in (113a) and 3m.sg in (113b). The fact that the clitic chain involves a mismatch of features causes ungrammaticality. By contrast, the trace of the extracted DP in (114) does match those of the participle which are neutral, whence its grammaticality. A clitic chain is defined by Guerssel (1995: 123, (15)) as follows:

(116) *Definition of a clitic chain:* A clitic agrees in person, number, and gender features with the DP it is coindexed with. The clitic and the DP are said to form a clitic chain.

---

<sup>21</sup> See Ouhalla (1993) for an alternative analysis whereby the discontinuous morpheme *y---n* is viewed as an anti-agreement morpheme.

## 2.2 Evidence from construct state nouns

In the present subsection I provide evidence that the nominative subject morpheme *i-* showing as a prefix in (117) is base-generated as a head clitic:

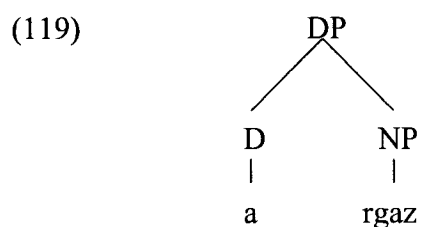
- (117) I-zwiɾ (AZK, nominative)  
3m.sg.nom.-red  
It / he reddened

The analysis is restricted to 3sg. for the sake of clarity. The difference between the 3sg clitics and rest of the paradigm is dealt with in Section 4. The view presented here is based on the analysis published as Achab (2003), investigating the difference between two nominal forms, traditionally referred to as *construct* and *free state*. A lexical subject is in construct state when it occurs post-verbally as exemplified in (118a), and in free state when it occurs pre-verbally as exemplified in (118b):

- (118) a. I-čča wɾgaz  
3m.sg.eat cs.man  
The man has eaten  
b. argaz I-čča  
fs.man 3m.sg.eat  
The man has eaten

Drawing inspiration from Guerssel (1992), in Achab (2003) I defend the idea that the postverbal CS noun *w-rgaz* in (118a) is a bare NP while the preverbal FS noun *argaz* in (118b) is a full DP. I further argue that in Tamazight a nominal expression has to be a DP in order to be expressed syntactically. Accordingly, only FS nouns, which are DPs, can be projected in the syntax. By contrast, CS nouns, which are bare NPs, have to be

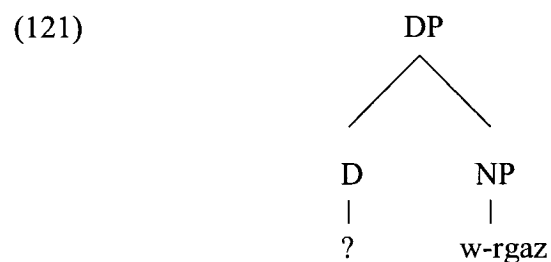
selected by a head D for them to be legitimate syntactically. Applied to the examples in (118) above, the FS noun *a-rgaz* in (118b) is a DP whose head D is represented by the initial vowel *a*<sup>22</sup> as illustrated below:



By contrast, the CS noun *w-rgaz* in (118a) is a bare NP whose representation is illustrated below:



For the NP in (120) to be projected syntactically, it needs to be selected by a head category D in the following fashion:



I argue in Achab (2003) that the head D in (121) corresponds to the subject morpheme *i-*, which subsequently incorporates onto the verb where it shows as a prefix. The reason why the morpheme *i-* raises to the subject position has to do the Extended Projection Principle (EPP) in the way proposed by Nash and Rouveret (1999) as will be

---

<sup>22</sup> Likewise, Guerssel (1992) suggests that the initial vowel *a* corresponds to a default head marker, which he called Kase.

explained shortly. Extended Projection Principle stipulates that constructions involving inflected Tense involve a subject position that needs to be filled by a lexical element or morphological content including expletives (for a discussion. In the early version of the Government and Binding Theory, languages with rich inflection, and Tamazight is such a language, where overt lexical subjects are optional, the subject position is supposed to host a null or an empty element. For this reason, such languages are sometimes *pro*-drop languages in Government and Binding (see Chomsky 1981). However, while the spirit idea has been maintained, it is reformulated by Nash and Rouveret (1999) in terms of D-feature borne by T, and which that has to be checked for scope reasons. In the case of morphologically rich languages (*pro*-drop languages in Government and Binding terminology) Nash and Rouveret (1999: 9) argue that “the D-feature of T is exceptionally satisfied by the pronominal / argumental property of the verb inflection.”

Getting back to the idea whereby the morpheme *i* is viewed as a Determiner above, I argue in Achab (2003) that the CS noun *wrgaz* in (118a) is selected by the subject morpheme *i*- prior to its incorporation in the way illustrated below in (122):

(122)

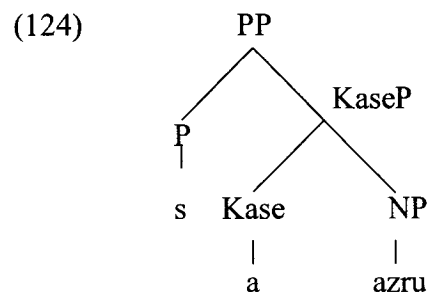


The arguments sustaining the analysis just recalled are based on the condition that a CS noun has to be adjacent to its head D for it to be selected as its complement as shown in (122a). More evidence for the adjacency relation between the two elements

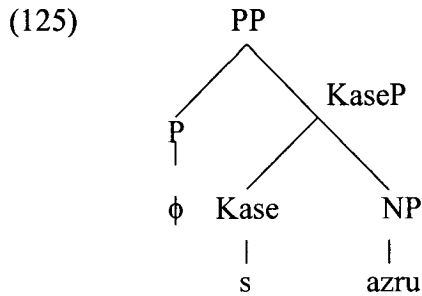
comes from other situations involving CS nouns. Compare for instance the sentence in (123a), which involves a FS noun, with the one in (123b), which involves a CS noun:

- (123) a. I-wwet s **azru**  
           3m.sg.hit to fs.stone  
           He launched (something) towards the stone
- b. I-wwet s **w-zru**  
           3m.sg.hit with cs.stone  
           He hit with a stone

Guerssel (1986, 1992) argues that the element *s* in (123a) which has a directional meaning is a genuine preposition, while the one in (123b), which has the instrumental meaning, is a case marker. Accordingly, he treats the FS noun *azru* in (123a) as a KaseP, whose syntactic head is represented by the initial vowel *a*, considered a default morphological case marker. Guerssel concludes that the maximal projection KaseP is the complement of the preposition *s* in the way illustrated below:

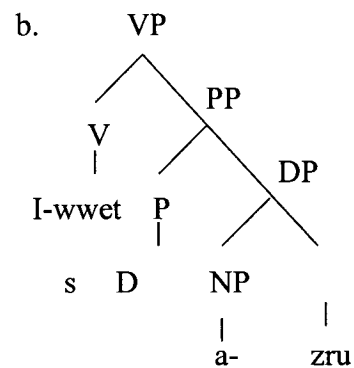
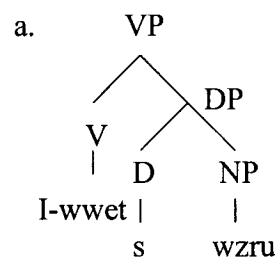


By contrast, Guerssel considers the CS noun *wzru* in (123b) as the complement of the head Kase represented by the case marker *s*, while the maximal projection KaseP is seen as a complement of an empty preposition in the way illustrated below:



The view adopted by Achab (2003) is similar to Guerssel's with the difference that the head *s* in (123b) is viewed as a determiner head *D* rather than *Kase*. Consequently, unlike the DP [<sub>D</sub> a- [<sub>NP</sub> zru]] in (123a), which is the complement of the preposition *s*, the DP [<sub>D</sub> s[<sub>NP</sub> w-zru]] in (123b) is the complement of the verb *y-wwet*. Accordingly, the structures of the sentences (123a) and (123b) look like (126a) and (126b) respectively:

(126)



Let us now get back to the discussion of the subject morpheme *i-* to complete our argumentation. Compare the sentence (123b), reproduced as (127a) below, with the one in (118a) repeated as (127b) below:

- (127) a.      Yewwet s **wzru**  
                  3m.sg.hit with CS.stone  
                  He hit with a stone

- b. I-čča wrgaz  
3m.sg.eat CS.man  
The man has eaten

Unlike the situation in (127a) where the CS noun *wzru* is adjacent to the head *s*, the CS noun *wrgaz* in (127b) is not adjacent to its head, which I supposed to correspond to the morpheme *i-*, the two being separated by the verb stem *-čča*. Given the adjacency condition holding between the NP and its head D, I assume that the subject morpheme *i-* is base-generated as the head D in the way illustrated in (122), repeated below as (128):

(128)



In (128a) the head *i-* and its CS complement *wrgaz* are adjacent. In (128b) the determiner *i-* incorporates onto the verb, leaving a trace in its original position.

In order to give more support to the idea that the morpheme *i-* is indeed a clitic incorporated onto the verb, let us consider the participial form. As already mentioned in the previous subsection, the participial form in Kabyle Tamazight is invariable with respect to person, gender and number. It is derived by adding the (aspectual) suffix *-n* to the third masculine singular form of the verb. That is, the subject morpheme *i-* appears as a prefix and the participial morpheme *n-* appears as a suffix in the way illustrated in

(129):

(129) win **i-čča-n**

Who 3m.sg.eat.part

That who has eaten

There are two possible ways of expressing the proposition in (129) when the negation is added. The standard way of expressing the negative counterpart is by adding the negation *ur* before the verb as shown in (130):

(130) Win ur **i-čči-n** (ara)

Who NEG 3m.sg- eat-part (not)

The one who has not eaten

However, The Kabyle Tamazight variety, there exists an alternative form to (130) where the morpheme *n* appears as a prefix in the place of the morpheme *i-*. This possibility is illustrated below:

(131) Win ur **n-čči** (ara)

That who NEG part-eat

That who has not eaten

What the negative participial forms in (130) and (131) show is that the morpheme *i-* is not an inflectional element of the verb since it may be supplanted with the participial morpheme. In Achab (2003) I took this to suggest that this morpheme is a clitic rather than a ‘fossilized’ inflectional morpheme. I concluded that the movement of the subject morpheme *i-* into the preverbal position has to do with Extended Projection Principle in the way explained above (see the discussion of the EPP following the structure given as (121) above).



Having clarified the clitic status of the nominative subject morpheme *i-*, I am now in a more comfortable position to explore the differences between the nominative and the accusative clitics occurring with verbs of quality. This will be the topic of the next section.

### 3. Difference between the nominative and the accusative forms

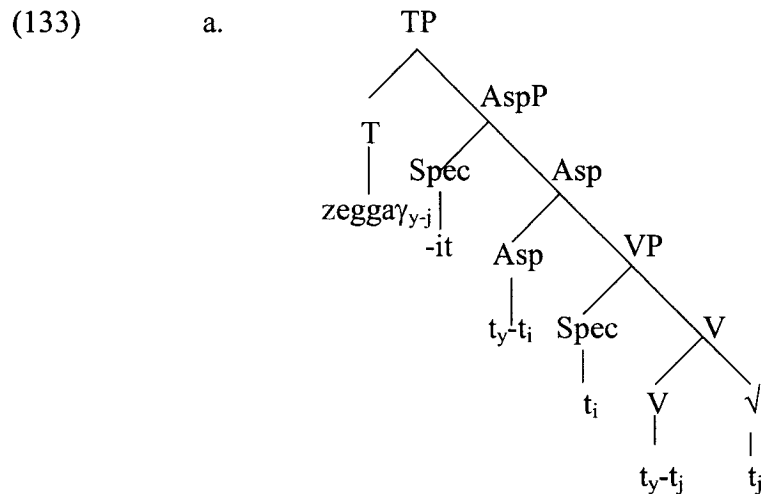
Let us consider again the pure stative (or accusative) and the inchoative (or nominative) forms of verbs of quality in (132a) and (132b) below respectively:

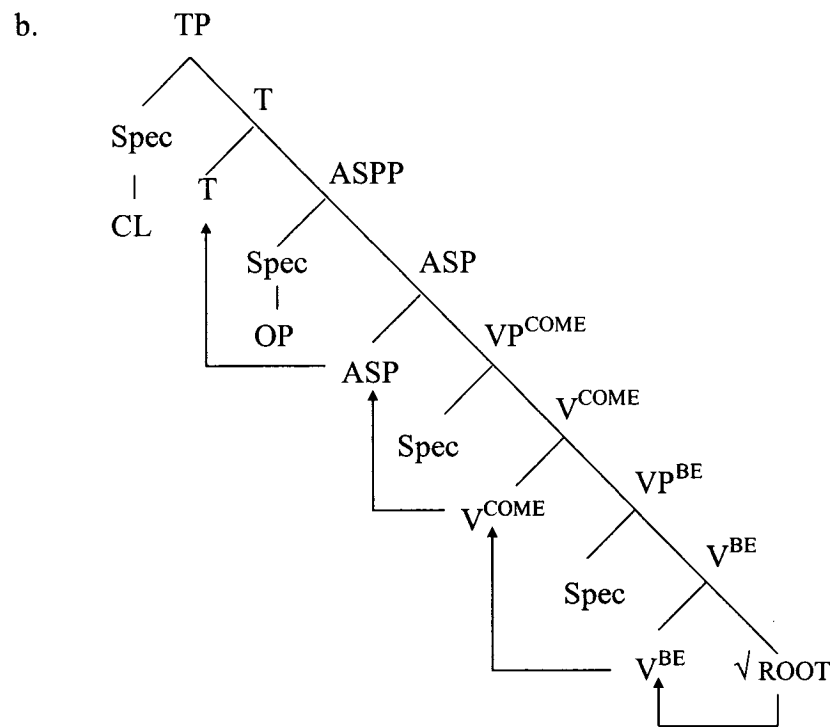
- (132) a.      Zeggay-it  
                 Red (PERF) -CL. 3M.Sg.  
                 It is red
- b.      I-zwiγ  
                 CL.3M.Sg.NOM.-red  
                 It / he reddened

Both the accusative object clitic *-it* in (132a) and the nominative subject clitic *i-* in (132b) correspond to an internal argument. At this level of discussion the two questions worth examining are the exact positions occupied by the accusative and the nominative clitics in (132a) and (132b), respectively; and the factor that forces the object clitic in (132b) to surface as a nominative subject in the prefix position.

It has been widely admitted in the literature that arguments raise to the subject position most often for (nominative) Case and Extended Projection Principle motivations (see above). However, the accusative form (132a) provides evidence that accusative case is available and movement exclusively motivated by Case requirements is to be excluded. Therefore, the fact that the clitic surfaces with the nominative Case in (132b) is simply a

consequence rather than a motivation for such a movement. EPP on the other hand is now considered a property of the core functional categories C, T and light  $v$  (Chomsky 2000, 2001). The fact that the accusative clitic appears as a suffix in (132a) means that it occupies a lower position than the verb. By contrast, the nominative clitic occurring as a prefix in (132b) occupies a position that must be higher than the verb. As recalled in the introduction, I provisionally concluded in the previous chapter that the accusative clitic (132a) is in [Spec, Asp] as illustrated in (133a) below, while assuming the nominative clitic (132b) to be in [Spec, TP] as illustrated in (133b):





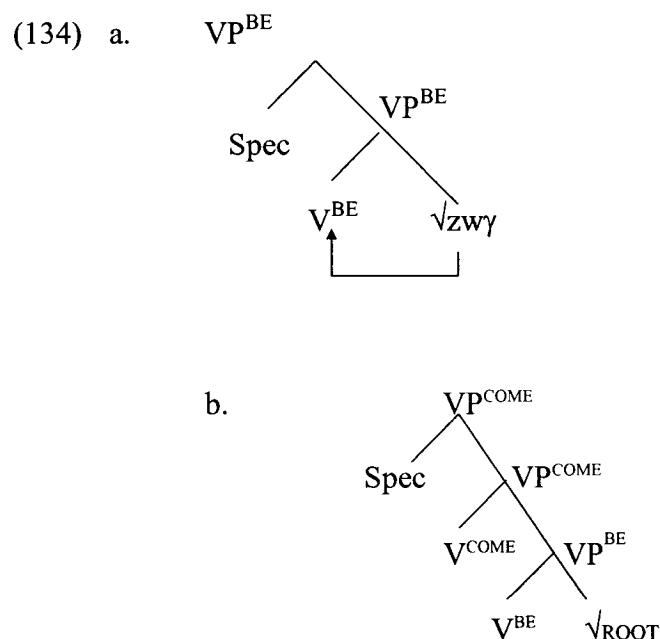
In (133b) the clitic in [Spec, T] is in a head-spec relation with T, whence the nominative Case. By contrast, the clitic in (133a) is in [Spec, ASP], which explains why its surfaces with the accusative case instead of the nominative. However, such a conclusion does not explain why the clitic in (132a) does not raise to [Spec, T] unlike the situation in (132b). In what follows, I argue that the reason why the clitic in (132a) does not raise to [Spec, T] is because the accusative form (132a) has a defective category T, as opposed to the nominative form (132b) which has a non-defective T.

### 3.1 Accusative form and defective T

In the present subsection I argue that the category T involved in the accusative form (132a) is defective in the way proposed by Chomsky (2001) for some types of constructions including infinitives, raising verbs and Exceptional case Marking (ECM) constructions. Chomsky (2001: 9) suggests that a defective T cannot have an EPP-

feature; therefore no internal raising to [Spec, T<sub>def</sub>] takes place. A functional category (probe) such as T has to be defective with respect to a given uninterpretable feature if the lexical category (goal) supposed to value and delete it lacks such a feature (Chomsky 2001: 6). In the case of the accusative form under consideration, such a hypothesis will explain why the object clitic does not move to spec of T as illustrated in (133a) above.

