

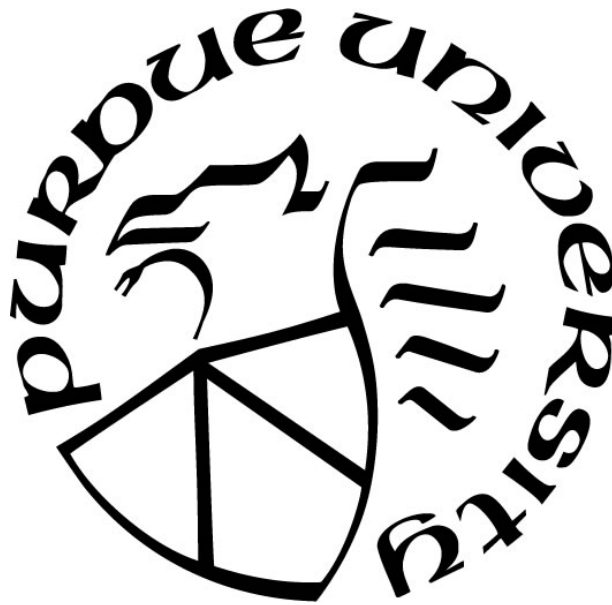
**A SYNTACTIC ANALYSIS OF MOTION PREDICATES IN SOUTHERN
TATI (TAKESTANI DIALECT)**

by
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A Dissertation

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Doctor of Philosophy



Department of Linguistics
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*Dedicated to my Siblings:
Sina, Kimia, and Nima*



Kimia said today: "I was thinking of you and Poem when I made this."

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همیم بینیست که و اجم دسیون در نیره: سینا، کیمیا، نیما، مامان، و بابا. شما خوریون خو از برسستیم دا انگا، بقییش ده شما بی مشم. ننه، بیه، ممود آقا، عزیز، و آقا جون، شما دویایون مینیوینده از هچ فاییدیم ندشت. خالو (رضا دایی) و پریسا زندایی، مرتضی دایی، ای عالم خوشالا مویم شما بی گیم مزند. سحر، مهسا، حامد، سید حمید، و حمید و ماماش، شما دس در نیره... خیلی زحمتیون بکشست. آقای پدرام، مرحوم عباس طاهری، و آقای عباس تات، شما زحمتون سیادینیجی را خیلی ارزش درنده. آقای یوسف سعادت، نواجم چقدر دا انه اشته خو درسم بلده گردی. دکتر رامین رحمانی، ته همی چمه را کمک ویش. دیه یاقا منگرده! مبخشا اگه بقیم یاقا بشت. سلومت گردا! مریم، خواهر، دستت درد نکنه در این مدت باهام خندیدی و گریه کردی. از قدیم گفتن آدم باید به دوستش بخنده، با دشمنش بشینه گریه کنه.

To conclude, I reaffirm the amazing contributions the above-mentioned people have made to this dissertation. From them, I have received many of the best ideas you will find explored here. However, any flaws that remain are mine and mine alone.

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LIST OF ABBREVIATIONS

+	The boundary between nominal/adjectival parts and light verbs in compound verbs
#	The unavailable interpretation
-	Morpheme boundary
1	1 st person
2	2 nd person
3	3 rd person
ACC	Accusative Case
ADJ	Adjective
AGR	Agreement morpheme
AGT	Agentive
CONJ	Conjunction
D	Determiner
DEF	Definite
F	Feminine
GEN	Genitive Case
IND	Indicative modality
IPFV	Imperfective aspect
K	Eigenplace projection
NEG	Negative morpheme
M	Masculine
P	Plural morpheme
POSS	Possessive marker
PROG	Progressive aspect
PTCP	Participle
PROG	Progressive aspect
PRS	Present tense
PST	Past tense
PV	Preverb (either in the form of a vowel or <i>be-</i>)
SBJV	Subjunctive modality
S	Singular
Spec	Specifier

ABSTRACT

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Title: A Syntactic Analysis of Motion Predicates in Southern Tati (Takestani Dialect)

Committee Chair: Elena Benedicto

This dissertation provides a syntactic representation of Motion Predicates (MPs) expressed by series of verbs known as Serial Verb Constructions (SVCs) in Southern Tati – an Indo-European language spoken mainly in the Northwestern parts of Iran. This study addresses the sub-eventive decomposition of MPs by following the theoretical framework established by generative-constructivists like Borer (2005) and Ramchand (2008), as implemented for MPs in Benedicto and Salomon (2014). This dissertation also contributes to the documentation of Southern Tati, which is categorized by UNESCO as ‘definitely’ endangered.

CHAPTER 1 proposes the hypotheses of this study, according to which the verbal series expressing Tati MPs are mono-eventive and are made of an underlying complementation structure. As such, this study shows that the Tati verbal series expressing MPs are instances of SVCs. With regard to the sub-eventive deconstruction of motion, this chapter hypothesizes that the Telic, Resultative, and Agentive components merge into the Path component of motion.

CHAPTER 2 discusses the mono-eventivity of the SVCs expressing MPs. Despite the multiplicity of inflectional morphology on the verbs in verbal series expressing MPs, this chapter rules out the possibility of pluri-clausal structures for Tati verbal series by showing that the series is

nevertheless mono-eventive and that the multiple morphological markings are indeed a reflection of just one single inflectional value.

CHAPTER 3 discusses the syntactic structure of the verbal series expressing MPs in Tati. Based on the premise that variables are c-commanded by operators, this chapter eliminates a structure based on coordination or adjunction for verbal series expressing MPs in Southern Tati and, thus, proves the existence of an underlying complementation structure for these verbal series.

CHAPTER 4 presents the methodology. The study data was collected through three series of animations (175 videos altogether) designed to contrast different parameters of MPs including 3-D path, Telicity, Agentivity, and Resultative. The data were elicited from three native speakers of Tati through a self-administered application in seven movie blocks. The data is comprised of a total of 525 utterances in audio, which are coded and processed in ELAN.

CHAPTER 5 analyzes telicity, along the lines of Borer (2005), in terms of the range assignment to the head of Asp_QP in MPs. This study is important in showing that telicity in Tati MPs is not dependent on the specifications of internal arguments. Instead, range assigner in telic MPs is an XP_{REACH} substructure whose head can be phonologically spelled out as one of these two options: (a) as a (semi-)grammaticalized head *be-ræʂ*- ‘reach’ or (b) as a preposition-like element *to* ‘to.’ This study also discusses the internal structure of the locational phrase (i.e., XP_{LOC}) in terms of Svenonius (2008) and shows that only those projections of the locational phrases that denote a region in Svenonius’s terms (i.e., KP, AxP, and DegreeP) can be the complement of an X_{REACH}.

CHAPTER 6 discusses the Resultative component. Although it has been argued that a final *result* state can produce telicity in an event, this chapter discusses that the Resultative component appears as an add-on sub-structure to the Telic component. This study discusses the elements of the Resultative component, namely, its head, complement, and specifier positions. It is argued that the final resting state in Tati MPs is encoded in an eventive verb denoting *becoming* that state rather than a stative verb. This chapter also discusses that XP_{LOC} in the complement position of V_{res} can only be a delimited region (i.e., AxP or Degree P) in Svenonius's terminology. In addition, the XP_{LOC} in the specifier position of the resultative component, if it exists, is in a possessor-possessed relationship with the XP_{LOC} in the complement position.

CHAPTER 7 focuses on the structure of the Agentive component. Along the lines of Marantz (1984), Kratzer (1996), and Arad (1999), this chapter argues that the Agentive component is introduced as an add-on sub-structure to the non-agentive intransitive events through a functional head labeled as little *v* (*v*). This study identifies two main types of agentive events (i.e., Initial Contact and Continuous Contact) and discusses that in Initial Contact an intermediate semi-grammaticalized head (labeled as 'separation'), which denotes breaking the agent-undergoer contact, prevents the components below the Agentive component from being shared with the Agentive component itself. This study then provides more supporting evidence for the structural differences between Initial Contact and Continuous Contact by distinguishing between two sub-types of Initial Contact and four types of Continuous Contact. Finally, CHAPTER 8 discusses the contributions of this study and the potential areas for future research.

CHAPTER 1. INTRODUCTION

1.1 Goals and Contributions

The major goal of this dissertation is to provide a syntactic representation of Motion Predicates (MPs) in Southern Tati. According to Yarshater (1969), Southern Tati is one of the main branches of North-Western Iranian languages and is spoken sporadically in the Northern parts of Iran.¹ The variety of Southern Tati dealt with in this study is the Takestani dialect, spoken by the Tat community in the city of Takestan, which is known by its speakers as Siadiniji [sijɒdinidʒi]². Furthermore, considering that Southern Tati has been categorized by UNESCO's *Atlas of the World's Languages in Danger* project as “definitely endangered,” this study has a secondary goal of contributing to the documentation of Southern Tati.

This dissertation is focused on providing a syntactic analysis of MPs expressed by series of verbs known as Serial Verb Constructions (SVCs) in Southern Tati. Previous studies such as Kratzer (1996), Borer (2005), and Ramchand (2008) have carried out theoretical analyses on the complex structure of events. For instance, Ramchand discussed that every event is composed of a *process* Phrase that allows the merging of an *initiation* Phrase and/or a *resultative* Phrase. Some other studies, such as Talmy (2000 & 2007), have done typological analyses specifically on motion events. Few of these studies, however, have targeted the structure of motion events. Among those

¹ Yarshater (1969:17-18) categorized Southern Tati into five separate groups based on the geographical place where each dialect is spoken. These groups, according to Yarshater, include the dialects spoken in (a) Southwest of Qazvin (including Takestan) and Eshtehard, (b) Xo'in (c) Xalxal and Tarom, (d) Harzand and Dizmar, and (e) East and Northeast of Qazvin (Kuhpayeh, Rudbar, and Alamut). Yarshater distinguished the Southern Tati language group from Tati dialects in the Caucasus area which, according to him, are derived from and hence are closer to Persian or a dialect similar to Persian.

² Takestan, known as Siaden [sijɒden] by its residents, is located in the Qazvin Province in Iran. Refer to the map in Appendix A for the location of Takestan in Iran.

few studies most have taken a lexicalist approach and have attributed the information related to motion as being encoded in the lexicon as part of the lexico-semantic information related to verbs. For instance, Bohnemeyer (2003) and Bohnemeyer et al. (2007) have analyzed the universal and cross-linguistic variations in the segmentation of motion events into subevents such as *departure*, *passing*, and *arrival*. However, these segmentations are mainly based on the semantic typologies of various languages rather than their syntactic structures. Thus, this dissertation is significant in dealing with the syntactic structure of MPs in Sotho Tati in general and with the sub-eventive deconstruction of motion in this language group in particular. This dissertation takes a generative-constructivist approach with regard to the division of labor between lexicon and syntax in analyzing MPs. In this approach, according to Ramchand (2008:38), much of the predictable and systematic information traditionally included in lexicon is attributed to syntax. As such, this study deals with the sub-eventive decomposition of MPs following the theoretical framework established by generative-constructivists like Borer (2005) and Ramchand (2008) and implemented for MPs in Benedicto & Salomon (2014); it distinguishes four different components of MPs: Path (Trajectory), Telicity, Resultative, and Agentive.

The MP components identified in this dissertation are characterized as follows: Path introduces an undergoer and its motion along a 3-dimensional locational path. Telicity (CHAPTER 5) verbalizes an undergoer's reaching an endpoint. Resultative (CHAPTER 6) characterizes the resting state of an undergoer after reaching an endpoint in telic events. Agentivity (CHAPTER 7) is the component introducing an agent, as an external argument, that brings about movement related to an undergoer of motion. The syntactic structure of these components is discussed with regard to the internal structure of each (that may lead to further classifications of each component into its sub-

components) as well as their relationship to the other components within the single event boundary (mono-eventive MPs).

Additionally, among the studies on MPs, few have analyzed MPs expressed by SVCs beyond the combination of Manner and Path, especially MPs expressed by SVCs in non-European Indo-European languages that are in the Indo-Iranian language family. Furthermore, SVCs are mostly analyzed from a descriptive point of view and in analytic rather than polysynthetic languages. Therefore, this study is significant in providing a syntactic analysis of MPs expressed by SVCs in Southern Tati and, through this analysis, contributes to the understanding of how Language, as a universal phenomenon, expresses motion. This study provides intra and inter-linguistic tests to provide evidence for the mono-eventivity of SVCs expressing Tati MPs (CHAPTER 2) as well as their complementation structure (CHAPTER 3). Example (1) below shows the type of SVC structures that will be dealt with in this study.

(1) SR ³	tittije	tʃeluf	o ⁴ go ⁵	boʃin	bœʃœ
UR	titie	tʃelu-e-ef	o-gor-d	be-ɲʃin-d	be-ʃei-Ø
Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM. AGR
Role	agent	undergoer	contact	separation	Path
SR	beræ'sæs	ɒ'niʃ		deræχte	sær
UR	be-ræs-æst-Ø	ɒ'niʃ-t-Ø		deræχt-e	sær
Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM. AGR		tree-K	top
Role	telicity	resultative		(Xp _{Loc})
	'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top ⁶ .'				

³ SR is used for the surface representation of an utterance after applying a range of phonological rules, UR shows the underlying representation of morphemes before applying the phonological changes in speech, Gloss includes word translations and morpheme inflections, and Role includes specifications about the role of words in MPs.

⁴ Verbs in this study are marked for stress on the onset of their stressed syllable.

⁵ The consonant cluster /rd/ at the end of *o-gor-d* is deleted at the surface-level form of the verb.

⁶ SVC languages can express uniform information that can be handled in non-serial languages using coordination, subordinating and other syntactic dependency devices. For instance, this example can be expressed in English in multiple ways like: 'The girl picked up the sparrow. Then, the sparrow went towards the tree, reached it, and sat on it.' Since using syntactic dependency devices for English translations might be interpreted as multi-causality of events, the translation of the information connoted through seriality is added into English translations through brackets in this study. Still, the translations assume that all the verbs in Tati SVCs occur in a single event.

In the example above in (1), the agentive component introduces *tittije* ‘girl’ as the agent of the verbal series that initiates the motion of the undergoer of motion *tʃelu* ‘the sparrow’. This component by itself is composed of two subcomponents, namely *contact* and *separation*: the verb *o'go* ‘picked up’ verbalizes an establishment of contact between the girl and the sparrow (*contact* sub-component), and the verb *bv'fin* ‘threw’ is used to express a subsequent termination (separation) of contact (*separation* subcomponent). Both of these verbs are transitive. The heads of Path, Telic, and Resultative components in this example are verbalized through verbs *bæ'fæ* ‘went,’ *beræ'sæs* ‘reached,’ and *p'nif* ‘sat’ in succession and express the sparrow’s movement along the 3-D Path in the space, its reaching the endpoint *deræχte sær* ‘tree top,’ and its final state of ‘sitting’ at the endpoint successively. These three verbs are intransitive and agree with the undergoer of motion *tʃelu* ‘the sparrow’ as a third-person singular masculine noun.⁷

With regard to the Telic component, some studies such as Garey (1957), have semantically categorized single verbs into telic or atelic groups. However, this study, along the lines of Borer (2005), proposes a syntactic analysis of telicity in MPs and analyzes telicity in terms of *range assignment* to the Asp_Q head.⁸ Additionally, despite Verkuyl’s (1972) generalization about the necessity of a quantity internal argument for telicity, this study shows that telicity in MPs is the result of range assignment to Asp_Q through a VP_{reach} (the component denoting the undergoer’s reaching the endpoint) rather than a quantity internal argument. Moreover, although it has been widely argued (e.g. in Ramchand [2008]) that attainment of a final result state can create telicity,

⁷ Note that Tati verbs agree with their subject in person, number, and gender. However, variations exist in gender agreement based on the transitivity and tense values. Appendix B includes a list of agreement morphemes, and Appendix C includes a list of verbal stems on which agreement morphemes are marked in Takestani.

⁸ For details about the conditions for range assignment to Asp_Q, refer to CHAPTER 5.

this study discusses that the Result component, if expressed, is a separate substructure from the Telic component, being an add-on to the Telic component in telic MPs.

Along the lines of Marantz (1984), Kratzer (1996), Arad (1999), and Alexiadou et. al (2015), this dissertation also proposes that the Agentive component is introduced as an add-on substructure to the non-agentive intransitive MPs through a functional head labeled as little *v* (*v*). This study is also innovative in using different alignment patterns of Tati verbs to syntactically distinguish two types of agentive MPs (Initial and Continuous Contact) as well as their sub-types, which have not been syntactically analyzed in the current literature.

1.1.1 Descriptive Properties of SVCs

The notion of ‘single event’ has not been firmly established in the literature. In alignment with the generally agreed-upon descriptive properties of SVCs established by Sebba (1987), Aikhenvald (2006), and Muysken and Veenstra (2006), this study characterizes SVCs in terms of (a) single event (mono-eventive) interpretation in spite of using more than one verb; (b) shared inflectional features like tense, aspect, and negation; and (c) lack of overt elements of syntactic dependency (e.g., coordination and subordination) used in non-serial languages. For instance, example (1) in section 1.1 has a mono-eventive interpretation despite using several verbs each inflected for tense.⁹

⁹ While past tense, subjunctive modality, and imperfective aspects are morphologically marked on every verb stem in Tati SVCs, present tense, indicative modality, and perfective aspect are distinguished through the lack of... morphological markings on the verbs. In addition, negation is only marked on a single (highest) verb stem in each SVC. For a discussion about the distribution of the morphological markers and their ‘shared’ value in Tati SVCs, refer to 2.2.

Additionally, using a coordinating conjunction like *ɒsɒni/ɒsɒni* ‘then’ breaks the mono-eventivity of (1) and turns it into a coordination of two unrelated events, as shown by (2).

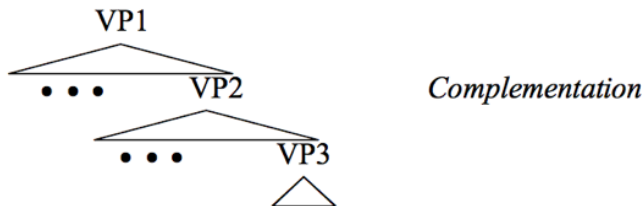
(2)	SR	tittijɛ	tʃɛluʃ	o'go	bo'ʃin	ɒsɒni	bœ'ʃœ
	UR	titie	tʃɛlu-e-ɛʃ	o-gor-d	be-ɒʃin-d	ɒsɒni	be-ʃei-Ø
	Gloss	girl.F	sparrow.M-DEF-3S. AGR	PV-pick_up-PST	PV-throw-PST	CONJ.then	PV-go.PST-3SM. AGR
	Role	agent	undergoer	contact	separation		Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær		
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær		
	Gloss	PV-reach-PST-3SM. AGR	PV-sit-PST-3SM. AGR	tree-K	top		
	Role	telicity	resultative	(Xp _{Loc})		
	‘The girl [pick_up] threw the sparrow, then went [reach] [sit] on the tree top.’						

The descriptive properties of SVCs listed above will be discussed in CHAPTER 2 as a body of evidence for hypothesis (a) in (11), which is about the mono-eventivity of Tati verbal series expressing MPs.

1.1.2 Syntactic Structure of SVCs

With regard to syntax, this study adapts the structure of SVC proposed by Larson (1991) and the event structure proposed by Ramchand (2008). Larson (1991) discussed three prevailing proposals for the underlying structure of SVCs (namely coordination, adjunction, and complementation) and proposed a structure for SVCs based on complementation, which is shown by (3).

(3)



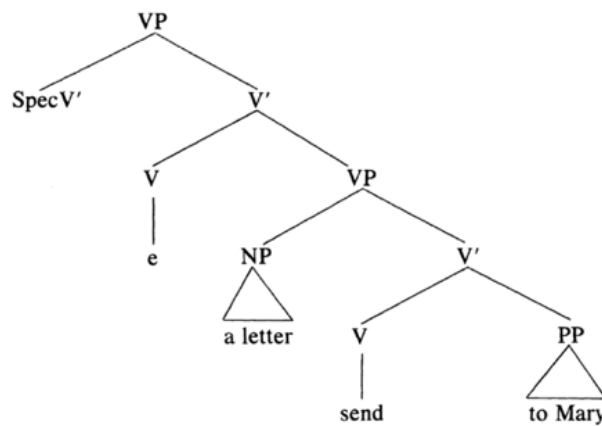
Larson (1991:187)

Due to the semantic similarities between SVCs in serializing languages and secondary predicates in non-serializing languages like English, Larson (1991) derived SVC structures from the structure of secondary predicates, which he had previously derived from the structure of double-object

constructions he had proposed in Larson (1988). Larson (1988) pointed out the existence of a structural asymmetry between direct and indirect objects. Specifically, indirect objects are c-commanded by direct objects (not vice versa) and are structurally closer to the verb than direct objects, as represented in (4)b below for (4)a.

(4) a. John sent a letter to Mary

b.

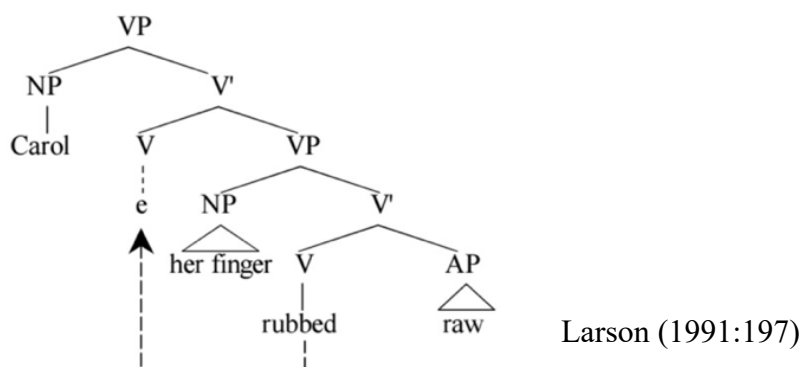


Larson (1988:342)

As (4)b shows, the indirect object *Mary* is c-commanded by the direct object *a letter* (and not conversely) and is closer to the verb *send* than the direct object, although *a letter* is closer to *send* at the surface level in (4)a. In the same vein, Larson (1991) represented the secondary predicate (5)a in (5)b.

(5) a. Carol rubbed her finger [raw].

b.

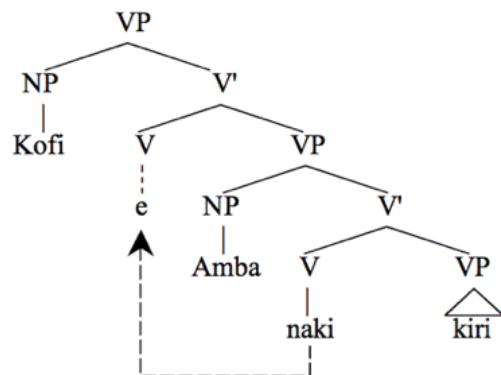


As shown by (5)b, the secondary predicate *raw* is c-commanded by the direct object *her finger* and is structurally closer to the verb *rubbed* than the direct object, although on the surface in (5)a *her finger* is closer to *rubbed*. Larson (1991) proposed that the upper V in the shell structure is an empty head working as the landing site for the verb *rubbed*, as the verb moves up to assign Case to the direct object *her finger*.¹⁰ According to Larson (1991), while non-serializing languages like English express secondary predicates with non-verbal constructs like AP *raw* in (5)a, serializing languages can express the same constructs using non-nominal constructs like VP *kiri* ‘kill’ shown by (6)a. Larson then extended the secondary-predicate structure in (5)b to SVCs. For example, the Akan SVC (6)a is represented in (6)b.

(6) a. Kofi naki Amba kiri
 Kofi hit Amba kill
 ‘Kofi struck Amba dead.’

¹⁰ The upper V in Larson’s shell structure was later re-analyzed as VOICE head proposed by Kratzer (1996) and little v (v) proposed by Chomsky (1995).

b.



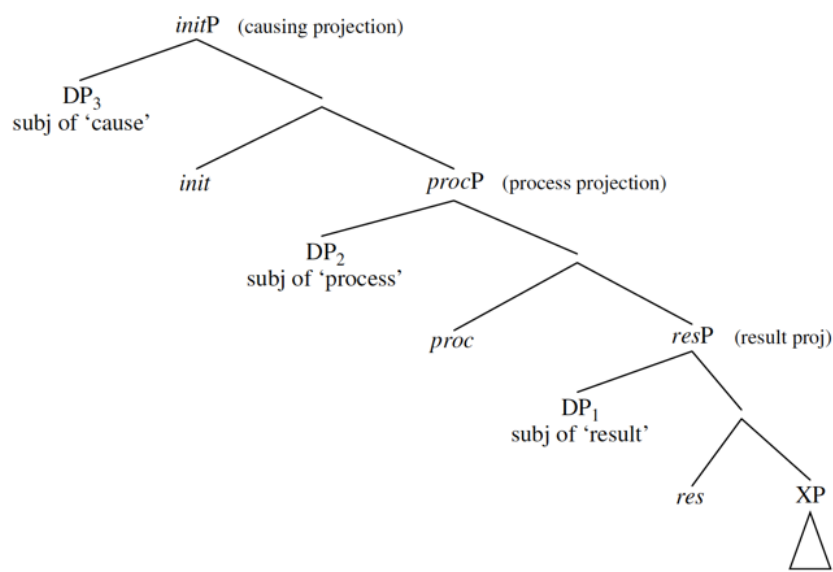
Larson(1991:201)

Taken from Baker (1991)

As we notice in (6)b, the VP *kiri* 'kill' is syntactically in the same position as the secondary predicate AP *raw* in (5)b in both being a complement, and therefore being closer to the verb as well as in being c-commanded by the direct object Amba.

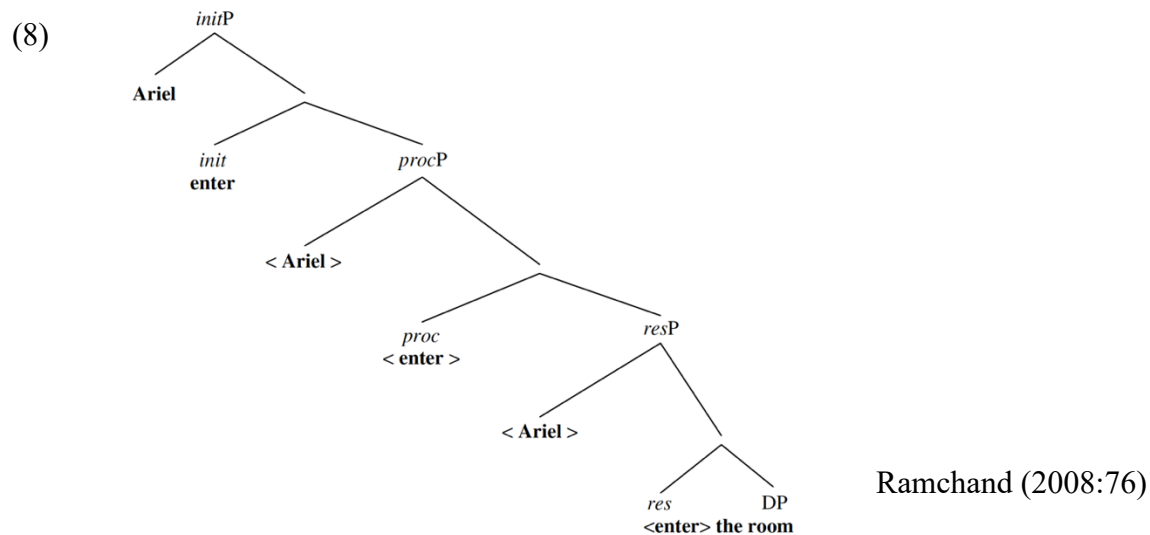
In terms of the sub-eventive decomposition of MPs expressed by SVCs, this study uses Ramchand's (2008) event structure, represented in (7).

(7)



Ramchand (2008:39)

According to Ramchand (2008), the structure of each event (as opposed to state) is at least made of a component (subevent), which she labeled as *process* Phrase (*procP*). Acting as the heart of event in Ramchand's model, *ProcP* introduces a change and licenses an undergoer of change in its specifier position through *proc* head. This component potentially allows the merging of two other components (*initiation* Phrase [*initP*] and *result* Phrase [*resP*]) to the structure of events. *Init* head in Ramchand's model (if merged with *procP*) has an inherent feature of causation (initiation) and introduces *initiator* as the entity responsible for the eventuality (change) in an event.¹¹ *ResP* licenses resultee in its specifier as the entity that holds an explicitly-expressed state. Ramchand's (2008) event structure was originally proposed for the complex sub-eventive structure of single verbs denoting a single event. For example, Ramchand shows the structure corresponding to the sentence *Ariel entered the room* in (8).



As shown by (8), according to Ramchand (2008), the same verbal head (*enter*) 'identifies' the heads of all three subevents (*initP*, *procP* and *resP*). This study extends the event structure in (7)

¹¹ *Init* head is re-analyzed as the external-argument introducing *v* and *proc* head is analyzed as the internal-argument introducing *v* in this study.

to SVCs due to their mono-eventivity. As such, this study proposes that Tati uses verbal heads in SVCs to express what is expressed by other means in non-serializing languages.

1.1.3 Hypothesis

This study makes three hypotheses about the series of verbs like those in example (1), which is repeated in example (9).¹²

(9) SR	tittijɛ	tʃɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ
UR	titie	tʃɛlu-e-eʃ	o-gor-d	be-ɲʃin-d	be-ʃei-Ø
Gloss	girl.F	sparrow.M-DEF-3S. AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM. AGR
Role	agent	undergoer	contact	separation	Path
SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær	
Gloss	PV-reach-PST-3SM. AGR	PV-sit-PST-3SM. AGR	tree-K	top	
Role	telicity	resultative	(X _{ploc})	
'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'					

This study hypothesizes that verbs in verbal series like (1)/ (9) are mono-eventive (hypothesis [a] stated in (11). More specifically, despite inflecting each verb for features like tense and aspect, these series of verbs stand as single units strung together in single events and not as independent clausal units. The descriptive properties of SVCs mentioned in section 1.1.1 are used in CHAPTER 2 as the basis of tests to provide evidence for the mono-eventivity of Tati MPs expressed by SVCs.

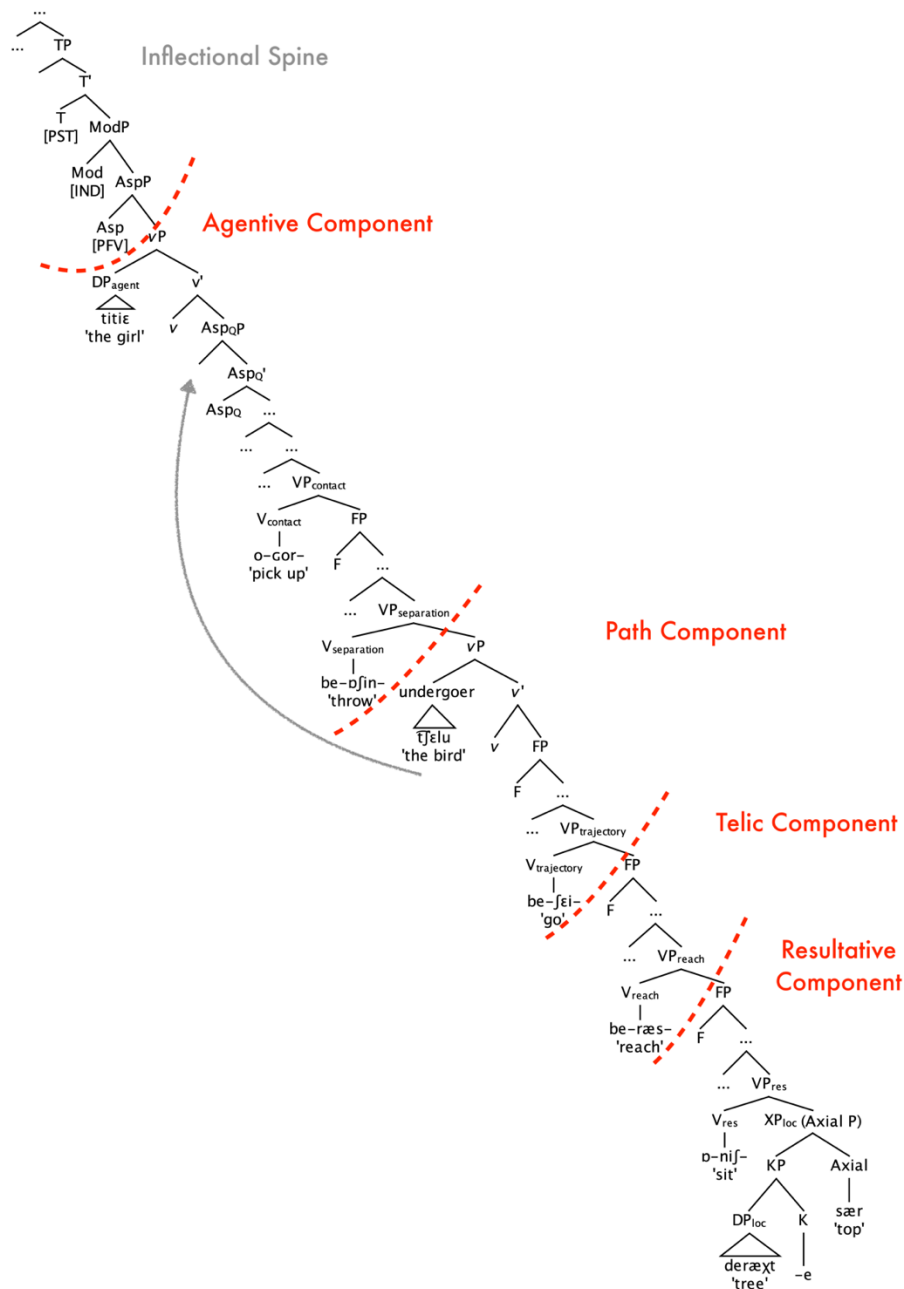
Structurally, along the lines of Larson (1991), this study hypothesizes that Tati verbal series expressing MPs are made of an underlying complementation structure (hypothesis [b] stated in

¹² Note that the event related to example (9) can be expressed through a mono-verbal event, with an expressed verb of *separation* and phonologically-null Path, telic, and resultative heads, as shown by the example below.

(a) SR	tittijɛ	tʃɛluʃ	bɒ'ʃin	deræχte	sær
UR	titie	tʃɛlu-e-eʃ	be-ɲʃin-d	deræχt-e	sær
Gloss	girl	sparrow.M-DEF-3S. AGR	PV-throw-PST	tree-K	top
Role	agent	undergoer	separation	(X _{ploc})
'The girl threw the sparrow on the tree top.'					

(11). Following Larson's lines of argumentation, his complementation structure is extended to Tati SVCs, like (9) in this study. As such, the structure related to this example is represented below in the layered complementation structure shown by (10).

(10)



As (10) shows, different components of Tati MPs are recursively merged based on an underlying complementation structure, such that the higher components c-command the lower components in a single event-denoting structure. Additionally, as in the structures in (4) and (5), c-command holds between the DP-undergoer *tʃɛlu* ‘sparrow’ and the locative Phrase (Xp_{LOC}) *deræxte sær* ‘tree top.’ This study, by providing evidence for such c-command relationships in CHAPTER 3, proves the existence of an underlying Larsonian complementation structure for Tati MPs that, in turn, rules out other alternative explanations such as coordination and adjunction.

Three points need to be clarified here about the structure in (10): First, this structure assumes that VPs are not separate clausal units. Instead, they are closely linked together as sub-parts (sub-events) in a sequence of verbs that is comprised of a single event. Therefore, multiplicity of VPs in this structure does not produce multiple events. Second, due to the multiplicity of morphological marking on each verb in Tati SVCs for features such as tense, modality, and aspect, despite the mono-eventivity of SVCs, following Aboh (2009), the VPs below the highest VP in the complementation structure of SVCs are proposed to be embedded in functional projections (FPs) whose heads will be discussed in 2.2 to verbalize a copy of the single value related to each feature in the inflectional spine. Third, following Pylkkänen (2008) and Harley (2013), this study assumes a split in the little *v* head: one *v* as equal to Kratzer’s (1996) VOICE head for introducing external arguments and another *v* for introducing internal arguments that, along the lines of Travis (1991) and Borer (2005), moves to the specifier of the internal-aspect projection (AspQP). The split in *v* heads also aligns with the event structure proposed by Ramchand (2008) in which one functional head (*init*) introduces the external argument and another functional head (*proc*) introduces the internal argument (undergoer).

In terms of the sub-eventive decomposing of motion (hypothesis [c] in (11)), this study hypothesizes that the Telic, Resultative, and Agentive components can merge into the Path component, in the same way that Ramchand's Bounded Path, Resultative, and Initiation components can merge into the Process subevent. This study also discusses the sub-components of each of the components mentioned above (Agentive, Telic, and Resultative components), which are distinguished based on their morphological distribution, syntactic behavior, and semantic interpretation. For instance, CHAPTER 7 discusses that the existence of a *separation* sub-component in Initial-Contact agentive MPs syntactically distinguishes them from Continuous-Contact MPs.

In sum, this study has three main hypotheses about Tati verbal series expressing MPs, which are listed in (11) a-c.

- (11) a. Tati verbal series expressing MPs are mono-eventive.
- b. Tati verbal series expressing MPs merge in a layered complementation structure.
- c. An *agentive*, *telic*, and/or *resultative* component can merge into the *Path* component in Tati verbal series expressing MPs.

As stated above, CHAPTER 2 and CHAPTER 3 provide evidence for the hypotheses (a) and (b) successively. In addition, evidence will be provided for hypothesis (c) in CHAPTER 5, CHAPTER 6, and CHAPTER 7 through dealing with the Telic, Resultative, and Agentive components in succession.

1.2 Concluding Remarks and Organization of the Dissertation

The motivations for this dissertation were presented in this chapter together with its goals and contributions. This chapter proposed three hypotheses about the verbal series expressing MPs in the Takestani dialect of Southern Tati, an endangered language of Iran, and presented some descriptive and syntactic background for those hypotheses.

The organization of this dissertation is as follows. This chapter states the goals and contributions of this study as well as its hypotheses and organization. CHAPTER 2 provides evidence for the mono-eventivity of the verbal series expressing MPs in Southern Tati, and CHAPTER 3 provides evidence for their complementation structure. CHAPTER 4 discusses the research methodology and includes specifications about the data elicitation devices, procedures, and participants, as well as data transcription and coding. The next three chapters provide evidence for the hypothesis on the sub-eventive decomposition of verbal series expressing MPs and each analyze a component of MPs: the Telic component in CHAPTER 5, the resultative component in CHAPTER 6, and the agentive component in CHAPTER 7. The last chapter, CHAPTER 8, summarizes the dissertation and provides implications for further research.

CHAPTER 2. MONO-EVENTIVITY OF SVCS EXPRESSING MPS

This chapter provides evidence for hypothesis (a) stated in (11) in CHAPTER 1. According to hypothesis (a), Tati verbal series expressing MPs are mono-eventive. Along the lines of Aikhenvald (2006), the mono-eventivity of SVCs expressing MPs is conceptualized in this study as being comprised of a ‘single event’ and forming a ‘syntactic whole’. Consequently, each SVC is proposed to be attributed to one single value for eventuality in New-Davidsonian semantics. This chapter rules out the possibility of pluri-clausal structures for Tati verbal series, and provides five pieces of evidence for their mono-eventivity: Non-compositionality of Meaning (2.1) Single Inflectional Spine (2.2), Single Agreement Morpheme (2.3), Single Prosodic Unit (2.4), and Lack of *pro* (2.5).

2.1 Non-compositionality of Meaning

According to the principle of compositionality in mathematics and semantics (also known as Frege’s Principle), as explained by Szabó (2013) and Kratzer and Heim (1998), the meaning of a complex whole is a function of the meanings of its components and the way they are combined. Following Aikhenvald (2006), I use the non-compositionality of meaning to distinguish between SVCs and non-serial constructions in Tati, in the sense that the SVC denotations cannot be fully calculated as the sum of the meanings of their components (verbs). Below, I show how the non-compositionality of meaning in Tati verbal series leads to the creation of forms that do not produce bi-clausality/multi-clausality.

Consider the series of verbs in (12), which includes two verbs (*o'go* ‘picked up’ and *bæ'fæ* ‘came’).¹³

(12)	SR	fere	ærdækɒf	o'go	bæ'fæ
	UR	fere	ærdæke-f	o-gor-d	be-ʃei-Ø
	Gloss	boy	duck-3S.AGR	PV-pick_up-PST	PV-go.PST-3S.M.AGR
	Role	agent	undergoer	contact	Path
		a. ‘The boy carried the duck away.’			
		b. # ¹⁴ The boy picked up the duck, (and) went.’			

As a result of the non-compositionality of SVCs denotations, the intended interpretation of (12) shown by (a), i.e., *carrying the duck away*, is not fully predictable by combining the lexical meaning of its individual verbs (*pick up* and *go*). On the other hand, if each of the verbs were to be interpreted compositionally, a reading associated with separate events would be created in (b), which is not available (i.e., is ungrammatical) for this event. According to the compositional reading of (12) in (b), the boy picked up the duck at some time and moved away from a reference point (*went*) at another time, without necessarily ‘carrying away’ the duck away from the reference point (the boy might have released the duck into the air after picking it up).

An additional case for a non-compositional reading for verbal series is (13), which is made of two *Path* verbs (*'rædde+je* ‘passed’ and *bo'mε* ‘came’).

¹³ This series is pronounced as a single prosodic unit for its actual denotation as an SVC, as shown in (a). On the other hand, pronouncing it as two prosodic units would produce a bi-clausal reading shown in (b), which is not available for this event. The case is the same with the series (13), (15), (16), (17), and (18) in this section in that their actual interpretation is associated with their pronunciation as a single prosodic unit. Conversely, pronouncing them as more than one prosodic unit would be associated with their bi-clausality or multi-clausality, which is not available for those events. Section (2.4) will discuss the prosodic evidence for the mono-eventivity of Tati verbal series.

¹⁴ For the sake of comparison, the actual interpretation for some of the utterances in this study is paired with another interpretation that is not available for a given utterance and is marked using the pound (#) symbol.

(13)	SR	tʃɛlu	roxonɪʃ	ˈræddɛ+jɛ	boˈmɛ
	UR	tʃɛlu	roxonɛ-ɛʃ	ræddɛ+jɛ	be-omɛi-∅
	Gloss	sparrow	river-3S. AGR	passed.ADJ-do.PST	PV-come.PST-3SM.AGR
	Role	undergoer	boundary	Path	Path
		a. ‘The sparrow came over the river.’			
		b. #The sparrow passed the river, (and) came.’			

The sparrow in example (13), as shown by (a), is interpreted to have moved simultaneously along the Horizontal and Deictic planes. On the other hand, if each verb was interpreted compositionally, a reading would arise in which the bird first passed the river and then came towards the reference point. This reading, as shown by (b), is not available for this event.

Along the same lines, Benedicto and Salomon (2014) showed that the denotation of 3-D *Path* is not strictly compositional in similar constructions in Mayangna. Consider the example in (14), which can be interpreted as a truck simultaneously moving upwards and away from the participant’s view.

(14)	truk	kil	kiuna	
	truck	go_up.∅	go.PST3s	
	‘the truck went up (the hill)’			Benedicto & Salomon (2014:20)

According to Benedicto and Salomon (2014), a fully compositional calculation for *Path* in (14) would produce an interpretation that the truck first went up the hill along the Vertical plane and later went away from a reference point along the Deictic plane, as shown by the vectors (a) and (b) in Figure 2.1.¹⁵ However, an SVC reading produces an interpretation in which the truck moved along the intersection of both planes at the same time (shown by vector [c] in Figure 2.1.

¹⁵ Benedicto and Salomon (2014) used the 3-D Cartesian Coordinate System to analyze MPs in Mayangna. The midsagittal plane (X-coordinate), termed in Benedicto and Salomon’s model as the Deictic plane, expresses motion away from or towards a reference. The Horizontal plane (Y-coordinate) is used for movement across (from left-to-right or right-to-left) the viewpoint of a reference point, and the Vertical plane (Z-coordinate) expresses motion up or down the view of a reference point.

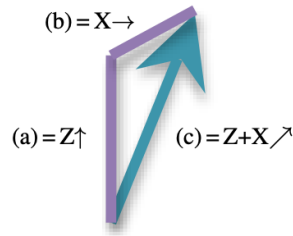


Figure 2.1 Complex Path related to example (14)

An additional case showing the result of the non-compositionality of meaning in Tati SVC is example (15) below, in which the verb *v'dv* 'gave' has a different argument structure (with an arbitrary indirect object) compared to when it maintains its full lexical content in a fully compositional sense. On the other hand, under a compositional denotation, example (15) would be ungrammatical, as shown by (b), since the argument structure related to the verb *v'dv* 'gave' would require an indirect-object argument.

(15)	SR	ferɛ	kotæɾɛʃ	v'dv	b'ʃæ
	UR	ferɛ	kotæɾ-ɛʃ	v-dvɪ	be-ʃɛi-∅
	Gloss	boy	dove-3S.AGR	PV-give.PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
		a. 'The boy released the dove away.'			
		b. #'The boy gave the dove, (and) went.'			

As a result of the non-compositionality of meaning, some V-V constructions in Tati may yield idiomatic meanings, as shown by (16).¹⁶

(16)	SR	'bi	'beʃɛ
	UR	be-v-∅	be-ʃ-∅
	Gloss	PV-come-2S	PV-go-2S
	Role	exclamation	Path
		a. '[Come on] go now!'	
		b. #Come, (and) Go!	

¹⁶ Note that depending on the definition, these idiomatic constructions, also showing non-compositionality, may not be counted as SVCs.

Although the original lexical meaning of the verbs *'bi* and *be'fɛ* denotes *coming* and *going* in (16), *'bi* ‘come’ has become grammaticalized to express some illocutionary force (imperative) meaning.¹⁷ Note that although *'bi* ‘come’ in (16) is a grammaticalized verb, it still maintains a full lexical inflection related to a verb. However, this form does not introduce a separate clause as a result of being fully inflected. On the other hand, a compositional meaning, as shown by (16)b, would produce a bi-clausal interpretation.

Example (17) below also demonstrates how a sequence of two fully inflected verbs does not necessarily produce a clausal concatenation. The verb *bæ'fæ* ‘went’ in this example has become ‘fully’ reduplicated to express an aspectual meaning (*continuously*). On the other hand, a compositional meaning for (17), as shown by (b), would produce an interpretation that each instance of *bæ'fæ* would have a verbal meaning of ‘going.’

(17)	SR	tʃɛlu	bæ'fæ	bæ'fæ	mendo	ɒvæɾ
	UR	tʃɛlu	bɛ-ʃɛi-∅	bɛ-ʃɛi-∅	mendo	ɒ-væɾ
	Gloss	sparrow	PV-go.PST-3S.M.AGR	PV-go.PST-3S.M.AGR	river	D-side
		b. ‘The sparrow continued to go the other side of the river.’				
		b. #‘The sparrow went, (and) went to the other side of the river.’				

Another by-product of the non-compositionality of the meaning in SVCs is that there are more restrictions on the choice of verbs and their relative sequential orders in SVCs than in bi-clausal/multiclausal sequence of verbs. Specifically, the order of verbs in SVCs is tighter because verbs in SVCs assume grammatical meanings associated with the heads of functional projections. For instance, switching the *separation* and *contact* verbs order in our purported mono-eventive

¹⁷ The verb *bi* ‘come’ in this example has the same function as ‘*come on!*’ in English and the interjection ‘*ea!*’ in Spanish. In fact, Spanish has a very similar construction: *venga, vámonos!*, meaning ‘come on, let’s go!’

SVC in (1), repeated in (18)a, would produce (18)b, which has a bi-clausal rather than a mono-eventive reading.

(18)

a.	SR	tittijɛ	tʃɛluʃ	o'go	bo'fin	bœ'fœ
	UR	titie	tʃɛlu-e-eʃ	o-gor-d	be-ɲʃin-d	be-ʃei-Ø
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ		deræχte	sær
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø		deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR		tree-K	top
	Role	telicity	resultative		(Xp _{LOC})
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				
b.	SR	tittijɛ	tʃɛluʃ	bo'fin	o'go	bœ'fœ
	UR	titie	tʃɛlu-e-eʃ	be-ɲʃin-d	o-gor-d	be-ʃei-Ø
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-throw-PST	PV-pick_up-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	contact	Path
	SR	beræ'sæs	ɒ'niʃ		deræχte	sær
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø		deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR		tree-K	top
	Role	telicity	resultative		(Xp _{LOC})
		'The girl threw the sparrow, picked (it) up, (and) (it/he) went [reach] [sit] on the tree top.'				
		#'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

2.2 Single Inflectional Spine

As mentioned earlier in 1.1.1, one of the agreed-upon descriptive properties of SVCs is that their verbs “share” inflectional features like tense, modality, and aspect (which would also be linked to the non-compositionality effects discussed in 2.1). Below, we show how this ‘sharing’ is realized in different languages in three ways with regard to tense. The first strategy we show is from Gungbe in Aboh (2009), as shown by (19), in which neither of the verbs *bé* ‘collect’ and *dù* ‘eat’ is morphologically marked for tense.

- (19) Àsibá bé lésì dù.
 Asiba collect rice eat
 ‘Asiba collected rice eat (i.e., Asiba ate a lot of rice).’ Aboh (2009:1)

A second type of tense marking is shown by the example from Igbo in (20), in which one single tense marker (*rù*) is shared between the verbs in the series, *tì* ‘hit’ and *gbù* ‘kill.’

- (20) *ó* *tì-gbù-rù* *nwóké* *áhù*
 he hit-kill-TENSE man that
 ‘He beat that man to death’ (lit. hit-kill) Aikhenvald (2006:13)

The SVCs from Mayangna shown below in (21), belong to the same type as (20), in that they have a single tense marker, with the difference being that the verb *tal* ‘see’ is marked with a same-subject marker (SS) in (21)a and with a different-subject marker (DS) in (21)b in a switch-reference system.

- (21) a. *Nawah* *as* *talik* *îranayang*
 tiger D-DEF see.SS1s run.PST1s
 ‘I saw a tiger and I ran.’ Benedicto & Salomon (2014:1)
- b. *Nawah* *as* *taling* *kîrana*
 tiger D-DEF see.DS1s run.PST3s
 ‘I saw a tiger and it ran.’ Benedicto & Salomon (2014:1)

By contrast, there is a third type of language in which each verb in an SVC is marked with an inflectional marker for tense. An example is the SVC from Akan in (22), in which each verb (*bɔ* ‘strike’ and *ku* ‘kill’) is marked with a past tense morphology.

- (22) *Kofí bɔ-ɔ* *Áma ku-u* *no.*
 Kofi strike-PAST Ama kill-PAST 3SG
 ‘Kofi hit Ama and killed her.’
 (Ameke 2004:14) Aboh (2009:8)

Another example of this type is (23) from Lango, in which both verbs (*fat* and *exceed*) in the SVC take the habitual marking.

- (23) *àcwè* *àlô* *rwòt*
 1sg+fat+HAB 1sg+exceed+HAB king
 ‘I am fatter than the king’ (lit. I-fat I-exceed king) Aikhenvald (2006:8),

With regard to inflection marking on verbs in SVCs, Tati falls within the third type, along with Akan and Lango, in that all verbs carry morphological markings for tense. An example is (1), which is repeated in (24) for convenience. As shown in this example, all the verbs are marked with a past tense morpheme.¹⁸

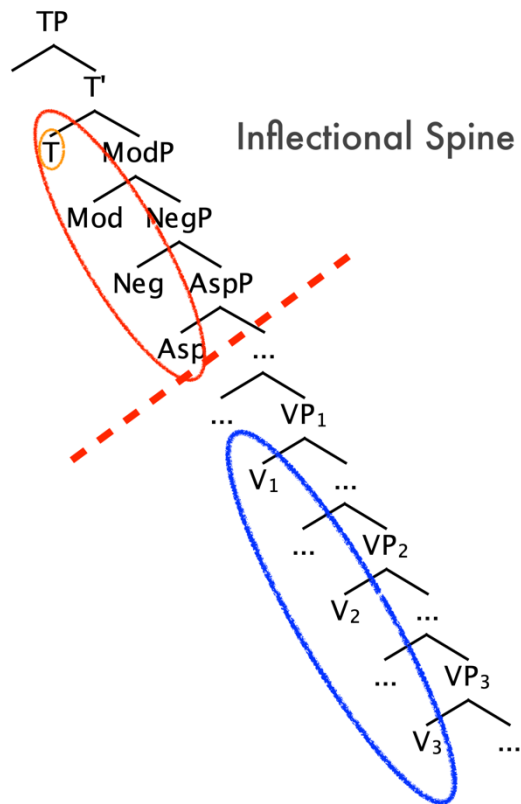
(24)	SR	tittijɛ	tʃɛluʃ	o'go	bb'ʃin	bæ'ʃæ
	UR	titie	tʃɛlu-e-ɛʃ	o-gor- d	be-ɲʃin- d	be-ʃɛi- Ø
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
	UR	be-ræs- æst-Ø	ɒ-niʃ- t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(X _{pLoc})	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

Examples like (24) in Tati may pose the question of whether they can be interpreted as SVCs because of the multiplicity of inflectional morphology. Despite the abundance of morphological markers, however, we will counter the non-seriality option by showing two things: one, that the series is nevertheless still mono-eventive; and two, that the multiple morphological markings are indeed the reflection of just one single inflectional value.

This chapter hypothesizes that even though there are morphological markers on all of the verbs for each feature (e.g., tense) in a series of verbs like (24) in Tati, the morphological markers all correspond to a single inflectional spine, carrying a single value for features such as tense, aspect, modality, and negation. This hypothesis is represented in (25).

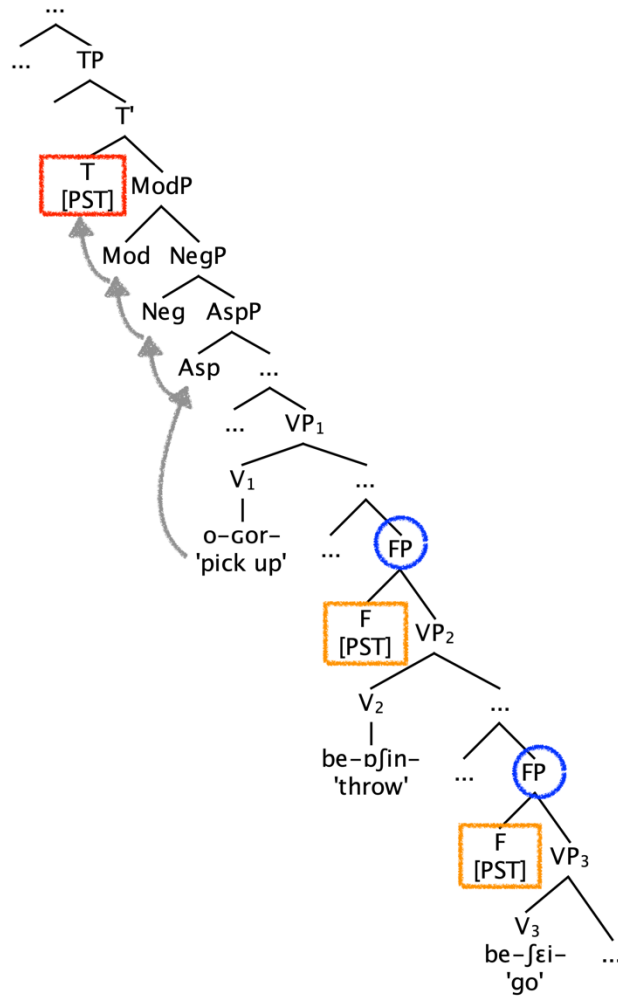
¹⁸ Based on the morpho-phonological properties of Tati that distinguish between past-tense stems and present-tense stems, I will assume that the phonological form of *bæ'ʃæ* 'went' corresponds to the past-tense stem. I assume that tense feature is morphologically encoded within the specific stem of the verb. A similar case takes place in Latin, which also distinguishes present, past, and participial stems. An example in Latin includes *Capio*, *Cepi*, and *Captum* as the present, past, and participial stems denoting 'catching, as shown by Mondon (2015).

(25)



As shown by (25), there is a single tense value for each SVC, which has scope over all the verb stems. Since tense is morphologically marked on every verb in (24), the multiplicity of tense marking on verbs in verbal series can be analyzed in three possible ways: First, consistent with Aboh (2009), there can be intermediate functional projections (FPs) dominating the verb stems below the highest stem, as shown by (26).

(26)

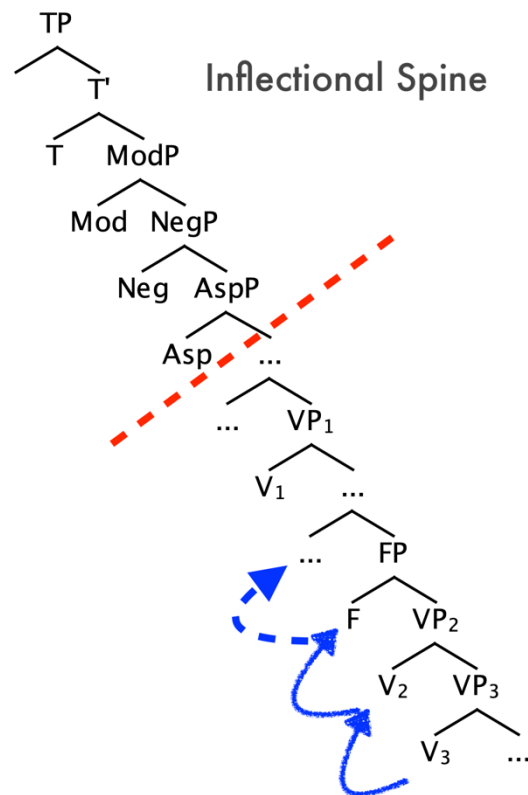


As shown by (26), for Tati verbal series like (24), there is a single tense projection in the whole event, and the highest verb stem *o-gor-* ‘pick up’ gets incorporated into the head of this projection (T) through a cyclic movement to become inflected for the past tense. It is claimed that the heads of the FPs dominating the lower verb stems have attributes like those of bound variables, which require them to be bound by T in this structure. Therefore, the value of tense (*past*) is copied on the F heads, and the lower stems in (24) (*be-ɒfin-* ‘throw,’ *be-fɛi-* ‘go,’ *be-ræɬ-* ‘reach,’ and *v-ni/-*

‘sit’), get inflected for the same morphology for tense as the highest verb stem *o-gor-* ‘pick up’ without having real values for tense.¹⁹

Since in (24) all verbs are marked with past tense morphology, a second alternative is to consider the existence of a single set of intermediate FPs for which the lower stems move to the head successively. This structure is shown by (27).

(27)



¹⁹ Note that other than tense, all the verb stems in (24) are conjugated for inflectional the features such as aspect and modality with perfective aspect and indicative modality. Therefore, the structure in (27) assumes, using dots representing the possibility of additional structure above each FP, that more than one FP might dominate each of the VPs below the highest VP. The focus of this study, however, is neither on the number of these functional projections nor on their order in the hierarchy. What needs to be made clear here is that the structure related to SVCs is more complex than a chain of verbs in the selection domain of each other in the hierarchy.

However, the movement of the stems to a single set of FPs, as shown by (27), predicts that there would be a single set of inflectional markings for all the stems moving to that F head, rather than a separate set of inflections for each verb, which is not the case.

The third option for explaining the morphological overmarking of the verbs in (24) is a morphological template for the verbs in Tati verbal series that needs to be interpreted on the morphological rather than the syntactic component. It is not the goal of this dissertation to ascertain which particular technique is the case for Tati. It is, however, important that the morphological overmarking on the verbs in verbal series is not considered as an impediment to their mono-eventivity. In other words, the over-marked morphological inflections on the verbs do not produce bi-clausal structures. Below, we show that there is a single value for tense, aspect, and negation in the series of verbs expressing Tati MPs.

2.2.1 Tense

Two tests are used in this section to prove the existence of a single tense value for verbal series expressing MPs in Tati. These tests include Changing the Tense Value and Time-Constituent Test.

The first test, Changing the Tense Value, is based on the idea that there can exist one and only one value for tense in each event even though World knowledge tells us that the actions associated with the individual verbs must have happened at slightly different times. As such, although each verb is marked with a tense morpheme, the tense markings are restricted to one choice, and any independent contrast in the tense marking of the individual verbs produces ungrammaticality. Consider again example (1), repeated in (28).

(28)	SR	tittije	t̪ɛluʃ	o'go	bɒ'ʃin	bæ'ʃæ
	UR	titie	t̪ɛlu-e-eʃ	o-gor- d	be-ɒʃin- d	be-ʃɛi- Ø
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'nɪʃ	deræχte	sær	
	UR	be-ræs-æst- Ø	ɒ-nɪʃ-t- Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{LOC})	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

The event in the example above has a mono-eventive reading, and it refers to a single action. As we see, all verbs (namely *bɒ'ʃin* 'threw,' *bæ'ʃæ* 'went,' *beræ'sæs* 'reached,' and *ɒ'nɪʃ* 'sat') are marked for the same value of tense (*past*). On the other hand, changing the tense value of one of the verbs (e.g., *bæ'ʃæ* 'went') into *present* produces a juxtaposition of unrelated events which are ungrammatical under the intended mono-eventive reading. The result of changing the tense value is shown by (29), where the mono-eventive reading in (b) is not available.

(29)	SR	tittije	t̪ɛluʃ	o'go	bɒ'ʃin	mi'ʃu
	UR	titie	t̪ɛlu-e-eʃ	o-gor-d	be-ɒʃin-d	me-ʃ-u
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	IND-go.PRS-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'nɪʃ	deræχte	sær	
	UR	be-ræs-æst- Ø	ɒ-nɪʃ-t- Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{LOC})	
		a. 'The girl [pick_up] threw the sparrow, (and) goes, (and) [reach] sat on the tree top.'				
		b. #'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

The ungrammaticality of example (29) for a mono-eventive reading due to changing the value of tense on one of its verbs in the series, shows that there needs to be a single tense value shared by all the verbs.

With regard to the Single Time-Constituent test, the premise is that time constituents are linked to the values of tense. Since there is a single tense value per event, there can only be a single time

(33)

a.	SR	æzire	berom	keftif	be'pet
	UR	æzire	berom-m	kefte-ef	be-pet-Ø
	Gloss	yesterday	brother-1S	meat ball-3S.AGR	PV-cook.PST-3SM
		'Yesterday, my brother cooked Kefte (meatballs).'			
b.	SR	berom	æzire	keftif	be'pet
	UR	berom-m	æzire	kefte-ef	be-pet-Ø
	Gloss	brother-1S	yesterday	meat ball-3S.AGR	PV-cook.PST-3SM
		'My brother cooked Kefte (meatballs) yesterday.'			

Replacing the time constituent *æzire* 'yesterday' with another time constituent like *pore* 'last year' in both (33)a and (33)b will produce grammatical results, as shown below in (34)a and (34)b successively. However, using both *æzire* 'yesterday' and *pore* 'last year' as two independent time constituents modifying a single tense value would produce an ungrammatical result, as shown by (34)c.

(34)

a.	SR	pɒrɛ	berɒm	keftɪʃ	be'pet	
	UR	pɒrɛ	berɒ-m	keftɛ-ɛʃ	be-pet-∅	
	Gloss	last year	brother-1s	meat ball-3s.AGR	PV-cook.PST-3SM	
		'Last year, my brother cooked Kefte (meatballs).'				
b.	SR	berɒm	pɒrɛ	keftɪʃ	be'pet	
	UR	berɒ-m	pɒrɛ	keftɛ-ɛʃ	be-pet-∅	
	Gloss	brother-1s	last year	meat ball-3s.AGR	PV-cook.PST-3SM	
		'My brother cooked Kefte (meatballs) last year.'				
c.	SR	*æzɪrɛ	berɒm	pɒrɛ	keftɪʃ	be'pet
	UR	æzɪrɛ	berɒ-m	pɒrɛ	keftɛ-ɛʃ	be-pet-∅
	Gloss	yesterday	brother-1s.GEN	last year	meat ball-3s.AGR	PV-cook-3SM
		* 'Yesterday, my brother cooked Kefte (meatballs) last year.'				

(Continuation of the footnote on previous page)

a.	SR	æzire	hæfte	berom	keftif	be'pet
	UR	æzire	hæfte-ε	berom-m	kefte-ef	be-pet-Ø
	Gloss	yesterday	seven-at	brother-1S.GEN	meat ball-3S.AGR	PV-cook-3SM
		'Yesterday at seven, my brother cooked Kefte (meatballs).'				
b.	SR	æzire	berom	hæfte	keftif	be'pet
	UR	æzire	berom-m	hæfte-ε	kefte-ef	be-pet-Ø
	Gloss	yesterday	brother-1S.GEN	seven-at	meat ball-3S.AGR	PV-cook-3SM
		'Yesterday, my brother cooked Kefte (meatballs) at seven.'				

2.2.2 Aspect

This section shows that, despite the possibility of marking each Tati verb in an SVC with an aspectual marker, all of the markers are associated with a single value for aspect per SVC, and the multiplicity of marking for aspect is the result of COPY on the verbal stems rather than an independent aspectual value on each verb (this is similar to tense and claim made in (25). One test is used in this section for the existence of a single aspectual marker for Tati SVCs, namely Changing the Aspect Value.

Consider the SVC below in (37). This SVC has a perfective aspect value, which is not morphologically marked on Tati verbs.

(37)	SR	tʃɛlu	roxonif	'rædde+je	bæ'fæ
	UR	tʃɛlu	roxone-ɛʃ	rædde+jær-d	be-ʃɛi-æ
	Gloss	sparrow.M	river-3S. AGR	pass.N+ do-PST	PV-go.PST-3SM
		'The sparrow went over the river.'			

Since SVCs in Tati are not limited to specific aspects, tenses, modalities, and illocutionary forces, the SVC in (37) can be stated using the morphologically-invariable progressive aspect marker *kɔrv*, which produces (38).

(38)	SR	tʃɛlu	kɔrv	roxonif	'rædde+mije	mæ'fæ
	UR	tʃɛlu	kɔrv	roxone-ɛʃ	rædde+me-jær-d	me-ʃɛi-æ
	Gloss	sparrow.M	PROG	river-3S. AGR	pass.N+ CONT-do-PST	CONT-go.PST-3SM
		'The sparrow was going over the river'				

As shown by (38), progressive aspect is marked using one *kɔrv* that has scope over both verbs and the past continuous marker *me-* on each verb. Marking any of the verb stems with perfective aspect, however, produces ungrammatical results, as shown below in (39). Example (39)a shows the result

of changing the aspect of the second verb stem (*be-ʃei-* ‘go’) into perfective, and (39)b shows the result of changing the aspect value related to the first verb stem (*ræddε+jε* ‘pass’) into perfective.

(39)

a.	SR	$\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonif</i>	<i>'ræddε+mije</i>	<i>bœ'ʃœ</i>
	UR	$\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonε-εʃ</i>	<i>ræddε+me-jær-d</i>	<i>be-ʃei-œ</i>
	Gloss	sparrow.M	PROG	river-3S. AGR	pass.N+ CONT-do-PST	PV-go.PST-3SM
		#‘The sparrow was passing the river, (and) went.’				
b.	SR	$*\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonif</i>	<i>'ræddε+jε</i>	<i>mœ'ʃœ</i>
	UR	$\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonε-εʃ</i>	<i>ræddε+jær-d</i>	<i>me-ʃei-œ</i>
	Gloss	sparrow.M	PROG	river-3S. AGR	pass.N+ do-PST	PROG-go.PST-3SM
		*‘The sparrow was passed the river, (it/he) was going.				

Example (39)a shows that *kɔrɔ* has scope over both verbs and determines their morphological-aspectual form in the series.²³ Example (39)b is ungrammatical in the language due to the incompatibility of *kɔrɔ* with *'ræddε+jε* ‘passed’ which has a perfective aspect. The ungrammaticality of these two examples with a different aspectual value shows that there is one single aspect related to the event in (38).

2.2.3 Negation

As claimed by (25), similar to tense and aspect, there can only exist a single value for negation in each SVC. Consider again our series of verbs in (1), which is repeated in (40).

²³ Note that example (39)a has a potential interpretation as a bi-clausal structure that can have an overt conjunction (*nsɔn* ‘then’). This possibility is shown below in (a).

(a)	SR	$\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonif</i>	<i>'ræddε+mije</i>	(nsɔn)	<i>bœ'ʃœ</i>
	UR	$\widehat{tʃ}\epsilon lu$	<i>kɔrɔ</i>	<i>roχonε-εʃ</i>	<i>ræddε+me-jær-d</i>	(nsɔn)	<i>be-ʃei-∅</i>
	Gloss	sparrow.M	PROG	river-3S. AGR	pass.N+ CONT-do-PST	(then)	PV-go.PST-3SM
		#‘The sparrow was passing the river, (then) went.’					

(40)	SR	tittije	tʃɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-e-ɛʃ	o-gor-d	be-ɒʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-DEF-3S. AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM. AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM. AGR	PV-sit-PST-3SM. AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{LOC})	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

Negating the event in (40) involves using a single marker for negation (*ne-*) that has scope over the entire event, as shown by (41).

(41)	SR	tittije	tʃɛluʃ	o'-no-go	'bɒʃiniʃe	
	UR	titie	tʃɛlu-e-ɛʃ	o- ne -gor-d	be-ɒʃin-iɛ	
	Gloss	girl.F	sparrow.M-DEF-3S. AGR	PV-NEG-pick_up-PST	SBJV ²⁴ -throw-3SF. AGR	
	Role	agent	undergoer	contact	separation	
	SR	'biʃu	'beræse	'ɒniʃine	deræχte	sær
	UR	be-ʃ-u	be-ræs-e	ɒ-niʃin-e	deræχt-e	sær
	Gloss	SBJV-go-3SM. AGR	SBJV-reach-3SM. AGR	SBJV-sit-3SM. AGR	tree-K	top
	Role	Path	telicity	resultative	(Xp _{LOC})
		'The girl did not [pick_up] throw the sparrow [go] [reach] [sit] on the tree top.'				

In (41), the single marker for negation negates the actions related to all the verbs in the SVC, which means negation has scope over the whole event.²⁵

²⁴ Note that negating an SVC involves marking the highest verb stem with the negative morpheme *ne-*, which in turn produces subjunctive modality on the verb stems c-commanded by it. This will be dealt with in detail in 3.3

²⁵ Marking negation on a verb stem other than the highest stem (*o-go* 'pick up') for negating (40) produces bi-clausal results in which negation will only have scope over the verb stems below it. The result is shown by example (a) below, wherein negation is marked on the second highest stem (*be-ɒʃin* 'throw') and hence it breaks the event into two separate clauses.

a.	SR	tittije	tʃɛluʃ	o'go	'nɒʃiniʃe	
	UR	titie	tʃɛlu-e-ɛʃ	o- gor-d	ne -ɒʃin-iɛ	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV- pick_up-PST	NEG-throw-3SF.AGR	
	Role	agent	undergoer	contact	separation	
	SR	'biʃu	'beræse	'ɒniʃine	deræχte	sær
	UR	be-ʃ-u	be-ræs-e	ɒ-niʃin-e	deræχt-e	sær
	Gloss	SBJV-go-3SM.AGR	SBJV-reach-3SM. AGR	SBJV-sit-3SM. AGR	tree-K	top
	Role	Path	telicity	resultative	(Xp _{LOC})
		'The girl picked up the sparrow, not to throw [it] to [go] [reach] [sit] on the tree top.'				

On the other hand, over-marking negation on the verbal stems in (40) would produce ungrammatical results (which is also ungrammatical for a mono-eventive reading), as shown by example (42).

(42)	SR	*tittije	tʃɛluʃ	o' -no-go	'nɔʃin	
	UR	titiɛ	tʃɛlu-e-ɛʃ	o- ne -gor-d	ne -ɔʃin-d	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	NEG-throw-PST	
	Role	agent	undergoer	contact	separation	
	SR	'nœʃœ	'neræsæs	ɒ'niniʃ	deræχte	sær
	UR	ne -ʃ-Ø	ne -ræs-æst-Ø	ɒ- ne -niʃ-t-Ø	deræχt-e	sær
	Gloss	NEG-go-3SM. AGR	NEG-reach-PST-3SM. AGR	PV-NEG-sit-PST-3SM. AGR	tree-K	top
	Role	Path	telicity	resultative	(Xp _{LOC})
		*‘The girl did not pick up the sparrow, did not throw (?), did not go, did not reach, did not sit on top of the tree.’				
		#‘The girl did not [pick_up] throw the sparrow [go] [reach] [sit] on the tree top.’				

The ungrammaticality of (40) with multiple negative markers, as shown by (42), indicates the necessity of a single value and also a single marker for negation per SVC.

As we can observe, negation behaves differently from tense and aspect in not being inflected on every verb in Tati SVCs. Similarly, Aikhenvald (2006) noted that there are languages in which one feature is over-marked on every verb in SVCs but another feature is only marked on one verb. An example, according to Aikhenvald, is Goemai, in which the choice between multiple and single marking is only possible for the obligative, as shown below in (43). In (43)a, the obligative marker is marked on both verbs, whereas in (43)b, it is only marked on one of the verbs in the SVC.

- (43)
- (a) de mûep goe mûen goe two mutane
 COMP 3PL OBLIG go(PL) OBLIG kill(PL) people(PL)
 ‘So that they should go (and) should kill people’
- (b) gwa goe doe kat ji n-lagos Aikhenvald (2006:95)
 SGM.LOG.AD OBLIG come find SGM.LOG.SP LOC-Lagos
 ‘(He₁ said to him₂ that) he₂ should meet him₁ here in Lagos’

2.3 Single Agreement Morpheme

Each Tati verb is marked by default for an agreement morpheme denoting the person, number, and gender of the subject.²⁶ Consider example (44) for Tati, wherein the verb *moχp'rije* ‘eats’ is marked with *-ie* in agreement with *gurbije* ‘cat’ as a third person singular feminine noun.