The hypothesis just expressed raises the question why the category T associated with the accusative form is defective as opposed to the nominative form. I believe that the answer to such a question resides in the type of VP associated with T. Let me elaborate further on this proposal. In the previous chapter I showed that the accusative form of the verb of quality in (132a) has the argument-predicate structure illustrated in (134a), as compared to the one represented in (134b) for the nominative form (132b):



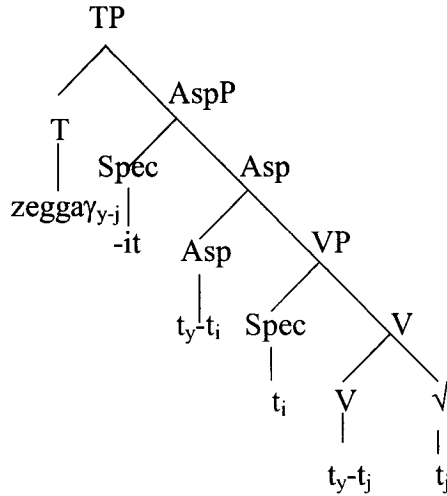
On the other hand, I proposed in Chapter 3 (Section 4) that the structures in (134a) and (134b) are selected by two different types of perfective Aspect. I called the

aspect selecting  $VP^{BE}$  in (134a) stative, and the one selecting  $VP^{COME}$  in (134b) non-stative or inchoative. I take stative aspect to equal the one involved in the English passive construction exemplified in (135b), and the non-stative aspect to equal the one used with the active sentence in (135a):

- (135) a. John broke the window  
       b. The window is broken

Participial forms lack complete  $\phi$ -features, which means that they lack the ability to delete the  $\phi$ -feature borne by the probe T (Chomsky 2001). In the English construction in (135b) the  $\phi$ -features of T are valued by the auxiliary ‘be’, which inflects for complete  $\phi$ -features. Without the auxiliary ‘be’, the T category in the passive sentence would have to be defective with respect to  $\phi$ -features in order to avoid a mismatch with the features of the goal. This provides an account for the origin of defectiveness of the category T involved in the AZK accusative form exemplified in (132a). Like the English participle ‘broken’ in (135b) the verb stem *zeggay* in (132a) does not contain  $\phi$ -features. However, unlike the English passive construction where the auxiliary ‘be’ provides full agreement features; the Tamazight accusative construction (132a) does not contain an auxiliary verb that would supply such lacking  $\phi$ -features. Moreover, the participial form cannot supply such features either because they have a default value (see § 2. 1 above). With this idea in mind, let us reconsider the structure illustrated in (133a), repeated below:

(136)



Chomsky (2000, 2001) suggests that non-defective C and T probes have complete  $\phi$ -features. Features of the probe have to be valued and deleted by the goal because they are uninterpretable. To achieve such an objective, the stative  $V^{BE}$  and the probe T in (136) have to Agree with respect to  $\phi$ -features prior to their Merge. However, as argued previously, the verb stem of the accusative form in (132a) lacks  $\phi$ -features. Therefore, the only remaining possibility for the derivation to proceed is by projecting a defective  $T_{def}$  instead of a complete T. Following the Chomsky's proposal recalled above according to which a defective T without an EPP-feature involves no internal raising to [Spec,  $T_{def}$ ] (Chomsky 2001: 9), the clitic in (136) will remain in the spec of  $V^{BE}$  or ASP for the same reasons. In *Minimal Inquiries* (Chomsky 2000) and *Derivation by Phase* (Chomsky 2001) TP is not considered a strong phase, which means that the structure above has to merge with CP. On the other hand, Chomsky (op. cit.) argues that the category C is  $\phi$ -complete and selects  $\phi$ -complete T. Following such a proposal, the structure in (136) cannot merge with C because its T is not  $\phi$ -complete. However, as far as the Tamazight language is concerned, there is evidence suggesting that the head Comp is neutral with respect to  $\phi$ -

features. When the Comp refers to the subject in relative clauses the verb is realized in the participial form. As already mentioned in § 2.1, the participial form *y-V-n* obtains by suffixing a participial morpheme *n* to the 3sg.m. Examples of relative clauses involving the neutral participial form are provided below; the Comp *i*, which is invariable with respect to  $\phi$ -features, has a subject as its antecedent:

(137) a. D kečč i y-ruh-n

Part you.m that went

It is you who left

b. D kem i y-ruh-n

Part you.fem that went

It is you who left

c. D netta i y-ruh-n

Part I that went

It is me who left

d. D nettat i y-ruh-n

Part I that went

It is me who left

e. D nekkwni i y-ruh-n

Part I that went

It is me who left

f. D kwenwi i y-ruh-n

Part I that went

It is me who left

g. D niteni i y-ruh-n

Part they.m. that went

It is them who left

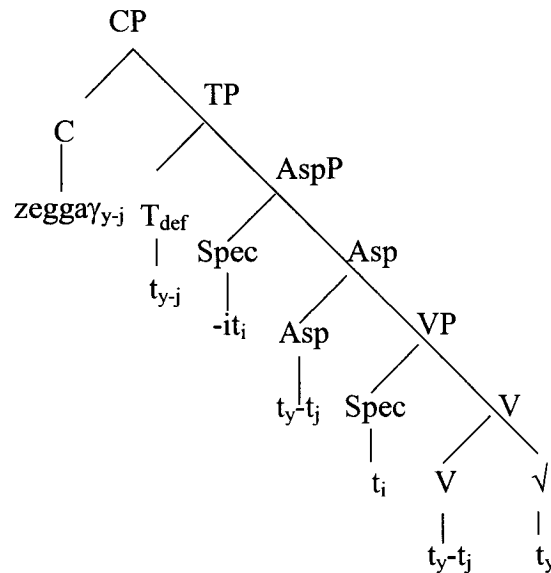
h. D nitenti i y-ruh-n

Part they.f. that went

It is them who left

The examples above show that the Comp *i* is compatible with  $T_{def}$  because non-complete with respect to  $\phi$ -features. Being non-complete means that the category *C* is devoid of EPP, which allows the clitic to remain in the spec of *V* or of *ASP*, which in turn would explain why it appears in the suffix position, supposing the verb to raise to *C*. Accordingly, I propose that the accusative form has the structure represented below:

(138)



The probe  $T_{def}$  in (138) is also defective with respect to nominative Case, which in fact is dependent on the agreement relation between the head and its specifier. Chomsky



(2001: 6) adopts the following view “Structural Case is not a feature of the probes (T,  $\nu$ ), but it is assigned a value under agreement then removed by Spell-Out from the narrow syntax”.

The hypothesis that the accusative form has a defective T as supposed above finds independent support in the Tamazight linguistic literature. Based on diachronic and synchronic data, Galand (1990) defends the idea that the accusative form is nominal rather than verbal. Combined with the idea that tense is the property that distinguishes verbs from nouns as suggested by Kornfilt (1985) for instance, Galand’s proposal, if correct, would explain why the category T associated with the accusative form is defective. Galand (1980) argues that verbs of quality are nouns that are combined with accusative clitics<sup>23</sup>. He first compares Tamazight verbs of quality to nominal predicates in Akkadian (an extinct Semitic language), which occur with pronouns as illustrated below (from Galand 1980: 348):

- (139) a.      šarr-āku  
                 King-me  
                 I am a king
- b.      šarr-āta  
                 King-you  
                 You are a king
- c.      šarr  
                 King  
                 king (masculine)
- d.      šarr-at  
                 King-f.sg  
                 She is a King

---

23 A similar idea was suggested by Cohen (1988) with regard to Semitic languages, namely that verbs of state were derived through the suffixation of person markers to verbo-nominal stems.

In (139a-b), the noun *king* is combined with short forms of independent pronouns. The third person masculine in (139c) displays no morphological morpheme (or displays a zero morpheme), while the third feminine in (139d) shows up with the feminine gender marker *-at*. The non-inflected third masculine form *šarr* and the feminine form *šarr-at* are called state nominals (Caplice 1983: 22). Caplice (1988: 40) claims that in Akkadian, any noun or adjective may merge with an accusative suffix.

Galand (1980) further points out that combination of nominals with pronouns has also survived in idiomatic and *wh-* expressions in contemporary Tamazight, citing the following examples from Taqbaylit (Kabyle Tamazight):

- (140) a.     D ir-it<sup>24</sup>  
               D bad-it  
               It is bad
- b.     ulac-it  
               None-it  
               It is not here/ there.
- c.     Anda-t?  
               Where-it  
               Where is it?

In this subsection I argued in favor of the idea that the accusative form has a defective T, which explains why the clitic occurs in the suffix position. In the next subsection I argue that unlike the accusative form the nominative form is associated with a non-defective T.

---

24 The expression in (140a) is constructed as follows: d (predicative copular) + ir (bad) + it (3m.sg accusative morpheme).

### 3.2 The nominative clitic and the inchoative form

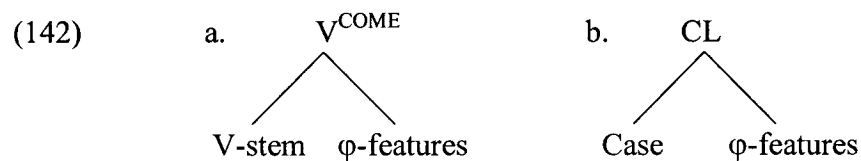
Compare again the accusative form in (141a) with the nominative form in (141b):

- (141) a.     Zeggay-it  
              Red.perf-3m.sg.acc.  
              It is red
- b.     I-zwiγ  
              3m.sg.nom-red  
              It / he reddened

In the previous section I related the defective T of the accusative form (141a) to the stative verb  $V^{BE}$ , which I supposed to lack  $\phi$ -features. Unlike the unaccusative form, the nominative form (141b) contains a non-stative  $V^{COME}$ , in addition to the stative  $V^{BE}$ . The higher verb  $V^{COME}$  corresponds to the eventive verb referred to as light  $v$  in the recent literature (Chomsky 2000, 2001; Kratzer 1993, 2004; Embick 2004 among many others). Light  $v$  has often been viewed as containing more features than the lower stative V. Among the features admitted to characterize the eventive light  $v$  is the EPP feature (Chomsky 2000, 2001). In Kratzer's (1993, 2004) analysis light  $v$  corresponds to Voice, which contains the EPP feature. Kratzer distinguishes between two types of Voice, only one of which is supposed to project an external argument. The projecting type is associated with transitive or active verbs, while the non-projecting type is associated with unaccusative, inchoative or passive verbs. In the latter situation, the internal argument has to raise to the Spec of Voice in order to check its EPP feature. As argued for in the previous chapter, the nominative clitic associated with the inchoative form of the verb of quality in (141b) corresponds to an internal argument, like the accusative clitic in (141a).

That is, the higher  $V^{\text{COME}}$  involved in the inchoative form in (141b) would correspond to the type of Voice that does not project an external argument in Kratzer's analysis. Following Kratzer's view, I assume that in the inchoative structure the clitic raises from Spec of  $V^{\text{BE}}$  to Spec of  $V^{\text{COME}}$ .

Unlike the lower V, light  $v$  is considered a functional rather than a lexical category (Chomsky 2000, 2001). As such, it contains the same type of features as those postulated for T and C such as EPP and  $\phi$ -features (Chomsky 2001). Given the correspondence between the abstract verb  $V^{\text{COME}}$  and light  $v$ , I assume that  $V^{\text{COME}}$  contains abstract  $\phi$ -features, which need to be lexicalized after Spell-Out. This particularity is crucial as it distinguishes the inchoative verb  $V^{\text{COME}}$  from the stative verb  $V^{\text{BE}}$ . Accordingly, unlike the situation considered above with respect to the stative verb  $V^{\text{BE}}$ , the verb  $V^{\text{COME}}$  will have to merge with a non-defective  $\phi$ -complete T. On the other hand, agreement features of the verb  $V^{\text{COME}}$  will also have to agree with those of the clitic in its specifier in the way illustrated below:



Having adopted the late lexical insertion approach, all the elements represented in (142a) and (142b) are to be considered in the form of abstract features. In (142b) the  $\phi$ -features of the clitic are inherent. By contrast, the Case feature is structural, because determined by its final landing site. Accordingly, if the clitic appears affixed to the verb, say for phonological reasons, the verb will show up with two types of agreement, those

belonging to the verb as illustrated in (142a) and those belonging to the clitic as illustrated in (142b). I demonstrate below that this is indeed what happens.

Unlike the accusative form dealt with in the previous subsection, which displays only the  $\phi$ -features of the clitics, the nominative form may display two sets of  $\phi$ -features, one of which belongs to the clitic, and the other to the higher verb  $V^{COME}$ . The set belonging to the clitic appears as a prefix, while the one belonging to  $V^{COME}$  appears as a suffix. As will be shown shortly, this idea will provide an account for the discontinuous affixes associated with the nominative form, as compared to the accusative form which occurs with suffixes only, as illustrated with the comparative paradigms below:

(143)

|                 | Nominative subject | Accusative object |
|-----------------|--------------------|-------------------|
| <b>Singular</b> |                    |                   |
| 1               | ----- $\gamma$     | -iyi              |
| 2m.             | t-----t            | -ik               |
| 2f.             | t-----t            | -ikem             |
| 3m.             | y-----             | -it / t           |
| 3f              | t-----             | -itt / tt         |
| <b>Plural</b>   |                    |                   |
| 1               | n-----             | -a $\gamma$       |
| 2m.             | t-----m            | -ikun             |
| 2f              | t-----mt           | -ikunt            |
| 3m.             | -----n             | -iten             |
| 3f.             | -----nt            | -itent            |

Ouhalla (2005) discusses the possibility that the discontinuous affixes in the nominative paradigm in (143) may belong to two distinct categories. He views the suffix elements as agreement markers of the lower V. On the other hand, he proposes that the prefix elements are also agreement markers belonging to the category PredP, leaving

open the possibility that such a PredP be identified as  $\nu$ P or simply as the projection of the agreement features, i.e. AgrP.

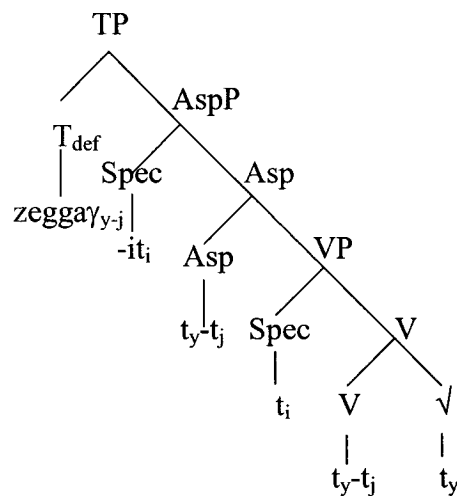
The analysis proposed here diverges from Ouhalla's with respect to both the prefix and the suffix elements. Unlike Ouhalla, I consider the prefix elements to be clitics, although realized on the verb, because of their affix nature. I have already recalled in Section 2 that the morpheme *y-* is base-generated as a head D, prior to its incorporation onto the verb as illustrated below:

(144)



I also showed in section 3.1 that the object clitic associated with the accusative form is base-generated in  $[\text{Spec}, V^{\text{BE}}]$  as illustrated below:

(145)



Given that the subject clitic *y-* occurring with the inchoative form also corresponds to the internal argument, it is reasonable to assume that it is also base-generated in [Spec, V<sup>BE</sup>] as assumed earlier with respect to the (stative) accusative form. Semantically, this relation between the argument and the verb BE accounts for the resultative state interpretation associated with the inchoative form. As mentioned in Chapter 3, the resultative state interpretation differs from the simple state interpretation associated with the accusative form. In the latter situation, the interpretation is not preceded by an event. In the resultative situation, the state indicated is preceded by the event indicated by the verb COME.

The nominative clitic moves further to the spec of COME where it is interpreted as a Theme, whence the inchoative interpretation. Remember that the accusative form lacks the inchoative interpretation, which reinforces the idea developed in Chapter 3 and adopted here that the two forms are distinguished on the basis of the inchoative abstract verb COME. This view of thematic relations matches the one suggested by Jackendoff (1990: 47) according to which “[t]he terms Theme, Agent, and so on, are not primitives of semantic theory. Rather, they are relational notions defined structurally over conceptual structure, with a status precisely comparable to that of the notions Subject and Object in many syntactic theories.”

Unlike the stative verb BE which is selected by a defective T as discussed in the previous section, the inchoative verb COME is associated with a non-defective T. The reasons why I assume that the inchoative verb COME is selected by a non-defective T is because the verb COME has its own  $\phi$ -features as argued for above and with respect to the structure illustrated in (145). Accordingly, both T and the category C have EPP effect,





stative form of verbs of quality are a remainder of a special type of conjugation system similar to the one called suffix conjugation in Semitic languages.

As recalled previously, Ouhalla (2005) proposes that the prefixes and the suffixes illustrated in the nominative paradigm in (143) constitute two sets of agreement features belonging to two distinct categories, respectively V and PredP, which Merge to form a complex verb, leaving open the possibility that such a PredP be identified as  $\nu$ P or as AgrP.

Another idea admitted in the linguistic literature on Tamazight is that the person feature is associated with the prefix position. However, the 1 sg represents an exception in the sense that, despite its suffix position, it has been acknowledged to indicate person (Cohen 1963, 1988, Noyer 1992). Cohen (1988: 25) suggests that the 1sg. suffix  $-\gamma$  and the 2<sup>nd</sup> p.  $-\text{d} / -\text{t}$  are person markers inherited from the accusative form. Such a hypothesis is similar to the one adopted by Prasse (1973). This idea may be reconciled with the agreement marker status I proposed in (142a) above. The suffix elements may be seen as having evolved into inflectional agreement markers after they had lost their clitic status. The idea that inflectional elements may result from pronouns or clitics has been adopted by Ouhalla (2005) for the same type of clitics as those being under discussion. However, such a hypothesis raises another question as to why the person feature has not survived in the rest of the paradigm. It may be proposed that the person feature in Tamazight is not necessary to express the agreement relation between a verb and its subject and therefore has to be deleted in order to avoid redundancy with the prefix elements in the way suggested by Noyer (1992), based on autonomy of features. Noyer proposes that where discontinuous bleeding occurs, “a feature F will not appear if F has been realized by

another affix at some other position of exponence in the form” (p. 142). In such a case, the person feature will not be realized as a suffix position because it has already been realized as a prefix. However, 1 singular would constitute an exception in view of the well-known fact across languages that 1sg rarely bears a morphological feature indicating gender. Ouhalla (2005) on the other hand suggests that prefixes in Tamazight have lost the number feature while retaining person and gender features, which is a general tendency in the Afroasiatic family of languages. Discussing the distribution of features along the discontinuous affixes in Tamazight, Noyer (*op. cit*) argues on the basis of data from the Tuareg dialect that 1sg is reanalyzed as singular.

#### **4. Conclusion**

In the present chapter I considered the status and the position of the suffix and the prefix morphemes associated with the accusative and the nominative forms. Based on the analyses provided by Guerssel (1995) and Achab (2003) I argued in favor the inflectional status of such morphemes (§ 2.1). I proposed that accusative clitics associated with the simple stative form of verbs of quality are in [Spec, ASP], whence its accusative case. By contrast, I argued that nominative clitics occurring with the inchoative form are in [Spec, C], whence the nominative Case. Following the idea of a defective T suggested by Chomsky (2000, 2001) I argued that the simple stative form has defective T. Defective T, according to Chomsky (2001: 9), cannot have an EPP-feature, which means that no internal raising to [Spec, T<sub>def</sub>] takes place. By contrast, the category T involved in the nominative form (is not defective, which explains why the clitic raises to the subject position where it is realized as a prefix with nominative Case.

## Chapter 5

### Verbs of spatial configuration

#### 1. Introduction

The present chapter is dedicated to the class of verbs of spatial configuration such as those listed below, with their equivalents in English and French:

(147)

| Tamazight     | French                        | English      |
|---------------|-------------------------------|--------------|
| <i>qqim</i>   | <i>s'asseoir</i>              | sit down     |
| <i>senned</i> | <i>s'adosser, s'accoter</i>   | lean against |
| <i>bedd</i>   | <i>se mettre debout</i>       | stand        |
| <i>kker</i>   | <i>se lever</i>               | stand up     |
| <i>tinez</i>  | <i>se baisser</i>             | bend         |
| <i>knu</i>    | <i>s'incliner, se courber</i> | bow          |
| <i>qummec</i> | <i>s'accroupir</i>            | squat        |

The Tamazight verbs listed above, like their English counterparts, lack reflexive morphology, and thus contrast with their French equivalents, which display the reflexive pronoun SE. Their lack of reflexive morphology notwithstanding, I argue in the present chapter that these verbs, the same analysis holds for their English equivalents, are indeed reflexives. The stand I am taking here is that reflexivity is not only a matter of morphology but it is also one of syntax and semantics. The idea of semantic reflexivity in the absence of morphological marking is familiar from the literature as it has already been proposed for semantically reflexive verbs such as 'wash' in English, as in [John washed], and their equivalents in other languages (for instance Reinhart 1996, 2002;

Reinhart and Reuland 1993; Reinhart and Silony 2004; McGinniss 1999). However, to the best of my knowledge, such an analysis has never been extended to include the class of spatial configuration verbs such as those listed in (147) above.

The present chapter is organized as follows. In Section 2 I argue that verbs of spatial configuration have a triadic structure unlike unaccusative and inchoative verbs, which have a dyadic structure. In Section 3, I argue in favor of a reflexive analysis of verbs of spatial configuration in Tamazight. A unified approach will be proposed for verbs of spatial configuration in languages including Tamazight and English where such verbs do not have reflexive morphology, and in languages where such verbs those display reflexive morphology as in French. Section 4 concludes the present chapter.

## **2. Internal structure and predicate-argument structure**

In the present section I argue that verbs of spatial configuration have a triadic structure, which contrasts them with unaccusative and inchoative verbs, which have a dyadic structure as seen in the previous chapters. As will be seen, such a triadic analysis will account straightforwardly for the three different interpretations associated with this class of verbs, in a manner that fits remarkably within the approach adopted in the present dissertation as outlined in Chapter 2.