(44)	SR	gurbije	guſtem	moχp'rije
	UR	gorbie	guſt-em	me-oχor-ie
	Gloss	cat.F	meat.M-1S.GEN	IND-eat-3SF. AGR
		‘The cat eats my meat.’		

In the past tense, Tati transitive verbs are inflected for an agreement morpheme when their object argument is marked with a possessive marker. For instance, the verb *mo'χprtʃe* ‘was eating’ in (45)a is marked with *-e* as a third-person singular agreement morpheme showing verb agreement with the subject *gurbije* ‘the cat’ and the object *guſt* ‘the meat’ in (45)a below is marked with the first-person singular possessive marker *-em* and.²⁷ If the object in the past tense is not marked with a possessive marker, the agreement morpheme shifts to the object rather than being marked on the transitive verb itself. For instance, in (45)b the agreement morpheme *-ef* has shifted from the verb stem *-oχpr-* ‘eat’ to the object because the object *guſt* ‘the meat’ is not marked with a possessive marker. However, marking the verb with the agreement morpheme would produce an ungrammatical result, as shown in (45)c, because the object is marked with a possessive marker.²⁸

²⁶ *cat* in Tati is a grammatically feminine noun.

²⁷ This type of agreement pattern, with all its variations, is common in some other Iranian languages, such as Kurdish, and has been analyzed, by scholars such as Karimi (2012), as Split Ergativity.

²⁸ The second restriction is that, when using an intransitive version of a verb that takes an object argument by default, agreement needs to be marked on the verb, as shown below by (c).

(a)	SR	gurbije	mo'χprdeſe
	UR	gorbie	me-oχor-d-ef
	Gloss	cat.F	IND.IPFV-eat-PST-3S.AGR
		‘[It was] the cat was eating.’	

(45)

a.	SR	gurbijε	guʃtem	mo'χɔrtʃε
	UR	gorbiε	guʃt-em	me-oxor-d-εʃ
	Gloss	cat.F	meat.M.POSS.1S	IND.IPFV-eat-PST-3S.AGR
		'The cat was eating my meat.'		
b.	SR	gurbijε	guʃteʃ	mo'χɔrd
	UR	gorbiε	guʃt-εʃ	me-oxor-d
	Gloss	cat.F	meat.M.3S.AGR	IND.IPFV-eat-PST
		'The cat was eating meat.'		
c.	SR	*gurbijε	guʃtemeʃ	mo'χɔrd
	UR	gorbiε	guʃt-em-εʃ	me-oxor-d
	Gloss	cat.F	meat.M.POSS.1S-3S.AGR	IND.IPFV-eat-PST
		*‘The cat was eating my meat.’		

This phenomenon (*agreement shift*) is used in this section for proving the mono-eventivity of Tati verbal series. This test predicts that transitivized verbs in the *past* tense in Tati SVCs have a single value for agreement morphemes. This prediction is tested out in (46), wherein three verbs share a single agreement morpheme (*-εʃ*). This morpheme refers to the third person singular agent *ferε* ‘the boy’ and is marked on the internal argument *ærdæke* ‘duck.’

(46)	SR	ferε	ærdækɔʃ	o'gord	be'bε
	UR	ferε	ærdæke-e-εʃ	o-gor-d	be-bær-d
	Gloss	boy.M	duck.F-DEF-3S.AGR	PV-pick_up-PST	PV-carry_away-PST
	Role	agent	undergoer	contact	Path
	SR	ɒ'no	loni	mon	
	UR	ɒ-n-vi	lonε-e	inside	
	Gloss	PV-put-PST	nest-GENinside		
	Role	resultative	(Xp _{Loc})	
		'The boy [pick_up] carried [put] the duck into the nest.'			

On the other hand, independent agreement morphemes for each verb in (46) produce a juxtaposition of three unrelated events shown by (47), which are ungrammatical for a mono-eventive interpretation in (b).²⁹

²⁹ Note that agreement in the first construct has been shifted to the internal argument *ærdæke* ‘duck’ within the event boundary.

- (47)
- | | | | | |
|-------|-------|-------------------|----------------|--------------------------|
| SR | ferɛ | ærdækɒf | o'gord | be'bærtʃɛ |
| UR | ferɛ | ærdækɛ-e-ɛf | o-gor-d | be-bær-d-ɛf |
| Gloss | boy.M | duck.F-DEF-3S.AGR | PV-pick_up-PST | PV-carry_away-PST-3S.AGR |
| Role | agent | undergoer | contact | Path |
-
- | | | | |
|-------|-------------------|--------------------|--------|
| SR | ɒ'niʃɛ | loni | mon |
| UR | ɒ-n-di-ɛf | lonɛ-e | inside |
| Gloss | PV-put-PST-3S.AGR | nest-3S.GEN | inside |
| Role | resultative | (X _{pLoc} |) |
- a. 'The boy picked up the duck, carried (?), (and) put (?) in the nest.'
- b. # 'The boy [pick up] carried [put] the duck in the nest.'

The grammaticality of the series of verbs in (46) with a single agreement marker provides further evidence for considering the series of verbs in this example as mono-eventive. However, the scope of this test is limited to the past tense and to the transitive verbs in a series. In other cases where the tense value related to the event is *present* or the event is made of intransitive verbs that require being marked with an agreement morpheme, the tests previously introduced for tense, aspect, and negation will provide evidence for their mono-eventivity. In addition, the Single-Prosodic-Unit test discussed below can distinguish between SVCs and bi-clausal/multi-clausal utterances. One example is the mono-eventive SVC in (48) in which each verb is marked with an agreement morpheme (-e) referring to the subject *ferɛ* 'the boy' as a third person singular masculine noun, but the multiplicity of marking for agreement morphemes does not produce multi-clausality, indicated in (b).

- (48)
- | | | | | |
|-------|-------|------------|------------------------|------------------------|
| SR | ferɛ | ærdækɛ | o'ngore | mebæ're |
| UR | ferɛ | ærdækɛ | o-m-gor-e | me-bær-e |
| Gloss | boy.M | duck.F.DEF | PV-IND-pick_up.PRS-3SM | IND-carry_away.PRS-3SM |
| Role | agent | undergoer | contact | Path |
-
- | | | | |
|-------|--------------------|--------------------|--------|
| SR | ɒni'je | loni | mon |
| UR | ɒ-m-mɛ-e | lonɛ-e | inside |
| Gloss | PV-IND-put.PRS-3SM | nest-3S.GEN | inside |
| Role | resultative | (X _{pLoc} |) |
- a. 'The boy [pick up] carries [put] the duck into the nest.'
- b. # 'The boy picks up the duck, carries (?), (and) puts (?) in the nest.'

2.4 Single Prosodic Unit

According to Aikhenvald (2006), the intonational properties of SVCs are similar to the properties of mono-verbal clauses, which distinguishes between them and multi-clausal utterances. Consider example (16), repeated below for convenience in (49).

- (49)
- | | | |
|-------|------------------------|----------|
| SR | 'bi | 'beʃɛ |
| UR | be-v-∅ | be-ʃ-∅ |
| Gloss | PV-come-2s | PV-go-2s |
| Role | exclamation | Path |
| a. | 'You can/must go now!' | |
| b. | #Come!, (and) Go! | |

Example (49) is a mono-eventive verbal series with an imperative illocutionary force (i.e., interpretation [a]). This example is pronounced as a single prosodic unit, as shown below in Figure 2.2 (a). An alternative bi-clausal rendering of the sequence in (49) includes interpretation (b), whose clausal boundary is phonetically marked through a pause between the verbs (*bi* 'come' and *beʃɛ* 'go'), as shown by Figure 2.2 (b). Another alternative is to mark the clausal boundary through a sudden fall of the pitch level on the first verb (*'bi* 'come'), as shown by Figure 2.2 (c). On the other hand, the lack of such clausal boundary markers for pronouncing (49) distinguishes it as mono-eventive³⁰.

³⁰ This utterance was produced by the researcher herself and the naturality of speech was checked with the participants of this study.

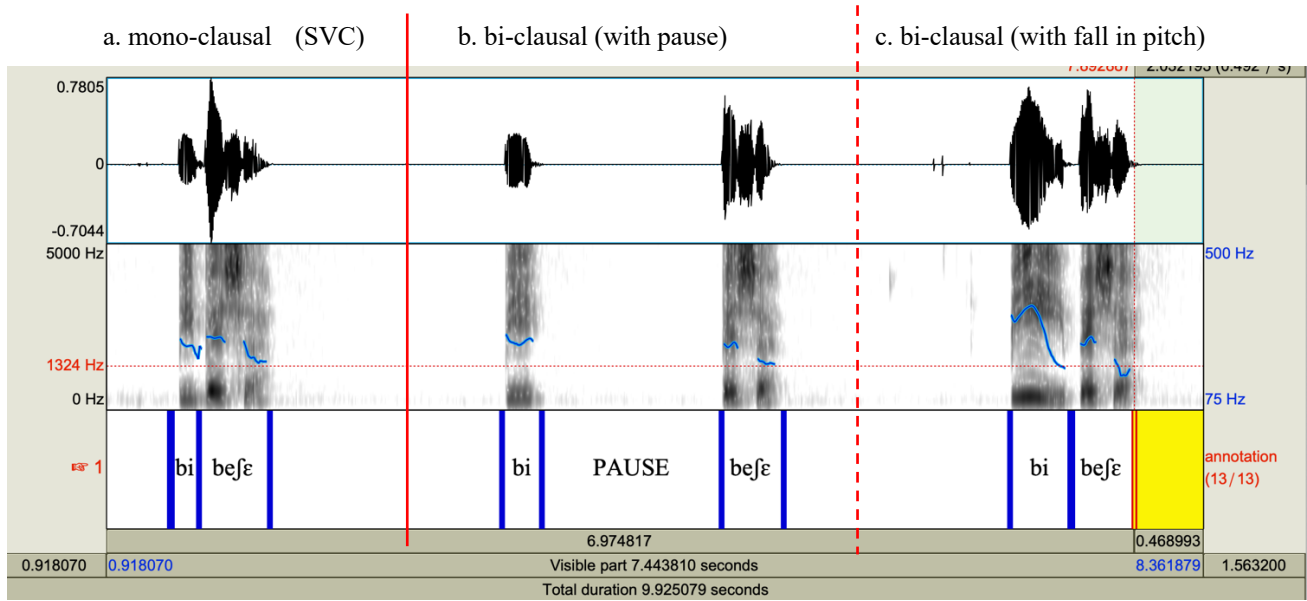


Figure 2.2 PRAAT representation for example (49)

Similar to (49) and as shown by Figure 2.2 (a), all the mono-eventive verbal series in this study, including our original SVC in (1), are pronounced using a single phonological phrase.³¹ On the other hand, using either a pause between verbs or a pitch change on a verb will produce bi-clausal/multi-clausal interpretations. For instance, a speaker of Tati (with initials NT) read example (12), repeated below in (50), with both its mono-clausal interpretation in (a) and its bi-clausal interpretation in (b).³²

- (50)
- | | | | | |
|-------|-----------------------------------------------|--------------|----------------|--------------------|
| SR | ferɛ | ærdækɒf | o'go | bæ'fæ |
| UR | ferɛ | ærdækɛ-f | o-gor-d | be-ʃɛi-Ø |
| Gloss | boy | duck-3S. AGR | PV-pick_up-PST | PV-go.PST-3S.M.AGR |
| Role | agent | undergoer | contact | Path |
| | a. 'The boy carried the duck away.' | | | |
| | b. # The boy picked up the duck, (and) went.' | | | |

³¹ This needs to be checked with the participants of this study and other speakers of Tati.

³² Two scenarios were made to elicit the actual and bi-clausal readings for this example: For reading (a), the participant was asked to read the sentence considering it as a single task done by the boy at once, and for reading (b), the participant read the actions related to the verbs *o'go* 'went' and *bæ'fæ* 'went' as being unrelated and denoting two separate actions whether both actions were done by the boy or by the boy and another person.

Figure 2.3 provides an acoustic representation of these two readings produced by PRAAT. As shown by Figure 2.3, the verbs *o'go* 'went' and *bæ'fæ* 'went' in the unavailable interpretation (b) related to (50) are pronounced using an intermediate pause between them that marks the clausal boundary and hence produces bi-clausality. On the other hand, the absence of such a pause in the expected reading of (50) in (a), produces a mono-eventive reading.

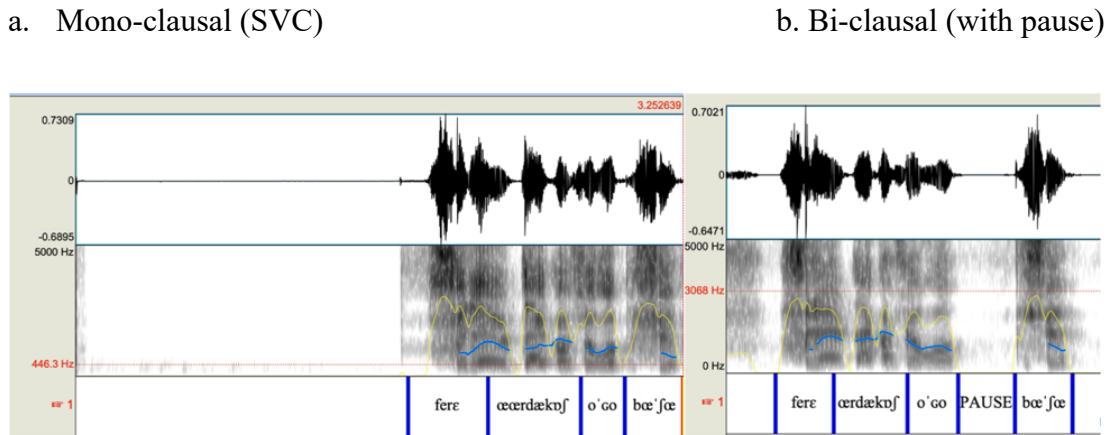


Figure 2.3 PRAAT representation for example (50)

The reliability of the acoustic properties for distinguishing mono-clausal constructions from multi-clausal ones needs to be verified through a systematic analysis of more examples produced by other Tati speakers. Additionally, this analysis is limited to the distinctions between SVCs and the multi-clausal coordinations that have null conjunctions. In other cases where coordinations include overt conjunctions or in cases of subordination constructions, clausal boundaries in the form of pause/rise in pitch might not exist.

2.5 Lack of *pro*

Since Tati is a *pro*-drop language, Tati SVCs might look like clause-chaining CPs with *pro* that are multi-clausal, as shown by (51). In other words, the sequence of verbs in a given Tati SVC

might be discussed as a sequence of independent CPs, each with *pro_i* as their subject, which is co-indexed with the subject of the first clause *tittijē* ‘the girl.’

(51)	SR	*tittijē _i	tʃɛˈluʃj	oˈgo	<i>pro_i pro_j</i>	bʊˈʃin	<i>pro_i</i>	bæˈʃœ
	UR	titiē	tʃɛlu-e-ɛʃ	o-gor-d		be-ʊʃin-d		be-ʃei-Ø
	Gloss	girl.F	sparrow.M-INDEF-3S.AGR	PV-pick_up-PST		PV-throw-PST		PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact		separation		Path
	SR	<i>pro_i</i>	beræˈsæs	<i>pro_i</i>	ʊˈniʃ	deræχte		sær
	UR		be-ræs-æst-Ø		ʊ-niʃ-t-Ø	deræχt-e		sær
	Gloss		PV-reach-PST-3SM.AGR		PV-sit-PST-3SM.AGR	tree-K		top
	Role		telicity		resultative	(X _{pLoc})
		*‘The girl picked up the sparrow, threw (?), (and) (it/he) went, reached (it), (and) sat on the three.’						

As shown by (51), example (1)/(28), using *pro*’s for the agent *tittijē* ‘the girl’ and the undergoer *tʃɛlu* ‘the sparrow’ produces a pattern of agreement that is different from the agreement pattern in a mono-eventive reading whose agreement morpheme *-ɛʃ* would be shared between the stems *o-gor-* ‘pick up’ and *be-ʊʃin-* ‘threw’.

The verb stem *be-ʊʃin-* ‘threw’ in (51) would appear as *bʊˈʃindef* ‘threw’ in a mono-verbal event with a *pro* subject and a *pro* object, as shown by (52).

(52)	SR	<i>pro_i</i>	<i>pro_j</i>	be-ʊʃin-d-ɛʃ
	UR	<i>pro</i>	<i>pro</i>	PV-throw-PST-3S.AGR
	Role	subject	object	separation
		‘she/he/it threw (it).’		

If *be-ʊʃin-* ‘threw’ was inflected in (51) with a correct form with *pro*, the result would be grammatical with independent time constituents, as shown by (53) below, which provide further evidence for the multi-clausality of (51).

- (53)
- | | | | | | | | |
|-------|----------------------|----------------------|--|----------------|---------------------|-----------------------------------|-----------------|
| SR | tittijē _i | t̪ɛlu _j | | o'go | pejre | pro _i pro _j | bɒ'ʃintʃe |
| UR | titie | t̪ɛlu-e-ɛʃ | | o-gor-d | pərirə | | be-ŋʃin-d-ɛʃ |
| Gloss | girl.F | sparrow.M-DEF-3S.AGR | | PV-pick_up-PST | two days ago | | PV-throw-PST-3S |
| Role | agent | undergoer | | contact | | | separation |
-
- | | | | | | | | |
|-------|---------------------|------------------|-------------------|--|--------------|------------------|----------------------|
| SR | æzire | pro _j | bœ'ʃœ | | ærœ | pro _j | beræ'sæs |
| UR | æzire | | be-ʃei-Ø | | ærœ | | be-ræs-æst-Ø |
| Gloss | two days ago | | PV-go.PST-3SM.AGR | | today | | PV-reach-PST-3SM.AGR |
| Role | | | Path | | | | telicity |
-
- | | | | | | | | |
|-------|------------------|--------------------|--|----------------------|-----|--|--|
| SR | pro _j | v'niʃ | | deræχte | sær | | |
| UR | | v-niʃ-t-Ø | | deræχt-e | sær | | |
| Gloss | | PV-sit-PST-3SM.AGR | | tree-K | top | | |
| Role | | resultative | | (X _{pLOC}) | | | |
- 'The girl picked up the sparrow, threw (?) **two days ago**, (and) (it/he) went **yesterday**, reached (it) **today**, (and) sat on the three.'

Further evidence for ruling out a *pro*-drop analysis is that series of verbs like (28) still produce a grammatical result for mono-eventivity when they use a non-specific undergoer DP (*t̪ɛlu* 'sparrow'), as shown by (54).³³ This is relevant because *pro* can only be used with definite-specific references.

- (54)
- | | | | | | | |
|-------|---------|------------------|--|----------------|--------------|-------------------|
| SR | tittijē | t̪ɛluʃ | | o'go | bɒ'ʃin | bœ'ʃœ |
| UR | titie | t̪ɛlu-eʃ | | o-gor-d | be-ŋʃin-d | be-ʃei-Ø |
| Gloss | girl.F | sparrow.M-3S.AGR | | PV-pick_up-PST | PV-throw-PST | PV-go.PST-3SM.AGR |
| Role | agent | undergoer | | contact | separation | Path |
-
- | | | | | | | |
|-------|----------------------|--------------------|--|----------------------|-----|--|
| SR | beræ'sæs | v'niʃ | | deræχte | sær | |
| UR | be-ræs-æst-Ø | v-niʃ-t-Ø | | deræχt-e | sær | |
| Gloss | PV-reach-PST-3SM.AGR | PV-sit-PST-3SM.AGR | | tree-K | top | |
| Role | telicity | resultative | | (X _{pLOC}) | | |
- 'The girl [pick_up] threw **sparrows** [go] [reach] [sit] on the tree top.'

The example above is mono-eventive with a generic interpretation for the non-specific undergoer *t̪ɛlu* 'sparrows.' Since *pro* can only refer to a specific DP, the grammaticality of (55) with a non-specific DP-undergoer (*t̪ɛlu* 'sparrow') as the referent of *pro* for the undergoer, as shown in (54),

³³ Non-specificity of the undergoer DP *t̪ɛlu* 'sparrow' in this example is phonologically marked through a fall of its pitch on the stressed (second) syllable, which differentiates it from the specific DP-undergoer in (1) with a rise on its stressed syllable.

will rule out the existence of *pro* and hence chaining CP structures. This, in turn, will provide further evidence for considering the verbal series like (1) as mono-eventive.

The mono-eventivity of (54) can be confirmed by the fact that (54) can be modified only using one time constituent, which is associated with a single value for tense. The result of this test is shown by (55).

(55)	SR	tittijɛ	æzire	tʃɛluʃ	o'go	bɒ'ʃɪn	bœ'ʃœ
	UR	titie	æzire	tʃɛlu-ɛʃ	o-gor-d	be-ɒʃɪn-d	be-ʃɛi-Ø
	Gloss	girl.F	yesterday	sparrow.M- -3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent		undergoer	contact	separation	Path
	SR	beræ'sæs		ɒ'niʃ		deræχte	sær
	UR	be-ræs-æst-Ø		ɒ-niʃ-t-Ø		deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR		PV-sit-PST-3SM.AGR		tree-K	top
	Role	telicity		resultative		(Xp _{LOC})
		'The girl [pick_up] threw sparrows [go] [reach] [sit] on the tree top, yesterday.'					

2.6 Conclusion

This chapter provided evidence for hypothesis (11)a stated in CHAPTER 1 about the mono-eventivity of the verbal series expressing MPs. The evidence included five tests: Non-Compositionality of Meaning (2.1) Single Inflectional Spine (2.2), Single Agreement Morpheme (2.3), Single Prosodic Unit (2.4), and Lack of *pro* (2.5). These tests were used to rule out an explanation for the verbal series expressing Tati MPs based on pluri-clausal structures. CHAPTER 3 will provide evidence for an underlying complementation structure for the verbal series used to express MPs in southern Tati.

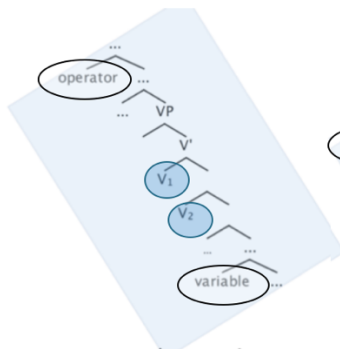
CHAPTER 3. COMPLEMENTATION STRUCTURE OF SVCS EXPRESSING MPS

Now that we have shown that Tati verbal series are mono-eventive serial constructions (CHAPTER 2), let us address their structure. This chapter provides evidence for hypothesis (b) in (11) stated in CHAPTER 1. According to hypothesis (b), the SVCs expressing MPs in Southern Tati are made of an underlying complementation structure. As such, this chapter eliminates a structure based on coordination or adjunction for verbal series expressing MPs in Southern Tati and, in line with Larson (1991), provides evidence for a structure based on complementation for them.

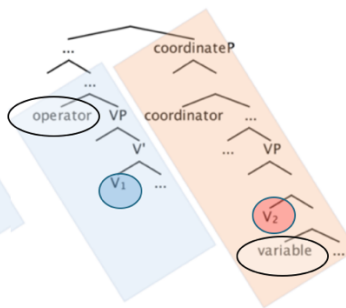
Following Larson (1991), the set of trees in (56) represent three potential underlying structures for Tati verbal series expressing MPs, namely complementation, coordination, and adjunction

(56)

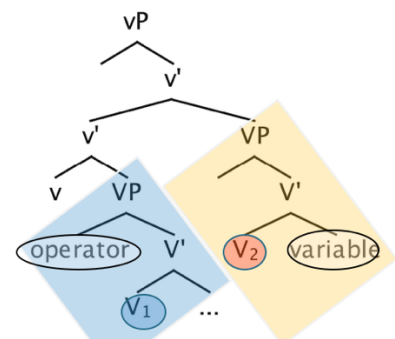
a. Complementation



b. Coordination



c. Adjunction



This chapter provides evidence for an underlying structure for Tati MPs expressed by a complementation-based SVC, as shown by (56)a above. A complementation structure for SVCs

predicts that higher positions in the structure will c-command lower positions, which results in the creation of a c-command domain (in blue). Therefore, an operator in a higher position will be able to c-command and bind a variable in the lower domain. On the other hand, alternative proposals, namely coordination in (56)b and adjunction in (56)c, predict that the operator-variable binding will not hold because the variable falls out of the scope of the operator (in the orange area).

Four tests, namely Bound-Variable, Negative-Concord-Item test, Subjunctive-under-Negation, and WH-extraction tests are used to provide evidence for an operator-variable binding relationship and hence an underlying complementation structure for Tati MPs expressed through SVCs. These tests rule out a structure based on coordination or adjunction for Tati SVCs because c-command fails to hold under those circumstances.

3.1 Bound-variable Test

This test is based on the c-command relationship between an operator and a variable and supposes that an operator is able to bind a variable because the variable falls within the c-command domain of the operator in a structural relationship. This relationship arises in a complementation structure but not in a coordination or adjunction structure. Related to this premise, we would expect that, in (57) below, that the variable *χoftænæref* ‘himself/herself’ is bound by the operator *hær* ‘each’ and results in an interpretation that each person has his/her own personal life.

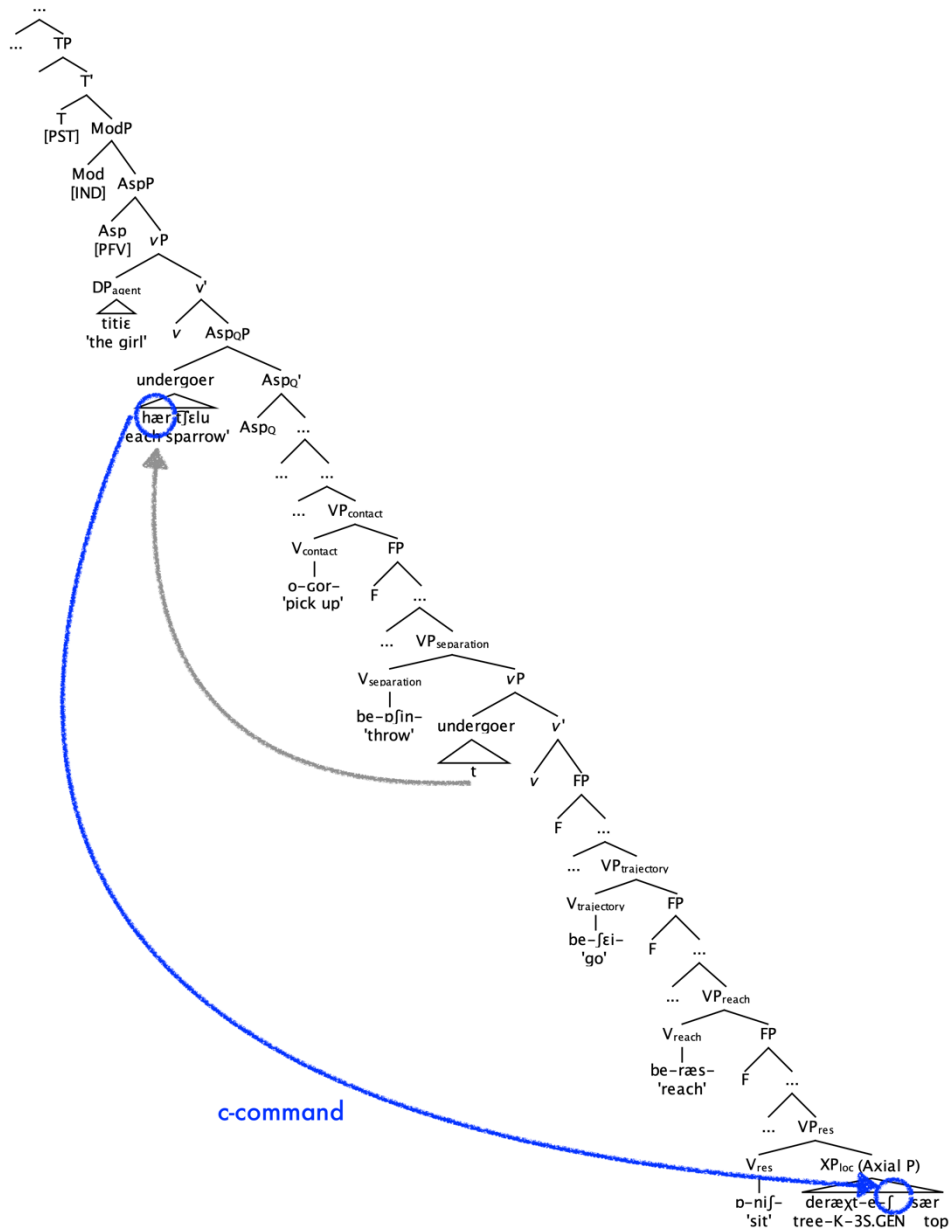
(57)	SR	hærɛ	χoftænæref	zendɛi	de're
	UR	hær-kɛ	χoftæn-ær-ɛf	zendɛi	der-e
	Gloss	each-person	self-ACC-3S	life	have.PRS-3S.M
		‘Each person has his/her own life.’			

According to the baseline set in (57), a complementation structure for Tati verbal series predicts that a variable lower in the structure of a Tati verbal series will be bound by an operator higher in the structure. Specifically, this test predicts that a pronoun lower in the structure will produce a grammatical one-to-one correspondence interpretation with the operator *hær* ‘each.’ Applying this test to our verbal series in (1) with the pronoun *-eʃ* as a variable on XP_{Loc} and *hær* ‘each’ as an operator modifying the undergoer *tʃɛlu* ‘the sparrow,’ we see that a grammatical result arises. The result of the test is shown by (58).

(58)	SR	tittije	hær	tʃɛluʃ	o'go	bɒ'ʃɪn	bœ'ʃœ
	UR	titie	hær	tʃɛlu-e-eʃ	o-gor-d	be-ɒʃɪn-d	be-ʃɛi-Ø
	Gloss	girl.F	each	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent		undergoer	contact	separation	Path
	SR	beræ'sæs		ɒ'niʃ		deræχteʃ	sær
	UR	be-ræs-æst-Ø		ɒ-niʃ-t-Ø		deræχt-e-eʃ	sær
	Gloss	PV-reach-PST-3SM.AGR		PV-sit-PST-3SM.AGR		tree-K-3S.GEN	top
	Role	telicity		resultative		(XP_{Loc})
		‘The girl [pick_up] threw each sparrow [go] [reach] [sit] on its tree top.’					

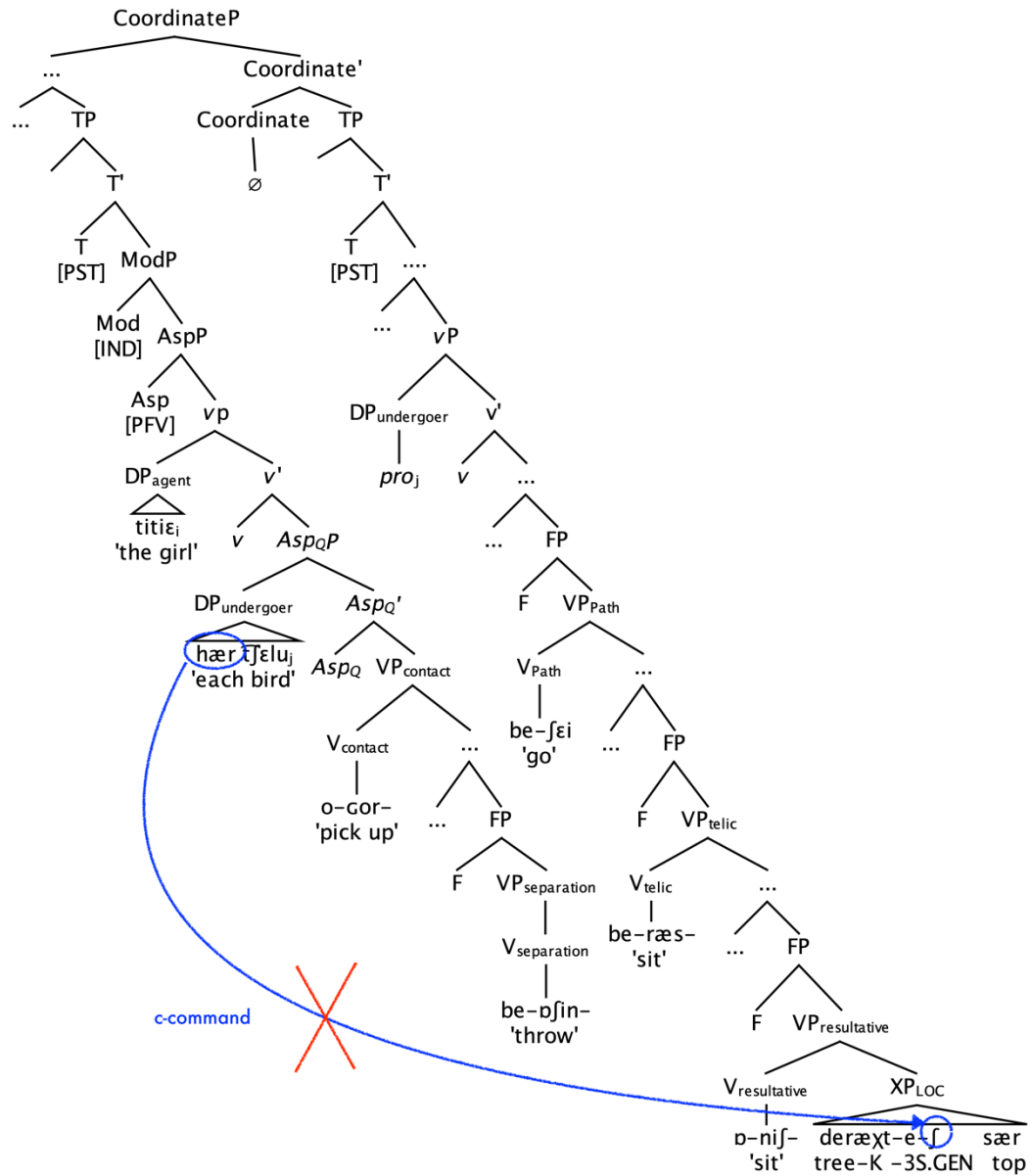
The grammaticality of (58) with the operator and the variable thus shows that the operator *hær* ‘each’ is able to bind the variable pronoun *-eʃ*, which in turn indicates that the variable is within the c-command domain of the operator, as shown by (59).

(59)



The existence of the operator-variable binding in (58), as shown by (59), proves our claim that the series of verbs in (1) is made of a complementation structure. On the other hand, a structure based on coordination for the verbal series in (1), as shown below in (60), predicts that the operator *hær* ‘each’ would not be able to bind the variable pronoun *-ef* because the variable would fall out of the c-command domain of the operator and in a separate clause.

(60)



The prediction above is played out in the example below in (61), wherein the coordinating conjunction *vm̃mv* ‘but’ breaks the event in our original SVC in (1) into two separate clauses, as shown by its expected interpretation in (a). As a result, (61) does not convey an interpretation with a one-to-one correspondence reading (b) in which each sparrow sits on its associated tree. This

provides further evidence for the existence of a complementation structure for Tati verbal series since the complementation, but not the coordination, provides an underlying structure where the appropriate binding can happen.

(61)	SR	tittije	hær	tʃɛluʃ	o'go	bɒʃin	ommo
	UR	titie	hær	tʃɛlu-e-ɛʃ	o-gor-d	be-ɒʃin-d	ɒsɒn
	Gloss	girl.F	each	sparrow.M-DEF-3S. AGR	PV-pick_up-PST	PV-throw-PST	then
	Role	agent		undergoer	contact	separation	conjunction
	SR	bœ'ʃœ		beræ'sæs	ɒ'niʃ	deræχteʃ	sær
	UR	be-ʃei-∅		be-ræs-æst-∅	ɒ-niʃ-t-∅	deræχt-e-ɛʃ	sær
	Gloss	PV-go.PST-3SM. AGR		PV-reach-PST-3SM. AGR	PV-sit-PST-3SM. AGR	tree-K-3S.GEN	top
	Role	Path		telicity	resultative	(X _{pLOC})	
		a. 'The girl [pick_up] threw each _i sparrow but (he/it) went [reach] [sit] on his _j /her _k /its _i tree top.'					
		b. #'The girl [pick_up] threw each _i sparrow [go] [reach] [sit] on its _i tree.'					

3.2 Negative-Concord-Item test

The Negative-Concord Item (NCI) in Tati *hetʃ* 'any' requires being licensed by a c-commanding operator (either as a negator or a Q operator) in non-elliptical contexts.³⁴ An example is (62)a wherein the NCI *hetʃ* 'any' is licensed by the negator *ne-* marked on the verb stem *-vin-* 'see.' On

³⁴ Negation has not been studied closely in Southern Tati. However, Kwak (2010) analyzed negation in Persian and divided Negative-Sensitive Items (which require being licensed by a negative marker) into two groups: Negative Polarity Items (NPIs) such as *dige* 'anymore' and Negative Concord Items (NCI) such as *hiʃ* 'any'. The Negative-Sensitive Item *hetʃ* 'any' in Tati, which is very similar in its meaning and distribution to *hiʃ* 'any' in Persian, is analyzed in this study as an NCI rather than an NPI. Evidence provided for this claim is along with Kwak (2010) for Persian: *hetʃ* 'any' in Tati can appear as an elliptical answer (e.g., in [a] below), can be used preverbally in the subject position (e.g., in [b] below), cannot be used in non-negative contexts (e.g., in (62)b in this section), and cannot be licensed across a clause boundary (e.g., in (63) in this section).