Unlike the class of inchoatives and unaccusatives, verbs of spatial configuration may yield up to three different interpretations depending on the context. These three interpretations correspond to those called ‘simple state position’, ‘maintain position’, and ‘assume position’ by Levin and Rappaport (1995). In L & R’s analysis the ‘simple position’ meaning refers to the configuration of the argument in space as in the sentence exemplified (148a) below; ‘the maintain position’ describes “the maintenance of a

particular spatial configuration by animate being” (p. 127) as in the sentence exemplified in (148b), while the ‘assume position’ “describes an animate being coming to be in a particular position under his or her own control” (idem) as in (148c):

- (148) a. The statue stood in the corner  
b. Yvonne stood alone in the hallway (for six hours)  
c. Yvonne stood (up)

Following the terminology adopted in the present dissertation, I will refer to these interpretations simply as ‘resultative state’, ‘inchoative’ and ‘agentive’. The agentive interpretation refers to the action undertaken by or under the control of the argument in order to be in the specific position indicated by the verb. The inchoative interpretation refers to the motion undertaken by the (body of the) person who performs the action in order to be in a specific configuration. The resultative state interpretation corresponds to the configuration resulting from the motion involved in the inchoative interpretation.

The stative and the inchoative interpretations are captured in the same way as proposed for the inchoative class of verbs of quality and the class of unaccusative verbs dealt with in Chapter 3. As a recall, I postulated a scope operator in the syntax with two different scope positions. When the scope of the operator is restricted to the domain of the lower VP[BE] as illustrated in (149a), the interpretation is resultative, if on the other hand the operator has scope over the higher VP[COME] as illustrated in (149b), the interpretation is inchoative.

TP

Spec T

Spec AspP

T Spec Asp

Spec VP<sup>COME</sup>

V<sup>COME</sup> VP<sup>BE</sup>

Spec V<sup>BE</sup>

OP V<sup>BE</sup> √ ROOT

b.

TP

Spec

T

ASPP

Spec

ASP

OP

ASP

VP<sup>COME</sup>

Spec

V<sup>COME</sup>

VP<sup>BE</sup>

Spec

V<sup>BE</sup>

V<sup>BE</sup>

ROOT

The cat sat on the mat

122

associated with the event indicated by the verb not only undergoes a change of configuration as a Theme, but also acts as the Agent that performs the action at the same time. Following the notation proposed in the literature (Jackendoff 1990, Pinker 1989 and Talmy 2000 among others) I paraphrase the verb function involved in the agentive interpretation as ACT, and its syntactic representation as  $V^{\text{ACT}}$ <sup>25</sup>.

Thus considered the dyadic structures illustrated in (149a) and (149b) above turn out to be inappropriate for verbs of spatial configuration in that they do not take into account the agentive interpretation. To solve this problem, the the event structure and lexical structure proposed for inchoative verbs has to be augmented with an agentive layer, the head of which is to be paraphrased with the abstract verb ACT, in the way illustrated in (150a) and (150b), respectively:

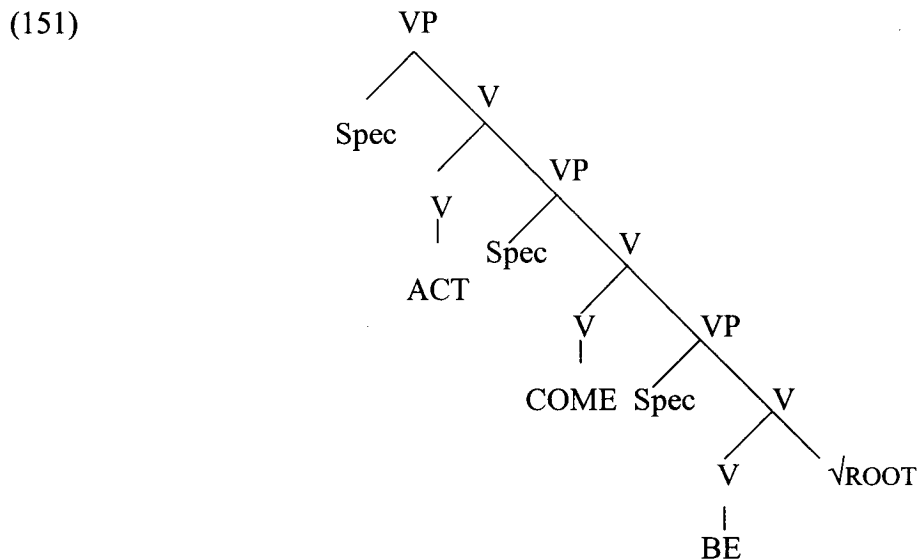
- (150) a.
- 
- ```

graph TD
    e1[e1] --- e1_l[e1]
    e1 --- e2_r[e2]
    e2_r --- e2_l[e2]
    e2_r --- e3_r[e3]
    e3_r --- p3[p3]
    e3_r --- e2_r2[e2]
  
```
- b. [ACT [COME [BE ([√ROOT])]]]

Following the approach outlined in Chapter 2, the mapping of the event structure in (150a) and the lexical structure in (150b) yields the predicate-argument structure

²⁵ Embick (2004a) assumed the agentive v , which he indicated as $v[\text{AG}]$, to be different from the inchoative v , which he wrote as $v[\text{FIENT}]$. I take Embick's $v[\text{AG}]$ and $v[\text{FIENT}]$ to correspond to $v\text{-}[\text{GO}]$ and $v\text{-}[\text{ACT}]$ adopted in the present chapter. $[\text{FIENT}]$, short for the word 'fientive' is used by the author as a synonym of the word 'inchoative'.

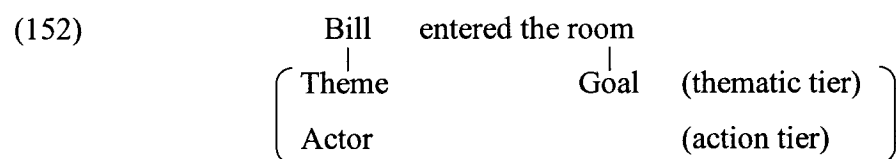
represented in (151) below, ignoring for the moment the functional categories as well as the position of the argument with that of the operator, which will be discussed in the next subsection:



In view of the fact that the stative and the inchoative interpretations obtain in the same way as proposed for unaccusative and inchoative classes, i.e. by restricting the scope of the operator to the verb BE or by enlarging it to include the verb COME, it is reasonable to suppose here that the triadic structure proposed in (151) is derived by augmenting the dyadic structure proposed for inchoatives and unaccusatives. Accordingly, for the argument associated with verbs of spatial configuration to be interpreted it has to stand in a Spec-head relation with the verb BE under the resultative state interpretation, and with the verb COME under the inchoative interpretation. This is enough evidence that in the triadic structure represented in (151), the argument is internal. To get the agentive interpretation, the argument has to move to the specifier of the verb ACT. The idea that internal arguments may be interpreted as agents is not new. Labelle (1992) for instance argued in favor of such an idea on the basis of French

reflexives. Levin and Rappaport (1995) on the other hand argue that under the ‘maintain position meaning’, which the authors define as ““the maintenance of a particular spatial configuration by animate being”, the argument is internal and agentive.

At first sight the dual thematic interpretation of an argument might look problematic since the argument associated with such verbs is interpreted as a Theme under the inchoative interpretation and as an Agent under the agentive interpretation. However, the problem disappears if we accept the idea that the argument is interpreted not as *either* a Theme *or* as an Agent, but *both* as a Theme *and* an Agent simultaneously. This in fact is the main semantic characteristic that singles out verbs of spatial configuration from the class of transitive verbs. Such an idea was for instance defended by Jackendoff (1990) after Talmy (1985), Culicover and Wilkins (1986). Discussing non-morphological reflexive verbs of spatial motion Jackendoff proposes a *two-tier representation* of thematic roles allowing for two θ -roles to be mapped onto one same argument in the way illustrated below (from Jackendoff 1990: 126):



Obviously, the view that one argument may have more than one thematic interpretation goes against the biuniqueness property stated in the θ -criterion as formulated in *Government and Binding* (Chomsky 1981). Such a view, which was implicit in the analysis proposed by Chierchia (1989) in the context of Italian using property theory (see § 4), was later endorsed by Alsina (1996) and modified by Reinhart (1996) with respect to reflexives. As a matter of fact, verbs of spatial configuration share

the property of dual thematic interpretation with reflexive verbs whose main semantic characteristic resides in the coreferential interpretation of two distinct thematic roles associated with the same predicate (Reinhart and Siloni 2005). This similarity is further investigated in the next where I propose a reflexive analysis for the class of spatial configuration verbs in Tamazight.

3. Reflexive analysis of verbs of spatial configuration

In the present section I argue in favour of a reflexive analysis of verbs of spatial configuration in Tamazight. Before presenting the analysis, I first recall some of the approaches proposed for morphologically reflexive verbs in various languages in the literature. Such a recall is necessary as some of the ideas suggested are appealed to in the course of the discussion.

3.1 Reflexive analyses: overview

In the present section I go through some of the analyses proposed for reflexive verbs in the literature. Such a recall will be useful when I present my analysis in Section 3.2. The existing analyses are of two types, transitive-based and intransitive-based.

3.1.1 Transitive proposals

Many linguists among those proposing a transitive approach for reflexive verbs (see the references cited above) view the reflexive element as an argument having its own thematic role although they diverge as to which of the lexical argument or the reflexive element should be considered as internal or as external. Some linguists propose to view the lexical DP as external, and the clitic SE as internal (Rizzi 1986, Burzio 1981, 1986; Dobrovie-Sorin 1998; Fontana and Moore 1992; and D'Alessandro 2001 among many others). Others adopt the opposite view, considering the lexical argument as internal and

the reflexive element as external (Kayne 1988, 1990, 1991; Pesetsky 1995 and Sportiche 1998 among many others). In both situations, coreference between the two arguments is supposed to be established via binding as opposed to chains that are established by movement.

A number of proposals have been made in the literature regarding the intransitivization of reflexive verbs. For instance, Keenan (1987) proposes that the English reflexive pronoun *himself* in a sentence such as *John washed himself* is an operator that turns a transitive predicate into an intransitive. Other linguists view reflexivization as an operation, often referred to as *Reduction*, which derives a reflexive structure from a transitive structure (for instance Grimshaw 1982, 1990; Marantz 1984; Bouchard 1984; Wehrli 1986; Chierchia 1989, 2004; Rosen 1989; Reinhart and Siloni 1999). They suggest that the reflexive element is viewed as a valence-reducing morpheme with only a semantic but not a syntactic role, although they diverge as to which one of the internal or the external argument is affected by such an operation. While some argue that the *Reduction* operation suppresses the internal argument (for instance Grimshaw 1982; Wehrli 1986; Chierchia 1989, 2004; Reinhart and Siloni 1999), others argue that this operation affects the external argument (Marantz 1984; Bouchard 1984; Rosen 1989; Grimshaw 1990).

Those advocating reduction of the internal argument propose that reflexivization results from the linking of the internal theta role with the external theta role. Such an operation is meant to block the mapping of the internal theta role onto the object position in the syntax. Wehrli (1986) phrases the proposal in terms of absorption of the internal theta-role by the reflexive clitic SE. The hypothesis bears similarity with the later one

proposed for passives by Baker, Johnson and Roberts (1989). Chierchia (1989, 2004) on the other hand proposes that the operation reduces a transitive V to an intransitive one by suppressing the internal argument, while keeping its meaning associated with the verb, formulated as $V(x, x)$. On the other hand, advocating the suppression of the external argument, Marantz argues on the basis of small clauses that a lexical operation raises the internal argument to the subject position as illustrated below:

(153) Jean_i se considère t_i intelligent

Reinhart and Siloni (2005) argue that languages might differ as to the level where such an operation takes place. In some languages such as English, Hebrew and Hungarian, the operation takes place in the lexicon. In other languages such as the Romance languages for instance, the operation takes place in the syntax. The idea is akin to the decausativization or suppression operation proposed for unaccusative verbs by Chierchia (1989, 2004), Levin and Rappaport (1995), and Reinhart (1996, 2002). The difference between the *Reduction* operation proposed for reflexives and the decausativization operation proposed for unaccusatives is that the former does not suppress the theta role, which remains active in the syntax. The effect of the Reduction operation is to prevent the mapping of the external variable (or its theta role) onto the external argument position in the syntax.

Alboiu *et al* (2004) view reflexives in Romance as transitive constructions with only one (DP) argument, merged as internal but spelled out as external subsequent to its movement to Spec of vP. They propose that the reflexive morpheme SE results from the spelling out of the copy left by the DP argument subsequent to its movement to the subject position. The idea is articulated within the spirit of Distributed Morphology

Also operating within the Distributed Morphology approach, McGinnis (1999) and Embick (2004) argue that reflexivization entails cliticization of an anaphoric external argument onto the verb thus freeing the external argument position. The internal argument, which corresponds to the lexical DP, then moves to the external argument position. The derivation is illustrated in (154a) and (154b) (Embick's (2004: 141, (4) and (5) respectively):

a.



that raises to the subject position to bound the reflexive SE which bears the external theta-role as illustrated below:

(155) Jean_i se lave *t_i*

Hornstein (1999, 2001) proposes a version of the intransitive approach viewing reflexive constructions as having only one argument, which is internal, but associated with two distinct thematic roles, the Agent and the Patient. These theta roles are first mapped onto syntactic positions, independently of the lexical argument. The internal argument is then projected into the object position where it picks up the Patient role. Subsequently, the internal argument raises to the spec of the higher *v* where it is associated with the Agent theta role, leaving a copy in its original site.

Hornstein further argues that both the internal argument in the subject position and the copy left in the object position have to be pronounced for Case requirements. As a result, the copy is pronounced as SE.

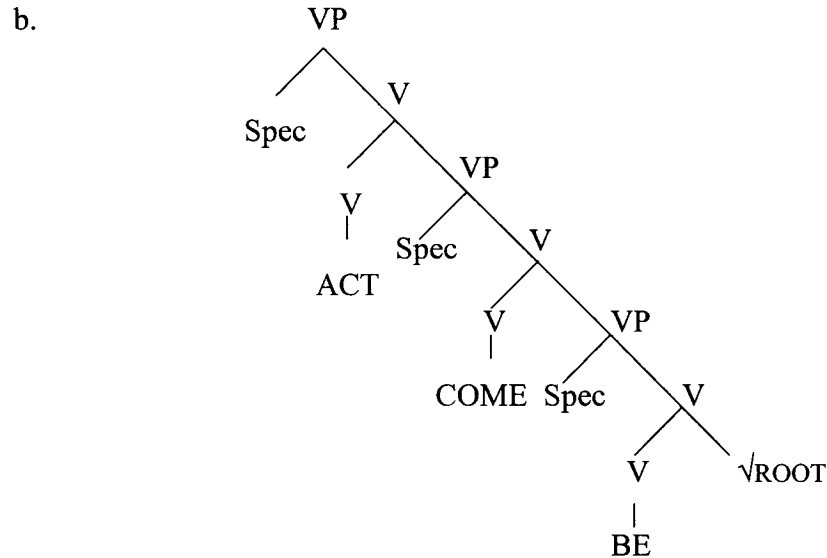
3.2 Analysis

Let me start the discussion by comparing the French verb of spatial configuration *s'asseoir* 'sit' in (156a), which displays the reflexive pronoun SE, with its Tamazight counterpart *qqim* in (156b) which does not display any reflexive morphology.

- (156) a. Il s'est assis
He SE is sit down
He sat down
- b. I-qqim
3Sg.M.-sat down
He sat down

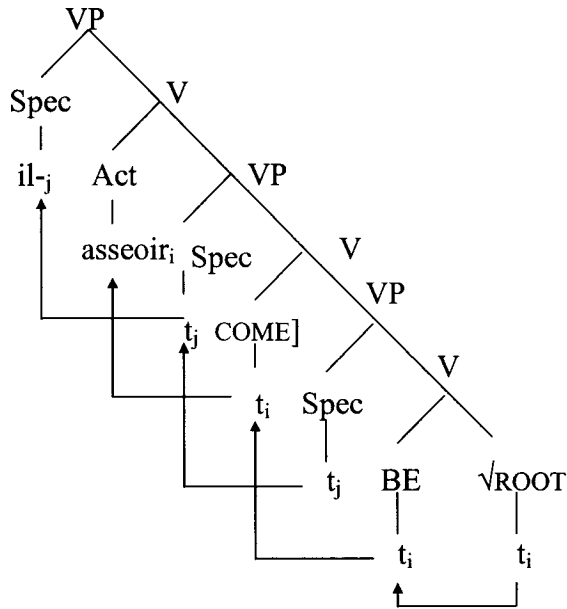
In what follows, I first argue that the French reflexive exemplified in (156a) and the Tamazight reflexive in (156b) have the same lexical structure and the same predicate-argument structure represented in (157a) and (157b) below respectively (see section 2):

(157) a. [Event ACT [Event COME [State BE ([$\sqrt{\text{ROOT}}$)]]]]



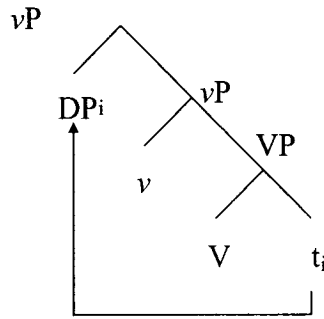
I already argued in Section 2 in favour of the internal status of the argument associated with verbs of spatial configuration, being first generated in Spec of BE before it raises to [Spec, COME] where it is interpreted as a Theme and subsequently to [Spec, ACT], where it is interpreted as an Agent. Adopting the idea from Distributed Morphology (Halle and Marantz 1993) according to which the phonological features corresponding to the lexical items in the syntactic structure are inserted after Spell-Out. Subsequent to its movement to [Spec, ACT] the internal argument leaves an identical copy in both [spec, BE] and [spec, COME]. Let me illustrate this below with the French reflexive sentence given in (156a) keeping in mind that the lexical elements on the tree are abstract features indicated only for the sake of clarity:

(158)



The structure above contains no phonological features corresponding to the reflexive element *S* unlike the internal argument *il*. The movement of the internal argument to [spec, ACT] leaves a copy in [spec, COME] and in [spec, BE]. The copy in [spec, COME] keeps its original thematic interpretation (or thematic role) as a Theme subsequent to the movement of the original copy to [Spec, ACT] where it is interpreted as an Agent. As recalled in § 4, Hornstein (1999, 2001) argues in favor of an intransitive analysis of reflexive constructions whereby their internal argument is associated with two distinct thematic roles, namely the Agent and the Patient. He suggests that such thematic roles are mapped onto syntactic positions, independently of the lexical argument. In his analysis, the internal argument is projected into the object position where it picks up the Patient role, before it raises to the spec of the higher *v* where it is associated with the Agent theta role, leaving a copy in its original site as illustrated below:

(159)



In the structure I proposed in (158) the copy in [spec, COME] is to be understood as distinct from a DP trace. DP traces do not have a thematic interpretation, or assuming they do, it is no different from the one borne by the original DP. In order to highlight this distinction, I indicate copies that have a distinct thematic interpretation than the original copy as $t_i\theta$, where t_i refers to the copy of the argument and the symbol θ to its thematic interpretation. Accordingly, the movement of the internal argument from [spec, COME] to [spec, ACT] in (158) results in a chain with two thematic roles and one argument, which can be represented as follows:

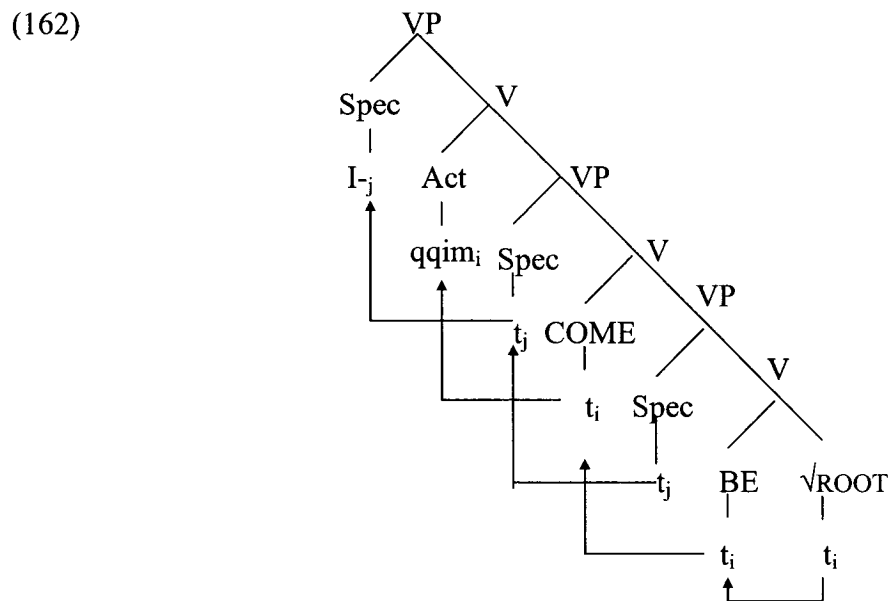
(160) $[Arg_i\theta_k \text{ ACT}[t_i\theta_j \text{ COME } [t_i \text{ BE}]]]$

At this level, the idea that phonological features are inserted only after Spell-Out allows us to extend the proposal just outlined for the French reflexive verb *s'asseoir* to the Tamazight counterpart verb *i-qqim*, which as a recall lacks the reflexive morphology. Let us compare again the French verb *s'asseoir* reproduced in (161a), with its Tamazight equivalent *iqqim* reproduced in (161b):

(161) a. Il s'est assis
 He SE is sat down
 He sat down

- b. I-qqim
3m.sg.-sat down
He sat down

In the Tamazight example (161b) the internal argument corresponds to the subject clitic *i-* suffixed to the verb. I demonstrated in Chapter 3 on the basis of construct state nouns that the subject morpheme *i-* originates as the head D of the lexical DP, which subsequently cliticizes onto the verb. Accordingly, Applying the structure proposed in (158) for the French verb *s'asseoir* to the Tamazight equivalent verb *i-qqim* in (161b), we get the following syntactic structure, again keeping in mind that the lexical elements on the tree are abstract features indicated only for the sake of clarity:



Like the structure proposed in (158) for the French reflexive, the structure in (162) contains trace copies in [Spec, COME] and [Spec, BE] left by the internal argument *i-* subsequent to its movement to [Spec, ACT]. So far, the simultaneous interpretation of the lexical argument as an Agent and as a Theme is captured in the same way as in the

French verb equivalent discussed above. The raising of the internal argument yields an A-chain that is similar to the one proposed for the French reflexive verb *s'asseoir* in (163) as shown below:

$$(163) \quad [CL_{i\theta_k} \text{ ACT } [t_{i\theta_j} \text{ COME } [t_j \text{ BE}]]]$$

In (163) the original copy represents the clitic subject. The trace copies contain features that are identical to those borne by the clitic, except for those determined by their respective positions such as thematic interpretations and Case.