- (a) SR *hetʃ* [-em 'noχp]
 UR *hetʃ* [-em ne-oχpr-d]
 Gloss any [1S.AGR NEG-eat-PST]
 'Nothing! [I ate]
- (b) SR *heʃke* 'nomε
 UR *hetʃ-kæs* ne-omεi-∅
 Gloss any-person NEG-come.PST-3SM
 'Nobody came.'

the other hand, (62)b is ungrammatical because of the absence of a licensing negator for the NCI

hetf ‘any.’³⁵

(62)

b.	SR	æz	'neʃejm	<i>hetf</i>	jɔɔɔ
	UR	æz	ne-ʃei-m	<i>hetf</i>	jɔɔɔ
	Gloss	1S.AGR	NEG-go.PST-1S	any	place
	Role	undergoer	Path	NEG	XP _{Loc}
		'I did not go anywhere.'			


b.	SR	*æz	<i>hetf</i> kæsem	'vind
	UR	æz	hetf -kæs-em	vin-d
	UR	1S.AGR	any.PI-body-1S: AGR	see.PST
		*‘I saw anybody.’		

Now consider (63) in which two clauses are coordinated using the conjunction *ɔmmɔ* ‘but.’ Based on what was established in (62), the PI *hetf* ‘any’ in the second construction in (63) does not create a grammatical result with the negator *ne-* in the first construction due to a coordinator that interrupts the NEG-PI c-command.

(63)	SR	*æz	'nomɛime	<i>ɔmmɔ</i>	<i>hetf</i> kæsem	'vin-d
	UR	æz	ne-om-mɛ	<i>ɔmmɔ</i>	<i>hetf</i> -kæs-em	vin-d
	Gloss	1S.AGR	NEG-come.PST-1S.AGR	but.CONJ	any.PI-body-1S.AGR	see.PST
		* I did not come but I saw anybody.'				

The ungrammaticality of (63) shows that the NCI *hetf* ‘any’ requires being licensed by an operator. With the above point established, a complementation structure for Tati verbal series expressing MPs predicts that an NCI lower in the structure will produce a grammatical utterance with a negator introduced higher up in the inflectional spine of the event structure due to a NEG-NCI

³⁵ An example for licensing *hetf* using a Q operator is in (c).

(c)	SR	<i>hetf</i> -kɛ	bo'mɛ	mæmoni	
	UR	<i>hetf</i> -kæs	be-o'mɛi-Ø	mæmoni	Q
	Gloss	any-body	PV-come-3S.M.AGR	party	Q
		'Did anybody come to the party?.'			

binding.³⁶ This is shown to be true in our series of verbs in (1). The NCI *hitf* ‘any’ modifying the XP_{Loc} *deræhte sær* ‘on the tree top’ will produce a grammatical result with the negator (*ne-*) marked on the highest verb. The result of the NCI test in (1) is shown by (64)a, with its associated structure in (64)b.

(64)

a.	SR	tittije	t̪ɛluʃ		o'-no-go		'bɒʃɪniʃe
	UR	titie	t̪ɛlu-e-eʃ		o- ne -gor-d		be-ɒʃɪn-ie
	Gloss	girl.F	sparrow.M-DEF-3S. AGR		PV-NEG-pick_up-PST		PV. SBJV -throw-3SF. AGR
	Role	agent	undergoer		contact		separation
	SR	'biʃu		'beræse		'ɒniʃɪne	
	UR	be-ʃ-u		be-ræs-e		ɒ-niʃɪn-e	
	Gloss	PV.SBJV-go-3SM. AGR		PV.SBJV-reach-3SM. AGR		PV-sit-3SM. AGR	
	Role	Path		telicity		resultative	
	SR	het̪ɛ	deræhte	sær			
	UR	het̪ɛ	deræht-e	sær			
	Gloss	any.PI	tree-K	top			
	Role		(XP_{Loc})				
		‘The girl did not [pick_up] throw the sparrow [go] [reach] [sit_on] any tree top.					

³⁶ Note that marking any verb stems other than the highest stem *o-gor-* ‘pick up’ with negation would break the mono-eventivity of (1).

b.



As (64)b indicates, the negator *ne-* c-commands the NCI *hetʃ* ‘any’ in its c-command domain.

This, in turn, proves that the verb series *boʃin* ‘threw,’ *bæʃæ* ‘went’ *beræʃæs* ‘reached’ and *ɔ-niʃ* ‘sat’ in the series of verbs in (1) merge in a complementation structure. On the other hand, (64)b predicts that, in a structure based on coordination (such as (65)a below), the NCI *hetʃ* ‘any’ in the

second (coordinated) construct produces an ungrammatical result with negation *ne-* in the first construct due to a lack of c-command between the negator and the NCI. This prediction proves true, as introducing a coordinating conjunction like *þm̃mv* ‘but’ will break the NEG-PI binding relationship. As a result, an ungrammatical result will arise, which is shown by (65)b below.

(65)

a.



b.	SR	*tittije	t̪ɛluʃ	o' nogo	'bɔʃiniɛ	ɒmmɒ
	UR	titie	t̪ɛlu-e-ɛʃ	o- ne -gor-d	be-ɔʃin-iɛ	ɒmmɒ
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	PV-throw.PRS-3SF.AGR	but.CONJ
	Role	agent	undergoer	contact	separation	
	SR	bœ'ʃœ		beræ'sæs	ɒ'niʃ	
	UR	be-ʃɛi-Ø		be-ræs-æst-Ø	ɒ-niʃ-t-Ø	
	Gloss	PV-go.PST-3SM.AGR		PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	
	Role	Path		telicity	resultative	
	SR		het̪ʃ	deræχte sær		
	UR		het̪ʃ	deræχt-e sær		
	Gloss	any.PI		tree-K top		
	Role			(Xp _{LOC})		

*‘The girl did not [pick_up] throw the sparrow but (it/he) went [reach] [sit] on any tree top.’

The ungrammaticality of (65)b provides further evidence for ruling out an underlying structure other than complementation for Tati MPs expressed by SVCs.

3.3 Subjunctive-Under-Negation test

Consider (41) as the negated form of (1), which is repeated in (66)a. The structure associated with (41) is represented by (66)b.

(66)

a.	SR	tittije	t̪ɛluʃ	o'-no-go	'bɔʃiniɛ	
	UR	titie	t̪ɛlu-e-ɛʃ	o- ne -gor-d	be-ɔʃin-iɛ	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	SBJV -throw-3SF.AGR	
	Role	agent	undergoer	contact	separation	
	SR	'bɪʃu	'beræse	'ɒniʃine	deræχte	sær
	UR	be-ʃ-u	be-ræs-e	ɒ-niʃin-e	deræχt-e	sær
	Gloss	SBJV -go-3SM.AGR	SBJV -reach-3SM.AGR	SBJV-sit-3SM.AGR	tree-K	top
	Role	Path	telicity	resultative	(Xp _{LOC}))

‘The girl did not [pick_up] throw the sparrow [go] [reach] [sit] on the tree top.’

modality.³⁷ On the other hand, the lower verb stems *be-ƒei-* ‘go’ and *be-ræs-* ‘reach’, and *v-niƒ-* ‘sit’ move up to the functional head above each of them for being inflected for the indicative modality within the scope of negation.³⁸ This, therefore, provides a piece of evidence for hypothesis (b) in (11) that the series of verbs in Tati MPs are made based on a complementation structure.

Note that negation in (66)a has scope over the whole event, as shown in 2.2.3, and negates the action related to all the stems below it (*be-vƒin-* ‘throw,’ *be-ƒei-* ‘go,’ *be-ræs-* ‘reach,’ and *v-niƒ-* ‘sit’). Consequently, marking any of the stems below NEG with its original indicative modality in (1) (indicative), would intervene in the scope of negation on that stem and would produce ungrammaticality. One example of this is found in (67).

(67)	*SR	tittijɛ	tʃɛluʃ	o'nogo	bɒ'ʃin	bæ'ʃœ
	UR	titie	tʃɛlu-e-eʃ	o-ne-gor-d	be-vʃin-d	be-ƒei-Ø
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	v'nijʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	v-nijʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{LOC})	
	*‘The girl did not pick up the sparrow, (and) threw (it) [go] [reach] [sit] on the tree top.’					

As shown in (67), although the highest verb *o'go* ‘picked up’ is marked with negation, the subsequent verbs (*bæʃœ* ‘went’, *beræ'sæs* ‘reached,’ and *vnijʃ* ‘sat’) are not marked with subjunctive modality. Instead, they are all marked with indicative modality. Therefore, this example is ungrammatical.

³⁷ Presumably, the highest stem *o-gor-* ‘pick up’ is first attracted by the negative morpheme *ne-* and then moves up to the modality head, where it is immune to negation due to being out of (above) the scope of negation. This explains why the highest stem is not marked by the subjunctive-modality marker.

³⁸ Note that subjunctive modality is marked on Tati verbs by shifting verb stress from their stems onto the stem’s preverb.

Due to the appearance of subjunctive modality on the lower stems (*be-ɸin-* ‘throw,’ *be-ɸei-* ‘go,’ *be-ræs-* ‘reach, and *ɸ-ni/-* ‘sit’) in (66), it might be argued that each of these stems is embedded in a separate clause with an independent value for modality. Here, we use two pieces of evidence against this argument to show that subjunctive modality is only a morphological byproduct of c-command by the negative morpheme (*-ne*) on the lower stems. As such, subjunctive modality on the lower stems as a result of negation shows, similarly to Aboh (2009), that those stems are embedded within functional projections (FPs), we show that the heads of those FPs do not have real values for modality.

First, a change from indicative to subjunctive modality is very common in some other languages, including Basque and Spanish. The example in (68) below demonstrates how negation (*no*) produces subjunctivity on the verb in the embedded clause, i.e., *venga* ‘come.’³⁹

(68)

- a. creo que viene mañana
 think.1s that come.3S.IND tomorrow
 ‘I think he comes tomorrow.’
- b. no creo que venga mañana
 NEG think.1s that come.3S.SBJV tomorrow
 ‘I don’t think he comes tomorrow.’

Second, it might still be argued that Subjunctive under Negation in Tati verbal series like (67) produces embedded clauses (i.e., multi-clausality), as shown in (68) for Spanish, and does not preserve the mono-eventivity of the series. However, in opposition to this argument, knowing the larger context of the event expressed by (66)a, this example can have two possible interpretations,

³⁹ For an analysis of Subjunctive under Negation, see Laka (1990) among many others.

which correspond to two different structures: one as an SVC (interpretation (a) in (69)) and the other as a multiclausal unit with embedded purpose clauses (interpretation (b) in (69)).

(69)	SR	tittijɛ	tʃɛluʃ	o'-no-go	'bɔʃiniɛ	
	UR	titie	tʃɛlu-e-ɛʃ	o- ne -gor-d	be-ɔʃin-iɛ	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	SBJV -throw-3SF.AGR	
	Role	agent	undergoer	contact	separation	
	SR	'bifu	'beræse	'ɔniʃine	deræχte	sær
	UR	be-ʃ-u	be-ræs-e	ɔ-niʃin-e	deræχt-e	sær
	Gloss	SBJV -go-3SM.AGR	SBJV -reach-3SM.AGR	SBJV -sit-3SM.AGR	tree-K	top
	Role	Path	telicity	resultative	(X _{pLOC})
	a.	'The girl did not [pick_up] throw the sparrow [go] [reach] [sit] on the tree top.'				
	b.	'The girl did not pick up the sparrow, to throw it, (for the sparrow) to go, to reach, and to sit on tree top.'				

If we take the negation out of (69) under its SVC interpretation in (a), the subjunctive modality markers on the stems *be-ɔʃin*- 'throw,' *be-ʃei*- 'go,' *be-ræs*- 'reach, and *ɔ-niʃ*- 'sit' disappear, as shown below in (70)a (our original SVC in (1)). On the other hand, taking negation out of (69) under its multiclausal interpretation in (b), will retain the subjunctive markers, as shown by (70)b.

(70)

a.	SR	tittijɛ	tʃɛluʃ	o' go	bɔ'ʃin	bæ'ʃæ
	UR	titie	tʃɛlu-eʃ	o-gor-d	be-ɔʃin-d	be-ʃei-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɔ'niʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	ɔ-niʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-GEN top		
	Role	telicity	resultative	(X _{pLOC})	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

b.	SR	tittije	t̪ɛluʃ	o'go	'bɔʃɪniʃe	
	UR	titie	t̪ɛlu-e-eʃ	o-gor-d	be-ɔʃɪn-ie	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	SBJV -throw-3SF.AGR	
	Role	agent	undergoer	contact	separation	
	SR	'bɪʃu		'beræse	'ɒniʃɪne	deræɣte
	UR	be-ʃ-u		be-ræs-e	ɒ-niʃɪn-e	deræɣt-e
	Gloss	SBJV -go-3SM.AGR		SBJV -reach-3SM.AGR	SBJV -sit-3SM.AGR	tree-K
	Role	Path		telicity	resultative	(X _{pLoc})
		'The girl picked up the sparrow to throw (it), (and for the sparrow) to go, to reach, and to sit on the tree top.'				

In interpretation (b) in (69), the absence of negation does not influence the presence of subjunctive modality on the verb stems, as shown by (70)b. Thus, we conclude that subjunctive modality on the embedded verbs has a real value in this interpretation. On the other hand, since in interpretation (a) in (69) the absence of negation results in the absence of subjunctive modality on the verbal stems, as shown by (70)a, we conclude that subjunctive modality on the lower verb stems does not have a real value for modality.⁴⁰

In the same vein, taking negation out of (68)b will result in (71) below, wherein the verb *viene* ‘comes’ has indicative rather than subjunctive modality. This shows that subjunctive modality on *venga* ‘come’ in (68) does not have a real independent value. Instead, it has been produced as a result of negation.

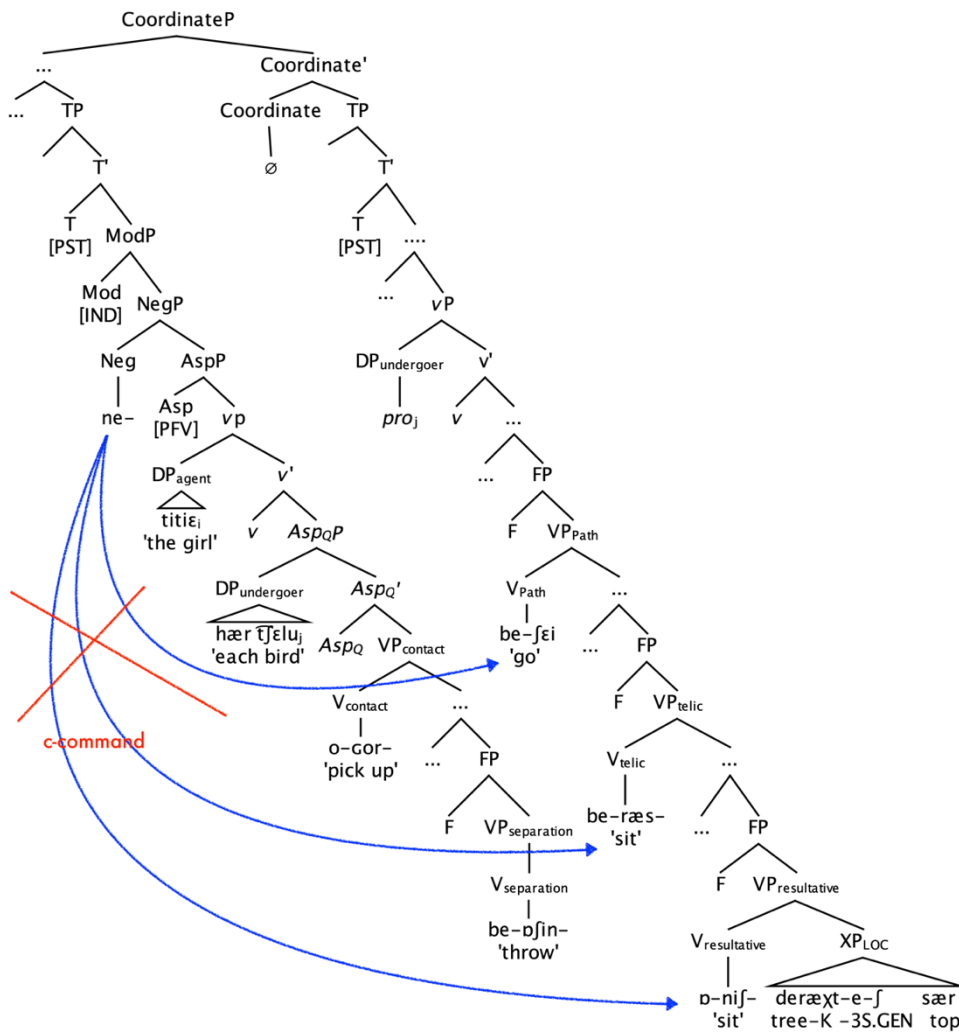
(71)	Creo	que	viene	mañana
	think.1S	that	come.3S.IND	tomorrow
	‘I think he comes tomorrow.’			

⁴⁰ As shown by (69), Tati uses subjunctive modality to encode two separate meanings: (a) the influence of the scope of negation, and (b) to encode a sense of *purpose* for the action related verbs marked with subjunctivity. While the latter case is structurally analyzed in this study as producing an embedded clause for each verb used with a *purpose* sense (e.g., ‘*bifu* ‘to go’ in (69) b), the former case is analyzed as preserving mono-eventivity. Therefore, subjunctive modality marked on the stems in the scope of negation is supposed to be represented, along the lines of Aboh (2009), as a functional head above each of the stems in the scope of negation, rather than producing separate (embedded) clauses (TPs).

In addition, (66)b predicts that introducing a coordinating conjunction between *be-ɒʃin-* ‘throw’ and the stems below it interrupts the operation-variable binding relationship because it leaves the lower stems out of the scope of the negator *ne-*. This prediction is shown below in (72)a. This prediction proves true in (72)b below, as adjusting (67) with the coordinator *ɒmmɒ* ‘but’ causes the stems *be-fɛi-* ‘go’ and *be-ræs-* ‘reach’ not to be marked with subjunctive markers.

(72)

a.



b.

c.	SR	tittije	tʃeluf	o'nogo	'bɔʃinije
	UR	titie	tʃelu-e-ef	o-ne-gor-d	be-ɲʃin-ie
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	PV.SBJV-throw.PRS-3SF.AGR
	Role	agent	undergoer	contact	separation
	SR	ɒmmɒ	bæ'fœ		beræ'sæs
	UR	ɒmmɒ	be-ʃei-Ø		be-ræs-æst-Ø
	Gloss	but.CONJ	PV-go.IND.PST-3SM.AGR	PV-reach.IND-PST-3SM.AGR	
	Role		Path		telicity
	SR	v'niʃ	deræχte sær		
	UR	v-niʃ-t-Ø	deræχt-e sær		
	Gloss	PV-sit.IND-PST-3SM.AGR	tree-K top		
	Role	resultative	(Xp _{Loc})		
		'The girl did not [pick_up] throw the sparrow but (it/he) went [reach] [sit] on the tree top.'			

As the structure in (72)a shows, the negator *ne-* c-commands the stems *o-go-* ‘pick_up’ and *b-ɲʃin-* ‘throw.’ Therefore, the result of this c-command relation is spelled out in (72)b through marking *o-go-* ‘pick_up’ with the negator and *b-ɲʃin-* ‘throw’ with subjunctive modality. On the other hand, (72)b indicates that the negator *ne-* does not have scope over the construct containing the verb stems *be-ʃei-* ‘go,’ *be-ræs-* ‘reach,’ and *v-niʃ-* ‘sit’ due to an intervening coordinator, and this lack of c-command produces indicative, rather than subjunctive, modality on these stems in (72)b. This reasoning rules out a structure based on coordination for Tati MPs expressed by SVCs and, in turn, confirms hypothesis (b) in (11).

3.4 WH-extraction test

As shown earlier in (56)c, in a structure based on the adjunction of VPs, negative morpheme *ne-* would be too high in the hierarchical structure and therefore would have its scope over all verbal stems. As a result, the Subjunctive-under-Negation test would not distinguish SVCs from adjunctions. However, WH- question formation can help us in ruling out a structure based on adjunction for MPs expressed by SVCs. This is because WH-extraction out of an adjunct structure

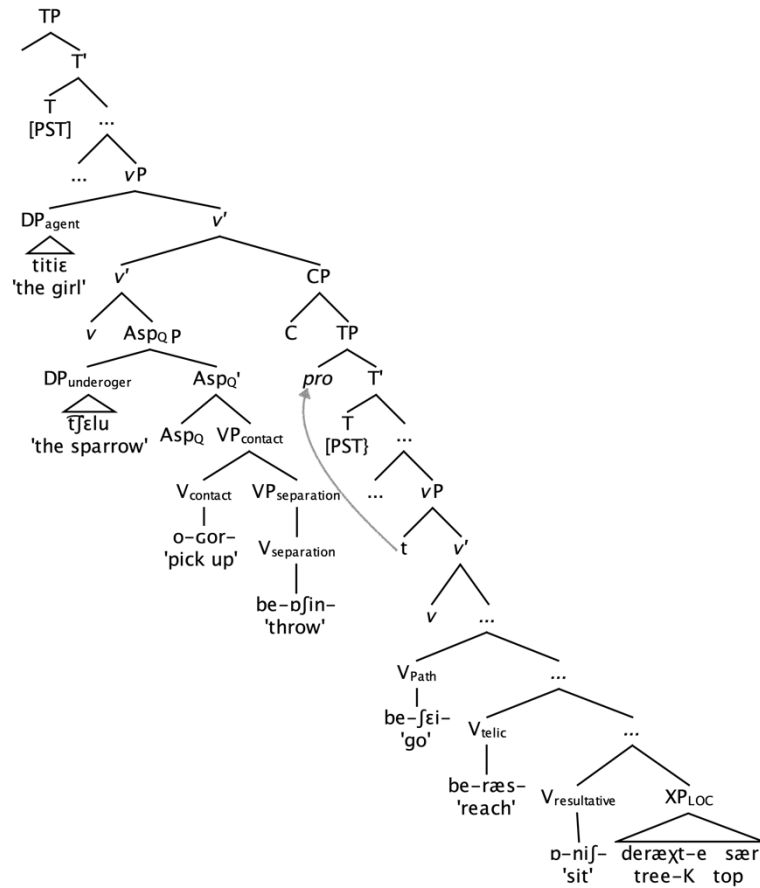
produces ungrammatical results, while extraction out of a complement structure produces grammatical ones. Below in (73)b, a structure based on adjunction is shown for our model SVC repeated in (73)a.⁴¹This section rules out explaining Tati MPs through such a structure.

(73)

a.	SR	tittijɛ	tʃɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-GEN	top	
	Role	telicity	resultative	(Xp _{LOC})		
	'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'					

⁴¹ Note that in a structure based on the adjunction of VPs, *hær* 'each' and the negative morpheme *ne-* (as two operators) would be too high in the hierarchical structure and therefore would have their scope over all verbal stems. As a result, Negation-Scope test, PI test, and Bond-Variable test would not distinguish SVCs from adjunctions.

b.



As shown by (73)b, the Path, Telic, and Resultative verbal stems are in a part of the structure that is an adjunct to the part containing the *contact* and *separation* stems. This section shows that SVCs behave like complementation structures rather than like adjunctions in terms of WH-extraction. Consider example (74)a using *tʃon* ‘because’ adjunct. Extraction of the constituent *æzire* ‘yesterday’ out of (74)a will produce an ungrammatical result for a real (information-seeking) interpretation as marked by # in (74)b.⁴²

⁴² Instead, example (74)b has an echo-question interpretation, which is irrelevant to the WH-extraction test. This interpretation could relate to a situation wherein the interlocutor repeats the information related to the first construct (that food went bad) but uses the echo (rather than real) question to make sure about the time the food was made. The answer to such a question would be *pejire* ‘the day before yesterday.’

(74)

- a.
- | | | | | | |
|-------|---------------------------------|------------|----------------------|--|----------|
| SR | gæzɒ | | χɒ'ɾɒbɒve | | tʃon |
| UR | gæzɒ | | ʒɾɒb+v-ve-∅ | | tʃon |
| Gloss | food.M | | bad+become-be-3SM | | CONJ |
| SR | pɛjɪɾɛ | | dʒɒm | | 'sɒbedɒ |
| UR | pɛɾɪɾɛ | | dʒɒ-m | | sɒ+be-dɒ |
| Gloss | the day before yesterday | 3SM-1S.AGR | made.ADJ+PV-give.PST | | |
- 'The food went bad because I made it the day before yesterday.'
- b.
- | | | | | | |
|-------|-------------|------------|----------------------|----------|------|
| SR | gæzɒ | | χɒ'ɾɒbɒve | | tʃon |
| UR | gæzɒ | | ʒɾɒb+v-ve-∅ | | tʃon |
| Gloss | food.M | | bad+become-be-3SM | | CONJ |
| SR | kɛj | dʒɒm | | 'sɒbedɒ | |
| UR | kɛi | dʒɒ-m | | sɒ+be-dɒ | |
| Gloss | when | 3sm-1S.AGR | made.ADJ+PV-give.PST | | |
- 'The food went bad because I made it the day before yesterday.'
- # when did the food go bad because I made it-----?

On the other hand, WH-extraction out of example (75)a, which is made of a matrix clause and an embedded clause with *ke* 'that,' would create a grammatical result for a real-question interpretation. The result of this operation is shown below in (75)b.

(75)

- a.
- | | | | | | | |
|-------|-----------------------|------|-------|-----|------|---------------------|
| SR | fek+mijɛɾi | ke | ogɒ | dɛ | gæzɒ | moχo're |
| UR | fekr+me-ær-i | ke | ogɒ | dɛ | gæzɒ | me-vχor-e |
| Gloss | thought+IND-do-2S.AGR | that | there | LOC | food | IND-eat.PRS-3SM.AGR |
- 'You think that he eats food there.'
- b.
- | | | | | | | |
|-------|-----------------------|------|--------------|-----|------|---------------------|
| SR | fek+mijɛɾi | ke | kɒ | dɛ | gæzɒ | moχo're |
| UR | fekr+me-ær-i | ke | kɒ | dɛ | gæzɒ | me-vχor-e |
| Gloss | thought+IND-do-2S.AGR | that | where | LOC | food | IND-eat.PRS-3SM.AGR |
- 'Where do you think he eats food?'

Consider again our SVC, repeated below in (76)a, with the result of the extraction of its XP_{LOC} *deræχte sær* 'on the tree' in (76)b.

(76)

a.	SR	tittijɛ	tʃɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ		deræχte	sær
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø		deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR		tree-GEN	top
	Role	telicity	resultative		X_{pLoc}	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				
b.	SR	tittijɛ	tʃɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ		kɒ	
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø		kɒ	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR		Q.where	
	Role	telicity	resultative			
		'Where did the girl [pick_up] threw the sparrow [go] [reach] [sit]?'				

Comparing (76)b with both (74)b and (75)b, we see that WH-extraction out of (76)a behaves like (75)a, which has a complementation structure, rather than like (74)a, which has a structure based on adjunction. This illustrates that our SVC in (1) has a complementation rather than adjunction structure. As a result, a structure for our SVC based on adjunction, as shown in (73)b, is ruled out.

3.5 Conclusion

The evidence provided in this chapter proved that Tati MPs expressed through SVCs are made of an underlying complementation structure rather than a structure based on coordination or adjunction (i.e. hypothesis (b) in (11) stated in CHAPTER 1). Through dealing with the mono-eventivity of the verbal series expressing MPs and their complementation structure, this chapter, together with CHAPTER 2, show that these verbal series are indeed cases of SVCs.

CHAPTER 4. METHODOLOGY

This chapter provides details about the data collection instrument and processes, participants, and data coding as well as data analysis.

4.1 Data Collection and Instrument

The study data were collected through a series of animations (175 videos altogether) made by Benedicto (2017) with the collaboration of the Envision Center at Purdue University. The animated videos were organized around 19 themes (e.g. a bird, a paper plane, a man, etc.) and were designed to elicit data on various aspects of MPs such as Telicity, Agentivity, Boundary crossing, and Complex Path. The video clips were presented to the participants through a self-administered application in seven movie blocks, each of which consisted of 25 video clips presented to the participants in a randomized order. The main window of this application is shown by Figure 3.1.

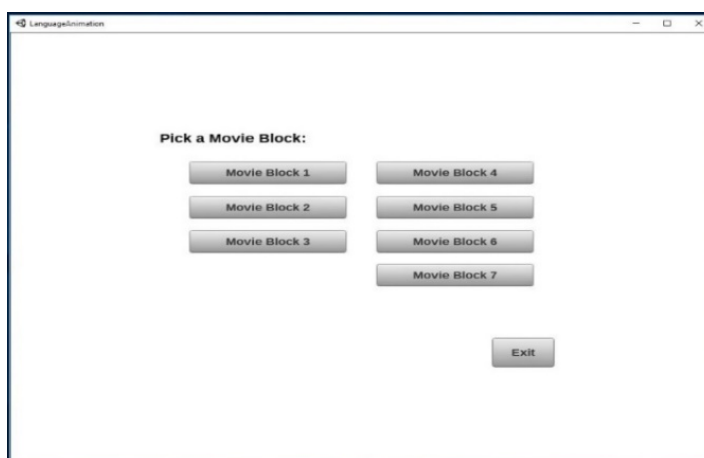


Figure 3.1 Main Window of the Animation Application

Each video clip was identified by a four-digit code number. In order to attribute the right data to each video clip, the participants were asked to state the code number related to a given video clip before and after their utterance related to that clip. The participants had already signed the consent

form approved by the Institutional Review Board at the Human Research Protection Program at Purdue University, with the protocol number 0902007814.

4.2 Parameters

As mentioned above, the video clips were designed to elicit data on different parameters of MP including 3-D Path, Boundary crossing, Telicity, and Agentivity. In addition, the video clips were put in pairs or sets minimally different in terms of a parameter (e.g. agentive versus non-agentive). The parameters of interest in this study and the contrasts made with regard to these parameters are discussed below. Section 4.2.1 discusses Telicity as one parameter, and section 4.2.2 discusses agentivity as the other parameter.

4.2.1 Telicity

With regard to telicity, a contrast was made between telic and atelic events. The video clips showing an undergoer of motion (e.g. a goose, a bird, etc.) that reaches a destination (e.g. a nest, a fence, a tree, etc.) represent telic events and the clips in which an undergoer moves but does not reach a destination show atelic events. Within the atelic group, another contrast was made between the events that have a potentially reachable goal (Underspecified-atelic events), and the events that lack a potential goal to be reached (Unspecified-atelic events). Examples for the telic/atelic contrast include clip 0202 representing a telic event wherein a paper plane moves in the air and falls into a bucket. The still images related to this clip are shown in Figure 3.2.

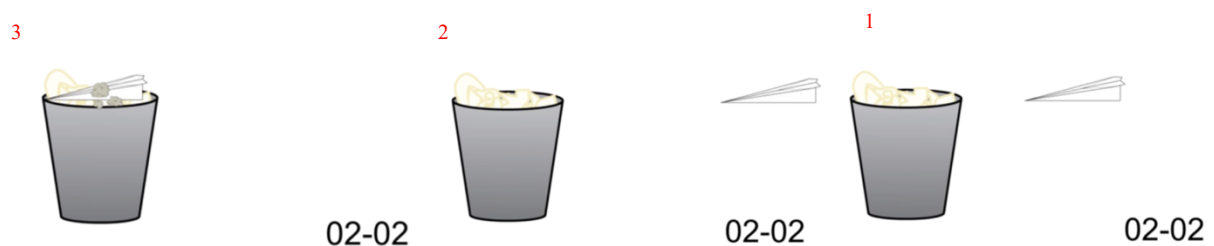


Figure 3.2 Clip 0202

Clip 0202 contrasts in telicity with two clips: One of these clips is 0201, shown by Figure 3.3, representing an Unspecified-atelic event lacking a goal of motion.

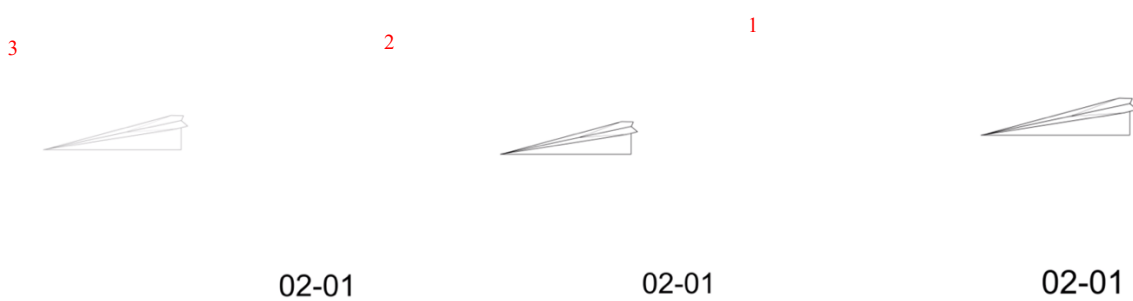


Figure 3.3 Clip 0201

Clip 0202 also contrasts with clip 0219, shown below in Figure 3.4, and represents an Underspecified-atelic event wherein the paper plane moves towards a bucket that presumably could be an endpoint but does not reach the bucket (the video clip ends during the movement of the paper plane towards the bucket).

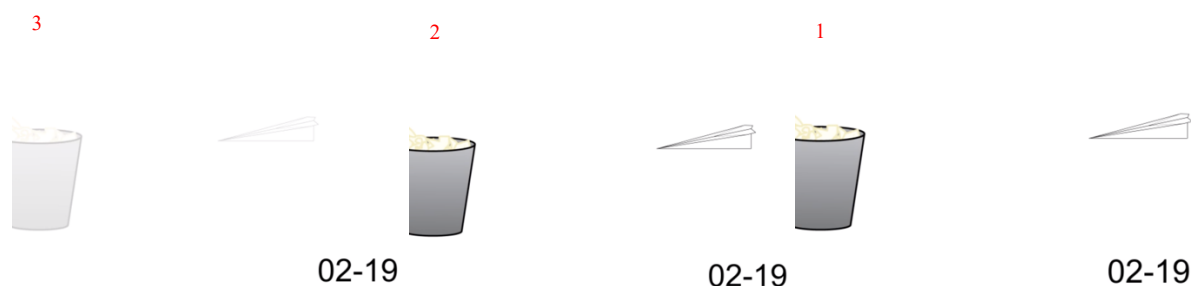


Figure 3.4 Clip 0219

4.2.2 Agentivity

Regarding agentivity, a contrast is made between agentive and non-agentive events. In the agentive events, an agent as an external actor (e.g., a boy or a girl) brings about the movement of an undergoer of motion (e.g. a paper plane, a goose, etc.) through establishing contact with the undergoer whereas in the non-agentive events, an undergoer moves by itself without an interfering agent.⁴³ Within the agentive group, a contrast was made between Initial-Contact and Continuous-Contact agentive events. In an Initial-Contact agentive event, an agent establishes contact with an undergoer and initiates its motion. The agent then breaks off the contact and the undergoer moves along the Path without having the agent involved in the motion. On the other hand, in a Continuous-Contact agentive event, an agent maintains contact with the undergoer during the motion without breaking the contact off, thus participating together with the undergoer in the motion along the Path. For example, clip 0702, shown by Figure 3.5 represents a non-agentive event in which a child goes down a slide by himself.



Figure 3.5 Clip 0702

The event shown by clip 0702 is contrasted with two agentive events: (a) the Initial-Contact agentive event in 0705, shown below in Figure 3.6, wherein a man taps on a child's shoulder and

⁴³ The contact is of a tactile type in most clips. However, there are clips in which the contact belongs to another type. For example, one group of clips show a girl establishing agent-undergoer contact with a kite through the kite cord.

then the child goes down the slide by himself, and (b) the Continuous-Contact agentive event in 0707, shown by Figure 3.7, wherein the man is still holding on the child's back while the child is going down the slide.



Figure 3.6 Clip 0705



Figure 3.7 Clip 0707

4.3 Participants and Data Handling

This section discusses the details about the participants of the study and the process of data collection and analysis.

4.3.1 Participants

Data from three participants were used for this study. The participants were three native speakers of Tati selected from three different areas of the city of Takestan, and their initials were: MT, SH, and HR. The participants include three native speakers of Tati selected from three different areas

of the city of Takestan. Two of the participants were male and one was a female, ranging in age from 25 to 29 years of age during the data collection sessions. The participants had bachelor's degrees and were bilingual speakers of Tati and Persian (with lower-intermediate proficiency in English and basic proficiency in Arabic).