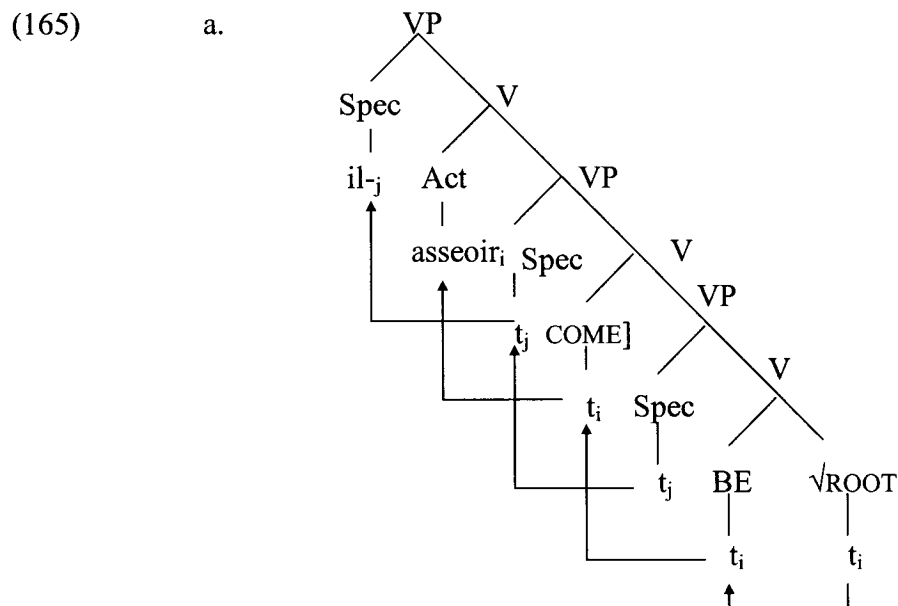
Let me now show how the French morphologically reflexive and its Tamazight non-morphologically reflexive counterpart differ are spelled out differently at the post-spell out level, thus accounting for their morphological differences. Getting inspiration from Hornstein (1999, 2001), Alboiu et al (2004) suggest that the reflexive morpheme SE in Romance is specified for person feature only. Accordingly, They propose that its selection to spell out the lower copy results from a constraint on A-chains which requires that only the original copy be fully specified as + R(referential). Such a constraint is formulated by Reinhart and Reuland (1993) as follows:

$$(164) \quad \text{General Condition on A-chains}$$

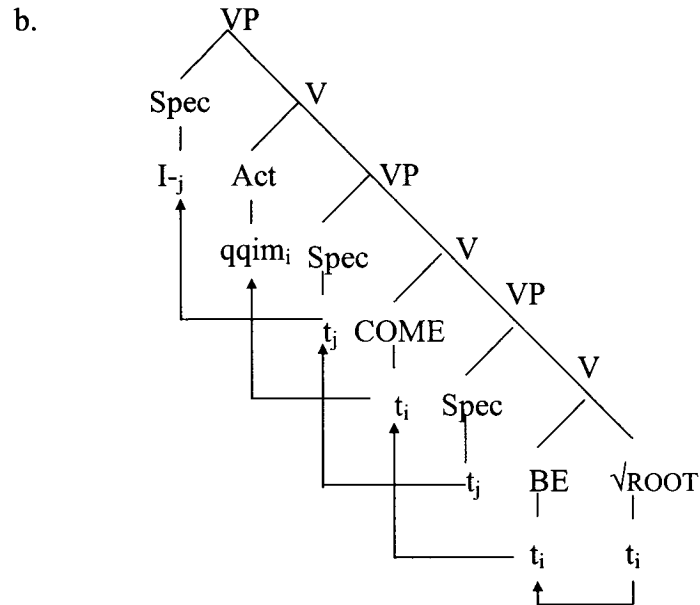
A maximal A-chain ($\alpha_1 \dots \alpha_n$) contains exactly one link α_1 that is both + R and Case marked.

Adopting the chain condition above, conjugated with the view formulated by Alboiu et al., suggest that all the abstract features making the lower copy +R(eferential) be deleted prior to spell-out. Applied to the French and the Tamazight examples in (161), with their structures illustrated in (158) and (162) respectively, the abstract features have to be impoverished in order to make them –R. After Spell Out, they will be substituted

for with their corresponding lexical items from the lexicon. Because French has an anaphoric underspecified default pronoun, which contains only the features that survive the morphological impoverishment, this pronoun will be inserted at the level of vocabulary insertion. Unlike French, The Tamazight language lacks such an underspecified pronoun²⁶. Accordingly, the abstract features of the copy that have survived the impoverishment process are condemned to remain silent after Spell-Out. To conclude, although the French verb *s'asseoir* and its Tamazight equivalent *qqim* have similar structures, illustrated in (165a) and (165b) respectively below, prior to Spell-Out, they diverge morphologically after Spell-Out for the reasons just mentioned.



²⁶ Tamazight has reflexive pronouns that are specified with respect to ϕ features. They parallel they English reflexives of the type pronoun + self.



Both the French and the Tamazight copies, equally indicated as $t_i\theta_j$ in [Spec, COME], confers the Theme interpretation to their internal argument, respectively, which is the role of reflexive pronouns. Thus considered, the copy $t_i\theta_j$ in [Spec, COME] in the Tamazight structure (165b) is a null reflexive element, i.e. not spelled out phonologically. In the remainder of this section, I provide more evidence from various languages in favor of null reflexive pronouns.

3.3 More evidence in favour of null reflexives

Evidence across languages shows that reflexive interpretation does not necessarily require overt reflexive pronouns or clitics. In Modern Greek for instance, some types of verbs yield a reflexive interpretation when used with non-active voice although they display no reflexive element. This is the case of the verbs referring to body action such as *wash*, *comb*, etc., exemplified below (from Embick 2004: 145, (11)):

- (166) I Maria xtenizete kathe mera
 the.NOM Maria.NOM comb.Nact.3SG every day
 ‘Maria combs herself every day.’

Embick (2004b: 146) argue that the reflexive interpretation involved in (166) is not due to non-active voice morphology since non-reflexive constructions such as passives and unaccusatives also occur with non-active voice. Embick suggests that body-action verbs such as the one exemplified in (166) contain a self-related component as part of its inherent meaning. McGinnis (1997) on the other hand discusses facts from Hebrew showing that verbs referring to body action, such as *hitraxec* ‘wash’ exemplified in (167) below, contain syntactically active inherent (empty) reflexive clitics:

- (167) Ani xoshev she mishehu hitraxec (McGinnis 1997: 149, (25a))
 I think that someone washed

McGinnis proposes that the verb *hitraxec* involves a phonologically null reflexive clitic because the verb, which patterns with the *hitpael* form, is associated with a Caseless *v*.

While Embick suggests that body-action type verbs such as the one illustrated in (166) lack the external argument, McGinnis (1997) on the contrary argues that they involve a morphologically null external argument in the spec of *vP* distinct from the internal argument. The relevancy of Embick’s (2004) and McGinnis’ (1997) proposals to our analysis proposed in the present chapter resides in the fact that reflexive verbs do contain null reflexive elements, whether as an argument (McGinnis’ proposal), or as part of the verb meaning (Embick’s proposal). Note that McGinnis’ proposal is more

compatible with our reflexive analysis presented in the previous section since it postulates the existence of null or empty reflexive pronouns.

4. Conclusion

In the present chapter I defended the idea that Tamazight verbs of spatial configuration participate in true reflexive constructions notwithstanding their lack of reflexive morphology as illustrated below:

(168) Y-qqim

3Sg.M.-sat down

He sat down

The structure of the Tamazight verb exemplified in (168) was compared with the one proposed for its verb equivalent in French, which is morphologically reflexive as shown in (169):

(169) Il s'est assis

He SE is sit down

He sat down

I first argued that the single argument that appears as the subject in both the Tamazight example in (168) and the French example in (169) is internal. I further argued on the basis of conceptual semantics that in both situations the argument involved is internal with two thematic interpretations, namely Agent and Theme. I proposed that such a mapping obtains in the narrow syntax by raising the lexical argument from [Spec, COME] to [Spec, ACT], thus forming an A-chain, composed of the lexical argument and a thematic copy.

Following Alboiu *et al* (2004) I adopted the A-chain constraint formulated by Reinhart and Reuland (1993) requiring that the lower copy of a chain be underspecified. I argued that fully specified copies undergo morphological deletion of certain features after Spell-Out. Accordingly, I proposed that the derivation of the Tamzight and the French sentences, given respectively in (168) and (169), diverge at Spell-Out. The French language having an underspecified or default reflexive pronoun SE, the lower copy will therefore surface as a morphological reflexive pronoun. By contrast, the Tamazight language lacking such an underspecified pronoun; therefore the lower copy remains morphologically empty.

Chapter 6

Causative verbs of change

1. Introduction

In the present chapter I investigate the internal structure of causative verbs of change, and the derivation of their predicate-argument structure in the syntax, within the same approach as the one adopted in the previous chapters. Like many languages, Tamazight has two types of causatives, which correspond to those called lexical and morphological in the linguistic literature. Morphological causatives refer to transitive verbs that are derived from intransitives with the means of the causative morpheme SS-²⁷ as exemplified with the verb *ss-aawj* ‘bend’ in (170b) below, to be compared with its intransitive counterpart in (170a):

- (170) a. Taawej tsarut
 3f.s.bend-perf cs.key
 The key is bent
- b. I-ss-aawej Yidir tasarut
 3m.s.CAUS-bend-perf Yidir fs.key
 Yidir distorted the key

Lexical causatives on the other hand are morphologically basic in that they do not involve any causative morpheme as exemplified with the verb *ldi* ‘open’ in (171b) below, with its intransitive counterpart given as (171a):

²⁷ The causative morpheme SS has also a non-geminate variant, which seems to be morpho-phonologically conditioned. In the present discussion however, I refer to it indifferently as SS-morpheme. For a morpho-phonological analysis of this morpheme see Guerssel (1992b) and Lahrouchi (2003).

- (171) a. Teldi tewwurt
 3F.Sg.open-PERF cs.door
 The door opened / is open
- b. Teldi Mekyusa tawwurt
 3M.Sg.open-PERF Mekyusa fs.door
 Mekyusa opened the door

I argue that the event structure and the predicate-argument structure of both types of causatives look alike; but they differ with respect to the way their lexical structure is represented or construed at the lexical level and the way their abstract verb CAUSE is lexicalised in the syntax. Ultimately, I argue that morphological causatives such as the one exemplified in (170) and lexical causatives such as the one exemplified in (171) share the structure represented in (172), while demonstrating that the differences reside in the strategies applied to lexicalise the abstract verb CAUSE:

- (172) [Event CAUSE [Event BECOME ([$\sqrt{\text{ROOT}}$)]]]

The rest of the discussion provided in the present chapter runs as follows. In Section 2 I deal with the class of morphological causatives where I argue that such verbs have their abstract verb CAUSE lexicalised by the causative morpheme SS-. In Section 3 I deal with the class of lexical causatives alternating with the intransitive use such as the one exemplified in (171) above. I argue that the abstract verb CAUSE involved in their structure it is lexicalised by means of the lexical $\sqrt{\text{ROOT}}$. The two different lexicalisation strategies applied with morphological causatives and lexical causatives are further elaborated upon in Section 4. Section 5 is dedicated to lexical causatives that do not have an intransitive alternate in Tamazight such as the verb *ny* ‘kill’. I argue that this class of

2. Morphological Causatives

(173) a. Semmed-et lqahwa (intransitive)
Cold-3F.SG.ACC coffee
The coffee is cool

b. Y-ss-ismd Yidir lqahwa (causative)
3M.Sg.NOM-CAUS.COOL.PERF Yidir coffee
Yidir cooled the coffee

(174) a. Y-rya wexxam-is (intransitive)
3M.Sg.burn. cs,house-his
His house has burned down

- b. Ss-ry-n laaskar axxam-is (causative)
 CAUS-burn-3m.pl. soldiers fs.house-his
 The soldiers have burnt his house down
- (175) a. I-qqim mmi-s γef ukersi (intransitive)
 3sg.M.-sit.perf child-her on chair
 He sat / is sitting on the chair
- b. T-ss-γim mmi-s γef ukersi (causative)
 3fs-CAUS-sit child-her on chair
 She stood her brother on the table

In Chapter 3 I showed that unaccusative verbs have the same structure as inchoatives; therefore, these two types are treated as one in the present chapter. I first deal with causatives derived from verbs of quality and unaccusatives (§ 2.1), before I move to those derived from verbs of spatial configuration (§ 2.1).

2.1 causatives derived from verbs of quality and unaccusatives

More examples of morphological causatives derived from intransitive verbs of quality are listed below:

(176)

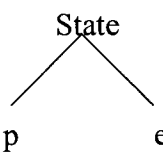
Root	Stative	Inchoative	Causative	
√zwγ	zeggay	izwiγ	ss-izweγ	(be red)
√myr	meqqar	imγur	ss-emγr	(be grown up)
√γzf	γezzif	iγzif	ss-γezef	(be tall; long)
√wzl	wezzil	iwzil	ss-ewzl	(be small)
√brk	berrik	ibrik	ss-ibrik	(be black)

The forms above show clearly that the verb stem of the causative form has the same morphology as the one involved in the inchoative forms, but different from the one

in the pure stative. Given this observation, it is reasonable to conclude that the LS of the causative forms is derived from their inchoative counterpart, rather than from the stative one, by adding the causative component to its LS. As a recall, I argued in Chapter 3 that the pure stative forms occur with accusative object clitics in the perfective as illustrated with the verb form *zeggay* ‘be red’ in (177a); while the inchoative forms occur with subject clitics prefixed to the verb as illustrated with the form *zwiγ* ‘become red’ in (177b):

- (177) a. *Zeggay-it*
 Red (PERF) -CL. 3M.Sg.
 It is red
- b. I-*zwiγ*
 CL.3M.Sg.NOM.-red
 It / he reddened

I argued that the stative form in (177a) has the monadic ES and LS illustrated in (178a) and (178b), respectively; while the inchoative form in (177b) has the dyadic ES and LS illustrated respectively in (179a) and (179b):

- (178) a. ES 
- b. LS: [BE x [$\sqrt{\text{ROOT}}$]]

- (179) a. ES:
-
- ```

graph TD
 e1[e1] --- p1[p1]
 e1[e1] --- e1[e1]
 e1[e1] --- e2[e2]
 e1[e1] --- p2[p2]
 e1[e1] --- e2[e2]

```
- b. [COME [BE x [√ROOT]]]

Accordingly, the derivation of the morphological causatives forms listed in (176) may be illustrated as follows:

- (180) *SS-causativization of verbs of quality:*
- a. Intransitive : ----- [Inch COME [State BE ([√ROOT])]]
- b. Transitive : [Event CAUSE] [Inch COME [State BE ([√ROOT])]]

When I dealt with the inchoative form in Chapter 3 I argued that the abstract verbs should be kept separate in the structure in order to account for both

The resulting lexical structure illustrated as (180b) for morphological causatives is similar to the one suggested by Guerssel (1986: 81) for the same semantic class of verbs. For instance, Guerssel gives the LCS structure illustrated in (181b) below for the morphological causative verb *ss-zyert* ‘cause to be long’ exemplified in (181a), which is derived from the stative verb *zyert* ‘be long’ exemplified in (182a) with its structure given as (182b):

- (181) a. Y-ss-zyert wryaz fuli  
3ms.CAUS.be:long:per man:FS string  
The man made the string long

- b.     *ss-zyert*:         *y* CAUSE (*x* COME TO BE LONG)
- (182)     a.     *Y-zyert wfuli*  
                   3ms-be.long CS.string  
                   The string is long
- b.     *zyert*:             *x* BE LONG

However, I disagree with Guerssel with respect to the lexical structure ascribed to the intransitive verb *zyert* ‘be long’ (182) that serves as input for the derivation of the causative form (181). Guerssel assumes that such a verb has monadic structure composed of the verb BE exclusively, while I argued above that such verb forms are inchoative, with a dyadic structure containing also the verb COME in addition to the stative verb BE (see also analysis proposed in Chapter 3). Discussing the same data as Guerssel’s, Lumsden (2000: 204) adopts a similar view holding that the morphological causative form *ss-zyert* in (181a) above contains both the inchoative verb “MOVE”, which corresponds to the abstract verb COME in the present work, and the stative verb BE, in addition to the causative abstract verb referred to as AFFECT by Lumsden, and which corresponds to our verb CAUSE in the present work. The structures proposed by Lumsden for the stative form *zyert* ‘be long’ and the causative form *ss-zyert* ‘cause to be long’ are illustrated in (183a) and (183b) respectively below (given as (13b) and (13c) by Lumsden 1995: 204):

- (183)     a.     Stative:         *y* BE AT [STATE<sub>i</sub>]
- b.     Causative:     *y* MOVE TO [*y* BE AT [STATE<sub>i</sub>]]  
                               *x* AFFECT *y*

Lumsden's causative structure illustrated in (224b) is based on the two-tier system proposed by Talmy (1988) and Jackendoff (1990). The verbs MOVE and BE are represented on a Thematic tier indicating change of state, while the verb AFFECT is represented on an Action tier indicating causation.

Both in Guerssel's and Lumsden's proposals the transition from the monadic structure with only the abstract stative verb BE, to the triadic structure with three abstract verbs (BE, COME and CAUSE) is direct. Where does the abstract inchoative component, paraphrased as COME, come from? The fact that the intransitive verb *zyert* 'be long' also yields the inchoative (or change of state) interpretation means that the inchoative component is independent of the causative component, which must be restricted to the verb CAUSE. Therefore, the analysis I proposal above deriving the causative structure from the inchoative rather than from the stative structure is more appropriate.

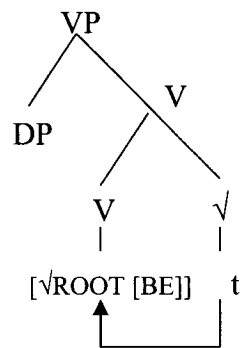
In the previous chapters I proposed that the abstract verbs BE, COME, ACT and CAUSE encoded in the LS of verbs must be identified lexically by some appropriate morphological material in the syntax, which I formulated as the following constraint:

- (184)        *Morphological Constraint*  
               Abstract verbs encoded in the LCS component of verbs must be identified with lexical content.

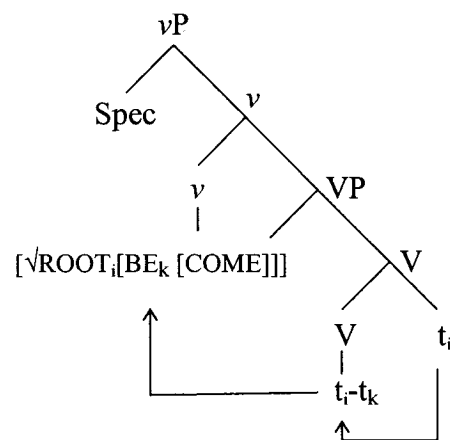
Applied to the verbs of quality under discussion, I proposed that the abstract verbs BE and COME are identified (or lexicalized) by the lexical  $\sqrt{\text{ROOT}}$  subsequent to their conflation as illustrated in (185a) and (185b) below, respectively:



(185) a.

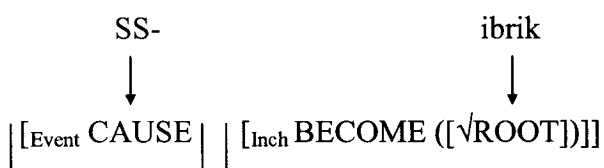


b.

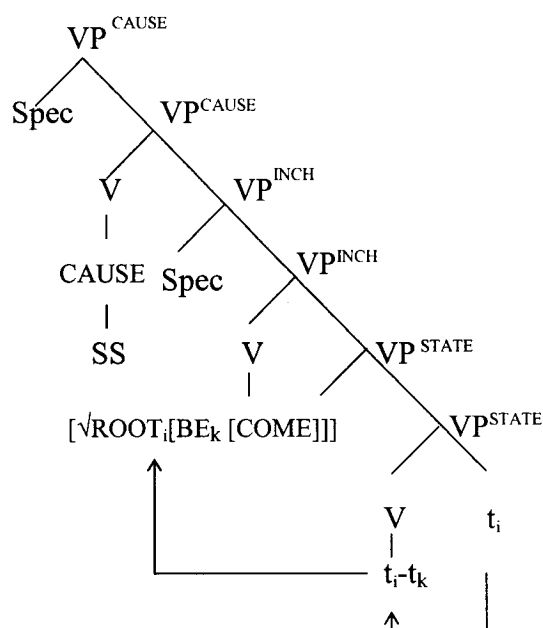


The causative form however contains the morphological morpheme SS which corresponds to the abstract verb CAUSE as illustrated with the verb *ss-ibrik* ‘to cause to become dark / black’ below:

(186) *Morphological causatives*



Therefore, unlike the abstract verbs BE and COME which are lexicalised by the lexical ROOT, the abstract verb CAUSE is lexicalised by the causative morpheme *SS* as illustrated below:

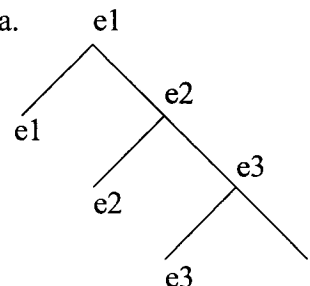


## 2.2 causatives derived from verbs of spatial configuration

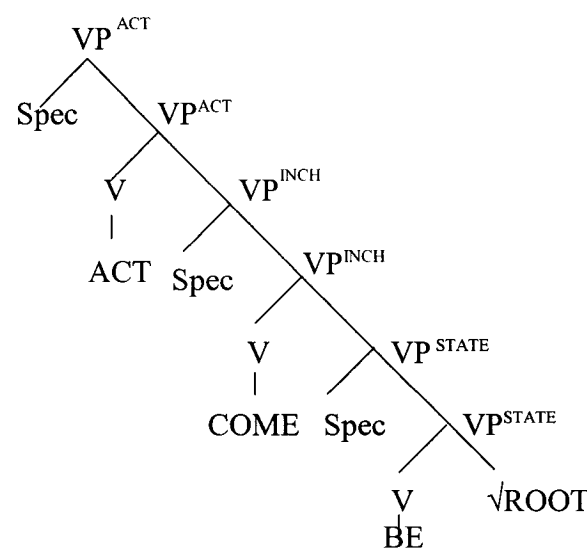
- (188) a. T-bedd                      γef ttabla                      (reflexive)  
3sg.f.-stand.perf on table  
She stood on the table

- b.     T-ss-bedd        mmi-s    yef   ttabla        (causative)  
          3fs-CAUS-stand   child-her on   table  
          She stood her son on the table

In Chapter 5 I demonstrated that verbs of spatial configuration such as *bedd* ‘stand’ exemplified in (188a) above have the event structure (simplified) and the lexical structure represented in (189a) and (189b) below, respectively:

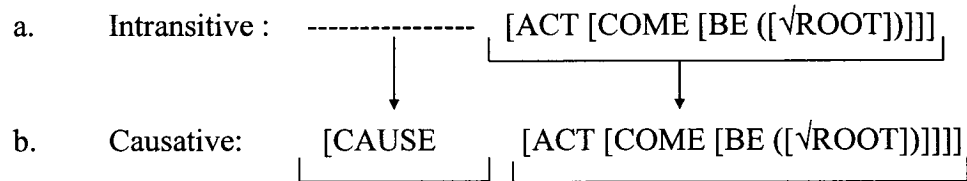
- (189)     a.     
- b.     [ACT [COME [BE ([√ROOT])]]]

The mapping of the ES and the LS above yields the PAS illustrated in (231).

- (190)     

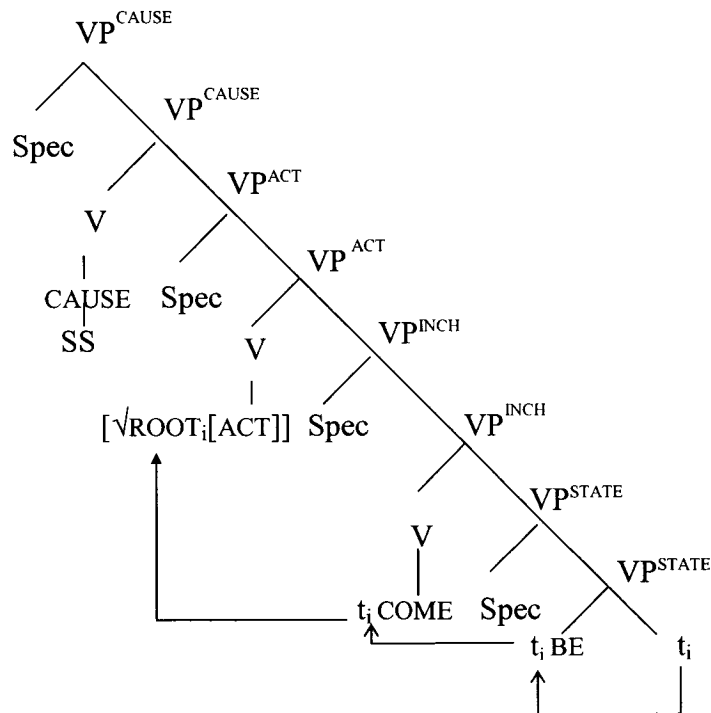
Like in the situation of causatives derived from inchoative verbs dealt with in the previous subsection, the morphological causative verb *ss-bedd* exemplified in (188b) is also derived from its intransitive counterpart *bedd*. Accordingly, I illustrate the derivation of the lexical structure corresponding to the causative verb *ss-bedd* as follows:

(191) *SS-causativization*:



The abstract verb CAUSE is identified lexically by the causative morpheme SS while the verbs ACT, COME and BE are lexicalised by the lexical root in the same way as argued for in the previous subsection and as illustrated below:

(192)



### 2.3 Conclusion

In the derivation process of morphological causatives presented in the present section I argued that the abstract causative verb CAUSE is lexicalised or identified lexically by means of the causative morpheme SS, while the verbs BE, COME and ACT are lexicalised by means of the lexical ROOT. The question that arises with respect to the structure above is why is the verb CAUSE not identified by the lexical ROOT just like the verbs BE and COME and ACT. What this question amounts to is why in these situations lexical causativization, i.e. without appealing to the causative morpheme, is not possible. This question will be answered in Section 4 where the two strategies applied to lexicalise the verb CAUSE are discussed. Before moving to such a discussion, I have to analyse the structure of lexical causatives first, which is the topic of the next section.

### 3. Intransitive alternating causatives

In the present section I investigate the structure of lexical causatives that alternate with the intransitive use. I argue that their abstract verb CAUSE is lexicalised by means of the lexical  $\sqrt{\text{ROOT}}$  unlike morphological causatives whose verb CAUSE is lexicalised by means of the causative morpheme SS.

Unlike morphological causatives, the abstract verb CAUSE involved in the structure of lexical causatives is not reflected morphologically as illustrated with the causative verb *ldi* ‘open’ exemplified in (193b):

- (193)            a.        Teldi                    tewwurt                    (intransitive)  
                              3f.sg.open-perf. cs.door  
                              The door opened / is open

- b.       Teldi               Mekyusa     tawwurt               (transitive)  
           3m.sg.open-perf Mekyusa     fs.door  
           Mekyusa opened the door

In the absence of a morphological causative marker likely to identify or lexicalise the abstract verb CAUSE, the question that arises here is how the abstract verb in question is lexicalised, knowing abstract verbs have to be identified with morphological content. As a recall, I formulated this constraint in Chapter 2 in the following generalization:

- (194)       *Morphological Constraint*  
           Abstract verbs encoded in the LCS component of verbs must be identified with lexical content.

Following the constraint above, that lexical verbs are possible is by itself ample evidence that the causative abstract verb involved in the structure of such verbs is lexicalised. The second question, akin to the one raised above, is why are such verbs not lexicalised by the causative morpheme SS or, why did the language not develop a new causative morpheme. I would like to argue the abstract verb CAUSE in question is lexicalised by the lexical  $\sqrt{\text{ROOT}}$  itself in the same way as argued for with respect to the abstract verbs BE, COME and ACT in the previous chapters, and recalled in Section 2. As will be shown shortly, the proposal will provide an elegant account for the semantic differences between lexical and morphological causatives as highlighted for instance by Guerssel (1986) followed by Lumsden (1995).

In his analysis of verbs of change in Tamazight, Guerssel (1986) argues that lexical causatives such as the verb *crez* ‘plough’ exemplified in (195) indicate ‘extrinsic

change’ while morphological causatives such as the verb *ss-fsy* ‘to melt or to cause to melt’ exemplified in (196) indicate ‘intrinsic change’.

(195) a. Y-crez wurtu (Guerssel’s (136a), p. 79)  
 3ms.plow cs.orchard  
 The orchard is plowed

b. Y-cerz weryaz urti (Guerssel’s (136b), p. 79)  
 3ms.plow.perf cs.man orchard  
 The man plowed the orchard

(196) a. Y-fsy wudi (Guerssel’s (140a), p. 81)  
 3ms.melt:perf.butter: cst  
 The butter melted

b. Y-ss-fsy wryaz udi (Guerssel’s (140b), p. 82)  
 3ms.CAUS.melt:per cs.man butter  
 The man melted the butter

By ‘intrinsic change’ Guerssel means that the change of state is somehow determined by a property that is inherent to the object undergoing such a change of state. In the case of the verb *ss-ffsy* ‘melt’ exemplified in (196) for instance, it is the temperature within the butter that determines whether the process of melting takes place or not. Viewed this way, the role of the causer (or external argument) involved with *ss-ffsy* is simply to create conditions triggering such a change.

By contrast, Guerssel argues, the ‘extrinsic change’ that characterizes lexical causatives is caused by factors that are external to the object (internal argument). In other terms, the change is not determined by a factor that is inherent to the object; rather, it is

driven by factors that are associated with the causer (o the external argument). Given the external ‘nature’ of the factor causing the change of state associated with lexical causatives, Guerssel concludes that the lexical-conceptual structure of these verbs is basically transitive in the sense that the ‘causer’ is always present even when left unexpressed as in their intransitive alternate. In the latter case, Guerssel continues, the causer is not projected in the syntax but it is present at the lexical-conceptual level.

Building on the analysis proposed by Guerssel recalled above, Lumsden (1995) argues that the predicate associated with the external argument in the lexical structure representation of lexical causatives is specified lexically with respect to the “manner” or the “means” in which the Causer (external argument) affects the Theme (internal argument). He proposes a lexical representation for lexical causatives whereby the “manner” component is related to the Actor argument as illustrated with the verb *crez* in (197) below, to be compared with the one the author proposes for morphological causatives where the “manner” component is related to the Theme argument as illustrated with the verb *ss-fsy* in (198). In both representations the “manner” component is indicated as GESTURE (the reading of Lumsden’s structures below is determined by the bracketed system):

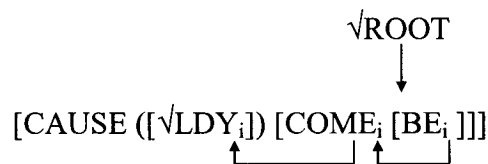
- (197) Transitive *crez* ‘plow’
- Causative:     *y* MOVE TO [*y* BE AT [STATE<sub>CRZ</sub>]]
- [*x* AFFECT *y* [GESTURE<sub>CRZ</sub>]] AFFECT *y*
- (198) Transitive *ss-fsy* ‘melt’
- Causative:     *y* MOVE TO [*y* BE AT [STATE<sub>FSY</sub>]]
- x* AFFECT [*y* AFFECT [GESTURE<sub>FSY</sub>]]



In what follows I provide an account that handles all the facts mentioned in a such a coherent way with the whole approach adopted in the present dissertation, without extra dispensing altogether with the two-layered system and the extra components called “manner”, “means” or “gesture” by Lumsden.

Framed within the approach adopted in the present dissertation, Guerssel idea of “external causation” would mean that the semantics of the verb must be associated with the abstract verb CAUSE as opposed to morphological causatives where the lexical  $\sqrt{\text{ROOT}}$  is restricted to the two abstract verbs BE and COME seen with respect to. Within the analysis proposed here, semantic features of verbs are conveyed by their lexical roots. Accordingly, given the *Morphological Constraint* adopted in the present work, recalled in (194) above, the abstract verb CAUSE involved in the structure of lexical causatives has to be identified or lexicalised by the lexical  $\sqrt{\text{ROOT}}$  as opposed to the verb CAUSE of morphological causatives, which is lexicalised by the morpheme SS. I henceforth refer to the former type as  *$\sqrt{\text{ROOT}}$ -lexicalisation* and to the latter type as *SS-lexicalisation*. The  *$\sqrt{\text{ROOT}}$ -lexicalisation* is illustrated with the verb *ldy* ‘to open’ in (199), to be compared with the *SS-lexicalisation* type illustrated in (200) with the verb *ss-fsy* ‘melt’:

(199)  *$\sqrt{\text{ROOT}}$ -lexicalisation (lexical causatives)*

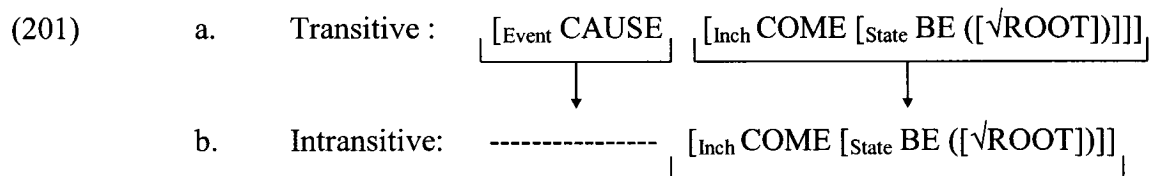


(200) *SS-lexicalisation (morphological causatives)*



Viewed from such a perspective, the predication that lexical causatives should be more specified lexically than morphological causatives does not come as a surprise since lexical  $\sqrt{\text{ROOT}}$ s are in fact more specified than the causative morpheme SS. Within the analysis proposed here, the “manner” specification highlighted by Lumsden is simply a corollary that results from the successive conflation of the lexical  $\sqrt{\text{ROOT}}$  with the abstract verbs CAUSE, COME and BE as illustrated in (199) above. Likewise, lack of “manner” specification associated with the causative component of morphological causatives is accounted for with the insertion of the causative morpheme to lexicalise the abstract verb CAUSE as shown in (200).

Within the analysis just proposed, the difference between the causative and the intransitive alternates is also accounted for straightforwardly. When the verb is realised in its intransitive form, the structure illustrated in (200) above is reduced to its inchoative component, leaving away the causative component as illustrated below:



The analysis favors the view that such a derivation obtains at the lexical-conceptual level because that is where the lexical structure is mapped onto the event structure following the model of the organization of the grammar presented in Chapter 2. Unlike lexical structure, event structure is not necessarily represented in a transitive form given that it is not part of the lexical knowledge but construed ‘on line’ as a result of the mental representation of events as they are seen or experienced in the external world following the definition provided by Jackendoff (1997) as recalled in Chapter 2.

The question as to which of the transitive or the intransitive alternate is derived from the other has concerned many languages and has been around in the linguistic literature for a while. The different proposals made in the literature diverge on this issue. Without getting into the details, three different views have been assumed. While some linguists argue that such verbs have a basic transitive structure (for instance Guerssel 1986; Labelle 1992; Pustejovsky 1995; Levin and Rappaport 1995; Davis and Demirdache 2000 among many others), others argue for the contrary, considering the intransitive alternate to be basic (Lakoff 1968, 1970; McCawley 1968; Perlmutter 1978; Burzio 1986; Keyser and Roeper 1984; Pesetsky 1995; Hale and Keyser 2002, among many others). Note however that the lexical structure proposed for lexical causatives in (199) above does not necessarily favour the intransitive hypothesis as it may be construed as intransitive first. In such a case, the structure corresponding to the intransitive alternate would be derived by stripping the transitive structure by its causative component as illustrated in (201) above, which is exactly the reverse of the derivation strategy applied with morphological causatives. Note that although the analysis just provided is formulated in a way that favors the transitive view of causative / unaccusative alternating

verbs, the possibility that the derived intransitive structure may have ended up being lexicalised is not to be excluded. In such a case, both the transitive and the intransitive structures shown in (200) would be part of the speaker's lexical knowledge as two distinct structures. Should the latter view prevail, the question regarding the direction of the derivation would then become meaningless at the synchronic level, being only relevant when viewed diachronically. Determining whether such is the case or not requires further investigations involving techniques known in the psycholinguistic and neurolinguistic fields as decision tasks and online tests.

#### **4. More on the differences between $\sqrt{\text{ROOT}}$ and SS- lexicalisation**

Derivation of morphological causatives as explained in Section 2 reveals that the abstract verb CAUSE is lexicalised with the causative morpheme SS as opposed to the rest of the abstract verbs BE, COME of the lower component, which are lexicalised by the  $\sqrt{\text{ROOT}}$ . By contrast, I argued in the previous subsection that the abstract verb CAUSE involved in the structure of intransitive alternating causatives is lexicalised by the  $\sqrt{\text{ROOT}}$ .

The difference between  *$\sqrt{\text{ROOT}}$ -lexicalization*, illustrated in (199) above, and *SS-lexicalization*, illustrated in (200), has to do with the “amount” of semantic content encoded in the ‘causing event’. That is, lexicalization of the verb CAUSE by means of the morpheme SS does not add any extra meaning to it other than the idea of ‘triggering’ the processes leading to change of state, which is internal or inherent to the object undergoing such a change in the way described by Guerssel (1986) as recalled in the previous subsection. By contrast, lexicalization of the verb CAUSE by means of the lexical  $\sqrt{\text{ROOT}}$  not only triggers causation but also adds to it lexical content encoded in

the  $\sqrt{\text{ROOT}}$  because the process leading to the change of state is not internal to the object (or the internal argument) but external in the sense that it comes from the subject (external argument).