4.3.2 Data Collection

The participants were asked to say what happened in each video clip and the elicitation sessions were audio recorded. Each participant was contacted a few times after the main data-collection sessions for some clarifications and confirmations about the data. A total of 525 utterances were gathered from the participants (175 animations for each participant). It is worth mentioning that the data were not collected to be used in an experimental method but to facilitate the analysis in a qualitative study.

4.3.3 Data Analysis

This section discusses the naming process for the ELAN files as well as some details about how the ELAN files were made.

4.3.3.1 *Naming Process*

The examples in this study include both those originating directly from the recorded data and those created by me as a native speaker of Tati. The examples originating from the data were coded using a four-digit ID number for each animation video followed by the language initials (i.e., TA for Tati) and the initials for each participant. For instance, a code like [0611TAMT] shows that this specific example is an exact copy of what the participant MT has said for the video animation 0611 for Tati. The examples produced by me, if directly related to the prompts in the video clips,

were coded using NT abbreviations. For instance, [0804TANT] is related to what I have said for the video clip 0804 for Tati. The examples produced by me, if not related to any video clips, are left without a code number. All the examples produced by me have been checked for grammaticality either by the participants or by other available native speakers of Tati.

4.3.3.2 ELAN Files

The recordings were later transferred to the ELAN software for transcription and coding.⁴⁴ The tiers (layers of data) set in the ELAN template for this study include surface representation, underlying representation, free English/ Persian translation, clause level, word level, morpheme level, telicity, completion, and agentivity. Some metadata is also provided about the place/time of data gathering, participants, and the annotator of the data. Figure 3.8 shows an example for an ELAN file labeled as [0101TAHR].

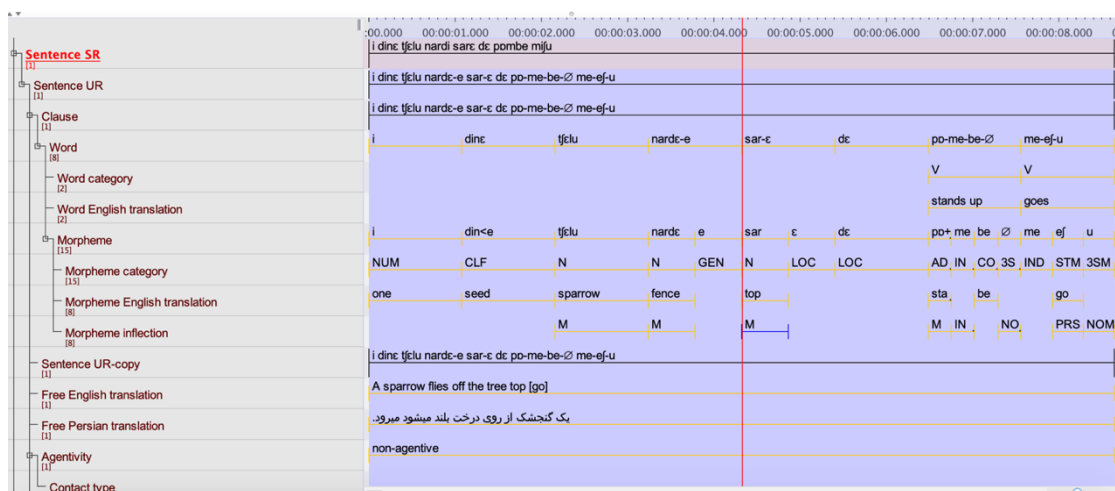


Figure 3.8 ELAN file for Clip 0101

⁴⁴ ELAN is an open-source software designed by Max Planck Institute for Psycholinguistics and is used to produce time-aligned annotations in a variety of fields like language documentation.

4.4 Conclusion

This chapter provided details about the data collection device and procedure, as well as specifications about the participants and data coding. Additionally, the video clips used in this study were characterized in terms of eliciting data related to agentivity and telicity as well as the subtypes related to each of them. Further syntactic analysis will elaborate upon the Telic component in CHAPTER 5 and the Agentive component in CHAPTER 7. CHAPTER 6 will provide a syntactic analysis of the resultative component.

CHAPTER 5. TELIC COMPONENT

5.1 Introduction

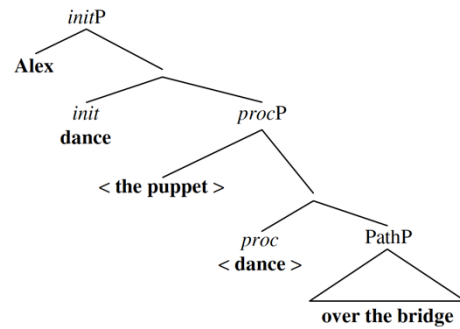
This chapter discusses the structure of telicity, which merges as the Telic component in Tati MPs. In keeping with Borer (2005), Ramchand (2008), and Beavers (2012), telicity is semantically defined as breaking the *homogeneity of process*. For example, an event of *run[ing]* is homogenous and, hence, atelic because all of its subevents are the same in having a denotation of V *run* (each subevent denotes *running*). On the other hand, an event of *run[ing] to the nest* is non-homogenous and telic because the final subevent is different from the previous ones in having the denotation of *having reached the nest*.

Ramchand (2008) labeled lexical verbs as either telic or atelic and syntactically characterized telic events in terms of having a bounded Path or an expressed result state as the complement of *process*. An example for a telic event with a bounded Path, is shown below in (77), as illustrated by Ramchand (2008). In this example that aligns with Ramchand (2008), telicity arises as a result of the bounded Path *over the bridge* as the complement of *process*.

(77)

- a. Alex danced the puppet over the bridge.

b.



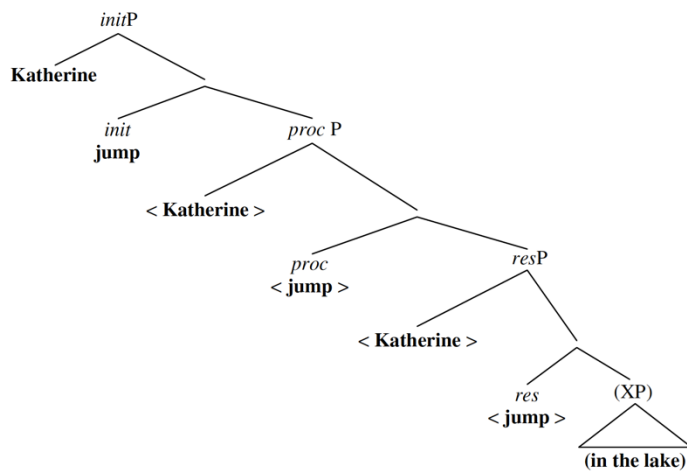
Ramchand (2008: 116)

An example, represented by Ramchand (2008), for telicity as a result of an expressed result state is (78), wherein the *PlaceP in the lake* is the complement of *res* head.

(78)

a. Katherine jumped in the lake.

b.



Ramchand (2008:80)

Although Ramchand (2008) analyzes telicity from a syntactic point of view, her analysis is highly dependent on the thematic classifications of lexical verbs. For example, Ramchand (2008:108) categorizes the transitive verb *push* as an [*init, proc*] verb that has two participants: an initiator and an undergoer. This class of verbs, according to Ramchand, produces telicity only if the Path, as the complement of *process*, is bounded. Ramchand provides some examples for bounded and unbounded Paths. For instance, she identifies *towards the bridge* in *Mary danced towards the*

bridge as an unbounded Path and identifies *into the room* in *Mary danced into the room* as a bounded Path. However, she does not provide any systematic explanation for the distinction between bounded and unbounded Path that produce telic and atelic events successively. On the other hand, the transitive verb *throw* is listed by Ramchand (2008) as an [*init, proc, res*] verb that takes an *initiator*, an *undergoer*, and a *resultee* as its participants. According to Ramchand, verbs of this class produce telicity by default due to their expressed *resultative* sub-structure.

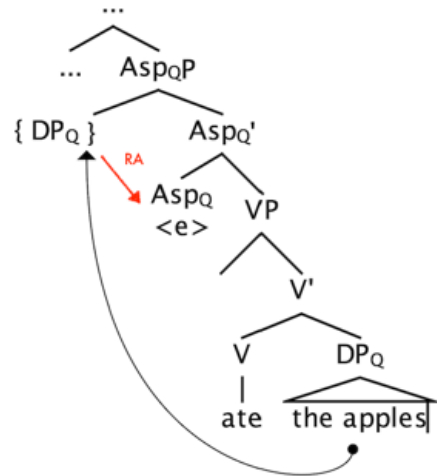
Borer (2005), on the other hand, claims that verbs are inherently atelic. She analyzes telicity as being encoded in the complex syntactic structure of the events. Example used by Borer include *Kim ate the apples* as a telic event versus *Kim ate apples* as an atelic event. According to Borer (2005), if telicity is encoded in verbs, these two sentences would have the same telicity value due to having the same verb (*eat*). Borer (2005) analyzes telicity as an add-on functional structure labeled by her as Asp_QP (where _Q stands for Quantity⁴⁵) that merges at the VP level in telic events. According to Borer, the head of Asp_QP (Asp_Q) has an open value <e> that requires *range assignment*⁴⁶ through a ‘subject of quantity’ (i.e., *soq*).⁴⁷ Following Borer, the structure related to the telic sentence *Kim ate the apples* is shown by (79).

⁴⁵ Borer (2005) referred to *quantity* as quantifiable, structural, and measurable change.

⁴⁶ According to Borer (2005), the heads of most functional heads have an open value that needs range assignment through an “appropriate range assigner.” For instance, in English the feature [+PST] assigns range to the Tense head in a TP, and *the* assigns range to the D head in a DP.

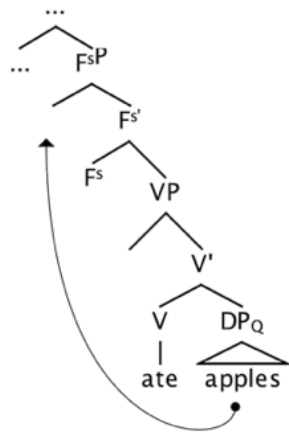
⁴⁷ Borer (2005, p. 74), used the term *quantity* to refer to non-homogenous structures like *quantity* (indefinite) mass (e.g., Q *salt*), *quantity* (indefinite) plurals (e.g., Q *dogs*), *quantity* indefinite singulars (e.g., a *dog*), definite mass (e.g., *the salt*), definite plurals (e.g., *the dogs*), and definite singulars (e.g., *the dog*). On the other hand, homogenous structures such as determiner-less mass (e.g., *salt*) and determiner-less plurals (e.g., *dogs*) are characterized by her as *non-quantity*.

(79)



Along the lines of Borer (2005), the structure in (79) represents a telic structure due to the fulfillment of range assignment through a *soq* internal argument (*the apples*) to the head of Asp_QP (i.e., Asp_Q). On the other hand, Borer claims that a structure with an Asp_QP crashes for an atelic event like *Kim ate apples* because *apples* is not a *soq* and hence cannot assign range to the head of Asp_QP . However, since *apples* still needs Case for a grammatical structure, Borer (2005:109) proposes merging a shell-functional Projection (F^sP) instead of Asp_QP , which leads to a grammatical structure with an atelic interpretation, as shown by (80).

(80)



Borer (2005) also presents evidence for requiring a functional projection (Asp_QP) in telic events by providing examples like (81) below from Finnish: although the object DP *taloa* ‘house’ is a *soq* in Borer’s terms, the event has an atelic interpretation since *taloa* is marked with partitive, rather than accusative, Case. Since Case is assigned by a functional projection, Borer (2005) analyzes telicity in terms of merging Asp_Q as the functional head needed in telic events.

(81)

Annerakensitaloa.
 Anne built house-PRT
 ‘Anne was building a/the house.’ Borer (2005:48)

This study agrees with Borer (2005) in analyzing telicity in terms of the range assignment to the head of Asp_QP in MPs and not in terms of thematic classifications of lexical verbs. However, this study is important in showing that telicity in Tati MPs is not dependent on the specifications of internal arguments. In other words, internal arguments in MPs are not range assigners in Borer’s terms, which represented in (79) above. Instead, in this study, telicity in MPs is proposed to be the result of range assignment to Asp_Q through an XP_{REACH} sub-structure, whose head (X_{REACH}) denotes reaching the place denoted by a locational Phrase (XP_{LOC}). This hypothesis will be stated in section 5.2 in (84) and evidence for it will be provided in the rest of this chapter.

Travis (1991) reported that there is a functional projection between the VPs in a Larsonian shell structures (i.e., *inner aspect* or *completive aspect*) that is different from *outer aspect*. In addition, several scholars, such as Ramchand (2008), Bertinetto (2001), and Borer (2005), recognized the role of outer aspect in the telicity of events. For instance, Bertinetto (2001) distinguished *terminativity* brought about by the perfective (outer) aspect from *boundedness* yielded by telicity

(i.e., internal aspect). According to Bertinetto, the perfective aspect corresponds to the view assumed by the speaker for events as “entirety,” whereas telicity depends on a heterogeneous interval closed at the right boundary of events. As such, along the lines of Bertinetto, telicity involves perfectivity, whereas perfectivity does not necessarily imply telicity. This occurs in the Italian example in (82), wherein the event is terminated (has perfective aspect) but is not bounded (telic).

(82)

Marco è *stato malato* per un mese (l’anno scorso)

‘M. *was(-PERFECTIVE) ill* for a month (last year)’.

Bertinetto (2001:21)

Along the same lines, the video clips used in this study distinguish between perfective (completive) events and telic events. For example, clip 0105 (showing a bird that flew to the fence) represents a telic (and also completive) event, whereas clip 1604 (showing a working fan that then stops working) represents a completive event. While the telic event in 0105 implies completeness to the action of flying, the completive event in 1604 does not involve telicity (heterogeneity). The still images related to these two events are shown below in Figure 5.1 and Figure 5.2., respectively.

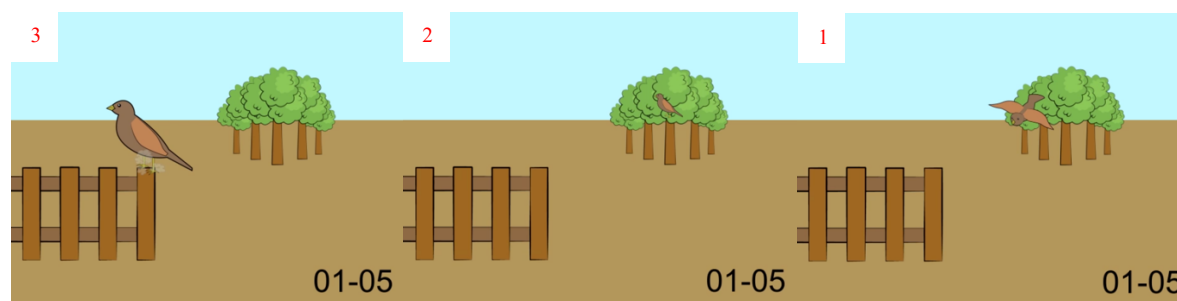


Figure 5.1 Clip 0105

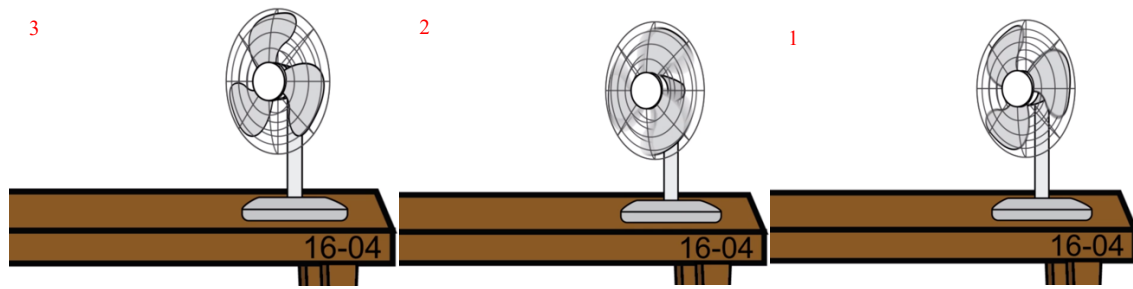
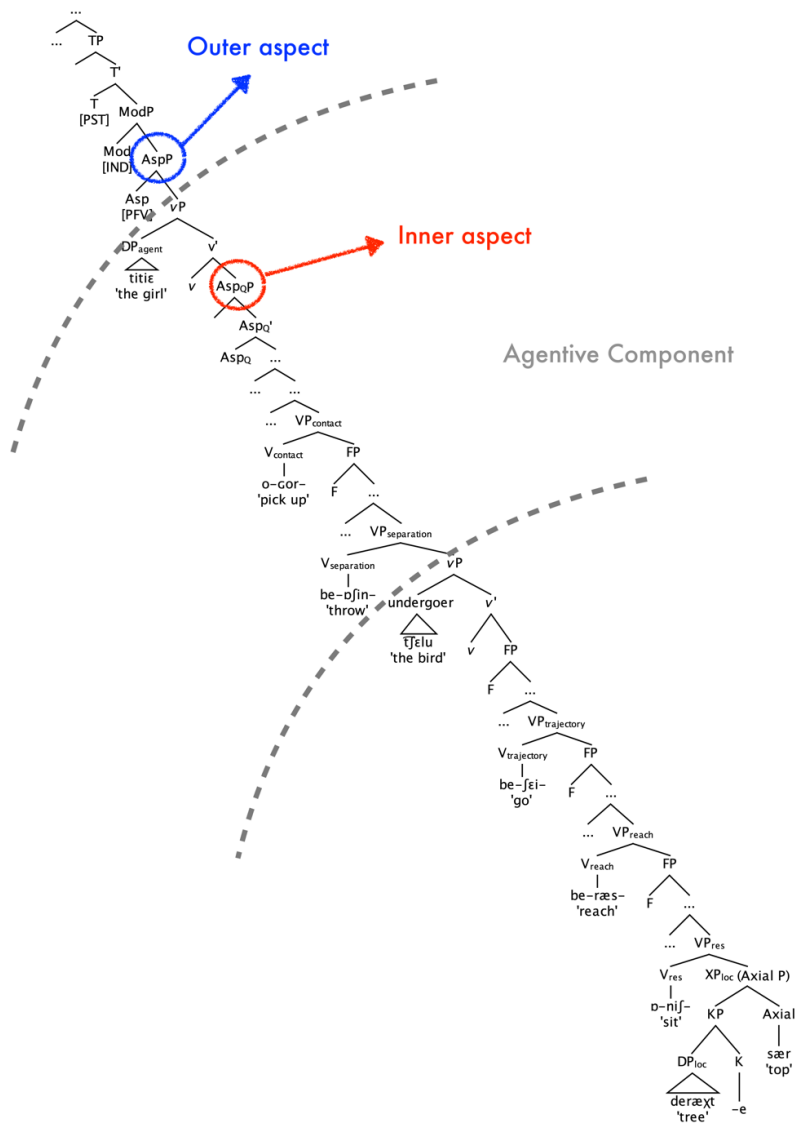


Figure 5.2 Clip 1604

Structurally, this study considers a split in the aspectual projections in MPs. More specifically, as shown in the structural hypothesis of this study in CHAPTER 1 in (10), this study identifies *outer aspect* (labeled as AspP) as part of the inflectional spine that has scope over the components below it, different from inner aspect (labeled as Asp_QP) in relation to telicity. The structure in (10) is conveniently repeated in (83) below with the aspectual heads marked on it. The role of external aspect in the telicity of Tati MPs is discussed in 5.3.2.

(83)



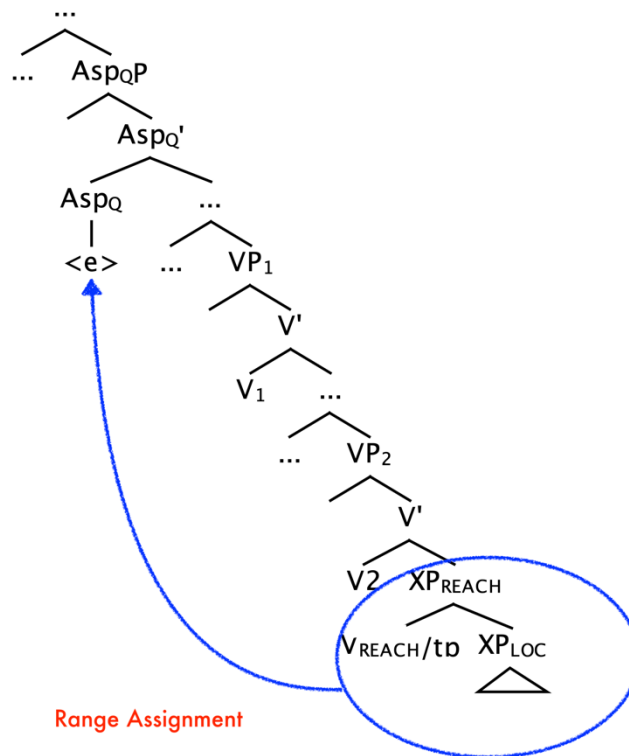
The structural hypothesis of this chapter is presented in section 5.2. This chapter then provides evidence for the hypothesis in section 5.3 by dealing with XP_{REACH} in 5.3.1 and the complex internal structure of the locational Phrase (XP_{LOC}) as the complement of X_{REACH} in 5.3.1.1. Section 5.3.2 distinguishes between telicity (inner aspect) and the perfective (outer) aspect structurally and

discusses a case that provides supporting evidence for distinguishing between inner aspect and outer aspect (telicity versus perfectivity).

5.2 Hypothesis

In alignment with Borer (2005), telicity in Tati MPs is analyzed in terms of an add-on structure (Asp_QP) the head of which (Asp_Q) requires range assignment. However, in keeping with Borer, this study hypothesizes that internal arguments do not work as *soq* in Tati MPs. Instead, the range assigner is an XP_{REACH} substructure, whose head can be phonologically spelled out as one of these two options: (a) as a (semi-)grammaticalized head *be-ræ̃s*- ‘reach’ or (b) as a preposition-like element *to* ‘to.’ Consequently, the structure of telicity in Tati MPs expressed by SVCs is represented in the structure in (84).

(84)



As shown by (84), XP_{REACH} assigns range to the head of the inner aspect projection (Asp_QP). This chapter also proposes that X_{REACH} as the head of XP_{REACH} in telic Tati MPs imposes specific restrictions on its complement, such that its complement can be either (a) a referential XP_{LOC} , indicating the location reached by an undergoer or (b) an expressed *resultative* Projection (*resP*). Section 5.35.3.1.1 provides evidence for a referential XP_{LOC} as the complement of X_{REACH} (section [a] of this proposal), and CHAPTER 6 deals with the Resultative component as the complement of X_{REACH} .

5.3 Evidence for the Hypothesis

This section discusses two main pieces of evidence for the hypothesis proposed in 5.2: Section 5.3.1 shows that XP_{REACH} assigns range to Asp_Q as a whole sub-structure in telic MPs, and 5.3.2 discusses the role of the *outer aspect* in the telicity of MPs.

5.3.1 XP_{REACH}

As stated above in 5.2, the structure in (84) predicts, along the lines of Borer (2005), that range assignment to Asp_Q through XP_{REACH} leads to the telicity of Tati MPs. Consider the telic event in (85) in which an XP_{REACH} is projected with the verbal stem *be-ræs-* ‘reach’ as its head (realized as *beræ'sæs* ‘reached’) and the XP_{LOC} *deræχte sær* ‘tree top’ as the complement of its head, indicating the endpoint of the sparrow’s motion.

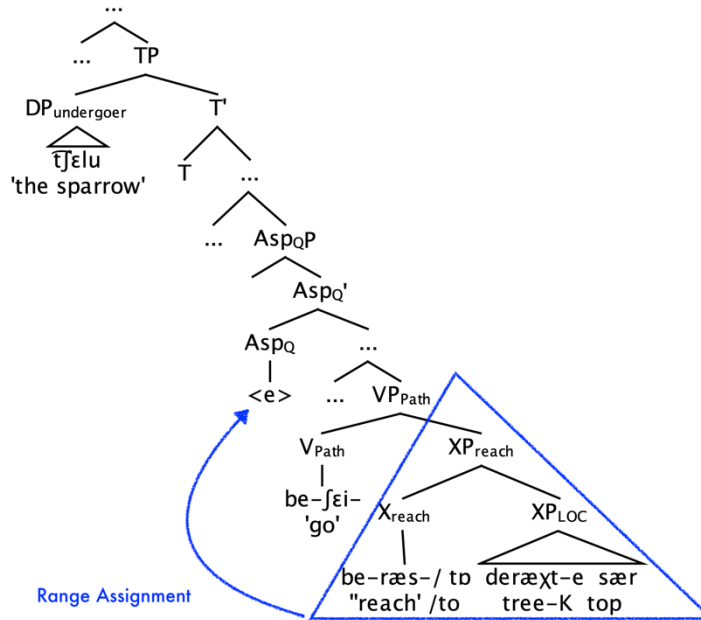
(85)	SR	ŧʃɛlu	bœ'ʃœ	beræ'sæs	deræχte	sær
	UR	ŧʃɛlu	be-ʃɛi-Ø	be-ræ's -æst-Ø	deræχt-e	sær
	Gloss	sparrow.M	PV-go.PST-3SM.AGR	PV- reach -PST-3SM	tree-K	top
	Role	undergoer	Path	telicity	(XP_{LOC})
		‘The sparrow went to [reach] the tree top.’				

The event in (85) can be modified with regard to its XP_{REACH} head by using *to* ‘to,’ as shown by (86). This event has a telic interpretation that the sparrow has reached the top of tree.

(86)	SR	$\widehat{tj\acute{e}lu}$	$b\acute{o}e'f\acute{o}e$	do	$der\acute{a}xte$	$s\acute{a}r$
	UR	$\widehat{tj\acute{e}lu}$	$be-f\acute{e}i-\emptyset$	to	$der\acute{a}xt-e$	$s\acute{a}r$
	Gloss	sparrow.M	PV-go.PST-3SM.AGR	PREP	tree-K	top
	Role	undergoer	Path	telicity	(X_{pLOC}))
	'The sparrow went to the tree top.'					

Consequently, the structure in (87) below is proposed to demonstrate the telicity of examples (85) and (86) based on our hypothesis in 5.2. As shown by this structure, the empty value related to Asp_Q is assigned range by XP_{REACH} .

(87)



As proposed earlier in 5.2, the presence of an XP_{REACH} is necessary for assigning range to Asp_Q in telic Tati MPs, and the head of this projection (X_{REACH}) can be either *be-ræs-* 'reach' or *ta* 'to.' Consider example (88), in which X_{REACH} is verbalized as *beræ'sæs* 'reached' and takes *sætele mon* 'inside the bucket' as its complement denoting where *mufæk* 'the paper plane' has reached.

(88)	SR	tittije	muʃæk'ej	bɒ'ʃin	bœ'ʃœ
	UR	titie	muʃæk-e-ef	be-ɒʃin-d	be-ʃei-Ø
	Gloss	girl.F	paper plane.M-DEF-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræ'sæs	sætele	mon	
	UR	be-ræs-æst-Ø	sætel-e	mon	
	Gloss	PV-reach-PST-3SM.AGR	bucket-GEN	inside	
	Role	telicity	(X _{p_{LOC}})		
		'The girl threw the paper plane [go] [reach] into the bucket.'			

Two pieces of evidence demonstrate the relevance of XP_{REACH} for assigning range to Asp_Q in telic MPs. First, replacing the definite-singular (*quantity*) internal argument *muʃæk-e* ‘the paper plane’ in (88) with *muʃæk* as a determinless-mass (*non-quantity*) DP will still produce a telic event with a generic interpretation (i.e., ‘the girl threw paper planes [go] [reach] into the bucket’). This is shown by (89) below.

(89)	SR	tittije	mu'ʃækeʃ	bɒ'ʃin	bœ'ʃœ
	UR	titie	muʃæk-ef	be-ɒʃin-d	be-ʃei-Ø
	Gloss	girl.F	paper plane.INDF-M-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræ'sæs	sætele	mon	
	UR	be-ræs-æst-Ø	sætel-e	mon	
	Gloss	PV-reach-PST-3SM.AGR	bucket-GEN	inside	
	Role	telicity	(X _{p_{LOC}})		
		'The girl threw paper planes [go] [reach] into the bucket.'			

Note that what distinguishes *muʃæk* ‘paper planes’ as a non-quantity DP_{undergoer} in (89) from its apparently similar counterpart *muʃæk* ‘the paper plane’ as a *quantity* DP in (88) is its stress pattern: while *muʃæk* ‘paper planes’ in (89) is stressed on its last (second) syllable (i.e., /ʃæk/), *muʃæk* ‘the paper planes’ in (88) has lost its word-level stress, which is instead marked on the definite marker *-e*. The grammaticality of (89) with a *non-quantity* internal argument (*muʃæk* ‘paper plane’) eliminates the need for a *quantity* internal argument as the range assigner in the telic Tati MPs, and provides evidence in favor of XP_{REACH} as the range assigner.

Second, X_{REACH} in telic events imposes specific restrictions on its complement for producing grammatical results for telicity. For instance, revising (88) by replacing the complement of X_{REACH} *beræ'sæs* ‘reached’ (*sætele mon* ‘inside the bucket’) with *sætele tæræf* ‘the bucket area’ would produce (90), which is an ungrammatical sentence.

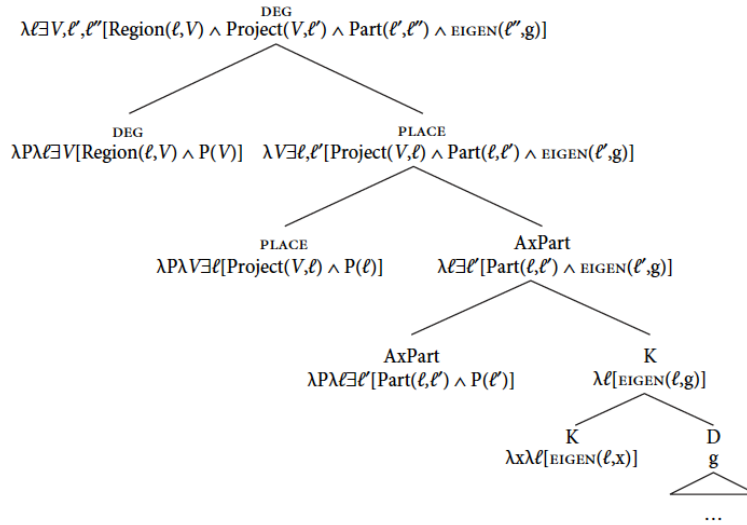
(90)	*SR	tittijə	muʃækɛʃ	boʃin	bœʃœ
	UR	titiə	muʃæk-e-ɛʃ	be-ɒʃin-d	be-ʃei-∅
	Gloss	girl.F	plane.M-DEF-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræ'sæs	sætele	tæræf	
	UR	be-ræs-æst-∅	sætel-e	tæræf	
	Gloss	PV-reach-PST-3SM.AGR	bucket-GEN	area	
	Role	telicity	(goal)	
	*‘The girl threw the paper plane [go] [reach] the bucket area.’				

The ungrammaticality of (90) with *sætele tæræf* ‘the bucket area’ provides evidence for the contribution of XP_{REACH} as a whole construct that assigns range to Asp_Q . As proposed in 5.2, the complement of X_{REACH} can be either a referential XP_{LOC} or a *resP*. The former case will be discussed following Svenonius (2008) in 5.3.1.1, and the latter case will be dealt with in CHAPTER 6.

5.3.1.1 XP_{LOC}

It was proposed above in 5.3.1 that the XP_{LOC} complement of X_{REACH} can only be referential in telic Tati MPs. Let us make an excursus here and investigate the properties of XP_{LOC} as set forth by Svenonius (2008). Svenonius discussed that locative phrases have a complex structure in which different projections of a DP_{ground} can project. This structure is represented in (91).

(91)



Svenonius (2008:74)

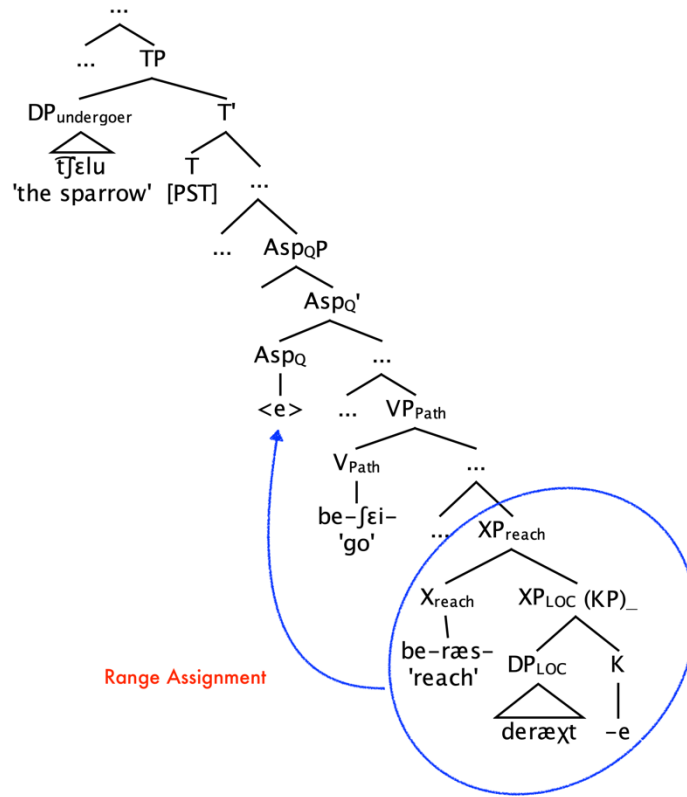
Below, following the structure proposed by Svenonius (2008) in (91), we examine different syntactic Projections of *deræχt* ‘the tree’ as a ground-denoting DP shown by the bottom of the tree in (91) as D---g. This DP can merge with a K marker *-e* to produce *deræχt_{tree-e_K}* ‘the tree,’ with the denotation of the *eigenplace* of the tree (the region in the space occupied by the tree). The *eigenplace* Projection of *deræχt* ‘the tree’ is used in (92)a as the complement of X_{REACH} *beræ'sæs* ‘reached’ in a telic event. The structure related to (92)a is shown below in (92)b.⁴⁸ As shown by this structure, the XP_{REACH} *beræ'sæs deræχte* ‘reached the tree’ assigns range to Asp_Q as a whole unit.

(92)

a.	SR	$\widehat{t}\widehat{f}\widehat{\epsilon}lu$	$b\acute{a}\epsilon'j\acute{o}\epsilon$	$ber\acute{a}\epsilon's\acute{a}\epsilon s$	<i>deræχte</i>
	UR	$\widehat{t}\widehat{f}\widehat{\epsilon}lu$	$be-ʃ\acute{\epsilon}i-\emptyset$	$be-r\acute{a}\epsilon s-\acute{a}\epsilon st-\emptyset$	<i>deræχt-e</i>
	Gloss	sparrow.M	PV-go.PST-3SM	PV-reach-PST-3SM	tree-K
	Role	undergoer	Path	Telic	(XP_{LOC} [Eigenplace P])
		‘The sparrow went [reach] the tree.’			

⁴⁸ As we notice in (92)b, XP_{LOC} in Tati, opposite other Phrases in MPs, is composed of head-final projections. This mix-headedness is an interesting topic to investigated in future research.

b.

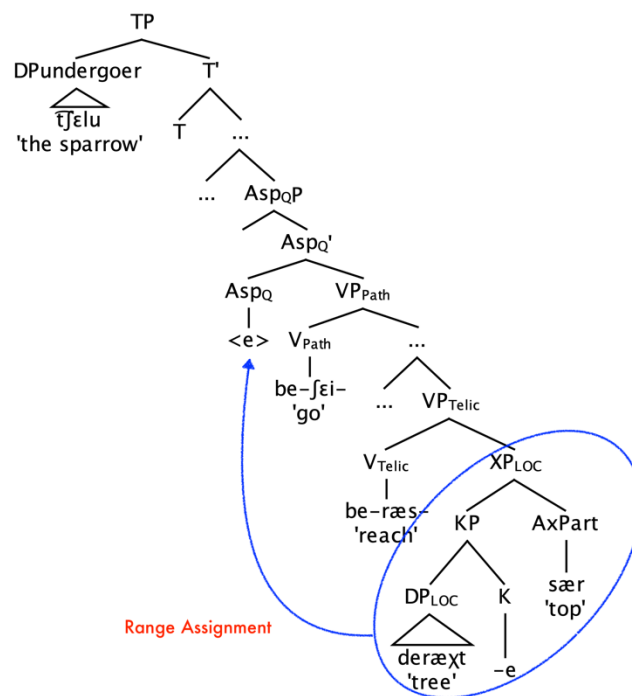


The *eigenplace* Projection of *tree* ($deræxt_{tree-e_K}$ ‘the tree’) can then merge with the Axial-Part head $sær$ ‘top’ to produce $deræxt_{tree-e_K} sær_{top}$ ‘the tree top,’ denoting the top sub-region of the tree. An example for the use of this Ax-Part Projection is (93)a, wherein $deræxt_{tree-e_K} sær_{top}$ ‘the tree top’ is the complement of X_{REACH} $beræ'sæs$ ‘reached’ in a telic event. The structure related to this event is represented in (93)a, along the lines of Svenonius (2008).