As a matter of fact, this opposition is not restricted to languages with morphological causatives such as Tamazight as we also find it in languages with analytical or periphrastic causatives such as English as shown with the two sentences below:

- (202)      a.      John melted the metal
- b.      John caused the metal to melt

In (202a) the abstract verb CAUSE is lexicalised by the lexical root  $\sqrt{\text{MELT}}$  in exactly the same way as proposed for the Tamazight alternating causatives in Section 3. By contrast, the verb CAUSE in (202b) is lexicalised by the light verb ‘cause’ in the same way as proposed for the causative morpheme SS of morphological verbs in Tamazight dealt with in section 2, while the lexical root  $\sqrt{\text{MELT}}$  in (202b) is restricted to the RESULT STATE component. The structures corresponding to the English sentences in (202a) and (202b) are illustrated below as (203a) and (203b), respectively:

- (203)      a.    [CAUSE ([<sup>√</sup>MELT]<sub>i</sub>) [BECOME ([t<sub>i</sub>]]]
- ↑-----↓
- b.    ‘cause’
- ↓
- [CAUSE [BECOME ([<sup>√</sup>MELT])]]

Shibatani and Pardashi (2002: 141) argue that the difference between the English sentences in (202a) and (202b) corresponds to the one found between direct and indirect causation, respectively. Direct and indirect causations have been used with different

interpretations in the literature (see Dixon 2000 for a review). The meaning with which they are used by Shibatani and Pardashi (2002) is akin to Guerssel's (1986) use of "external" and "internal causation" as recalled in Section 3. It is also a proven fact that in English the "causation" involved in lexical causatives is "external" while the one involved in periphrastic causatives is "internal" (see Nedyalkov and Silnitsky 1973; Comrie 1976; Shibatani 1976; Pinker 1989 and Levin and Rappaport 1995 and Shibatani and Pardashi 2002 among others)

### 5. Non-intransitive alternating causatives

In the present subsection I contrast the intransitive-alternating verbs dealt with previously with transitive verbs such as *nɣ* 'kill', which lack the intransitive alternate, as shown with the examples in (204):

- (204)
- a.     Y-nya       wemcic ayerda  
           3ms.-kill.perf cs.cat     fs.rat  
           The cat killed the rat
  - b.     \*Y-nya uyerda  
           3ms.-kill.perf cs. rat  
           \*The rat killed

I show that the internal structure associated with the verb *nɣ* 'kill' has a differs from the one proposed for the causative verbs dealt with so far in more than one aspect.

Whether transitive verbs such as 'kill' qualify as causatives or not is a question that has been debated in the literature and views adopted by their authors diverge (see Shibatani and pardashi 2002). Pinker (1989: 85) argues that the English verb 'kill' is a causative verb. However, he argues such a verb is to be distinguished from other causative verbs involving change of state on the basis of the thematic relation they

specify with their internal arguments. He further argues that verbs such as ‘kill’ specify an argument that is both Patient and Theme. As we shall see shortly, this thematic distinction has consequences on the internal structure of this type of verbs.

The fact that the argument is also a Theme means that such verbs involve a RESULT STATE component, which also implies that the object affected undergoes change of state of some sort. Fillmore (1971: 42) for instance proposed that the sentence in (205a) below involves a ‘resulting state’ component that parallels the ‘goal component’ indicated in (205b):

- (205) a. John killed the rat  
b. I pushed the table (into the corner)

In view of the facts just mentioned, it becomes reasonable to suggest at this that the difference between intransitive-alternating causatives and non-alternating verbs such as *ny* ‘kill’ resides not in the absence vs. the presence of a RESULT component, but in the way such a component is encoded in the lexical structure and, consequently, how it is expressed in the syntax. As a matter of fact, the RESULT STATE involved in non-alternating transitives cannot be expressed independently of the causative interpretation unlike that of intransitive-alternating causatives. In order to highlight this distinction, I indicate the RESULT component associated with the verb *ny* ‘kill’ simply as [RESULT STATE] as illustrated in (206a) below, as opposed to the representation showing the verbs BE and COME proposed for intransitive-alternating verbs illustrated in (206b):

- (206) a. Non-intransitive alternating causatives:  
[<sub>Event</sub> CAUSE [<sub>State</sub> RESULT STATE]]  
b. Intransitive-alternating causatives

[<sub>Event</sub> CAUSE [<sub>Inch</sub> COME [<sub>State</sub> BE]]]

In all the verb classes dealt with so far in the present dissertation, I motivated the use of the abstract verbs BE and COME on grounds that the verbs involved yield stative and inchoative interpretations. However, such a view does not apply with non-alternating transitive verbs such as *nγ* ‘kill’ because they lack the intransitive alternate. There is a direct relation between the type of verbs such as *nγ* ‘kill’ and their lack of the verbs BE and COME in their structure. The verbs BE and COME are often associated with a Theme argument in the literature, which is distinguished from a Patient argument (see Pinker 1989, Jackendoff 1990, and Rappaport and Levin 1988). Pinker (1989) argues that the verb ‘kill’ specifies an argument that is both Patient and Theme, which makes different from causative verbs involving a ‘pure’ Theme argument. This is taken by Pinker as evidence that the verb ‘kill’ involves the semantics indicated by the abstract verb ‘ACT ON’, which he relates to direct causation. The fact that the hybrid Theme / Patient relation does not depend on the argument but specified by the verb suggests that the verb involves different semantics than the verbs of change dealt with so far, which specify a pure Theme relation. To make this difference more explicit, I paraphrase the abstract verb involved in the structure of the verb *nγ* ‘kill’ as ACT ON as opposed to CAUSE. Accordingly, the structure proposed for the verb *nγ* ‘kill’ in (206a) above is reformulated as (207a) below, to be compared with the one proposed for alternating causatives in (206b), repeated as (207b):

- (207)        a.        Non-intransitive alternating causatives:  
                              [<sub>Event</sub> ACT ON [<sub>State</sub> RESULT STATE]]



- b. Intransitive-alternating causatives  
 [Event CAUSE [Inch COME [State BE]]]

Unlike the inchoative subcomponent in (207b), which is verbal, the ‘RESULT STATE’ subcomponent is not verbal but a pragmatic consequence of the action indicated by ACT ON on the object, albeit part of the verb meaning. This consequence is akin to the notion known in formal semantics as “conventional implicature” 28. Accordingly, unlike the structure in (207b), the one in (207a) does not contain the lexical verb ROOT. Instead, the verb root here merges directly with the abstract verb ACT ON at the lexical structure level. In view of that, the structures given in (207a) and (207b) may be completed by specifying the place of the lexical root as shown in (208a) and (208b) below, respectively:

- (208) a. Non-intransitive alternating causatives:  
 [Event ACT ON ([√ROOT] [State RESULT STATE])]
- b. Intransitive alternating causatives:  
 [Event CAUSE ([Event COME ([State BE ([√ROOT])])])]

The idea that verbs may differ with respect to the realization site of the lexical √ROOT has been defended by Embick (2004) who proposes that √ROOTS may either merge directly with a v-head, forming a complex head, or be generated as the complement of a v-head. Embick (2004: 370) suggests that when the lexical √ROOT merges directly with the v-head the Root “is interpreted as a *means* component; it specifies the means — the nature of the transition event — by which the result state is

---

28 The notion of implicature in logic and linguistics was first introduced by Grice 1957, taken up in his numerous subsequent works. It has seen then widely been investigated both in logic and in linguistics (see Green 2002 for a review).

The two types of lexical structures and the lexicalisations achieved above and in the previous sections with respect to lexical causatives and morphological causatives will help us shed light on the differences regarding causative / intransitive alternation across languages, which is the topic of the next section.

I now address the question as to why lexical causatives belonging to the same semantic field may alternate in one language but not in another. This situation is illustrated with the verb *bnu* ‘build’ in (209), as compared to its English counterpart *build* exemplified in (210):

- 166

b. \*The house built up

With respect to intransitive alternation, the English verb *build*, *cut*, and *plough* behave like the verb *ny* ‘kill’ dealt with in the previous section rather than like their Tamazight equivalents, which alternate with intransitive use. Accordingly, I propose that in English such verbs have the lexical structure proposed in (208a), while their counterparts in Tamazight have the structure proposed in (208b).

The reason why should such verbs differ across languages with respect to their lexical structure may have to do with principles or rules governing the translation (or expression) of events into linguistic expressions. It has been acknowledged in the literature that causatives that do not alternate in English correspond to those indicating “direct causation” 29, which corresponds to external causation in the present work. In this case, stating that languages are governed by different rules and principles regarding causation may suffice; but we still need lexical representations reflecting these differences, which is exactly what I have proposed here.

There remains yet one question that needs to be addressed here with respect to the lexical structure proposed for non-alternating causatives in (208a) above, repeated below:

(211) Non-intransitive alternating causatives:

[<sub>Event</sub> ACT ON ([<sub>√</sub>ROOT] [<sub>State</sub> RESULT STATE])]]

The question is how the RESULT component to represent is to be expressed on the predicate-argument structure in the syntax. If the result component of the lexical structure is not verbal as argued for in the previous section, then how is it to be expressed? Paul Hirshbühler (p. c.) suggested the possibility that the RESULT

---

29 Nedyalkov and Silnitsky (1973); Comrie (1976); Shibatani (1976); Pinker (1989) and Levin and Rappaport (1995) and Shibatani and Pardashi (2002) among others.

component in English may be adjective-like, as opposed to Tamazight where it is verb-like, which would explain why such verbs accept lexical roots in Tamazight but not in English. While such a view may seem convenient for English verbs, it does not work with non-alternating verbs such as *nɣ* ‘kill’ in Tamazight because the language lacks the category adjective<sup>30</sup>. Therefore, to illustrate the difference between the verbs under consideration in Tamazight and in English at the predicate-argument structure level, I indicate the RESULT component as R(ESULT), pending the advent of such a missing category. Accordingly, the predicate argument structure of the Tamazight verbs *bnu* ‘build’, *gzem* ‘cut’, and *krez* ‘plough’ will have the predicate-argument structure illustrated in (212b) while its English equivalents will look as in (213b), with their corresponding lexical structures repeated as (212a) and (213a), respectively, for convenience sake:

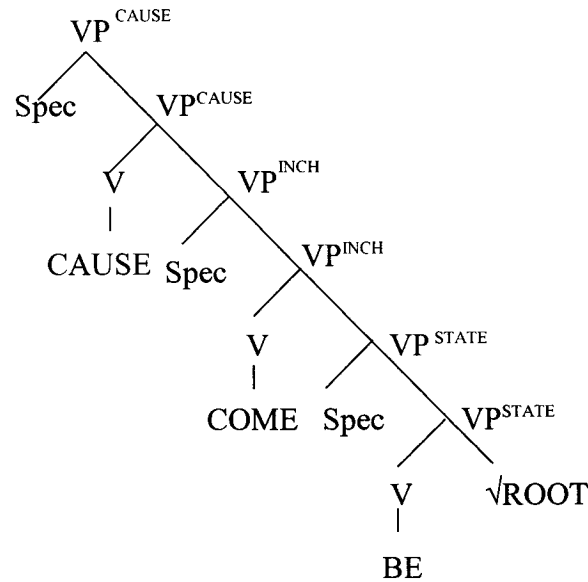
(212) *TI-alternating verbs*:

- a. [Event CAUSE ([Event COME ([State BE ([√ROOT])]])])]

---

<sup>30</sup> What is expressed with adjectives in languages such as English or French is in Tamazight expressed with verbs of quality, or their participial form.

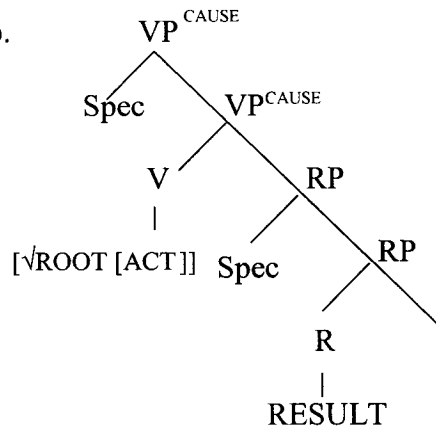
b.



(213) *Non-intransitive alternating causatives:*

a. [Event ACT ON ([√ROOT] [State RESULT STATE])]

b.

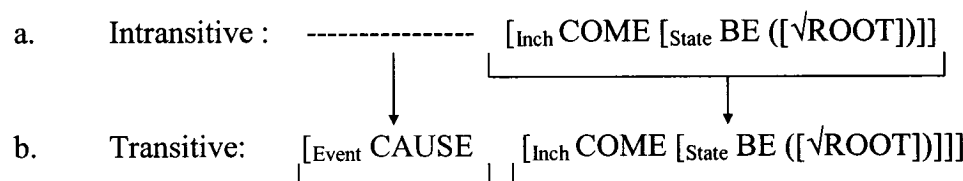


## 7. Conclusion

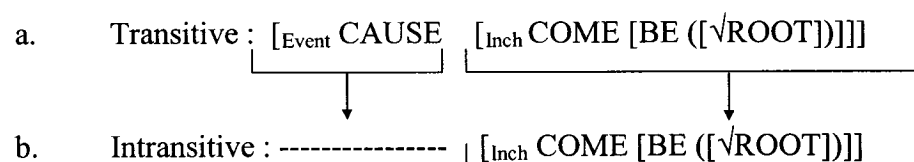
In the present chapter I have investigated two types of causative verbs of change in Tamazight, which correspond to morphological and lexical causatives. I proposed an analysis based on the lexicalization of abstract verbs. I argued that these two types of

causatives differ with respect to two fundamental traits, namely the direction of their derivation, and the way the abstract verb CAUSE of the transitive structure is lexicalized. With respect to the direction of derivation, I proposed in § 2 that the lexical structure of morphological causatives is derived by extending its intransitive counterpart. As far as lexical causatives are concerned, I argued that that the causative structure is basic while sustaining the intransitive alternate to be derived by reduction. I illustrated these two types of derivations as in (214) and (215) respectively:

(214) *Derivation of morphological causatives*



(215) *Derivation of lexical causatives*

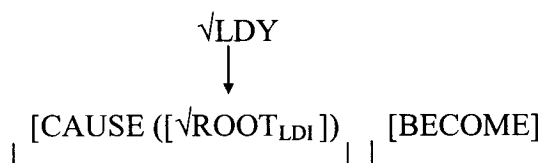


I also suggested that the possibility that both the transitive structure in (214b) and the intransitive structure in (214a) may have ended up being lexicalised as such, therefore retrieved directly.

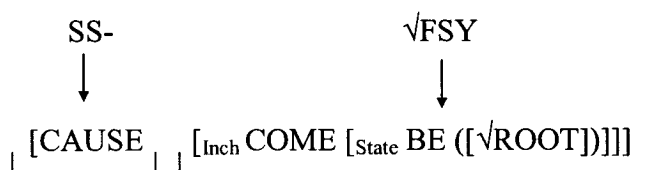
I further argued that morphological causatives (§ 2) and lexical causatives (§ 3) differ in the way the abstract verb CAUSE is lexicalized. More specifically, I demonstrated that the verb CAUSE involved in the structure of lexical causatives is lexicalized by means of the lexical ROOT. Alternatively, the verb CAUSE of morphological causatives is not lexicalized by the lexical ROOT of the verb but by inserting the causative morpheme SS. I illustrated this two different lexicalisation

strategies applied for lexical and morphological causatives as shown in (216) and (217), respectively:

(216)  $\sqrt{\text{ROOT}}$ -lexicalisation (lexical causatives)



(217)  $\text{SS-}$ lexicalisation (morphological causatives)



Intransitive-alternating causatives were contrasted with non-alternating causatives such as *nny* ‘kill’ in Section 5. I argued that the lexical structures associated with these two types of verbs differ with respect to the higher verb and their RESULT component involved. While the RESULT component associated with alternating verbs contains the lexical verbs BE and COME, which makes possible a conflation of a lexical root, the RESULT component belonging to non-alternating causatives does not contain such abstract verbs, which makes the insertion of the lexical root not possible. The two structures proposed for these two types of verbs were generalized in Section 6 in order to account for the difference between causative verbs across languages, which behave differently with respect to intransitive alternation, although belonging to the same semantic class.

## **Chapter 7**

### **Conclusion**

#### **1. Introduction**

In the present previous chapters I provided a new way of looking at the internal structure of verbs and the organization of the grammar. The approach adopted captures the differences between the various verb classes indicating state and change of state in Tamazight in a coherent manner, as it also explains some differences observed across languages with respect to causative and intransitive alternation. The approach has also a number of theoretical consequences on the structure of verbs in general.

In the present concluding chapter I first highlight the main ideas and proposals developed and defended in the previous chapters, starting with those whose theoretical scope is general (§ 2), before moving to those specific to the Tamazight data (§ 3). In § 4 I get back to the question of aspect mentioned in the introduction and explain why I did not consider it to be part of the internal structure as viewed in the present dissertation.

#### **2. Theoretically relevant proposals**

Among the major facts underlying the originality of the approach proposed are the model of the organization of the grammar, and the versatility of the lexical  $\sqrt{\text{ROOT}}$  within the lexical structure of verbs. Within the model of the organisation of the grammar argued for internal structure is viewed as composed of two distinct structures, which correspond to event structure and lexical structure. Event structure is seen as a mental representation of non-linguistic facts as we see them or experience them in the external world. Their structure is then represented at the lexical-conceptual level for linguistic purposes. Lexical structure on the other hand, corresponds to the linguistic knowledge of



the speaker, which is grammaticalized at the lexical. Using the inchoative structure for illustration, the internal structure in (218a) is thus composed of the event structure illustrated in (218b), and the lexical structure illustrated in (218c):

- (218)
- a. [Event COME [State BE ([ $\sqrt{\text{ROOT}}$ )]]]
  - b. [Event [State]]
  - c. [COME [BE ([ $\sqrt{\text{ROOT}}$ )]]]

The internal structure determines the projection of the Predicate-Argument Structure (PAS henceforth) in the syntax.

Within such a view of the organisation of the grammar, lexical structure, event structure and predicate-argument structure cease to be confused with one another in the way often observed in the literature, as recalled in Chapter 2.

The versatility of the lexical  $\sqrt{\text{ROOT}}$  on the other hand makes it possible for abstract verbs or verb functions such as those paraphrased as BE, CAUSE, ACT, and COME / BECOME to be lexicalised by conflation, thus accounting for the different interpretations associated either with the same verb form, or with different verbs including statives, inchoatives, unaccusatives, verbs of spatial configuration and causatives as illustrated below:

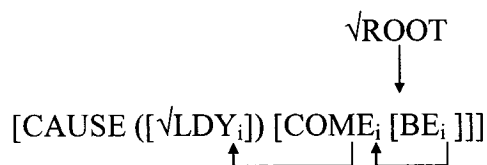
- (219)
- a. **Stative**  
[State BE ([ $\sqrt{\text{ROOT}}$ )]]]
  - b. **Inchoative / unaccusative**  
[Event COME [State BE ([ $\sqrt{\text{ROOT}}$ )]]]
  - c. **Verbs of spatial configuration**  
[Event ACT [Event COME [State BE ([ $\sqrt{\text{ROOT}}$ )]]]]

d. **Causative**

[<sub>Event</sub> CAUSE [<sub>Event</sub> COME [<sub>State</sub> BE ([<sup>√</sup>ROOT])]]]

Moreover, I argued that two types of lexicalisation strategies are applied with causative verbs in Tamazight, thus accounting uniformly and straightforwardly for the semantic and morphological differences between morphological and lexical causatives. As a recall, from the semantic point view lexical causatives refer to change of state brought about by factors that are external to the object while morphological causatives refer to change that is somehow brought about by the properties that are inherent to the object, although triggered by external factors. That is, while the abstract verb CAUSE involved in the structure of lexical causatives such as the *ldi* ‘open’ exemplified in (220b) is lexicalised with the  $\sqrt{\text{ROOT}}$  as shown in (220c) below, the verb CAUSE involved with morphological causatives such as the one exemplified in (221b) is lexicalised by means of the causative morpheme SS as illustrated in (221c):

- (220)
- a. Teldi                      tewwurt
- 3F.Sg.open-PERF cs.door
- The door opened / is open
- b. Teldi                      Mekyusa              tawwurt
- 3M.Sg.open-PERF Mekyusa fs.door
- Mekyusa opened the door
- c. *√ROOT-lexicalisation (lexical causatives)*



- (221)
- a. Taawej tsarut  
3f.s.bend-perf cs.key  
The key is bent
- b. I-ss-aawej                      Yidir tasarut  
3m.s.CAUS-bend-perf Yidir fs.key  
Yidir distorted the key
- c. *SS-lexicalisation (morphological causatives)*



I related the difference between the two types of lexicalisation to the amount of semantic content that has to be specified by the abstract verb CAUSE. The causative component of lexical causatives specifies the change of state indicated in addition to its causation, while the causative component of morphological causatives specifies only the causation, the change of state being conveyed by the RESULT component, whence the restriction of the lexical √ROOT to the verbs BE and COME, while the verb CAUSE is caused by the morpheme SS.