(93)

a.	SR	$\widehat{tʃɛlu}$	$bæ'ʃœ$	$beræ'sæs$	$deræχte$	$sær$
	UR	$\widehat{tʃɛlu}$	$be-ʃɛi-∅$	$be-ræs-æst-∅$	$deræχt-e$	$sær$
	Gloss	sparrow.M	PV-go.PST-3SM	PV-reach-PST-3SM	tree-K	top
	Role	undergoer	Path	Telic	(XP _{LOC} [Ax-Part P])	
	'The sparrow went [reach] onto the tree top.'					

b.



Objects might have different Axial Parts in Tati depending on their physical shapes as well as speakers' perspectives. Figure 5.3 below illustrates different Axial Parts of *tree* in Tati.

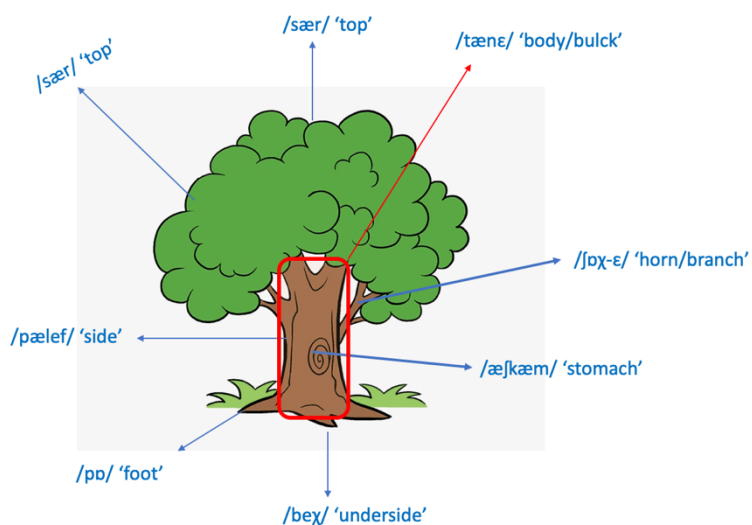


Figure 5.3. Axial Parts of *tree* in Tati

Other examples for Ax-Part projections of *tree* in Tati include *deræχ_{t_{tree}-e_K} p_nleg* ‘the tree foot’ and *deræχ_{t_{tree}-e_K} f_nχ_εhorn* ‘the tree branch.’ Each of these Projections can replace the Ax-Part P *deræχ_{t_{tree}-e_K} sæ_rtop* ‘the tree top’ in (93)b and produce another telic event. This is shown in (94) for *deræχ_{t_{tree}-e_K} f_nχ_εhorn* ‘the tree branch.’

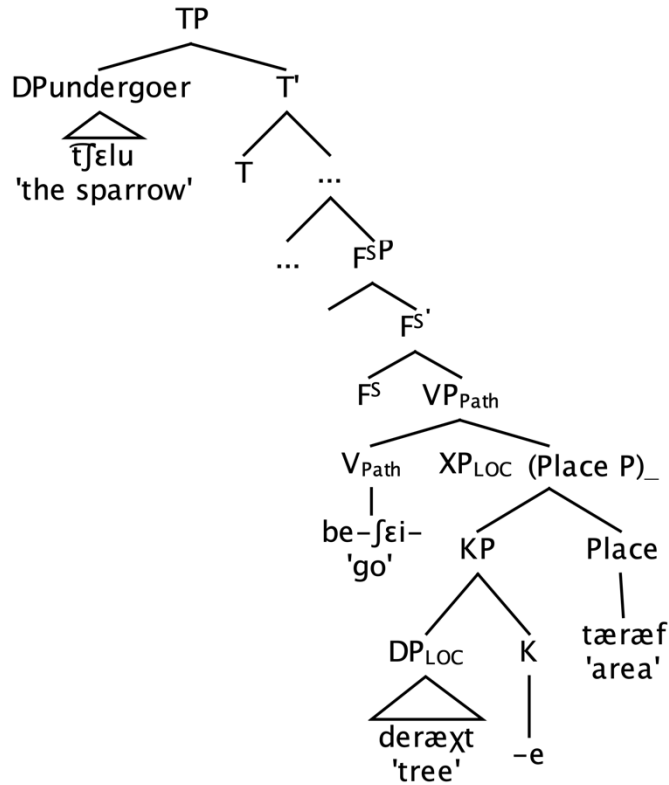
(94)	SR	$\widehat{tʃ}ɛlu$	bæ'fœ	beræ'sæs	deræχte	f _n χ _ε
	UR	tʃɛlu	be-ʃɛi-Ø	be-ræs-æst-Ø	deræχt-e	f _n χ _ε -ε
	Gloss	sparrow.M	PV-go.PST-3SM	PV-reach-PST-3SM	tree-K	horn-ε
	Role	undergoer	Path	Telic	(XP _{Loc} [Ax-Part P])
	‘The sparrow went [reach] onto the tree branch.’					

Along the lines of Svenonius (2008), the Ax-Part Projection *deræχ_{t_{tree}-e_K} sæ_rtop* ‘the tree top’ in (93)a can merge with a Place head like *tæræf* ‘area’ to produce the Place Projection *deræχ_{t_{tree}-e_K} sæ_rtop-e_{GEN} tæræf_{area}* denoting ‘the area around the tree top’ (comprised of the vectors coming off the tree top). Example (95)a uses *deræχ_{t_{tree}-e_K} sæ_rtop-e_{GEN} tæræf_{area}* ‘the area around the tree top’ as the complement of the Path head *bæ'fœ* ‘went’ in an atelic event. The structure related to this example is shown below in (95)b.

(95)

a.	SR	$\widehat{tʃ}ɛlu$	bæ'fœ	deræχte	tæræf
	UR	tʃɛlu	be-ʃɛi-Ø	deræχt-e	tæræf
	Gloss	sparrow.M	PV-go.PST-3SM	tree-K	area
	Role	undergoer	Path	(XP _{Loc} [Place P])
	‘The sparrow went towards the tree branch.’				

b.



Another example of the use of PlaceP *deræxt_{tree}-e_K sær_{top}-e_{GEN} tæræf_{area}* ‘the area around the tree top’ is the SVC in (96).

(96)	SR	tittije	muʃækɛʃ	boʃin	bœʃœ
	UR	titiɛ	muʃæk-ɛʃ	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	plane.M-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	sætele	tæræf		
	UR	sætel-e	tæræf		
	Gloss	bucket-GEN	area		
	Role	(XP _{LOC})		
	‘The girl threw the paper plane towards the bucket.’				

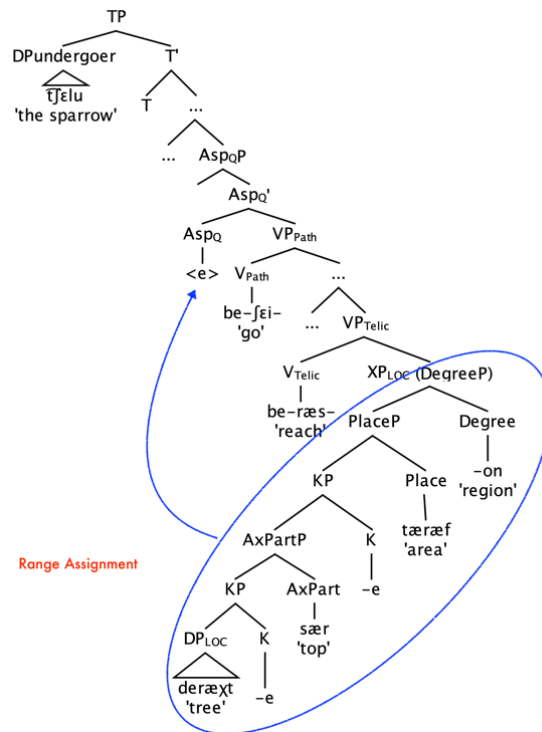
Following Svenonius (2008), the Place Projection *deræxt_{tree}-e_K sær_{top}-e_{GEN} tæræf_{area}* ‘the area around the tree top’ can then go back to the denotation of a region by merging with the morpheme *-on*, analyzed in Tati as a plural morpheme, as the head of DEGREE projection. As a result, *deræxt_{tree}-e_K sær_{top}-e_{GEN} tæræf_{area}-on_{Degree}* is produced, which has denotation of ‘the region around

the tree top'. An example is created for this Degree Projection in (97)a by replacing the XP_{Loc} *deræxt_{tree}-e_K sær_{top}* 'the tree top' in (93)a with the Degree Projection of *tree* *deræxt_{tree}-e_K sær_{top}-e_{GEN} tæræf_{area}-on_{Degree}* 'the region around the tree top.' The structure related to this example is shown below in (97)b.

(97)

- a.
- | | | | |
|-------|-----------|---------------|------------------|
| SR | t̪ɛlu | bæ'fœ | beræ'sæs |
| UR | t̪ɛlu | be-fɛi-∅ | be-ræs-æst-∅ |
| Gloss | sparrow.M | pv-go.pst-3sm | pv-reach-pst-3sm |
| Role | undergoer | Path | Telic |
-
- | | | | |
|-------|-------------------------|---------|-------------|
| SR | deræχte | sære | tæræfon |
| UR | deræχt-e | sær-e | tæræf-on |
| Gloss | tree-K | top-GEN | area-region |
| Role | (XP_{Loc} [DegreeP]) | | |
- 'The sparrow went [reach] the region around the tree top.'

b.



The structure provided by Svenonius (2008) in (91) has important implications for the telicity of Tati MPs. As we see in the telic examples (92)-(94) as well as (97), the different complements of X_{REACH} *beræ'sæs* 'reached' all refer to a region related to *deræxt* 'tree' and, following Svenonius (2008), are identified in this study as K, Ax-Part, or Degree Projections in (91). On the other hand, the complements of Path in (95) and (96), as two atelic events, denote *areas* rather than *regions* and are categorized as Place Projections, following the structure in (91). Accordingly, this section proposes that only those projections of XP_{LOC} that denote a *region* in Svenonius's (2008) terminology (i.e., KP, Ax-Part P, and Degree P) can be the complement of X_{REACH} in telic MPs. This claim predicts that all of the Projections identified as denoting a region in this section produce a grammatical result for telicity if they fill the XP_{LOC} slot in (98)a. This prediction comes true, as shown by (98)b for the projection *deræxt_{tree}-e_K p_nleg* 'the tree foot'.

(98)

a.	SR	tittije	muʃækɛʃ	bɒʃin	bæʃœ
	UR	titie	muʃæk-ɛʃ	be-ɒʃin-d	be-ʃɛi-∅
	Gloss	girl.F	paper plane.M-DEF-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræʹsæs	<div style="border: 1px solid black; padding: 10px; display: inline-block;"> XP_{LOC} </div>		
	UR	be-ræs-æst-∅			
	Gloss	PV-reach-PST-3SM.AGR			
	Role	Telicity			
		‘The girl threw the paper plane [go] [reach] XP_{LOC} .’			
b.	SR	tittije	muʃækɛʃ	bɒʃin	bæʃœ
	UR	titie	muʃæk-ɛʃ	be-ɒʃin-d	be-ʃɛi-∅
	Gloss	girl.F	paper plane.M-DEF-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræʹsæs	<div style="border: 1px solid black; padding: 10px; display: inline-block;"> <div style="display: flex; justify-content: space-between;"> <div> deræxt_e deræxt-e ftree-K (Xp_{LOC}) </div> <div> p_n p_n foot </div> </div> </div>		
	UR	be-ræs-æst-∅			
	Gloss	PV-reach-PST-3SM.AGR			
	Role	Telicity			
		‘The girl threw the paper plane [go] [reach] to the tree foot .’			

On the other hand, Place projections of DPs like *deræχt* ‘tree,’ such as *deræχt_{tree-e_K} tæræf_{area}* ‘the area around the tree,’ are predicted to produce ungrammatical readings if they fill the XP_{LOC} slot in (98)a. This is shown to be true in (99).

(99)	SR	*tittije	muʃækɛʃ	boʃin	bœʃœ
	UR	titie	muʃæk-ɛʃ	be-ɲʃin-d	be-ʃɛi-∅
	Gloss	girl.F	paper plane.M-DEF-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	beræʹsæs	deræχte	tæræf	
	UR	be-ræs-æst-∅	deræχt-e	tæræf	
	Gloss	PV-reach-PST-3SM.AGR	tree-K	area	
	Role	Telicity	(XP _{LOC})	
		*‘The girl threw the paper plane [go] [reach] the fence area.’			

It is worth mentioning that XP_{LOC} can be elided, and hence recovered from the context, in a telic events. One example involves the telic event in (100) below, which is understood with a reached endpoint (XP_{LOC}).

(100)	SR	muʃæk	bœʃœ	beræʹsæs
	UR	muʃæk	be-ʃɛi-∅	be-ræs-æst-∅
	Gloss	paper plane.M	PV-go.PST-3SM.AGR	PV-reach-PST-3SM.AGR
	Role	undergoer	Path	telicity
		‘The paper plane [go] reached X.’		

It is also possible for XP_{REACH} to be phonologically null in some telic events, like (101).

(101)	SR	tittije	muʃækɛʃ	boʃin	bœʃœ	∅
	UR	titie	muʃæk-ɛʃ	be-ɲʃin-d	be-ʃɛi-∅	∅
	Gloss	girl.F	plane.M-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR	∅
	Role	agent	undergoer	separation	Path	telic
	SR	sætele	mon			
	UR	sætel-e	mon			
	Gloss	bucket-GEN	inside			
	Role	(Xp _{LOC})			
		‘The girl threw the paper plane [go] into the bucket.’				

In (101), the presence of *sætele mon* ‘inside the bucket’ as an Axial-part projection denotes the presence of an X_{REACH}. In this example, the X_{REACH} is analyzed as being phonologically null. One piece of evidence for that supports considering a null X_{REACH} is that replacing the referential XP_{LOC}

sætele mon ‘inside the bucket’ in (101) with a non-referential XP_{LOC} such as *sætele tæræf* ‘the bucket area’ will produce an atelic event, as shown in (a), which is ungrammatical for a telic reading, as shown in (b) in (102).

(102)	SR	tittije	muʃækeʃ	boʃin	bœʃœ
	UR	titie	muʃæk-eʃ	be-ɲʃin-d	be-ʃei-∅
	Gloss	girl.F	plane.M-3S.AGR	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	separation	Path
	SR	sætele	tæræf		
	UR	sætel-e	tæræf		
	Gloss	bucket-GEN	area		
	Role	(XP_{LOC})			
		a.	The girl threw the paper plane towards the bucket.		
		b.	#‘The girl threw the paper plane [go] into the bucket.’		

In having a denotation of a *region* rather than an *area*, the restriction on the XP_{LOC} in (101), shown in (102), denotes the existence of an X_{REACH} that assigns that restriction. Therefore, the structure related to (101) is predicted to be basically the same as the structure in (84) with a null X_{REACH} . Specifically, the telic interpretation of (101) proves that XP_{REACH} (whether its head is spelled out as *-ræs-* or *tn*, or \emptyset) interacts with $AspQ$ for a telic reading. This restriction on X_{REACH} for a telic interpretation also provides evidence for the contribution of the complement of the X_{REACH} to the telicity, hence considering XP_{REACH} as a whole construct (rather than its head X_{REACH}) responsible for range assignment to $AspQ$. This theory becomes more refined when considering the existence of a null X_{REACH} , rather than no intermediate structures, between the *process* head and a referential XP_{LOC} in telic events.

5.3.2 Outer Aspect

Consider example (103)a below. This event has a perfective aspect value and a telic interpretation, in which the tree top is reached by the sparrow. On the other hand, modifying (103)a by changing

its aspectual value into *progressive*, produces (103)b with an atelic reading, wherein the sparrow does not actually reach the tree top.

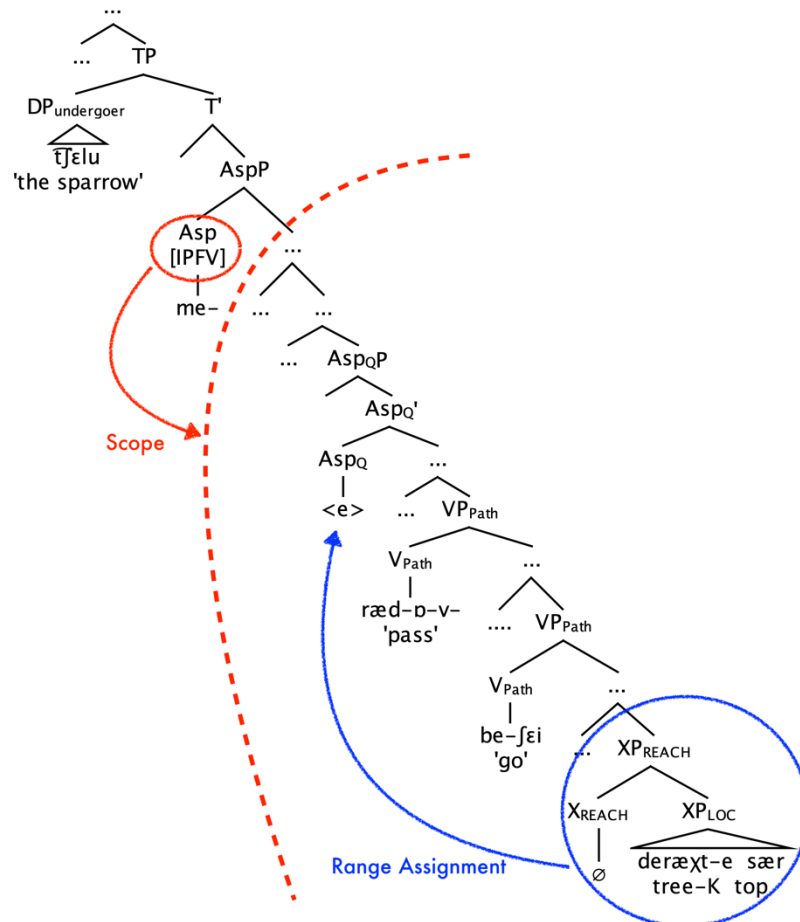
(103)

- | | | | | | |
|----|------------------------------------------------------|---------------------------|--------------------------------------------|-----------------|-----------------|
| a. | SR | $\widehat{tʃ\acute{e}lu}$ | $rædd\acute{o}+ve$ | $bœ'fœ$ | $deræχte\ sær$ |
| | UR | $\widehat{tʃ\acute{e}lu}$ | $ræd-ʋ+ve-∅$ | $be-ʃei-∅$ | $deræχt-e\ sær$ |
| | Gloss | sparrow.M | passed.ADJ-become+be.PST-3SM.AGR | PV-go-PST-3SM | tree-K top |
| | Role | undergoer | Path | Path | (X_{pLOC}) |
| | 'The sparrow [pass]went to the tree top.' | | | | |
| | | | | | |
| b. | SR | $\widehat{tʃ\acute{e}lu}$ | $k\acute{o}r\acute{o}\ rædd\acute{o}+meve$ | $mœ'fœ$ | $deræχte\ sær$ |
| | UR | $\widehat{tʃ\acute{e}lu}$ | $k\acute{o}r\acute{o}\ ræd-ʋ+me-ve-∅$ | $me-ʃei-∅$ | $deræχt-e\ sær$ |
| | Gloss | sparrow.M | PROG passed.ADJ-become+CONT-be.PST-3SM.AGR | CONT-go-PST-3SM | tree-K top |
| | Role | undergoer | Path | Path | (X_{pLOC}) |
| | 'The sparrow was [pass] going towards the tree top.' | | | | |

Structurally, the telicity of (103)a is explained through the interaction between two components:

(a) Asp_Q with an empty value and (b) XP_{REACH} (comprised of a null X_{REACH} and its referential complement *deræχte sær* 'tree top') as the range assigner. Since (103)b has the same XP_{REACH} as (103)a, its projected Asp_Q is assumed to be assigned range by XP_{REACH} . However, (103)b has an atelic interpretation although the conditions for telicity are met in it. This reading is assumed not to invalidate our proposal about telicity. Instead, it provides evidence for separating outer and inner aspectual projections (Asp and Asp_Q , respectively) from each other, as proposed by Travis (1991) and Borer (2005). Particularly, the otherwise telic event in (103)b merges with an outer aspect projection with an imperfective value, which reverses the telic reading of the sentence due to its scope over the whole event. This is shown by (104).

(104)



Example (105) provides another piece of evidence for separating outer and inner aspects.

(105)	SR	tittije	muʃækɛʃ	boʃin	bœʃœ	hɒvɒ
	UR	titie	muʃæk-e-ɛʃ	be-ɒʃin-d	be-fɛi-Ø	hɒvɒ
	Gloss	girl.F	paper plane.M-DEF-3SAGR	PV-hit-PST	PV-GO.PST-3S.M.AGR	air
	Role	agent	undergoer	separation	Path	(?)
		‘The girl hit the paper plane [go] into the air.’				

The example above neither has an X_{REACH} nor produces a grammatical result with an X_{REACH} . Additionally, *hɒvɒ* ‘air’ is not a region in Svenonius’s (2008) terms. As a result, Asp_Q cannot merge due to the lack of a range-assigner XP_{REACH} and the event should have an atelic reading with an F^S projection. However, this example has an interpretation with some type of end to the event.

Although the paper plane does not reach a goal, the event seems to have come to an end. In other words, this example has a completive sense (*perfective* outer Asp value), but it is not telic (lack of Asp_Q projection). In Bertinetto's (2001) terminology, this event has *terminativity* rather than *boundedness* (the perfective aspect in this event corresponds to the completive view assumed by the participant). In addition, example (105) can be analyzed as telic, with its distinct subevent breaking the homogeneity of the event at the starting point of the event rather than at its end. These types of telic MPs, however, are not the target of this study and can be analyzed in future research.

5.4 Conclusion

This chapter analyzed the structure of the Telic component in Tati MPs. It was argued that telicity is a result of range assignment to the head of Asp_Q (internal aspect) by VP_{REACH}, whose head imposes specific restrictions on its complement: its complement can be either a referential (region) XP_{LOC} or an expressed *resP*. CHAPTER 6 discusses the structure of the Resultative component as the complement of X_{REACH} in the telic MPs in Tati.

CHAPTER 6. RESULTATIVE COMPONENT

6.1 Introduction

As proposed in CHAPTER 5, the complement of X_{REACH} in Telic Tati MPs can be a *resultative* projection (*resP*). This chapter deals with the structure of the Resultative component, which expresses the final state of an undergoer of motion after reaching an endpoint in telic MPs. Further, this chapter discusses that the head of the Resultative component, denoting the resting state of an undergoer predicated upon the previous *reaching* subevent (i.e. Telic component), can be expressed through verbal stems like *v-nif*- ‘sit,’ *be-æftv*- ‘stand,’ and *v-χot* ‘lie down.’ An example is in (1), which is repeated below in (106) for convenience. The verb *v-nif* ‘sat’ in (106) denotes the resting (sitting) state of the undergoer of motion *tʃɛlu* ‘the sparrow’ after reaching the place denoted by the XP_{LOC} *deræχte sær* ‘tree top.’

(106)	SR	tittije	tʃɛluʃ	o'go	bo'ʃin	bæ'ʃæ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	v-nif	deræχte	sær	
	UR	be-ræs-æst-Ø	v-nif-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-GEN	top	
	Role	telicity	resultative	(XP_{LOC})	
		‘The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.’				

Similar to *v-nif*- ‘sat’ in (106), many of the verbs used as the head of the Resultative component in Tati MPs denote a resting posture of an undergoer. Particularly, these verbs express the posture of an undergoer of motion as it comes to rest after motion. The example in (107) uses another *resultative* verb (i.e. *v-χot* ‘lied down.’)

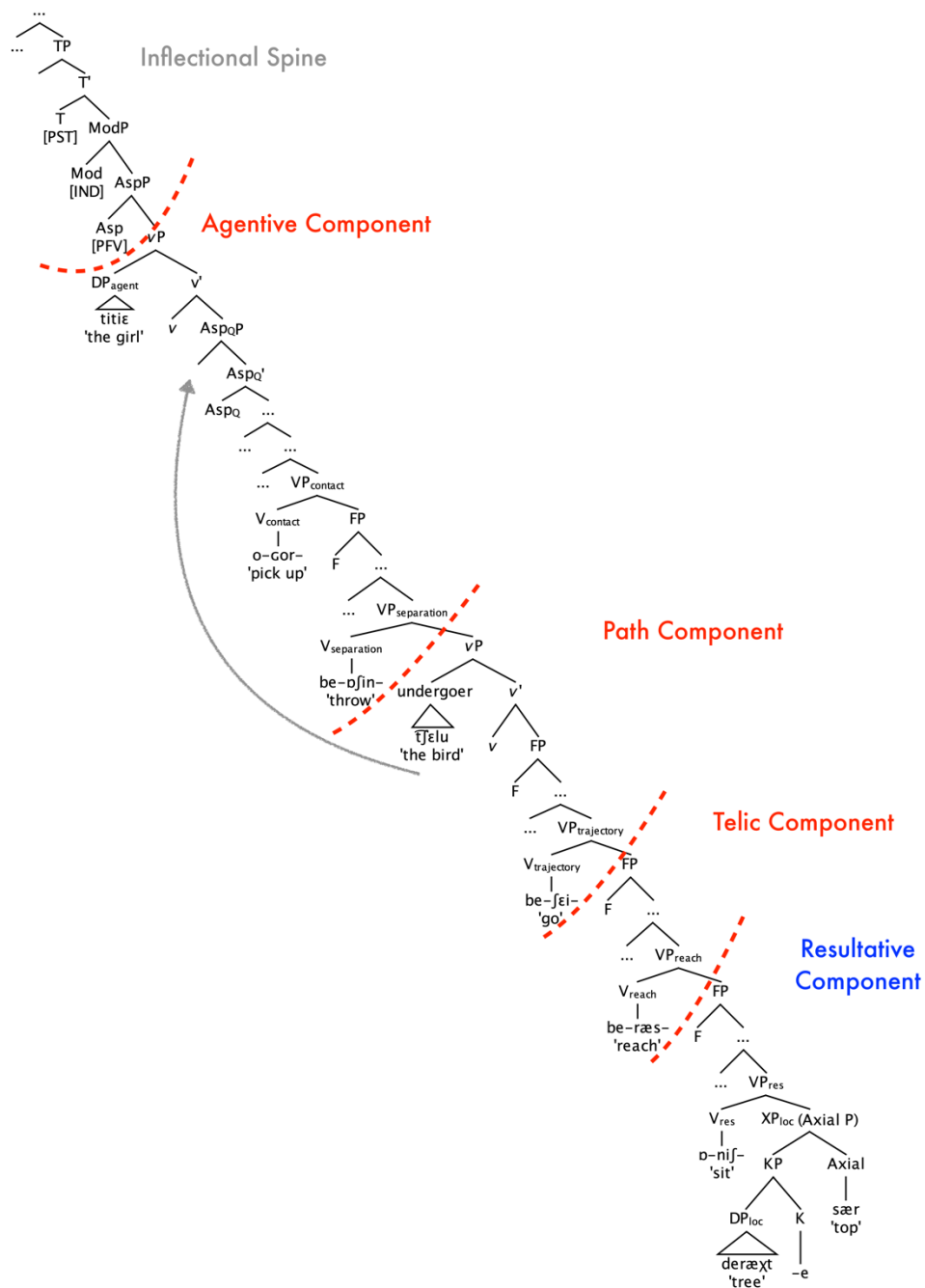
(107)	SR	ferɛ	beræ'sæs	lɒlu	ɒ'χot	$\widehat{d}ʒɒ$	sær
	UR	ferɛ	be-ræs-æst-∅	lɒlu	ɒ-χot-∅	$\widehat{d}ʒɒ$	sær
	Goss	boy.M	PV-reach-PST-3SM	bed	PV- lie .PST-3SM	3S.GEN	top
	Role	undergoer	telic	XP _{LOC}	resultative	(XP _{LOC})
		'The boy [reach] lied down on the bed.'					

In the example above, *ɒ'χot* 'lied down' denotes the resting state of the undergoer of motion *ferɛ* 'the boy' after reaching the place denoted by XP_{LOC} (the bed). The hypothesis of this chapter is proposed in 6.2. Section 6.3 provides evidence for the structural hypothesis of this chapter by dealing with the elements of the resultative component (head, complement, and specifier).

6.2 Hypothesis

The structure related to (1) / (106), which was proposed earlier in (10) in CHAPTER 1, is repeated in (108).

(108)



This chapter discusses the part of the structure in (108) that is labeled as the Resultative component. Although it has been argued, by scholars like Ramchand (2008), that a final *result*

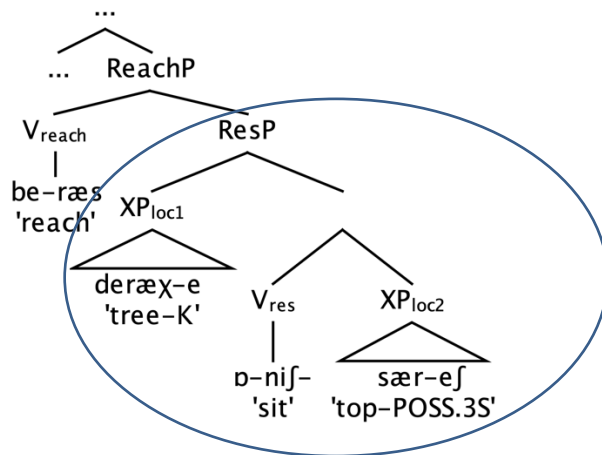
state can produce telicity in an event, this chapter provides evidence that the Resultative component, if expressed, appears as an add-on substructure to the Telic component at the bottom of MP structures.

The data gathered for this study show that example (106) can also be expressed in an alternative way, which is provided in (109).

(109)	SR	tittije	tʃɛluʃ	o' go	bv'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-e-eʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-œ
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	deræxte	v'niʃ	særef	
	UR	be-ræs-æst-Ø	deræxt-e	v-niʃ-t-Ø	sær-ʃ	
	Gloss	PV-reach-PST-3SM.AGR	tree-GEN	PV-sit-PST-3SM.AGR	top-3S.POSS	
	Role	telicity	XP_{Loc1}	resultative	XP_{Loc2}	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'				

As shown by (109), the *resultative* head *v'niʃ* 'sat' is preceded by one XP_{Loc} (*deræxte* 'tree') and followed by another XP_{Loc} (*særef* 'its top'). Accordingly, this chapter hypothesizes the structure in (110) for the Resultative component.

(110)



As shown by (110), the *resultative* head is a separate head from the telic head (V_{REACH}). In addition, *resP* in (109) has one XP_{LOC} (*deræxt-e* ‘tree’) in its specifier and another XP_{LOC} (*sæ-r-ef* ‘its top’) in the complement position of V_{res} (*v-nif-* ‘sit’). A comparison between the internal structures of the Resultative components in (108) and (110) indicates that these structures are basically the same, with the difference being that, in (110), the specifier position of *resP* is occupied by an XP_{LOC} while in (108), *resP* lacks such a specifier. Therefore, for a refined theory, this chapter proposes (110) as the structural hypothesis for the Resultative component in Telic Tati MPs.

6.3 Evidence for the Hypothesis

This section provides evidence for the hypotheses in (110) by examining different elements of the Resultative component in Tati MPs. Section 6.3.1 discusses the head of the Resultative component. Section 6.3.2 deals with the restriction imposed by V_{res} on its XP_{LOC} complement. Finally, section 6.3.3 argues the relationship between an expressed XP_{LOC} in the specifier position of V_{res} and the XP_{LOC} in the complement position of that verbal head.

6.3.1 Head Position of the Resultative Component

As established in this chapter in examples (106), (107), and (109), the heads of the Resultative component (i.e., *v 'nif* ‘sit’ and *v'χot* ‘lied down’) denote the resting state of their undergoer after motion. A point needs to be established here about the distinction between dynamic and stative verbs before proceeding to the restriction imposed on the head of Resultative component. Along the lines of Ramchand (2008), a dynamic verb denotes a change related to an undergoer of change,

which introduces *process* as the core of events. On the other hand, due to the lack of a change, a state introduces neither a *process* nor an undergoer of change⁴⁹.

Data analysis shows that the head of the Resultative component in Tati MPs requires being a dynamic rather than a stative verb. Particularly, in Tati, the final resting state is encoded in an eventive verb denoting *becoming* that state, while the verb lexeme still includes the semantics related to that state. For example, *v'niʃ* 'sat' in (106), repeated conveniently in (111) below, is a dynamic verb denoting the action that leads to the *sitting* state accomplished by the sparrow, which results from reaching the tree top.

(111)	SR	tittijɛ	tʃɛluʃ	o'go	bo'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɲʃin-d	be-ʃɛi-Ø
	Gloss	girl.F	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	v'niʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	v-niʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-3SM.AGR	tree-GEN	top	
	Role	telicity	resultative	(X _{pLoc}))	
	'The girl [pick_up] threw the sparrow [go] [reach] [sit] on the tree top.'					

Adverbial modifications like *sæ ɾɒ* 'three times' are used to provide evidence for the dynamicity of the *res* heads in Tati MPs. For instance, *v'niʃt* 'sat' in (112) below is shown to produce a grammatical result with the modifying adverbial phrase *sæ_{three}-ɾɒ_{times}* 'three times,' which provides evidence for its dynamicity. In example (112), the sparrow's action of sitting on the tree top is interpreted as occurred three times, presumably with intervals denoting not-sitting.

⁴⁹ According to Ramchand (2008: 68) a stative verb has a *holder* of the state denoted by the verb.

(112)	SR	t̪ɛlu	sœ	rɒ	ɒ'niʃ	deræχte	sær
	UR	t̪ɛlu	sœ	rɒ	ɒ-niʃ-t-∅	deræχt-e	sær
	Gloss	sparrow.M	NUM.three	time	PV-sit-PST-3SM	tree-K	top
	Role	undergoer	(adverbial	)	resultative	(XP _{Loc})
		'The sparrow sat three times on the tree top.'					

The above-mentioned requirement (i.e., dynamicity) for the head of the Resultative component is evidenced from the fact that, when expressed as stative verbs, *resultative* heads produce ungrammatical results for both the mono-eventivity and the complementation structure of MPs. Consider example (113) below, in which the stative *res* head *ɒniʃ'tæve* 'was sitting' denotes the bird's resting state of *sitting* on top of the tree (rather than its action of *sitting* on top of the tree).

(113)	SR	tittije	t̪ɛluʃ	o'go	bɒ'ʃin	bœ'ʃœ	
	UR	titie	t̪ɛlu-e-eʃ	o-gor-d	be-ɒʃin-d	be-ʃei-œ	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR	
	Role	agent	undergoer	contact	separation	Path	
	SR	beræ'sæs	ɒniʃ'tæve			deræχte	sær
	UR	be-ræs-æst-∅	ɒ-niʃ-t-æ-ve-∅			deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR	PV-sit-PST-PTCP-be.3S.M.AGR			tree-K	top
	Role	telicity	resultative			(XP _{Loc})
		#'The girl [pick_up] threw the sparrow [go] [reach], (and) (it) was sitting on the tree top.'					

As shown by (113), the stative head *ɒniʃ'tæve* 'was sitting' produces an interpretation that is ungrammatical for a mono-eventive reading. The case of negating (113) supports this claim because negation would not have scope over the stative verb *ɒniʃ'tæve* 'was sitting.' Instead, the scope of negation would only be over the dynamic verbs *o'go* 'picked up,' *bɒ'ʃin* 'threw,' *bœ'ʃœ* 'went,' and *beræ'sæs* 'reached.' As a result, the stative verb *ɒniʃ'tæve* 'was sitting' keeps its affirmative interpretation while all other (dynamic) verbs receive a negative interpretation as the result of negation. The result of negating (113) is represented below in (114).

(114)	SR	tittije	t̪ɛluʃ	o' -no-go	'bɔʃiniʃe	
	UR	titie	t̪ɛlu-e-eʃ	o- ne -gor-d	be-ɔʃin-ie	
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST	SBJV -throw-3SF.AGR	
	Role	agent	undergoer	contact	separation	
	SR	'bɪʃu	'beræse	ɔnɪʃ tæve	deræxte	sær
	UR	be-ʃ-u	be-ræs-e	ɔ-nɪʃ-t-æ-ve-∅	deræxte	sær
	Gloss	SBJV -go-3SM.AGR	SBJV -reach-3SM.AGR	PV-sit-PST-PTCP-be.3SM.AGR	tree-K	top
	Role	Path	telicity	resultative	(X _{pLoc}))
	a.	The girl did not [pick_up] throw the sparrow [go] [reach]... (It) was sitting on the tree.'				
	b.	#'The girl did not [pick_up] throw the sparrow [go] [reach] [sit] on the tree top.'				