I further argued that the same approach also explains the differences between intransitive alternating and non-alternating causatives, be it within one particular language or across languages. With alternating causatives the √ROOT lexicalises the abstract verbs of the RESULT component in addition to the verb CAUSE, while in the situation of non-alternating the √ROOT lexicalises only the verb CAUSE. Based on differences related to the thematic interpretation of the internal argument between

proposed in the literature, I further proposed that the causative component of non-alternating causatives is very likely to correspond to the verb AFFECT than CAUSE. This difference provides evidence for the distinction between the RESULT components as recalled above. I illustrated the structures proposed for intransitive alternating and non-alternating causatives as shown in (222a) and (222b), respectively:

- (222)        a.        [Event CAUSE [COME [BE ([√ROOT])]]]
- b.        [Event AFFECT ([√ROOT]) [RESULT STATE]]

### 3. Verbs of (change of) state in Tamazight

#### 3.1 *Verbs of quality*

Verbs of quality, dealt with in Chapter 3, have the particularity to occur with accusative clitics when they indicate a pure state, and nominative clitics when they indicate resultative state or change of state depending on the context. I argued that the accusative form, which indicates a pure state, has a monadic structure illustrated in (223a) while the nominative form, which indicates resultative state or change of state, has the dyadic structure illustrated in (223b), which it shares with unaccusative verbs.

- (223)        a.        [State BE ([√ROOT])]]]
- b.        [Event COME [State BE ([√ROOT])]]]

To distinguish between the resultative state and the change of state interpretations associated with the inchoative structure in (223b) given for the nominative form, I argued that its syntactic structure contains an operator with two different scope options, following an idea proposed by Diesing (1992); Kratzer (1995); Chierchia (1995) among others, to distinguish between stage-level and individual-level predicates. I argued that such verbs yield the change of state interpretation when the operator has scope over the

higher verb COME in their structure; but a stative (or resultative) interpretation the scope of the operator is restricted to the lower verb BE.

I addressed the cross-dialect morphological difference taken by inchoative (or nominative) form verbs of quality. I argued that such a difference reflects another difference, which is aspectual. More specifically, one type of aspect, which I called stative, selects the abstract  $V^{BE}$  in the syntax as in Tashelhiyt Tamazight, while the other, which I called non-stative, selects the verb  $V^{COME}$  as in Taqbaylit (Kabyle) Tamazight.

The accusative and the nominative clitics are dealt with more thoroughly in Chapter 4. There I argued that the clitic is the pronominal expression of the internal argument in both situations. However, the accusative clitic is realized as a suffix because it does not raise to the subject position due to the category T involved which is defective as opposed to the non-defective category T involved in the nominative form, whence the raising of the clitic to the subject position where it surfaces as a prefix with the nominative Case. On view of that, I demonstrated that the accusative clitic is in Aspect while the nominative clitic is in the spec of Comp. In both situations the verb stem is in C, which accounts for the accusative suffix status in one case and the nominative prefix status in the other.

### *3.2 Unaccusative verbs*

Unlike verbs of quality, unaccusative verbs lack accusative form, i.e. the possibility to occur with accusative clitics. I accounted for this on the basis of the fact that their semantic content does not refer to an inherent property or state but to a property that results from a change of state undergone by the (internal) argument. Apart from this detail, unaccusative verbs and verbs of quality, in their inchoative or nominative form, behave alike.

I further divided the class of unaccusative verbs into two subclasses depending on whether the change indicated is internally caused or whether it is externally caused, following the analysis proposed by Guerssel (1986) for Tamazight verbs of change. I argued that externally caused unaccusatives have a transitive basic structure, which means that the intransitive structure is derived by reducing the causative structure; as opposed to externally caused causatives whose structure is basically intransitive. These two types of unaccusatives further contrast on the basis of the way their causative counterparts are derived. This latter topic is dealt with in Chapter 6 dedicated to causative verbs of change.

### *3.3 verbs of spatial configuration*

The class of inchoative and unaccusative verbs are contrasted in Chapter 4 with another class of intransitive verbs, called verbs of spatial configuration, such as *qqim* ‘sit’, *bedd* ‘stand’, *kker* ‘stand up’, *knu* ‘lean, bend’, etc. I argued that such verbs are reflexive semantically and syntactically reflexive, although lacking a reflexive morphology, which makes them look like unaccusative. On the basis the three different interpretations associated with this class of verbs, which correspond to the stative, the inchoative and the reflexive, of I argued that such verbs the triadic internal structure illustrated below:

(224) [Event ACT [Inch BECOME ([ $\sqrt{\text{ROOT}}$ )]]]

I accounted for the stative and the inchoative interpretations in the same way as proposed for unaccusatives and inchoatives, while accounting for the agentive interpretation by raising the clitic argument to the spec of ACT. On the other hand I argued that verbs of spatial configuration are semantically reflexive because the argument

is associated with two different thematic roles, one of which corresponds to the Agent in the Spec of ACT, and the other corresponds to the Theme in the spec of the verb COME. The two thematic roles form a thematic chain with argument. Such an analysis draws support from the idea well established in the literature that reflexives have two thematic roles but only one argument.

### *3.4 Causative verbs*

As mentioned with respect to the different classes unaccusative verbs, the class of causative verbs in Tamazight is split into two sub-classes based morphological and semantic criteria. Morphological causatives are derived from unaccusatives indicating “internal change” by prefixing the causative morpheme SS to their base. By contrast, lexical causatives, which indicate external change, are basically transitive. I argued that the verb CAUSE involved with morphological causatives is lexicalised by the causative morpheme SS, while the one involved with lexical causatives is lexicalised by means of the lexical ROOT. These two types of lexicalisation strategies provide explain in a straightforward manner the semantic differences between these two classes as highlighted by Guerssel (1986), namely why verbs indicating external cause lack a causative morpheme while those indicating internal causation display the causative morpheme SS.

Lexical causatives with an intransitive alternate were contrasted with those lacking the intransitive alternate. I argued that the lexical structures associated with these two types of verbs differ with respect to the composition of their RESULT components. While the RESULT component associated with alternating verbs is composed of the lexical verbs BE and COME, and the lexical ROOT, the one associated with non-

alternating causatives does not contain abstract verbs, which makes the insertion of the lexical root not possible.

The two structures just mentioned also provided an account for the difference observed across languages regarding the possibility for some lexical causatives to alternate in some languages but not to others, although belonging to the same semantic class.

#### **4. Aspect and internal structure**

In the present section I explain why I did not consider aspectual structure as part of the internal structure of verbs presented in the previous chapters. Before starting the discussion, let me clarify that when dealing with the internal structure of events, the type of aspect referred to corresponds to the one called *lexical aspect* in the linguistic literature (also called situation aspect by Smith 1991), and which refers to temporal properties such as duration, instantaneity and telicity. It is different from the one called *grammatical aspect* (also called viewpoint aspect by Smith 1991), and which indicate whether an event is viewed as terminated (perfective) or as non-terminated (imperfective).

##### *4.1 Aspectual structure*

Aspectual structure has often been quoted as part of the internal structure of verbs. As a matter of fact, aspectual structure is even at the origin of the idea that verbs have an internal structure, following the works by Vendler (1957, 1967), based on earlier works including Ryle (1949) and Kenny (1963). As already recalled in Chapter 2, Vendler (1967) proposed a new classification based on time relevant semantic criteria such as *duration*, *instantaneity* and *delimitation*, which he called “time schemata”. Accordingly, he proposed a classification ranking verbs into four major aspectual classes called *state*, *activity*, *accomplishment*, and *achievement*. Vendler’s main claim is that tense



considerations “are not merely limited to the obvious discrimination between past, present and future (...) The use of a verb may also suggest the particular way in which that verb presupposes and involves the notion of time.” (p. 97). In his view, a verb may have more than one schema, and the more schemata it has, the more divergent readings it offers. He then argues that such different readings are easily accounted for when the schemata involved are individually taken into consideration using time adverbials such as *in*-phrase and *for*-phrase as diagnostic tests. accomplishments and Achievements are compatible with *in*-phrase but not with *for*-phrase time adverbials as illustrated in (225) and (226) respectively. Activities and states on the other hand are compatible with *for*-phrase time adverbials but not with *in*-phrase time adverbials as illustrated respectively in (227) and (228).

(225) How long did it take to draw the circle? (accomplishment)

\*For how long did he draw the circle?

He drew the circle in twenty seconds

It took him twenty minutes to draw the circle

(226) At what time did you reach the top? (achievement)

\*For how long did you reach the top?

At noon sharp / in less than a minute.

(227) For how long did he push the cart? (activity)

\* How long did it take to push the cart?

He was pushing the cart for half an hour

(228) For how long did you love her ? (state)

\*At what time did you love her?

For three years

The criteria above as well as the diagnostic tests proposed by Vendler were largely adopted by modern linguists in their aspectual classification of verbs and events. However, Vendler was also aware that time alone does not explain these differences when he acknowledged that “other factors like the presence or absence of an object, conditions, intended state of affairs, also enter the picture.” (*ibid*). For instance, a verb such as *walk* which is of the activity type becomes an accomplishment verb when it occurs with a locative destination or an adverb of extent (Dowty 1979: 60) as shown below:

- (229) a. John walked a mile / to the park  
b. John walked a mile / to the park in an hour  
c. It took John an hour to walk a mile / to the park  
d. John finished walking to the park

On the basis of the facts just mentioned many linguists rejected Vendler’s original analysis, arguing instead that aspectuality is not a property verbs but of sentences (see for instance Verkuyl 1972, 1989, 1993, 2000).

#### 4.2 *Aspect and internal structure*

In the analysis of internal structure proposed in the present dissertation however, only event structure and lexical structure are considered, leaving away aspectual structure. The reason I gave then is because only one criterion, namely telicity, among those assumed to determine aspectual structure in the literature is relevant to the verb

classes investigated in the present work. Before elaborating on telicity, let me first explain in what sense the other criteria are irrelevant.

#### 4.2.1 *Instantaneity and duration*

*Instantaneity* distinguishes achievement verbs such as ‘hear’, ‘find’, ‘win’, etc, from activity verbs such as ‘listen’, ‘look’, ‘discover’, etc, which indicate events occurring on a longer period of time. In the present dissertation, no such distinction is needed because activity verbs are not part of the verbs investigated.

*Duration* on the other hand distinguishes achievement verbs from accomplishment verbs such as ‘write a letter’, ‘draw a circle’, etc. In the analysis presented in the previous chapters no distinction is made between achievement and accomplishment verbs, both of which indicate change of state. As a matter of fact, some linguists propose to topple these two subclasses into one class, referred to as *Transition* verbs by Pustejovsky (1991, 1995). Moreover, such a distinction on the basis of duration may easily be captured by considering event structure. Consider for instance the pair of sentences below both of which involve the verb type, a dichotomy often cited in the literature (for instance by Verkuyl 1993):

- (230) a. He typed the letter P  
b. He typed a thirty-page document

The same verb type is used in the examples above. However, while in (8a) it is interpreted as an achievement because the indicated event is non-durative and instantaneous, it is interpreted as an accomplishment in (8b) because the indicated event is durative. Here we somehow run into a vicious circle. If we admit that the difference resides in the nature of the events indicated, then one can always argue that such a nature is precisely what is aspectual with events, which is not untrue. What is of importance to

our discussion here is the fact that the contrast between the two examples in (8) provides evidence that aspect is neither lexical nor syntactic property, but eventual. The same can be said regarding the situations often cited in the literature in favor of the syntactic analysis of aspect (see Verkuyl op. cit.)<sup>31</sup>. For instance verbs such as ‘sing’ or ‘drink’ are of the activity type, but become accomplishment verbs when they are delimited by a complement as in ‘sing a song’ or ‘drink a beer’. Again, it is more reasonable to consider such a property to stem from the nature of the event, rather than ascribing it to VP in the syntax. Within the analysis provided here, VP, which is part of the argument structure, is simply the syntactic counterpart of the internal structure. Obviously, more needs to be said regarding the way aspect is encoded within events, by considering a wide range of examples, which I leave for future research for lack of time here.

#### 4.2.2 *Telicity*

The *in*-phrase and *for*-phrase time adverbials introduced by Vendler (op. cit.) to determine whether an event is of the accomplishment / achievement type, or the of the activity types (see above) also indicate whether an event is telic or atelic, respectively.

*Telicity* is a property that refers to the final state of events. As recalled in Chapter 2, the class of telic verbs (Aristotle’s *kineseis* verbs), contrast with the class atelic verbs (Aristotle’s *energiai* verbs), which do not contain such a property. With the verb classes investigated in the dissertation, telicity is indicated by the change of state into which the event indicated by the verb culminates. Consequently, the notion of telicity is inherent to event structure, delimited by the lower component called RESULT. Therefore, event

---

<sup>31</sup> For arguments in favor of a syntactic view of aspect see Verkuyl (1972, 1989, 1993, 2000) and Tenny (1987). For counterarguments to Verkuyl’s view see Rothstein (2004) Tenny (1994) admits that Aspect forms an intersection between Semantics and Syntax. Similarly, van Hoot (2000) argues that telicity is involved at all levels, the lexical, the semantic and the syntactic.

structure suffices for this purpose, and no appeal to an extra structure is necessary. However, like in the previous situation, how such aspect is encoded in event structure is a matter of future research

## REFERENCES

- Abush, D. (1985). *On Verbs and Time*. Doctoral Dissertation. University of Massachusetts at Amherst.
- Achab, K. (2003). "Alternation of state in Berber", in Jacqueline Lecarme (ed.) *Research in Afroasiatic Grammar II*. Amsterdam: John Benjamins
- Alboiu, G., M. Barrie and C. Frigeni (2004). "SE and the unaccusative / ergative paradox". *Proceedings from the 2002 CLA Conference*, 7-14, UQAM Press
- Allaoua, A. (1986). *Description Linguistique d'un Parler de Petite Kabylie (Ayt- Ziyan)*. Doctoral dissertation, University of Copenhagen.
- Alsina, A. (1996). *The Role of Argument Structure in Grammar*. CSLI Publications
- Aoun, J. & A. Benmamoun, (1998). "Minimality, reconstruction and PF movement." *Linguistic Inquiry*, 569-597. MIT Press. Massachusetts Institute of Technology.
- Baker, M., K. Johnson, I. Roberts (1989) "Passive arguments raised." *Linguistic Inquiry*, 20, 219-52.
- Barss, A. (1986). *Chains and Anaphoric Dependence*. Doctoral Dissertation. MIT.
- Benfey, T. (1869). *Geschichte der Sprachwissenschaft und Orientalisch Philologie in Deutschland*, Munich, J. G. Cotta
- Benua, L. and H. Borer, (1996). "The Passive/Anti-Passive Alternation." Paper presented at GLOW 1996, Athens, Greece.
- Brett, M. and E. Fentress, 1996. *The Berbers*. Blackwell Publishers, Inc, Oxford.

- Booij, G. (1992). "Morphology, semantics & argument structure", in ROCA A.G.,  
*Thematic Structure : its Role in Grammar*, Foris.
- Borer, H. (1994). "The projection of arguments", in E. Benedicto and J. Runner  
(eds.) *Functional Projections*, University of Massachusetts Occasional  
Papers 17. 19-47. GLSA, Amherst MA.
- Borer, H. (1996). "Passive without theta grids", in P. Farrell & S. Lapoint (Eds.),  
*Morphological Interfaces* (pp. 60-99). Stanford, CA: CSLI
- Bouchard D. (1984). *On the Content of Empty Categories*. Foris, Dordrecht
- Brousseau, A.-M. and E. Ritter (1991). "A non-unified analysis of agentive verbs."  
*Proceedings of the 10th West Coast Conference on Formal Linguistics*, Stanford,  
CA: Center for the Study of Language and Information, pp. 53-65.
- Burzio, L. (1981) *Intransitive Verbs and Italian Auxiliaries*. Doctoral  
dissertation. MIT, Cambridge, Mass.
- Burzio, L. (1986) *Italian Syntax: A Government-Binding Approach*, Reidel,  
Dordrecht.
- Camps, G. (1983). Comment la Berbérie est devenue le Maghreb Arabe. *Revue de  
l'Occident musulman et de la Méditerranée*, n°35 : 7-24 Aix-en-Provence.
- Camps, G. (1995). *Les Berbères. Mémoire et Identité*. Paris. Éditions Errance.
- Caplice, R. (1983). *Introduction to Akkadian*. Rome: Biblical Institute Press.
- Chierchia, G. (1989). "A Semantics for Unaccusatives and its Syntactic  
Consequences." Ms. Cornell University.

- Chierchia, G. (1995) "Individual-level predicates as inherent Generics." In: G. N. Carlson & F. J. Pelletier (eds), *The Generic Book*. Chicago, London: The University of Chicago Press, 176-223
- Chierchia, G. (2004), "A semantics for unaccusatives and its syntactic consequences." In: Alexiadou, Anagnostopoulou, and Everaert (eds), *The Unaccusativity Puzzle: Explorations at the Syntax-Lexicon Interface*, Oxford, 22– 59.
- Chomsky, N. (1981). *Lectures on Governmnet and Binding*. Dordrecht: Foris
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, Mass. MIT Press.
- Chomsky, N. (2000). "Minimalist inquiries: The framework.", in Robert Martin, David Michaels and Juan Uriagereka (eds), *Step by Step: Essays in Minimalist Syntax in Honor of Howard Lasnik*, edited by 89-155. Cambridge, MA: The MIT Press, 2000.
- Chomsky, N. (2001) "Derivation by phase." *MIT Occasional Papers in Linguistics*, 18. Cambridge, MA.
- Cohen, D. (1963), *Le Dialecte Harabe (Hassānīya) de Mauritanie*, Paris, Klincksieck.
- Cohen, D. (1988a). "Introduction". In: Jean Perrot & David Cohen (eds). *Les langues dans le Monde Ancien et Moderne : Langues Chamito-Sémitiques* Paris. Centre National de la Recherche Scientifique (CNRS), pp. 1-8.
- Cohen, D. (1988). "Chamito-Sémitique". In: Jean Perrot & David Cohen (eds). *Les langues dans le Monde Ancien et Moderne : Langues Chamito-Sémitiques* Paris. Centre National de la Recherche Scientifique (CNRS), pp. 9-30.



- Comrie, D. (1976). "The syntax of causative constructions: cross-language similarities and divergences. In: Masayoshi Shibatani (Ed.), *Syntax and Semantics, Volume 6: The Grammar of Causative Constructions* (pp. 261-312). New York: Academic Press
- Courtois, Ch. (1942). "De Rome à l'islam", *Revue africaine*. 86, pp. 24-55.
- Culicover, P. W. and W. Wilkins. (1986). "Control, PRO and the projection principle," *Language*, 62: 12-153.
- Demirdache, H. and H. Davis, (2000). "On lexical verb meanings: evidence from Salish." In J. Pustejovsky and C. Tenny (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. CSLI: Stanford University Press, 97-142.
- D'Alessandro, R. 2001 "On impersonal *si* constructions in Italian" in Marjo van Koppen, Joanna sio and Mark de Vos (Eds.), *Proceedings of Console X*, Leiden.
- Diesing, D. (1992). *Indefinites*. Cambridge, Mass: MIT Press.
- Dobrovie-Sorin, C. 1998. "Types of predicates and the representation of existential readings" *Proceedings of SALT*, Stanford, April 1997. Cornell University Press
- Diesing, M. (1992). *Indefinites*. Cambridge, Mass: MIT Press.
- Dowty, D. (1979). *Word Meaning and Montague Grammar*. Dordrecht, Reidel.
- Dixon, R.M.W (2000) "A typology of causatives: Form, syntax and meaning". In: R.M.W Dixon and Alexandra Aikhenvald (Eds) *ChangingValency*.30-83. Cambridge: Cambridge University Press.

- Embick, D. (2000). "Syntax and Categories: Verbs and Participles in the Latin Perfect", *Linguistic Inquiry* 31:2, 185-230.
- Embick, D. (2004) "On the Structure of Resultative Participles." *Linguistic Inquiry* 35:3, 355-392.
- Fontana, J. M. and J. Moore. (1992). "VP-Internal subjects and SE-reflexivisation in Spanish", *Linguistic Inquiry* 23: 501-510.
- Galand, L. (1969). "Types d'expansion nominale". *Cahiers Ferdinand de Saussure* 25, 83-100.
- Galand, L. (1980). Une integration laborieuse: les verbes de qualité du berbère. *Bulletin de la Société Linguistique de Paris* 75, 347-62.
- Galand, L. (1990). "Du nom au verbe d'état: témoignage du berbère" In : Hans Mukarovsky (Ed.) *Proceedings of the Fifth International Hamito-Semitic Congress*. Viena.
- Gautier, F. (1937). *Le passé de l'Afrique du Nord*. Paris : Payot.
- Green, M. S. (2002) "Review of implicature: intention, convention, and principle". In: Wayne A. Davis (Ed.) *The failure of Gricean Theory*. Philosophy and Phenomenological Research, 65, 241-4
- Greenberg, J. (1950). "Studies in African linguistic classification: IV. Hamito-Semitic." *Southwestern Journal of Anthropology* 6.47-63.
- Grice, H. P. (1957) "Meaning". *Philosophical Review*, 66, 377-88
- Grimshaw. J. (1982). "On the lexical representation of romance reflexive clitics." In: Joan Bresnan (Ed.) *The Mental Representation of Grammatical Relations*. Cambridge, MA/London: MIT Press. 87-148.

- Grimshaw, J. (1990). *Argument Structure*. Cambridge. Mass.: MIT Press.
- Grimshaw, J. (1993). *Semantic structure and semantic content in lexical representation*. Rutgers University, New Brunswick.
- Guerssel, M. 1986. *On berber verbs of Change : a Study on Transitivity Alternations*. Cambridge. (Mass.): MIT.
- Guerssel, M., 1987. "The status of lexical category preposition in Berber: implication for the nature of construct state". In Guerssel, M. & Hale, K. (Eds.) *Studies in Berber syntax, MIT Lexicon Project Working Papers 14*.
- Guerssel, M. (1992a). "On the case system in Berber". *The Canadian Journal of Linguistics* 37,113-299.
- Guerssel, M. (1992b). "The Phonology of Berber Derivational Morphology by Affixation". *Linguistic Analysis*, 22 (1-2) : 3-60
- Guerssel, M. (1995). "Berber clitic doubling and syntactic extraction" , *Revue Québécoise de Linguistique* 24, 112-33
- Guerssel, M. (1995). "Berber clitic doubling and syntactic extraction." *Revue Québécoise de Linguistique* 24, 112-33.
- Haiman, J. (1985). *Natural Syntax*. Cambridge: Cambridge University Press.
- Hale, Kenneth. 1986. "Notes on world view and semantic categories: some Warlpiri examples" pp.233-254 (Chapter 8) in *Features and Projections*, ed. by Peter Muysken & Henk van Riemsdijk. Dordrecht: Foris. 2000
- Hale, K. and J. Keyser (1998). "The basic elements of argument structure." Papers from the UPenn/MIT Roundtable on Argument Structure and

- Aspect. H. Harley. Cambridge, MA, MIT Working Papers in Linguistics.  
32: 73-119.
- Hale, K. and Keyser, S. J. (2002). *Prolegomena to a Theory of Argument Structure*. Cambridge, Mass.: MIT Press.
- Hale, K. and S. J. Keyser (1986). *Some Transitivity Alternations in English*. *Lexicon Project Working Papers 7*. Center for Cognitive Science, MIT
- Hale, K. and S. Keyser (1987); "A View from the Middle." *Lexicon Project Working Papers 10*. Center for Cognitive Science, MIT, Cambridge, Mass.
- Hale, K. and M. Laughren (1983). "Preface to Dictionary Entries of Verbs."  
MIT, Cambridge, MA.
- Halle, M. & A. Marantz. (1993). "Distributed morphology and the pieces of inflection". In K. Hale & S.J. Kayser (eds), *The view from Building 20*, MIT Press, Cambridge.
- Herodotus. *The Histories* (English translation, revised edition 2003). London: Penguin Books.
- Hornstein, N. (1984) *Logic as Grammar: An Approach to Meaning in Natural Language*. MIT Press, Cambridge, MA.
- Hornstein, N. (1999). "Movement and control," *Linguistic Inquiry*, 30: 69-96. .
- Hornstein, N. (2001). *Move! A Minimalist Theory of Construal*. Oxford: Blackwell.
- Hayward, R. J. (2000). "Afroasiatic" In: Bernd Heine & Derek Nurse (Ed.) *African languages: an introduction*, pp. 74-98. Cambridge University Press.

- Haiman, J. (1985). *Natural Syntax*. Cambridge: Cambridge University Press
- Ibn Khaldoun, A. (translated by De Slane in 1840) *Histoire des Berbères et des dynasties musulmanes de l'Afrique septentrionale*. New Edition 1999. Paris : Les Geuthner.
- Jackendoff, R. S. (1983). *Semantics and Cognition*. Cambridge, MA, MIT Press.
- Jackendoff, R. S. (1990). *Semantic Structures*. Cambridge, MA, MIT Press. Syntax and Semantics 26: Syntax and the Lexicon. T. Stowell and E. Wehrli. New York, Academic Press: 155-178.
- Jackendoff, R. S. (1997). The architecture of the language faculty. Cambridge, Mass., MIT Press.
- Julien, C.-A. (1951). *Histoire de l'Afrique du Nord des Origines à 1830*. Paris : Payot.
- Kayne, R. (1988). "Romance *se / si*", *GLOW* newsletter 20.
- Kayne, R. (1990). "Romance clitics and PRO", *Proceedings of the 20th Annual Meeting of NELS*, CLSA, Univ. of Massachusetts, Amherst.
- Kayne, R. (1991) "Romance Clitics, Verb Movement, and PRO." *Linguistic Inquiry* 22, 647-686.
- Keenan, E. L. (1987). *Universal Grammar: 15 Essays*. London: Croom Helm.
- Kenny, A. (1963), *Action, Emotion and Will*, London: Routledge and Kegan Paul.
- Keyser, S. and T. Roeper (1984). "On the middle and ergative constructions in English." *Linguistic Inquiry* 15:381-416.
- Kornfilt, J. (1985). *Case Marking, Agreement and Empty Categories in Turkish*. PhD Diss. Harvard University.

- Kratzer, (2004), "Building resultatives". In: Maienborn and Wöllstein-Leisten (Eds.) *Event Arguments in Syntax, Semantics, and Discourse*, Tübingen
- Kratzer, A. (1993). "On external arguments". In: E. Benedicto and J. Runner (Eds) *Functional Projections*. Amherst, MA, Graduate Students Linguistic Association, University of Massachusetts at Amherst: 103-130.
- Kratzer, A. (1995). "Stage-level and individual level predicates". In: G. N. Carlson and F. J. Pelletier. *The Generic Book*. Chicago, University of Chicago Press: 125-175.
- Labelle, M. (1992). M. (1992). "Change of state and valency." *Journal of Linguistics* 28, 375-414.
- Lahrouchi, M. (2003). "Manifestations gabaritiques dans la morphologie verbale du berbère Tachelhit." *Recherches Linguistiques de Vincennes*, 32 : 61-82. Paris.
- Lakoff, G. (1968). "Some verbs of change and causation." In *Mathematical Linguistics and Automatic Translation*. In: S. Kuno. (Ed.) Report NSF-20, Aiken Computation Laboratory, Harvard University, Cambridge, Mass.
- Lakoff, G. (1970) "Pronominalization, negation and the analysis of adverbs". In: Jacobs, R. and P. Rosenbaum (Eds.) *Readings in English transformational grammar*, 145-165, Ginn & Co, Waltham, MA.
- Levin, B. and M. Rappaport. (1986). "The formation of adjectival passives" *Linguistic Inquiry* 17, 623-663.
- Levin, B. and M. Rappaport Hovav. (1994) "A preliminary analysis of causative verbs in English", *Lingua* 92, 35-77.

- Levin, B. and M. R. Hovav. (1995). *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, MA, MIT Press.
- Levin, B. and M. Rappaport. (1996). "Lexical semantics and syntactic structure". In: S. Lappin (Ed.) *The Handbook of Contemporary Semantic Theory*, Blackwell, Oxford, 487-507.
- Levin, B. and M. Rappaport Hovav (1999) "Two structures for compositionally derived events", *Proceedings of SALT 9*, Cornell Linguistics Circle Publications, Cornell University, Ithaca, NY, 199-223. (25 pages, postscript)
- Lumsden, J. S. (1995). "Cause, manner and means in Berber change of state Verbs". In: J. Lecarme, J. Lowenstamm and U. Shlonsky (Eds.) *Research in Afroasiatic Grammar. Papers from the Third conference on Afroasiatic Languages*, Sophia Antipolis, 1996.
- Marantz, A. (1984). *On the Nature of Grammatical Relations*, Cambridge, Mass., MIT Press
- Marantz, A. (1997). "No escape from syntax: don't try to do morphological analysis in the privacy of your own lexicon", *Penn Working Papers in Linguistics* 4.2.
- Marçais, W. (1938). "Comment l'Afrique du Nord a été arabisée". *Annales de l'Institut d'Études Orientales d'Alger*, vol. IV, 1938, pp. 1-2, and vol. XIV, 1956, pp. 6-17.
- Marçais, G. (1946). *La Berberie Musulmane et l'Orient au Moyen Age*. Paris : Aubier.

- McCawley, J. (1968). "Lexical insertion in a grammar without Deep Structure".  
In: B.J. Darden, C.-J.N. Bailey, and A. Davison (Eds.) *Papers From the Fourth Regional Meeting of the Chicago Linguistic Society*, Chicago.
- McCawley J. 1973, "Syntactic and logical Arguments for Semantic Structures".  
In: Farjimura O. (Ed.) *Three dimensions in Linguistic Theory*. Tokyo: TEC Corp. pp. 259-376.
- McGinnis. M. (1997). "Reflexive and the specifiers of vP." In: L. Pykkänen, H. Harley, & A. van Hout (Eds.) *Papers from the UPenn/MIT Round Table on the Lexicon*, MIT Working Papers in Linguistics 35: 137–160
- Nash, L. and A. Rouveret. (1999). "Proxy categories in phrase structure. Ms. University Paris 8.
- Nedjalkov, V. P. and G. G. Silnitsky (1973). "The typology of morphological and lexical causatives." In: F. Kiefer (Ed.), *Trends in Soviet theoretical linguistics*. pp. 1-32. Dordrecht: Reidel.
- Noyer, R. (1992). *Features, Positions, and Affixes in Autonomous Morphological Structure*. PhD thesis, MIT, Cambridge, Mass.
- Ouerdane, A. (1992). Reedition 2003. *Les Berbères face à l'arabo-islamisme en Algérie*, Montreal, Éd. KMSA,
- Ouhalla, J. (1993). "Subject-extraction, negation and the anti-agreement effect." *Natural Language & Linguistic Theory* 11: 477-518
- Ouhalla, J. (1994). *Introducing Transformational Grammar. From Principles and Parameters to Minimalism*. London/Sydney/Auckland: Arnold



- Ouhalla, J. (2005, to appear). Agreement, Anti-agreement and the EPP. *Natural Language and Linguistic Theory* 23.3: 655-686.
- Pesetsky, D. (1995). *Zero Syntax: Experiencers and Cascades*. Cambridge, MA, The MIT Press.
- Perlmutter, D. (1978). "Impersonal passives and the unaccusative hypothesis", *Berkley Linguistics Society* 4. 157-89
- Prasse, K., 1974, *Manuel de Grammaire touarègue (tahaggart)*, VI-VIII, *Verbe* Copenhagen : Akademisk Forlag.
- Pinker, S. (1989). *Learnability and cognition: The acquisition of argument structure*. Cambridge, MA, MIT Press.
- Pustejovsky, J. (1988). "The Geometry of Events." In: C. Tenny (Ed.), *Generative Approaches to Aspect. Lexicon Project Working Papers* 24, MIT Press, Cambridge.
- Pustejovsky, J. (1991). The syntax of event structure. *Cognition* 41: 47-81.
- Pustejovsky, J. (1995). *The Generative Lexicon*. Cambridge, MA, The MIT Press.
- Rappaport, M., B. Levin, and M. Laughren (1993) "Levels of lexical representation", in J. Pustejovsky, ed. (1993) *Semantics and the Lexicon*, Kluwer, Dordrecht, 37-54.
- Rappaport Hovav, M. and B. Levin. (1996). "Two types of derived accomplishments" in M. Butt and T.H. King (Eds.), *Proceedings of the First LFG Conference*, 375- 388.

- Rappaport, M., M. Laughren and B. Levin (1993). "Levels of lexical representation." In: J. Pustejovsky (Ed.), *Semantics and the Lexicon*. Dordrecht, Kluwer Academic Publishers.
- Rappaport Hovav, M. and B. Levin (1998) "Building verb meanings". In: M. Butt and W. Geuder (Eds.), *The Projection of Arguments: Lexical and Compositional Factors*, CSLI Publications, Stanford, CA, 97-134.
- Reinhart, T. 1991. "Lexical properties of ergativity." Paper presented at the Workshop on Lexical Specification and Lexical Insertion, Research Institute for Language and Speech, University of Utrecht.
- Reinhart, T. (1996). "Syntactic effects of lexical operations: reflexives and unaccusatives". *OTS Working Papers in Linguistics*.
- Reinhart, T. and T. Siloni. (1999). "Against the unaccusative analysis of reflexives". Ms., later published In Alexiadou, A., E. Anagnostopoulou, and M. Everaert M, *The Unaccusative Puzzle: Explorations of the Syntax-Lexicon Interface*. Oxford: Oxford University Press.
- Reinhart, T. (2002). "The theta system - an overview." *Theoretical Linguistics* 28. 3.
- Reinhart, T. and E. Reuland (1993) "Reflexivity", *Linguistic Inquiry* 24.4, 657-720.
- Reinhart, T. and T. Siloni. (2005). "The lexicon-syntax parameter: reflexivization and other arity operations", *Linguistic Inquiry* 36, 3.
- Ritter, E. and S. Rosen. 2000. "Event structure and ergativity" In Tenny, C. and J. Pustejovsky (eds.) *Events as Grammatical Objects: the Converging*

- Perspectives of Lexical Semantics and Syntax*. Stanford. Leland Stanford Junior University, CSLI Publications
- Reinhart, T. (1990). "Self representation", updated draft of a lecture delivered at Princeton conference on anaphora, October 1990.
- Reinhart, T. (1996), "Syntactic effects of lexical operations: Reflexives and Unaccusatives", *OTS working papers*.
- Roeper, T. (1981). "On the deductive model and the acquisition of productive morphology. In Baker, C. and J. MacCarthy (eds.) *The Logical Problem of Language Acquisition* Cambridge, MA.: MIT Press.
- Renan, E. (1855). *Histoire générale et systèmes comparés des langues sémitiques*. Paris.
- Rizzi, L. (1986). "On Chain Formation". In H. Borer (Ed.) *Syntax and Semantics 19: The Grammar of Pronominal Clitics*, New York: Academic Press.
- Rosen, S. (1989). *Argument Structure and Complex Predicates*. PhD thesis, Brandeis University.
- Ryle, G. (1949). *The Concept of Mind*. London. Hutchinson's University Library.
- Shibatani, M. (1976). "The grammar of causative constructions: a conspectus." In Masayoshi Shibatani (Ed.) *Syntax and Semantics VI: the grammar of causative constructions*, pp. 1–42. New York: Academic Press.
- Shibatani M. and P. Pardeshi 2002). "The causative continuum". In M. Shibatani (Ed.). *The Grammar of Causation and Interpersonal Manipulation*. Amsterdam: John Benjamins, pp. 85-126.
- Smith, C.(1991). *The Parameter Aspect*. Dordrecht: Kluwer

- Sportiche, D. (1998). *Partitions and Atoms of Clause Structure: Subjects, agreement, case and clitics*, Routledge
- Stowell, T. (1981) *Origins of Phrase structure*. PhD dissertation, MIT.
- Talmy, L. (1985). "Lexicalisation patterns : semantic structure in lexical forms". In: T. Shopen (Ed.) *Language Typology and Syntactic Description*, vol. 3, 56-149.
- Talmy, L. (1988). "Force dynamics in language and cognition." *Cognitive Science*, 12: 49-100.
- Talmy, L. (2000). *Toward a Cognitive Semantics*, Vols I and II. Cambridge, MA: The MIT Press
- Tenny, C. (1987). *Grammaticalizing Aspect and Affectedness*. Doctoral Dissertation, MIT.
- Tenny, C. (1994). *Aspectual Roles and the Syntax Semantics Interface*. Dordrecht. Kluwer Academic Press
- Travis, L. (1992). "Inner Tense with NP: The Position with Number". In 1992 *Annual Conference of the Canadian Linguistics Association*, pages 329-345. University of Toronto Working Papers in Linguistics.
- Travis, L. (2000). "Event structure in syntax." In Tenny, C. and J. Pustejovsky. (Eds.), *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, 145-185. Stanford, CA: CSLI Publications.
- Tenny, C. and J. Pustejovsky. (2000). "A history of events in linguistic theory." In Tenny, C. and J. Pustejovsky (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Stanford. Leland Stanford Junior University, CSLI Publications

- van Hout, A. (2000). Event semantics in the lexicon-syntax interface." In Tenny, C. and J. Pustejovsky (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Stanford. Leland Stanford Junior University, CSLI Publications
- van Voorst, J. G. (1988). *Event Structure*. Amsterdam / Philadelphia: John Benjamins.
- Vendler, Z. (1957). "Verbs and times." *The Philosophical Review*, LXVI: 143-160
- Vendler, Z. 1967. "Verbs and times." In: Z. Vendler (Ed), *Linguistics in Philosophy*, Ithaca, Cornell University Press, New York.
- Verkuyl, H. (1972). *On the Compositional Nature of the Aspects*. Dordrecht: Reidel.
- Verkuyl, H. (1989). "Aspectual classes and aspectual composition", *Linguistics and Philosophy* 12, 39-94.
- Verkuyl, H. (1993). *A Theory of Aspectuality : The Interaction between Temporal and Atemporal Structure*, Cambridge: Cambridge UP.
- Verkuyl, H. (2000). "Events as individuals: aspectual composition and event semantics". In Higginbotham, J., F. Pianesi, A.C. Varzi (Eds.) *Speaking of Events*, New York/Oxford: Oxford University Press.
- Von Wright, G. H. (1963). *Norm and Action: a Logical Inquiry*. London: Routledge and Kegan Paul.
- Von Wright, G. H. (1968). *Essay in Deontic Logic and the General Theory of Action*, Amsterdam: North Holland.

- Wehrli, E. (1986) "On some properties of French clitic SE", in H. Borer (Ed.) *The Syntax of Pronominal Clitics*, 263-283. San Francisco: Academic Press.
- Zubizarreta, M.-L. (1987). *Levels of Representation in the Lexicon and in the Syntax*, Foris: Dordrecht.
- Williams, E. (1981). "Argument Structure and Morphology." *The Linguistic Review* 1, 81-114