As shown in (114), interpretation (b), which denotes negating the whole event in (113), is not available. On the other hand, an interpretation arises, in which the stative verb *ɔnɪʃ tæve* ‘was sitting’ stays by its own as a separate (verbal) unit. Therefore, using a stative, rather than a dynamic, verb of *result* breaks the mono-eventivity of the MP in (113).

In addition, as we notice in (114), following the Subjunctive-under-Negation test introduced in 3.3, we notice that all the verbs in (114) are marked with subjunctive modality under the scope of negation, except the stative verb *ɔnɪʃ tæve* ‘was sitting.’ This provides evidence for both the lack of a complementation structure for (113) and, hence, for considering *ɔnɪʃ tæve* ‘was sitting’ as falling out of the complementation structure of the rest of the MP.

The dynamicity requirement for the head of the Resultative component might be the morphological nature of the Tati language with regard to its verb chains, according to which all the verbs need to be marked with a copy of the single value for each feature. Specifically in MPs, this restriction requires each verb to be marked with a dynamic morphology that is linked to the single value for eventuality in New-Davidsonian semantics. In other words, the eventive value needs to be copied on each verb. This also provides evidence for Ramchand’s (2008) claim that states stand by

themselves in non-eventive constructs lacking *process*. In addition, Ramchand (2008:130) proposes that as a *result* state does not pre-exist the *process*; it can still be temporally contiguous with the *process*. In this case, according to Ramchand, a transition point links the end part of the *process* to the beginning of the *result*. Following this claim of Ramchand, the transition point in Tati MPs linking the *process* and *result* is analyzed as *the same eventive value* for those components.

6.3.2 Complement Position of the Resultative Component

Data analysis for this study also shows that V_{res} (just like V_{REACH}) imposes specific restrictions on its complement, according to which V_{res} requires its complement to be a delimited region (either an Ax-Part Projection or a Degree Projection in Svenonius's [2008] terms). For instance in (106) above, the complement of V_{res} *v-nif*- 'sit' is *deræχte sær* 'tree top,' which is analyzed as an Ax-Part Projection in Svenonius's terms. Another example is *dʒv sær* 'its top' in (107), which is another Ax-Part Projection, with *dʒv* referring back to *lɒlu* 'the bed' in this example. An example of the use of a Degree Projection as the complement of V_{res} , is produced in (115) below as the result of replacing *deræχte sær* 'tree top' in (106) with the Degree Projection *deræχte sære tæræfon* 'the region around the tree top.'

(115)	SR	tittije	tʃeluf		o'go	bɒ'ʃin	bæ'fœ
	UR	titie	tʃelu-ef		o-gor-d	be-ɒʃin-d	be-ʃei-Ø
	Gloss	girl.F	sparrow.M-3S.AGR		PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer		contact	separation	Path
	SR	beræ'sæs		n' nif		deræχte	sære tæræfon
	UR	be-ræs-æst-Ø		n-nif-t-Ø		deræχt-e	sær-e tæræf-on
	Gloss	PV-reach-PST-3SM.AGR		PV-sit-PST-3SM.AGR		tree-GEN	top-GEN area-region
	Role	telicity		resultative		(Xp _{Loc})
	'The girl [pick_up] threw the sparrow [go] [reach] [sit] in the region around the tree top. '						

On the other hand, using an area-denoting complement for V_{res} *v-nif*- 'sit' in (115) (i.e., a PlaceP) or an undelimited Region (Eigenplace) of a XP_{Loc} would produce an ungrammatical result, as

shown in (116)a for the KP *deræχte* ‘the tree’ and in (116)b for the PlaceP *deræχte sære tæræf* ‘the area around the tree top.’

(116)

- a.
- | | | | | | |
|-------|----------------------|-----------------------------|--------------------|--------------|-------------------|
| *SR | tittijē | t̪ɛluʃ | o'go | bɒ'ʃin | bœ'ʃœ |
| UR | titie | t̪ɛlu-ɛʃ | o-gor-d | be-ɲʃin-d | be-ʃei-Ø |
| Gloss | girl.F | sparrow.M-3S.AGR | PV-pick_up-PST | PV-throw-PST | PV-go.PST-3SM.AGR |
| Role | agent | undergoer | contact | separation | Path |
| SR | beræ'sæs | ɒ'niʃ | deræχte | | |
| UR | be-ræs-æst-Ø | ɒ-niʃ-t-Ø | deræχt-e | | |
| Gloss | PV-reach-PST-3SM.AGR | PV- sit -PST-3SM.AGR | tree-K | | |
| Role | telicity | resultative | (X _{pLOC} |) | |
- *‘The girl [pick_up] threw the sparrow [go] [reach] [sit] **the tree**.’
- b.
- | | | | | | |
|-------|----------------------|-----------------------------|--------------------|--------------|-------------------|
| *SR | tittijē | t̪ɛluʃ | o'go | bɒ'ʃin | bœ'ʃœ |
| UR | titie | t̪ɛlu-ɛʃ | o-gor-d | be-ɲʃin-d | be-ʃei-Ø |
| Gloss | girl.F | sparrow.M-3S.AGR | PV-pick_up-PST | PV-throw-PST | PV-go.PST-3SM.AGR |
| Role | agent | undergoer | contact | separation | Path |
| SR | beræ'sæs | ɒ'niʃ | deræχte | sære | tæræf |
| UR | be-ræs-æst-Ø | ɒ-niʃ-t-Ø | deræχt-e | sær-e | tæræf |
| Gloss | PV-reach-PST-3SM.AGR | PV- sit -PST-3SM.AGR | tree-GEN | top-GEN | area |
| Role | telicity | resultative | (X _{pLOC} |) | |
- *‘The girl [pick_up] threw the sparrow [go] [reach] [sit] **in the area around the tree top**.’

The ungrammaticality of (116)b with the Place Projection *deræχte sære tæræf* ‘the area around the tree top’ as the complement of V_{res} *ɒ-niʃ*- ‘sit’ is compatible with resultative events being telic in nature, in that a telic interpretation, as shown earlier in 5.3.1.1, arises only if there is a region that is reached by an undergoer.

The ungrammaticality of (116)b, with the *eigenplace* projection *deræχte* ‘the tree’ as the complement of V_{res} *ɒ-niʃ*- ‘sit,’ not only confirms the above point about telicity but also indicates the greater rigidity of restrictions imposed by the *resultative* head on its complement compared to the telic head. As such, the verb denoting the *result* state of an MP needs not only a region

complement but also a region complement that is delimited in Svenonius's (2008) terms (i.e., Ax-Part or Degree Projection).

6.3.3 Specifier Position of the Resultative Component

The restrictions imposed by *resultative* verbs, mentioned above, on their complements bring our attention to MPs like (109), repeated for convenience in (117), wherein the *resultative* head *v'niʃ* 'sat' is preceded by one XP_{LOC} (*deræχte* 'tree') and followed by another XP_{LOC} (*særef* 'its top').

(117)	SR	tittije	tʃeluf	o'go	bo'ʃin	bæ'fœ
	UR	titie	tʃelu-e-ef	o-gor-d	be-ʋʃin-d	be-ʃei-œ
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	deræχte	v'niʃ	særef	
	UR	be-ræs-æst-∅	deræχt-e	v-niʃ-t-∅	sær-ʃ	
	Gloss	PV-reach-PST-3SM.AGR	tree-GEN	PV-sit-PST-3SM.AGR	top-3S.POSS	
	Role	telicity	XP_{LOC1}	resultative	XP_{LOC2}	
		'The girl [pick_up] threw the sparrow [go] [reach] [sit] tree top.'				

A closer look at examples (116)a and (117) shows that, although an Eigenplace Projection cannot appear as the complement of a *resultative* head, as shown in (116)a, the XP_{LOC} preceding this verb *deræχte* 'tree' belongs to an Eigenplace Projection type. In addition, data analysis results show that if V_{res} is preceded by one XP_{LOC} and followed by another XP_{LOC} , those XP_{LOC} 's need to be in a region-sub region relationship: an *eigenplace*-Axial Part relationship along the lines of Svenonius (2008).

The relationship between the two cases of XP_{LOC} for the same resultative head can also be analyzed along the lines of Freeze (1992), who related the structure of locative structures to possessive structures. As such, the XP_{LOC} in the specifier position of V_{res} denotes possession of the XP_{LOC} the complement position of that verb (i.e., *deræχt* 'the tree' possesses *særesh* 'its top' in (117)). This

analysis is legitimate, as the example below, lacking a possessor-possessioned relationship between the two cases of XP_{Loc} produces a result that is hard to analyze in Tati. In other words, it raises the question of how it is possible for the sparrow to reach the tree but sit on the fence.

(118)	?SR	tittije	tʃeluf	o'go	bo'ʃin	boe'ʃœ
	UR	titie	tʃelu-e-ef	o-gor-d	be-ɲʃin-d	be-ʃei-œ
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	deræχte	ɒ'nif	nærði	sær
	UR	be-ræs-æst-Ø	deræχt-e	ɒ-niʃ-t-Ø	nærde-e	sær
	Gloss	PV-reach-PST-3SM.AGR	tree-GEN	PV-sit-PST-3SM.AGR	fence-Gen top	
	Role	telicity	XP_{Loc1}	resultative	XP_{Loc2}	
		?'The girl [pick_up] threw the sparrow [go] [reach] [sit] on top of the fence.'				

Interestingly, the same relation exist in the *resP* of Ghanaian Student Pidgin (GSP), which is an analytical language with a very low morphological density per word. An example is (119) in Osei-Tutu (2019), wherein, *the tree* is analyzed by Osei-Tutu as possessing *im branch* 'its branch.'

(119)	The bird fly come catch the tree tap im branch
	D bird fly come reach D tree sit 3SGPD branch
	'the bird flew (all the way) to reach the tree and sat on a branch'

The eigenplace-Axial Part, or possessor-possessioned relationship between the two cases of XP_{Loc} associated with V_{res} , in Tati as a polysynthetic language and in GSP as an isolating language, provides evidence for the validity of the structure proposed for *resP* in (110), which in turn reaffirms the syntactic reality of this structure.

6.4 Conclusion

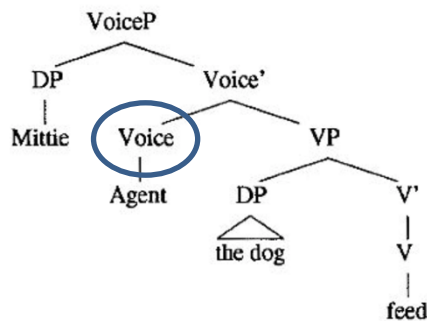
This chapter dealt with the Resultative component, which appears as the complement of the Telic component at the bottom of the MP structure. Evidence was provided for the structural hypothesis in this chapter by examining different elements of the Resultative component, namely its head, complement, and specifier positions.

CHAPTER 7. AGENTIVE COMPONENT

7.1 Introduction

This chapter focuses on the structure of the Agentive component, where an agent as an external argument is introduced into MPs and brings about the movement of an undergoer of motion. Along the lines of Marantz (1984), Kratzer (1996), Arad (1999), and Alexiadou et al. (2015), this chapter argues that the Agentive component is introduced as an add-on structure to the non-agentive intransitive events through a functional head labeled as little *v* (*v*). Related to this proposal, Kratzer (1996) proposed that external arguments are introduced through a functional head, labeled as VOICE in (120) for the sentence *Mittie fed the dog*.

(120)



Kratzer (1996:121)

As mentioned in CHAPTER 4, data were collected on the agentive and non-agentive MPs, and within the agentive group, a distinction was made between the video clips that were designed to elicit data about Initial Contact and those designed to elicit data about Continuous Contact. Ramchand (2008) mentions that the *initiation* component (*initP*) “leads to” the *process* component (*procP*). However, this view does not predict the fine-grained distinctions that our study is detecting regarding the two interpretations for (121).

(121)	SR	ferɛ	titijɔf	'hole+ɗɔ	vujɛ	mon
	UR	ferɛ	titie-ɛf	hole+ɗɔ	vijɛ	mon
	Gloss	boy.M	girl.F-3S.AGR	push.N-give.PST	water	inside
	Role	agent	undergoer	contact	(XP _{Loc})
		'The boy pushed the girl into the water.'				

In an Initial-Contact interpretation for (121), the boy pushes the girl, e.g., by tapping on her shoulder, who falls into the water. On the other hand, in a Continuous-Contact interpretation related to this example, the boy continuously pushes the girl without breaking contact with her until the girl falls into water (with the additional possibility of the boy's falling together with the girl into the water). This chapter provides a detailed analysis of the structural differences between Initial and Continuous Contact, as exemplified above in the two interpretation of (121).

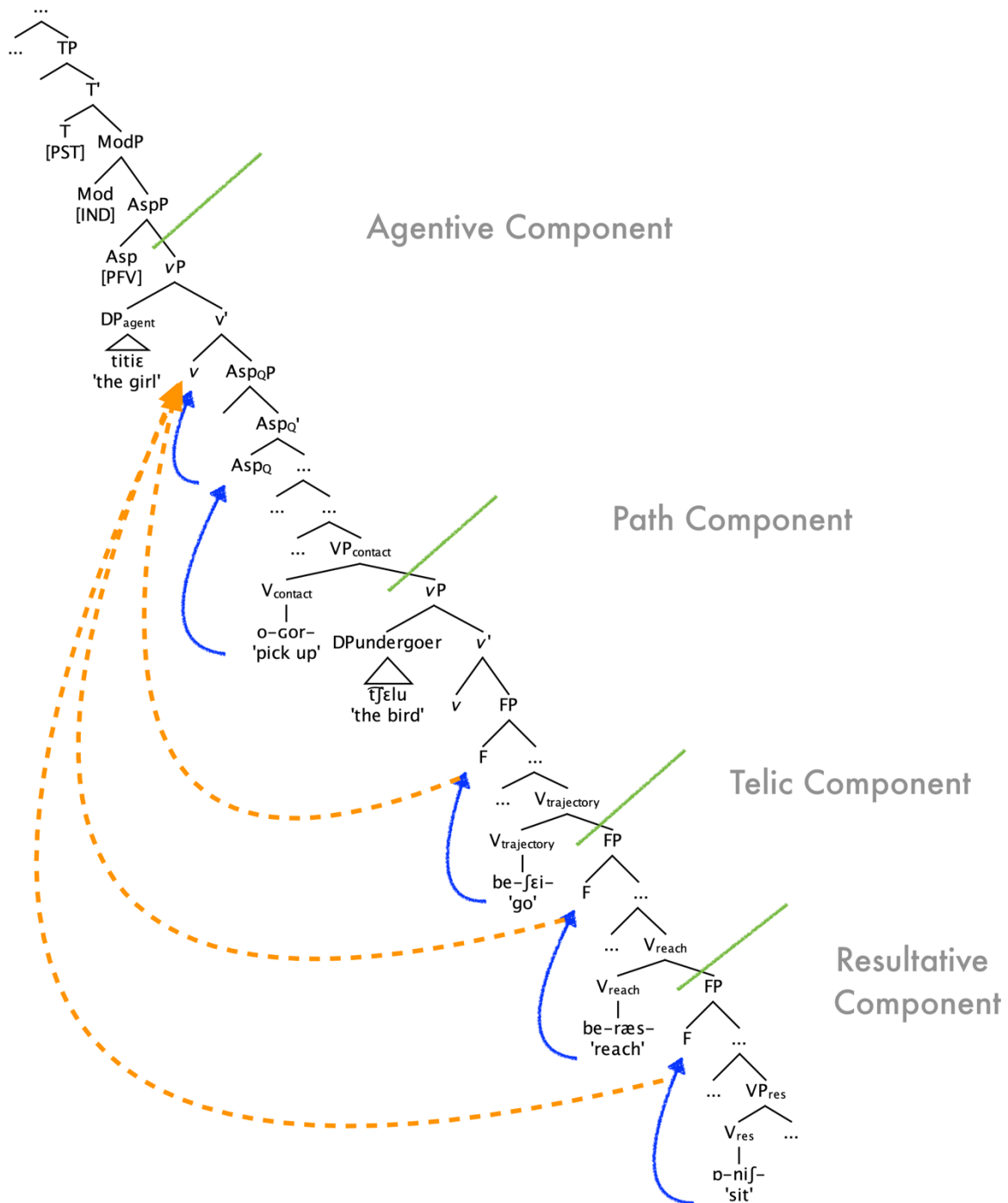
The rest of this chapter is organized as follows: 7.2 proposes structural hypotheses about the agentive MPs expressed by SVCs. Section 7.3 provides evidence for the hypothesis by examining different heads in the Agentive component in 7.3.1, distinguishing two sub-types of Initial Contact in 7.3.2 and four sub-types of Continuous Contact in 7.3.3.

7.2 Hypotheses

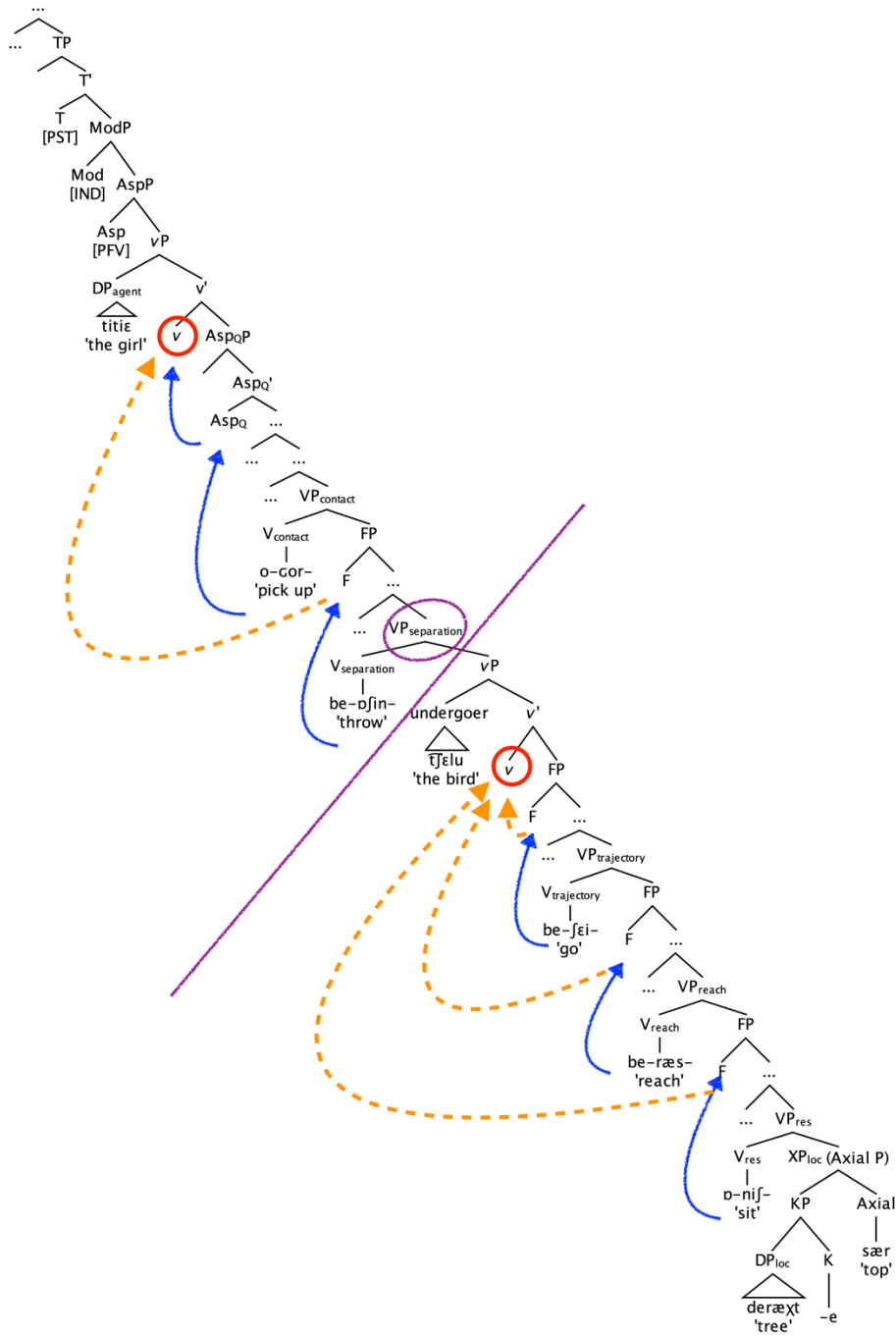
The structure in (122)a below is proposed for the Continuous-Contact agentive SVCs expressing MPs, and (122)b is proposed for the Initial-Contact agentive MPs.

(122)

a. Continuous-contact agentive events



b. Initial-contact agentive events



As both of the structures in (122) propose, agent is introduced through an external-argument introducing v in the specifier of the higher vP (equal to VOICE), and, aligning with the findings of Travis (1991), undergoer originates through an internal-argument introducing v in the specifier of the Path component as the subject of motion.⁵⁰

As proposed by (122), the structures of Initial Contact and Continuous Contact are basically the same: all of the verb stems in the Path, Telic, and Resultative components in both Initial and Continuous Contact undergo a successive head-to-head movement to the v in the Path component, and the verb stems in the Agentive component move up to the agent-introducing v higher in the structure. However, the structure of Initial Contact in (122)b is different from Continuous Contact in (122)a with regard to an intermediate semi-grammaticalized head (labeled as ‘separation’) in Initial Contact, which is realized as verbs like *bp’jin* ‘threw’ in (1) and denotes breaking the agent-undergoer contact. This head is proposed in (122)b to prevent the components below the Agentive component from being shared with the Agentive component itself (i.e., to move from the lower v to the Agentive component in a cyclic movement). On the other hand, because of the lack of such a *separation* head in Continuous Contact in (122)a, the components below the agentive component have access to, and hence to be shared with, the agentive component through cyclic head-to head movements.⁵¹

⁵⁰ The undergoer is supposed to move up to the specifier of Asp_0P in telic events and F^sP in atelic events.

⁵¹ The specific details related to the blocking strategy in Initial Contact will be left for future research. In addition, since straight head movements to the v heads is prohibited due to lack of adjacency, the particular mechanisms related to the cyclic movements of the heads remains to be established in future research.

The rest of this chapter provides evidence for the structural hypotheses proposed in this section. Section 7.3.1 discusses the Agentive-component heads, specifically the external-argument introducing head in 7.3.1.1, the contact head in 7.3.1.2, and the separation head in 7.3.1.3. Section 7.3.2 discusses Initial-contact agentive events and distinguishes between two different sub-types based on the morphological patterns of the verbs in each sub-type. Finally, section 7.3.3 deals with Continuous Contact and differentiates four different sub-types of Continuous Contact.

7.3 Evidence for the Hypotheses

As mentioned in CHAPTER 1, Tati, as a polysynthetic language, has a complex inflectional system with regard to its verbs. In this chapter, discussing the complexity of this system facilitates our understanding of agentive events because the morphological-marking patterns systematically differentiate Initial Contact from Continuous Contact as well as different sub-types within each contact group.

7.3.1 Agentive Component Heads

This section discusses different heads (subcomponents) of the agentive component in the agentive MPs expressed by SVCs. These heads, as shown by (122), include the external-argument introducing head (*v*) and the *contact* head in both types of agentive events as well as the *separation* head in the Initial-Contact agentive events.

7.3.1.1 External-argument Introducing Head

The agentive head (*v*) can be phonologically null in verbs like *bp'jin* ‘threw,’ as represented in (123).

(123)	SR	titijɛ	tʃɛluʃ	bɒʃin	zɛmin
	UR	titie	tʃɛlu-e-ɛʃ	be-ɒʃin-d	zɛmin
	Gloss	girl.F	sparrow.M.DEF-3S.AGR	PV-throw-PST	floor
	Role	agent	orientation change	separation	XP _{LOC}
		‘The girl threw the sparrow on the floor.’			

Example (123) lacks any spelled-out external-argument introducing *v*. However, this *v* can be phonologically spelled out as the agentive morpheme *-den*, as exemplified in (124)a below. Example (124)b, on the other hand, uses the same verb root as (124)a (*v-niʃ*- ‘sit’) in an intransitive and non-agentive verb form.

(124)

a.	SR	mærdæk	firiʃ	ɒniʃde'næs	zɛmin
	UR	mærdæk	fere-ɛʃ	ɒ-niʃ- den -æst	zɛmin
	Gloss	man.M	boy-DEF-3S.AGR	PV-sit-AGT-PST	ground
	Role	agent	undergoer	orientation change	XP _{LOC}
		‘The man put the boy in the sitting position.’			
b.	SR	fere	ɒ'niʃt	zɛmin	
	UR	fere	ɒ-niʃ-t-∅	zɛmin	
	Gloss	boy.M	PV-sit-PST-3SM	ground	
	Role	undergoer	orientation change	XP _{LOC}	
		‘The boy sat on the ground.’			

Note that the morpheme *-den* is also used in Tati to express causation. Accordingly, the event in (124)a can alternatively be interpreted as ‘the man did something that caused the boy to sit on the ground.’ This analysis remains open for further investigation of the potential interactions between the agentive and causative heads in Tati.

7.3.1.2 Contact Head

Comparing the structures in (122), we see that establishing an agent-undergoer contact is part of both Initial and Continuous Contact agentive events. The structures in (122) both show that whether the type of contact is Initial or Continuous in an agentive MP in Tati, the *contact* verb

moves up to the agentive-introducing head. The morphological result of this movement is that, whether in Initial Contact or in Continuous Contact, *contact* verbs are spelled out as transitive verbs conjugated for agents. Example (125) is used to clarify this point.

(125)	SR	tittije	tʃɛlu	ongo'rije	mɔ'ʃinije	hɔvɔ
	UR	titie	tʃɛlu-e	o-m-gor-iɛ	me-nʃin-iɛ	hɔvɔ
	Gloss	girl.F	sparrow.M-DEF	PV-IND-pick_up.PRS.SF	PV-throw.PRS-3SF	air
	Role	agent	undergoer	contact	separation	XP _{LOC}
	'The girl [pick_up] throws the sparrow to the air.'					

As shown by (125), the *contact* verb *ongo'rije* 'picks up' is conjugated as a transitive verb for the agent *tittije* 'the girl.' In addition to the transitive verb *ongo'rije* 'picks up' and all its variations, some other verbs of *contact*, such as '*dæsge* 'grabbed [by hand],', *be'ge* 'grabbed,', *bv'gvlge* 'held in arms,', and *bv'gvlzæn* 'held in arms,', can express the establishment of agent-undergoer contact in both Initial and Continuous Contact agentive events.⁵² Example (126) shows how '*dæsge* 'grabbed [by hand]'' is used in a Continuous-Contact agentive event. This verb is conjugated as a transitive verb for the agent *titije* 'the girl' as a third-person singular DP.

(126)	SR	titije	tʃɛluʃ	'dæsge	bɔ'ʃin	bœ'ʃœ
	UR	titie	tʃɛlu-e-ɛʃ	dæs+ger-d	be-nʃin-d	be-ʃei-œ
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	hand+grab-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	'The girl [grab_in_hand] threw the sparrow [go].'					

In addition, agent-undergoer contact can be phonologically null and, hence, recovered from the rest of the sentence, as shown by (127).

(127)	SR	ferɛ	œrdækɔʃ	be'bɛ	luni	mon
	UR	ferɛ	œrdækɛ-ɛʃ	be-bær-d	lunɛ-e	mon
	Gloss	boy.M	duck-3S	PV-carry_away-PST	nest-GEN	inside
	Role	agent	undergoer	Path	(Xp _{LOC})
	'The boy carried the duck into the nest.'					

⁵² The underlying forms related to these verbs before Agreement Shift are *dæs_{hand}+ger_{grab}-d_{PST}-e_{f3s}* 'grabbed by hand,' *bv_{gvl}arms+ger_{grab}-d_{PST}-e_{f3s}* 'grabbed in arms,' and *bv_{gvl}arms+zæn_{hit}-d_{PST}-e_{f3s}* 'grabbed in arms.'

As indicated in (127), even though a separate verb of contact is not expressed in this event, the agent-undergoer contact is (optionally) recovered from the context. Therefore, it this may indicate that there is indeed a phonologically syntactic position whose content can be recovered from context (just as happens with other grammatical phenomena). Further analysis would be needed to prove this point.

7.3.1.3 *Separation* Head

As proposed in (122), the intermediate *separation* head, as an add-on substructure added to Continuous Contact, differentiates the structure of Initial Contact from Continuous Contact in agentive events. Therefore, taking out the *separation* head in an event with an Initial-Contact interpretation is predicted to lead to either an ungrammatical result (under a mono-eventive reading) or a Continuous-contact interpretation if certain agreement patterns are met for Continuous Contact. This prediction is confirmed for (1), repeated in (128) below for convenience. Excluding the *separation* head *bv'fin* ‘threw’ from (128)a without changing the agreement pattern of the other verbs produces an ungrammatical result (under a mono-eventive reading), which is shown below in (128)b.

(128)

a.	SR	tittije	t̪ɛluʃ	o'go	bv'fin	bœ'fœ
	UR	titie	t̪ɛlu-ɛʃ	o-gor-d	be-ɳʃin-d	be-ʃei-œ
	Gloss	girl	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-SIT-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{Loc})	
		‘The girl [pick_up] threw the sparrow [go] [reach] [sit] the tree top.’				

b.	SR	tittije	tʃeluf	o'go	bæ'fœ
	UR	titie	tʃelu-ef	o-gor-d	be-fœi-æ
	Gloss	girl	sparrow.M-3S.AGR	PV-pick_up-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær
	UR	be-ræs-æst-Ø	ɒ-niʃ-t-Ø	deræχt-e	sær
	Gloss	PV-reach-PST-3SM.AGR	PV-SIT-PST-3SM.AGR	tree-K	top
	Role	telicity	resultative	(Xp _{Loc}))
		a. 'The girl [pick_up] the sparrow... (it) went [reach] [sit] into the bucket.'			
		b. #'The girl [pick_up] the sparrow [go] [reach] [sit] the tree top.'			

As we notice in (128)b, a mono-eventive interpretation is unavailable since the agreement patterns in this example denote two separate events coordinated with each other.⁵³ On the other hand, in the absence of the *separation* head in (128)a, repeated below in (129)a, a Continuous-contact interpretation is associated with inflecting the Path, Telic, and Resultative stems as intransitive verbs for the agent *tittije* 'the girl,' as shown in (129)b.

⁵³ A piece of evidence for the lack of mono-eventivity in (128)b is that negating it involves using two separate negative morphemes (*-ne*), one on the stem *o-gor-* 'pick up' and the other one on the stem *be-fœi-* 'go.' This shows that there are two separate events in (128)b. The result of negating (128)b is shown below in (a).

a.	SR	tittijɛ	tʃɛluʃ	o' -no-go		
	UR	titie	tʃɛlu-e-ɛʃ	o- ne -gor-d		
	Gloss	girl.F	sparrow.M-DEF-3S.AGR	PV-NEG-pick_up-PST		
	Role	agent	undergoer	contact		
	SR	'nœfœ	'beræse	'ɒniʃine	deræχte	sær
	UR	ne -fɛi-Ø	be-ræs-e	ɒ-niʃin-e	deræχt-e	sær
	Gloss	NEG-go-3SM.AGR	SBJV -reach-3SM.AGR	SBJV-sit-3SM.AGR	tree-K	top
	Role	Path	telicity	resultative	(Xp _{LOC})
		‘The girl did not pick up the sparrow... (s/he) did not throw the sparrow [go] [reach] [sit] on the tree top.’				

(129)

a.	SR	tittijɛ	tʃɛluʃ	o'go	bɒ'ʃin	bæ'ʃœ
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ɒʃin-d	be-ʃei-œ
	Gloss	girl	sparrow.M-3S.AGR	PV-pick_up-PST	PV-throw-PST	PV-go.PST-3SM.AGR
	Role	agent	undergoer	contact	separation	Path
	SR	beræ'sæs	ɒ'niʃ	deræχte	sær	
	UR	be-ræs-æst-∅	ɒ-niʃ-t-∅	deræχt-e	sær	
	Gloss	PV-reach-PST-3SM.AGR	PV-SIT-PST-3SM.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{Loc})	
		'The girl [pick_up] threw the sparrow [go] [reach] into the bucket.'				
b.	SR	tittijɛ	tʃɛluʃ	o'go	bɪʃ'ʃijɛ	
	UR	titie	tʃɛlu-ɛʃ	o-gor-d	be-ʃei-ɛ	
	Gloss	girl	sparrow.M-3S.AGR	PV-pick_up-PST	PV-go.PST-3S.AGR	
	Role	agent	undergoer	contact	Path	
	SR	beræ'sæste	ɒ'niʃte	deræχte	sær	
	UR	be-ræs-æst-ɛ	ɒ-niʃ-t-ɛ	deræχt-e	sær	
	Gloss	PV-reach-PST-3S.AGR	PV-SIT-PST-3S.AGR	tree-K	top	
	Role	telicity	resultative	(Xp _{Loc})	
		'The girl [pick_up] carried the sparrow [go] [reach] on the three.'				

As we notice, each of the events in (129)a and (129)b has a mono-eventive interpretation. However, due to the difference in their morphological-marking patterns, example (129)a is associated with an Initial-Contact agentive event, and example (129)b has a Continuous-Contact interpretation.

In both of the events in (129)a and (129)b, *tittijɛ* 'the girl' is interpreted as the agent, who picks up the undergoer of motion *tʃɛlu* 'the sparrow' (i.e., establishes contact with the undergoer). However, the girl in (129)a breaks off the agent-undergoer contact by throwing the sparrow. In effect, it is the sparrow in this event that undergoes the motion along the Path, reaches the place denoted by the Xp_{Loc} (i.e., top of the tree), and attains the resting state of *sitting* on top of the tree.

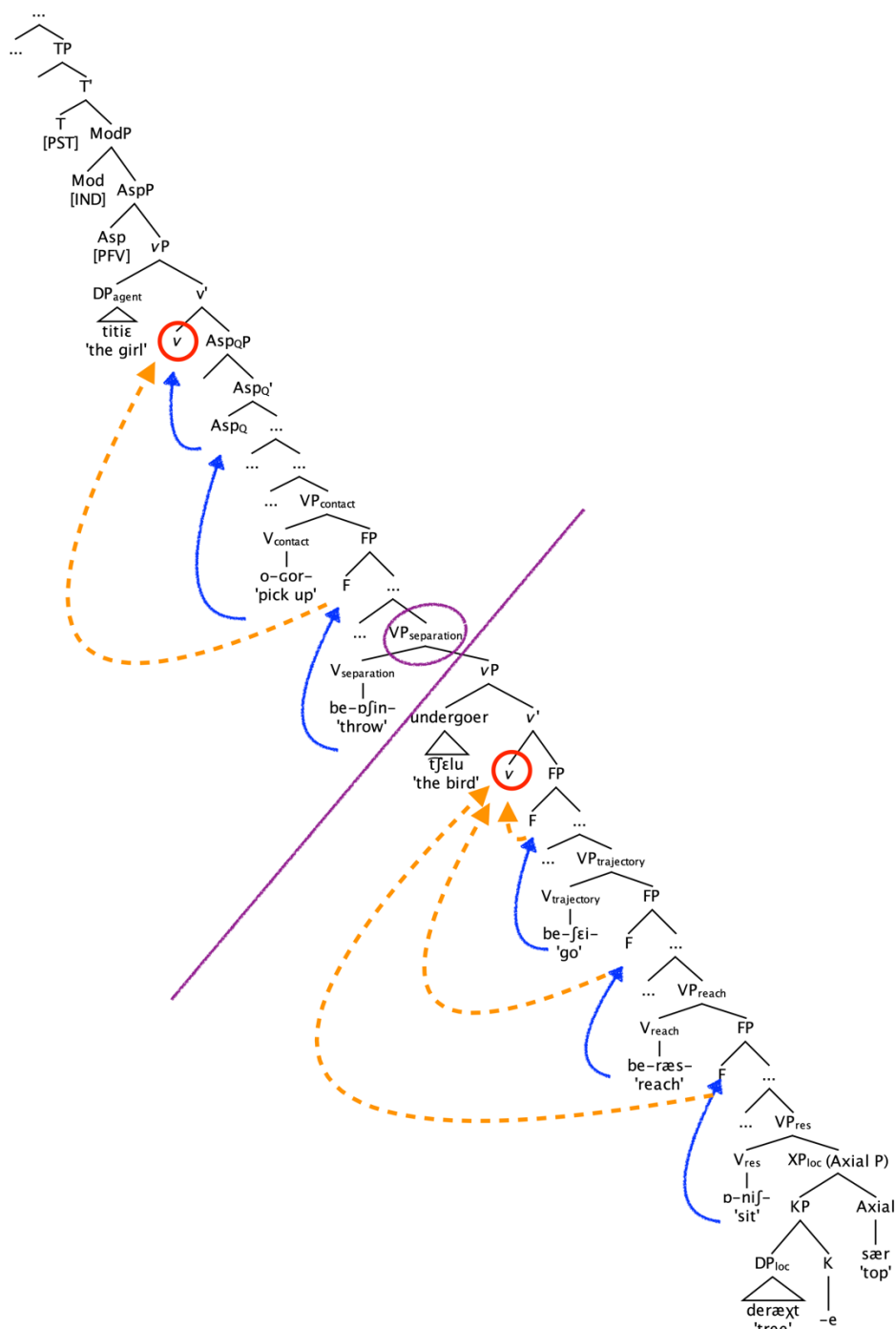
On the other hand, in (129)b, no *separation* head denotes breaking off the agent-undergoer contact, and the morphological markings of the verbs produce an interpretation in which the girl herself

moves along the Path of motion, reaches the tree, and sits on top of it.⁵⁴ Structurally, the two distinctly different morphological patterns discussed above for (129)a and (129)b provide evidence for the hypotheses in (122)a and (122)b repeated below in (130) for convenience.

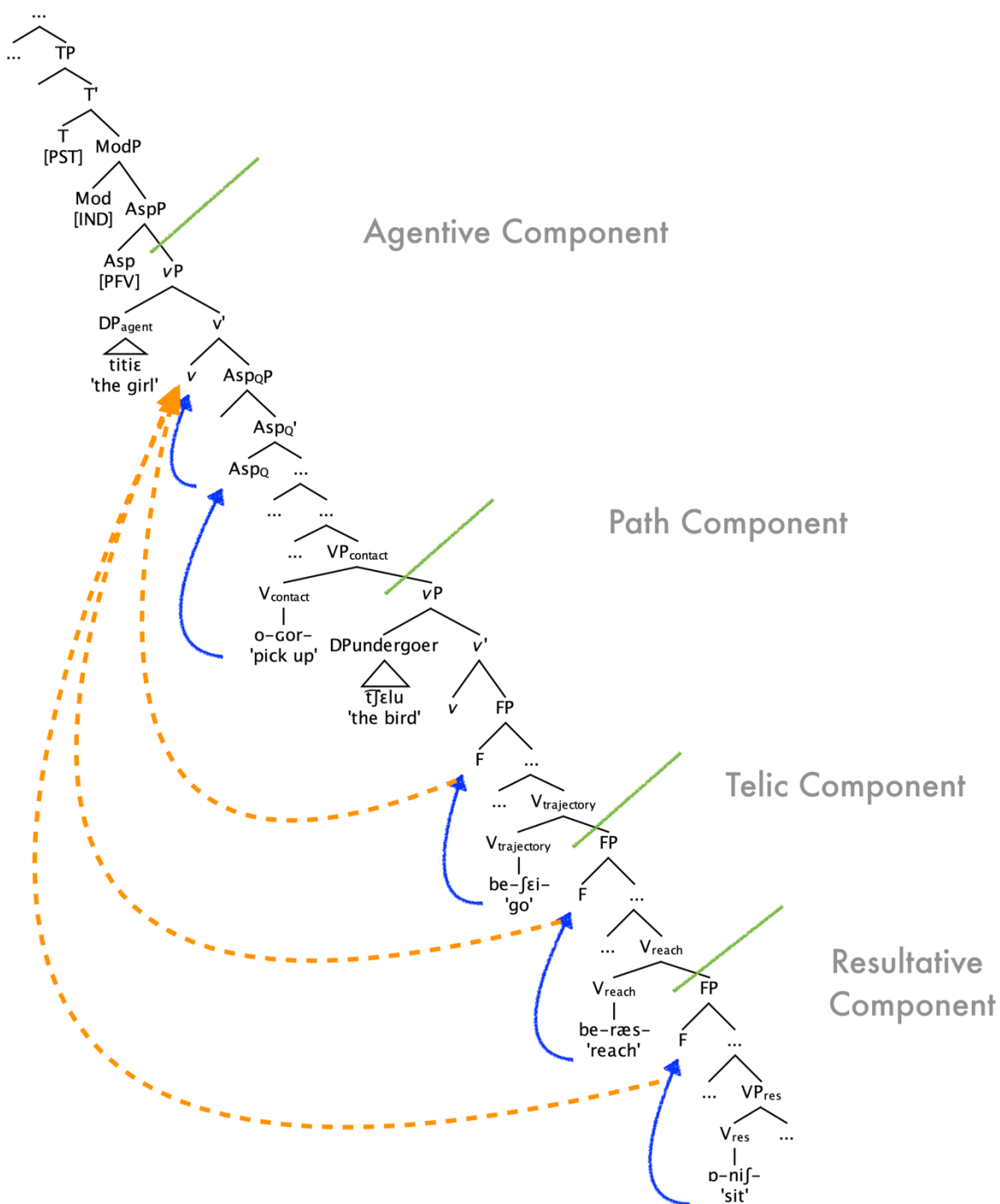
⁵⁴ A scenario related to this event can be a girl who finds a sparrow, which has fallen out of its nest. The girl then picks up the sparrow to carry it back to the top of the tree, where its nest is.

(130)

a. Initial-contact agentive event (129)a



b. Continuous-Contact agentive event (129)b



We notice in the Initial-Contact agentive event in (129)a that the verb stems in the Path, Telic, and Resultative components (i.e., *be-ʃei-* ‘go,’ *be-ræs-* ‘reach,’ and *v-nif* ‘sit’) are inflected as intransitive verbs for the undergoer *tʃɛlu* ‘the sparrow’ in the presence of the intermediate *separation* head *bvʃin* ‘threw’ in this event. On the other hand, the verb stems in the Agentive component (i.e., *oʔgo* ‘pick up’ and *be-ɲʃin-* ‘throw’) are conjugated as transitive verbs for the agent *tittije* ‘the girl’ in this example. These inflectional patterns provide supporting evidence for the validity of the structure in (130)a for Initial-Contact agentive events like (129)a. Particularly, the inflection of the verb stems in the Path, Telic, and Resultative components in (129)a for the undergoer *tʃɛlu* ‘the sparrow,’ rather than for the agent *tittije* ‘the girl,’ provides evidence for (a) these stems’ lack of movement to the agent-introducing head (*v*) due to the presence of the *separation* head and, hence, (b) their movement that only reaches the internal-argument introducing head (*v*). In addition, the conjugation of the verb stems in the Agentive component in (129)a for the agent *tittije* ‘the girl,’ supports their movement to the external-argument introducing head (*v*).

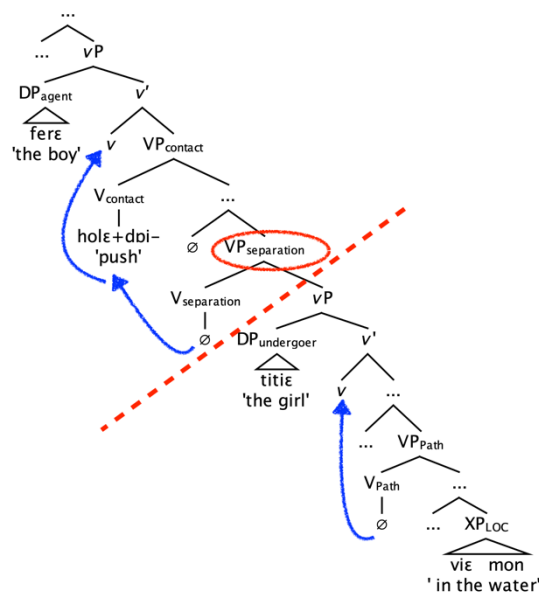
On the other hand, (129)b differs from (129)a with respect to its sub-eventive decomposition because it lacks a separation head like *bvʃin* ‘threw.’ As we notice in (129)b, all the verbs in the Path, Telic, and Resultative components (i.e., *be-ʃei-* ‘go,’ *be-ræs-* ‘reach,’ and *v-nif* ‘sit’) as well as the verbs in the Agentive component (i.e. *oʔgo* ‘pick up,’ and *be-ɲʃin-* ‘throw’) are inflected for the agent *tittije* ‘the girl.’ This agreement pattern, thus, provides evidence for the structure in (129)b, in that (129)b, due to its lack of a *separation* head, legitimates the cyclic movement of the stems up to the external-argument introducing head for their inflection for the agent *tittije* ‘the girl.’

The above analysis of the structural differences between Initial and Continuous Contact (i.e., the lack or presence of an intermediate *separation* head) thus helps us identify two different structures for the two different interpretations of (121), repeated below in (131).

(131)	SR	ferɛ	titijɔŋʃ	'hole+ɗɔ	vujɛ	mon
	UR	ferɛ	titie-ɛʃ	hole+ɗɔ	vije	mon
	Gloss	boy.M	girl.F-3S.AGR	push.N-give.PST	water	inside
	Role	agent	undergoer	contact	(XP _{Loc})
		'The boy pushed the girl into the water.'				

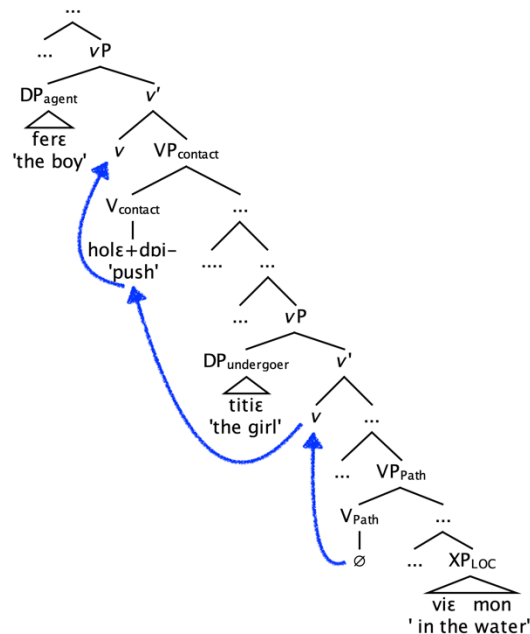
Since for both Initial Contact and Continuous Contact interpretations of (131), there is a movement along the Path into the water, the Path verb in the structures related to both of these interpretations is considered to be phonologically-null. For the Initial-Contact interpretation of (131), in which the boy momentarily pushes the girl and the girl falls into water, the structure below in (132) is proposed, with a phonologically-null *separation* head that blocks the movement of the null Path head upward in the structure into the Agentive component.

(132)



On the other hand, for the Continuous-Contact interpretation of (131), in which the agent *ferε* ‘the boy’ participates actively in the motion related to the undergoer *tittije* ‘the girl,’ the structure below in (133) is proposed. The lack of a *separation* head in this structure, allows the null Path verb to move up to the agentive head (*v*) and, thus, it can be interpreted as relating the agent *ferε* ‘the boy’ and the undergoer *tittije* ‘the girl’.

(133)



A piece of evidence for the validity of the structures proposed for (131) is that if the Path verb is phonologically expressed for both interpretations, it will be inflected for the undergoer *tittije* ‘the girl’ in the Initial-contact interpretation and for the agent *ferε* ‘the boy’ in the Continuous-contact interpretation. These inflectional patterns provide evidence for the movement of the Path stem only up to the internal-argument introducing head in (132) and its movement to the external-argument

introducing head in (133). The example below in (134) shows how the null Path verb in (131) is expressed in an Initial-contact agentive event.

(134)	SR	ferε	titijɲʃ	'hole+ɗɒ	bif'fiε	vujε	mon
	UR	ferε	titie-εʃ	hole+ɗɒ	be-ʃei-ε	vije	mon
	Gloss	boy.M	girl.F-3S.AGR	push.N-give.PST	PV-go.PST- 3SF	water	inside
	Role	agent	undergoer	contact	Path	(XP _{Loc})
		'The boy pushed the girl [go] into the water.'					

In (134), the stem denoting movement along the Path *bif'fiε* 'went' is inflected as an intransitive verb for the undergoer *tittije* 'the girl' as a third-person singular feminine noun. This morphological marking denotes the movement of the girl along the Path without the participation of the agent *ferε* 'the boy' in an Initial-contact event. On the other hand, an expressed Path verb for the Continuous-contact interpretation of (131) will be inflected for the agent *ferε* 'the boy' as a third-person singular masculine noun, as shown below in (135). This morphological marking denotes the agent's active participation in the motion along the Path.

(135)	SR	ferε	titijɲʃ	'hole+ɗɒ	bæ'fæ	vujε	mon
	UR	ferε	titie-εʃ	hole+ɗɒ	be-ʃei-∅	vije	mon
	Gloss	boy.M	girl.F-3S.AGR	push.N-give.PST	PV-go.PST- 3SM	water	inside
	Role	agent	undergoer	contact	Path	(XP _{Loc})
		'The boy pushed the girl [go] into the water.'					

Depending on several factors, variations exist in the morphological marking of verbs with regard to the degree of the participation of agents and undergoers in agentive events. For instance, (135) can be stated in another way, in which the Path verb is conjugated for both the agent *ferε* 'the boy' and the undergoer *tittije* 'the girl' as a transitive verb. This inflectional marking, produces an interpretation, that is slightly different from the interpretation in (135), as shown below in (136).

(136)	SR	ferε	titijɲʃ	'hole+ɗɒ	bi'jinde	vujε	mon
	UR	ferε	titie-εʃ	hole+ɗɒ	be-ʃei- inde	vije	mon
	Gloss	boy.M	girl.F-3S.AGR	push.N-give.PST	PV-go.PST- 3SP	water	inside
	Role	agent	undergoer	contact	Path	(XP _{Loc})
		'The boy pushed the girl [go] into the water.'					

As we see in (136), with a mono-eventive reading, the third-person plural agreement morpheme -*inde* on the Path verb *bi'jinde* 'went' refers to both the agent and the undergoer. This sub-type of Continuous Contact can be interpreted with regard to a scenario in which both the boy and the girl willingly went into the water (e.g., as they were playing).

The slight differences in interpretations, necessitates the creation of systematic classifications of the sub-groups within each contact type (i.e., Initial and Continuous Contact) . Below in 7.3.2, two sub-types of Initial Contact are identified. Then in 7.3.3, four different sub-types of Continuous Contact are distinguished. Since interpretations arise out of structures in our framework, each sub-type is given a different syntactic operation that distinguishes its unique interpretation from the other sub-types within the same contact group. However, the scope of this dissertation is limited to the identification of these differences in interpretation together with some notes on the way they are related to the hypotheses of this chapter. The subtle structural differences among different sub-types within each contact group can be investigated in further studies.

7.3.2 Initial Contact Sub-types

Two sub-types of Initial Contact were identified based on the video clips used for this study. Structurally, these two sub-types are basically the same (as shown by (122)b) because they share the *separation* head as part of Initial Contact. However, the two interpretations imply different structural processes, which can be analyzed in future studies

7.3.2.1 Sub-type 1: Agent's and Undergoer's Displacement

In this sub-type, an agent establishes contact with an undergoer and subsequently breaks the contact. The undergoer then moves from one place to another by itself and without the involvement of the agent in the motion. Clip 0124, shown below in Figure 6.1, represents this sub-type of Initial Contact. As this clip shows, the girl (the agent) initiates the motion of the sparrow by releasing it, and then the sparrow itself moves along the Path to the fence.



Figure 6.1 Clip 0124

An example related to clip 0124 is example (122).

(122)

[0124STAMT]

SR	tittije	tæppi	sære	tʃeluf	'veledn
UR	titie	tæppe-e	sær-e	tʃelu-e-ef	vel-ε+dn
Gloss	girl.F	hill-GEN	top-LOC	sparrow.M-DEF-3S.AGR	free.N-ADJ+give.PST
Role	agent	(adverbial adjunct	)	undergoer	separation
SR	bo'mε		emvære	roxone	de
UR	b-o'm-ε		em-vær-e	roxone	de
Gloss	PV-come.PST-3SM.AGR		DEM-side-GEN	river	LOC
Role	Path		(adverbial adjunct)	
SR	v'nift		nærði	sær	
UR	v-nift-t-Ø		nærde-e	sær	
Gloss	PV-sit-PST-3SM.AGR		fence-GEN	top	
Role	resultative		(XP _{LOC})	
'The girl released the sparrow from the top of the hill [come] [sit] to this side of the river.'					

As shown by (122), the verbs in the Path and the Resultative components (*bo'mε* 'came' and *v'nift* 'sat,' respectively) are inflected for the undergoer *tʃelu* 'sparrow, a third-person singular masculine noun, while the *separation* head *'veledn* 'threw' is inflected for (and interpreted as referring to) the agent *tittije* 'girl.' This provides evidence for the hypothesis in (122)b, in that the stems in the

Path, Telic, and the Resultative components move to the internal-argument introducing v , where they are conjugated for their subject in the specifier of lower vP (the trace of the undergoer $\widehat{t\acute{f}elu}$ ‘sparrow’⁵⁵). On the other hand, the *separation* head ‘*veledv*’ ‘threw’ moves up to the external-argument introducing v to be inflected for the agent $\widehat{t\acute{t}ij\epsilon}$ ‘girl.’

7.3.2.2 Sub-type 2: Undergoer’s Change of Orientation/Positional Configuration

In this sub-type, like in 7.3.2.1, an agent breaks the agent-undergoer contact after establishing it. However, only a part of the undergoer (rather than the whole body of it) undergoes some sort of movement (e.g., a change in orientation or positional configuration).⁵⁶ The event represented by clip 1203 in Figure 6.2 below provides an example. As this clip demonstrates, a hand initiates the motion of a bottle and immediately separates from it. As a result, the orientation related to the bottle changes from Vertical to Horizontal.

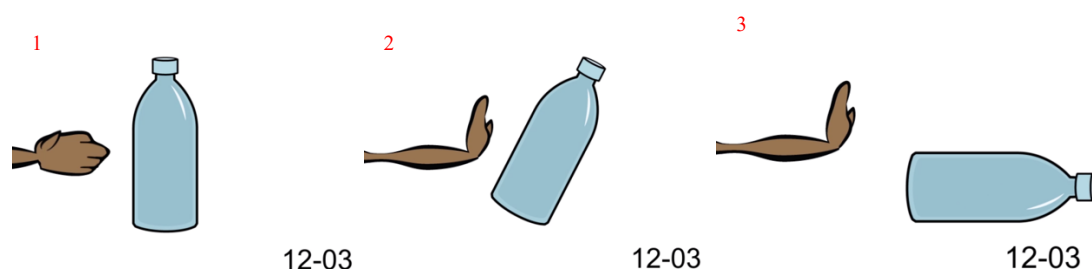


Figure 6.2 Clip 1203

An example expressing the event shown by clip 1203 is represented in (123).

⁵⁵ Note that, although the telic head is null in this example, its subject is interpreted to be the undergoer $\widehat{t\acute{f}elu}$ ‘sparrow.’

⁵⁶ In a change of orientation, the relative physical position of the whole body of an undergoer changes. One such example is an event wherein a bottle falls on the ground and its orientation changes from Vertical to Horizontal. In a change of positional configuration, the compositional shape of an undergoer changes around a pivot. An example of this is a person’s change of configuration from *sitting* to *standing*.

(123)					[1203TANT]	
SR	i	næfær	be'zæntʃɛ	ʃiʃɛ	ɒ'χot	zemin
UR	i	næfær	be-zæn-d-ʃ	ʃiʃɛ	ɒ-χot-Ø	zemin
Gloss	NUM:one	person	PV-hit-PST-3S.AGR	glass.M	PV-lie.PST-3SM.AGR	ground
Role	(agent	) separation		undergoer	orientation change	XP _{Loc}
	'A person hit the glass [lie] on the ground.'					

In the example above, the verb denoting the change of orientation from Vertical to Horizontal is expressed as *ɒ'χot* 'lied down.' Since this verb is related to the movement of the undergoer (*ʃiʃɛ* 'the glass'), it is conjugated for *ʃiʃɛ* 'the glass' using a null third-person singular masculine agreement morpheme. This provides further evidence for the structure in (122)b, according to which verbs in the Path, Telic, and Resultative components are conjugated for an undergoer in Initial Contact.⁵⁷ Because the undergoer *ʃiʃɛ* 'the glass' is not moved from one place to another in this sub-type, merging verbs of Path would produce ungrammatical results in the example above, as shown by (124).

(124)	SR	*i	næfær	be'zæntʃɛ	ʃiʃɛ	bœ'ʃœ	ɒ'χot	zemin
	UR	i	næfær	be-zæn-d-ʃ	ʃiʃɛ	be-ʃɛi-Ø	ɒ-χot-Ø	zemin
	Gloss	NUM:one	person	PV-hit-PST-3S.AGR	glass.M	PV-GO.PST-3SM.AGR	PV-lie.PST-3SM.AGR	ground
	Role	(agent	) separation		undergoer	Path	orientation	XP _{Loc}
	**'A person hit the glass[go] [lie] on the ground.'							

7.3.3 Continuous Contact Sub-types

Four sub-types of Continuous Contact were identified based on the video clips used for this study. The structures related to all of these sub-types are hypothesized, based on (122)a, to be basically the same due to the lack of a *separation* head, hence inflecting all of the verbal heads for the agent in Continuous Contact. The four different interpretations, however, imply different structural

⁵⁷ It is not easy to identify whether verbs denoting a change of orientation or positional configuration belong to Path, Telic, or Resultative heads. Since the scope of this study cannot go much beyond MPs expressing movement from one place to another, these categorizations can be done in future studies.

processes, which can be dealt with in future studies. Below, the four sub-types of Continuous Contact are listed together with an example for each sub-type.

7.3.3.1 Sub-type 1: Agent's and Undergoer's Displacement (Same Path)

In this sub-type, an agent establishes contact with an undergoer and moves from one place to another. As a result of the agent's displacement, the undergoer is also displaced. For example, clip 0615, shown by Figure 6.3, shows a person (agent) who carries away a duck up a hill into a nest.



Figure 6.3 Clip 0615

Example (46), repeated below in (125), expresses clip 0615.

(125)					[0615TANT]
SR	ferɛ	ærdækɒf	o'go	be'be	
UR	ferɛ	ærdækɛ-e-ɛʃ	o-gor-d	be-bær-d	
Gloss	boy.M	duck.F-DEF-3S.AGR	PV-pick_up.TR-PST	PV-carry_away.TR-PST	
Role	agent	undergoer	contact	Path	
SR	ɒ'no	loni	mon		
UR	ɒ-n-di	lonɛ-e	inside		
Gloss	PV-put.TR-PST	nest-3S.GEN	inside		
Role	telicity	(Xp _{LOC})			
	'The boy [pick_up] carried [put] the duck into its nest.'				

Since (125) denotes a Continuous Contact, all the verbs (*o'go* 'picked up,' *be'be* 'carried away,' and *ɒ'no* 'put') are inflected (as transitive verbs) for the agent *ferɛ* 'boy' as a third-person singular noun. This provides evidence for the hypothesis in (122)a, based on which all the verbs in

Continuous Contact move to the specifier of the external-argument introducing v higher in the structure to be inflected for the agent.

7.3.3.2 Sub-type 2: Agent's and Undergoer's Displacement (Parallel Paths)

In this sub-type, like in 7.3.3.1, an agent moves from one place to another while keeping Continuous Contact with an undergoer and brings about the undergoer's movement. However, this sub-type is different from 7.3.3.1 in that agent and undergoer in this sub-type move along two separate but parallel Paths simultaneously. An example of this is the event is shown by clip 0803, which is represented below in Figure 6.4. In the event related to this example, a girl, holding a kite cord in her hand moves on the ground (Path₁), which is different but still in a parallel-distance relationship with the Path in the air undergone by the kite (Path₂).

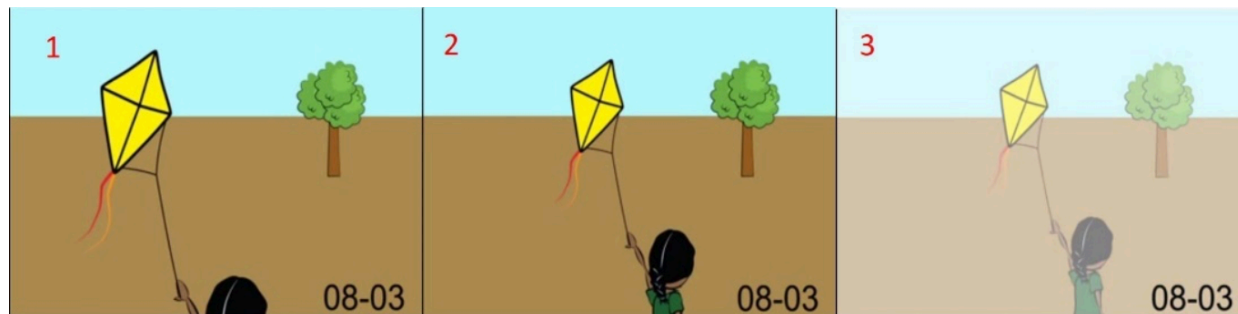


Figure 6.4 Clip 0803

Example (126) expresses the event represented by Figure 6.4.

(126)

[0804TANT]

SR	titijɛ	bɔdbɔdækɛf	tɔ	be'ge	bi'ʃijɛ
UR	titie	bɔdbɔdæk-e-ɛf	tɔ	be-ger-d	be-ʃɛi-ɛ
Gloss	girl.f	kite-DEF-M	thread.M	grab-PST	pv-go.PST-3SF
Role	agent	(undergoer	)	contact	Path
SR	bæʃ'tɔjɛ	deræxte	pælef		
UR	be-æʃt-v-ɛ	deræxt-e	pælef		
Gloss	PV-stand-PST-3SF	tree-GEN	side		
Role	resultative	(X _{pLOC})		
	'The girl, grabbing the kite cord, went [stand] next to the tree.'				

In the example above, all the verbs are conjugated as intransitive and for the agent (*titije* ‘the girl’) as a third-person singular feminine noun.⁵⁸ This provides a piece of evidence for the hypothesis in (122)a, according to which all the verbs in Continuous Contact move to the external-argument introducing *v* to be conjugated for the agent. Note that since the agent *titije* ‘the girl’ and the undergoer *bvdbvdæk* ‘the kite’ in (126) do not move along the same Path, the result state of *standing* next to the tree is inflected for the agent rather than the undergoer *bvdbvdæk* ‘the kite.’

Compared to the example above in (126), in which all the verbs are inflected for the agent *titije* ‘the girl,’ there are some examples within the same sub-type in which the inflectional patterns vary due to the higher level of the undergoer’s engagement in the motion. For instance, clip 0707 represents an event wherein an agent (a man) moves an undergoer (a child) along a Path, on the slide, which is almost in a parallel-distance relationship to his own Path, taken on the ground by the agent. This clip is shown by Figure 6.5.



Figure 6.5 Clip 0707

Compared to (126), in which the verbs are inflected for the agent, motion verbs describing clip 0707 can be inflected as intransitive verbs for both the undergoer and the agent. The reason for

⁵⁸⁵⁸ Note that this agreement pattern is different from the pattern in Initial Contact since in the latter verbs in the Path, Telic, and Resultative components are inflected as intransitive and for the undergoer.

this inflectional pattern is apparently related to the undergoer's higher level of engagement in the motion in clip 0707 compared to clip 0803 (i.e., kid versus kite). Example (127) expresses the event in video clip 0707.

(127)				[0707TANT]
SR	mærdæk	zɔrineʃ	be'ge	
UR	mærdæk	zɔrin-eʃ	be-ger-d	
Gloss	man.M	child-3S.AGR	PV-take-PST	
Role	agent	undergoer	contact	
SR	bu'minde	særsæri	dʒir	
UR	be-omɛi-indɛ	særsære-e	dʒir	
Gloss	PV-come.PST-3P	slide-K	down	
Role	Path	(XP _{Loc})	
	'The man pushed the child [come] down the slide.'			

Separate syntactic operations should have resulted in the inflectional pattern of (127) to mark the engagement of the undergoer in the motion. Although in (127) the verb *bu'minde* 'came' is conjugated for third-person plural (referring to both *mærdæk* 'the man' and *zɔrin* 'the child'), it is still interpreted for the agent (*mærdæk* 'the man'), which in turn provides evidence for our hypothesis in (122)a. In addition, the way an undergoer's engagement in an event affects the morpho-syntactical patterns and operations is an interesting topic for future research.

7.3.3.3 Sub-type 3: Only Undergoer's Displacement

In this sub-type, an agent moves an undergoer from one place to another through Continuous Contact and without displacing herself/himself (only a part of an agent, like a hand, undergoes some motion to move an undergoer). For instance, Clip 1103, shown by Figure 6.6, represents a person who bends and moves a child from the ground to the top of a table.



Figure 6.6 Clip 1103

The example in (128) expresses the event in clip 1103.

(128)

[1103TANT]

SR	innε	zejnije	'χolɒmbeje	i	dine	zorine
UR	innε	zeiniε	χol-ε+me-be-ε	i	dine	zorin-e
Gloss	one	woman	bent-ADJ+IND-become.PRS-3SF.AGR	one	CLF	child-ACC
Role	(agent	)	change of positional config.		(undergoer)
SR	ongo'rije		ɒni'ε			
UR	o-m-gor-iε		ɒ-m-n-iε			
Gloss	PV-IND-pick_up.PRS-3SF.AGR		PV-IND-put.PRS-3SF.AGR			
Role	contact		telicity			
SR	t̪fui	mize	sær			
UR	t̪fui	mize	sær			
Gloss	wood-ADJ	table-GEN	top			
Role	(XP _{Loc})				

‘A woman [bend], [pick_up] puts a child on top of the wooden table.’

As shown by (128), all the verbs in this example are conjugated as transitive verbs for the agent. Since in this sub-type an undergoer is displaced, the first impression is that merging a verb of Path will produce a grammatical result. However, this prediction proves to be incorrect because, based on our hypothesis in (122)a, all verbs in Continuous Contact move to the agent-introducing head (i.e., are inflected for agents), and therefore verbalizing a Path verb inflected for an agent produces an ungrammatical result, as shown by (129).

(129)

[1103TANT]

SR	*inne	zejnije	'χolombəje	i	dine	zərine
UR	inne	zeiniε	χol-ε+me-be-ε	i	dine	zərin-e
Gloss	one	woman	bent-ADJ+IND-become.PRS-3SF.AGR	one	CLF	child-ACC
Role	(agent	)	change of positional config.		(undergoer)
SR	ongo'rije		mi'fu	ɒni'je		
UR	o-m-gor-iε		me-ʃei-Ø	ɒ-m-n-iε		
Gloss	PV-IND-pick_up.PRS-3SF.AGR		PV-GO.PRS-3SM	PV-IND-put.PRS-3SF.AGR		
Role	contact		Path	telicity		
SR	tʃui	mize	sær			
UR	tʃui	mize	sær			
Gloss	wood-ADJ	table-GEN	top			
Role	(XP _{Loc})				

*‘ A woman [bend], picks up a child, (it/he) goes, (she) puts (?) on top of the wooden table.’

7.3.3.4 Sub-type 4: Undergoer's Change of Orientation/Positional Configuration

In this sub-type, neither an agent nor an undergoer moves from one place to another. Instead, an agent only changes the orientation or the positional configuration of an undergoer in Continuous Contact with it. Video clip 1105, shown by Figure 6.7 and expressed in example (130), provides an example of this.



Figure 6.7 Clip 1105

- (130)
- | | | | | | |
|-------|--------|-----------------|----------|------------------|--------------------------------|
| SR | mærdæk | zərine | dæs | mege're | 'pɒmijære |
| UR | mærdæk | zərin-e-e | dæst | me-ger-e | pɒ+me-ær-e |
| Gloss | man.M | child.M-DEF-GEN | hand | IND-grab-3SM.AGR | standing.ADJ+IND-do.TR-3SM.AGR |
| Role | agent | undergoer | (contact |) | change of positional config. |
- ‘The man [grab by hand] helps the child [stand] up.’

As shown by (130), all the verbs are conjugated for the agent (*mærdæk* ‘the man’) as transitive verbs, which provides evidence for the movement of their stem to the external-argument introducing head, as proposed in (122)a.

In sum, the morphological patterns related to different sub-types of agentive events within each type (Initial or Continuous Contact) provide evidence for the distinctions made between Initial and Continuous Contact in general, as proposed in (122). In addition, the variations of the morphological markings within each type (i.e. between different sub-types) provide evidence for the possibility of different syntactic operations that distinguish between sub-types.

7.4 Conclusion

This chapter argued that agents are introduced as add-on sub-structures into MP structures through a functional head labeled as *v*. It also syntactically differentiated Initial-Contact from Continuous-Contact agentive events and provided evidence for an intermediate head in Initial Contact that blocks the movement of the heads below the Agentive component into this component. Finally, this chapter also categorized different sub-types within each contact group (Initial/Continuous) and provided evidence for the structural hypotheses for agentivity in Tati MPs.

CHAPTER 8. CONCLUSION

8.1 Closure and Contributions

This dissertation provides a syntactic analysis of MPs in Southern Tati and, thereby, helps us acquire a better understanding of how Language, as a universal phenomenon, expresses MPs. This dissertation makes two significant contributions to the field: first, it provides evidence for the syntactic structure of MPs through dealing with an Indo-European language outside of Europe; second, it contributes to the description, documentation, and analysis of Southern Tati, categorized by UNESCO as a minority and ‘definitely endangered’ language of Iran, about which linguistic data is limited and lacks systematicity.

Regarding the first contribution, this study was an attempt to bridge the gap in the syntactic analysis of event structure, which has not been specifically focused on MPs. This dissertation thus provides evidence for the sub-eventive deconstruction of motion, which is more distinguishable because Tati is an SVC language and each of the sub-components of motion are represented using a VP. One particular area of significance is the chapters on SVCs, which use intra- and inter-linguistic tests to provide evidence for the mono-eventivity and the complementation structure of SVCs. As most of the available literature targets SVCs from a descriptive point of view and mostly deals with analytic rather than polysynthetic languages, this study sheds light on the syntactic structure of SVCs in other under-described Iranian languages that are closely related to Southern Tati. Specifically, with regard to the morphological markings of verbs in Tati verbal series, this study shows that, despite a multiplicity of markings for inflectional features, Tati verbal series are still comprised of a single event. Additionally, Tati’s use of systematic morphological patterns

provides concrete evidence for the existence of a c-command based relationship, which proves an underlying structure based on complementation for SVCs.

Another point of significance is with regard to telicity. Borer (2005) discussed that telicity is the result of range assignment to Asp_Q, either through a morpheme in the head or through a *subject of quantity* (*soq*): a constituent in the specifier position of Asp_QP, which is usually an internal argument.⁵⁹ However, she pointed out that in MPs, a *soq* internal argument cannot result in telicity and left this discussion open. This study contributes to this discussion by showing in Tati MPs that a XP_{REACH} rather than the specifications of an internal argument lead to a telic reading. In addition, this study claimed that a verb of *reaching* is only compatible with a *region* in Svenonius's (2008) terms, which necessitated analyzing the internal structure of XPLOC.

Regarding the Resultative component, this study, unlike some current studies such as Ramchand (2008), discusses that the Resultative component is independent of the Telic component. Last but not least, with regard to agentivity, this study uses Tati morphological patterns to syntactically represent the under-analyzed distinction between Initial and Continuous Contact in agentive events.

The theoretical contributions of this study are closely related to the status of Tati as an endangered language of Iran: most of the linguistic work on Tati lacks systematicity and specificity, and a lot of valuable data gathered on the language within the community are lost due to a lack of resources

⁵⁹ Borer (2005) referred to *quantity* as measurable, structural, and quantifiable change.

and training on language preservation, documentation, and analysis. This dissertation, despite being mainly focused on the structure of MPs, serves a secondary purpose of contributing to the documentation of Tati by providing a vast amount of coded data through examples. Additionally, the author of this dissertation, through being a native speaker of the language is privileged in having an understanding of the complex interfaces between morphological, phonological, and syntactic systems of the language, which have also been reflected in this research.

8.2 Areas for Future Research

Despite the contributions mentioned above, relevant questions have been raised by this study that are left unanswered due to the restrictions of time and scope. More detailed analysis of the general properties of Tati and, its morphological system, especially regarding its agreement system, can be the target of future studies.

With respect to the sub-eventive decomposition of motion events, the internal structure of the 3-D Path component and its contribution to the analysis of other components, especially the components merging above and below it (i.e., the Agentive and Telic components) can be analyzed in the future.

Regarding SVCs, whether the analysis provided for MPs is extended to other verbal series (presumably SVCs) outside of MPs, the compatibility of the analysis provided by this dissertation with those series is a potential area to be explored. In addition, more supporting evidence can be provided for the mono-eventivity of verbal series expressing MPs, despite the abundance of the morphological markers on verbs, for ruling out bi-clausality and multi-clausality.

With regard to telicity, the way in which the outer Asp head can interact with and affect the telicity value of the event through its interaction with the internal telic substructure (AspQP) provides an interesting question for future study, as does the complex internal structure of XP_{Loc} and its interaction with telicity.

Regarding the Resultative component, further research can be conducted about the interaction between the dynamicity/stativity of an expressed verb of result and the mono-clausality/ multi-clausality of the utterance. Furthermore, the restrictions imposed by the head of *resP* on its complement, as opposed to those imposed by the head of Telic component on its complement, can be analyzed in the future as well.

Finally, though this dissertation shows a structural difference between Initial and Continuous Contact in agentive events, the structures do not reflect the fine-grained distinctions within each contact type between their sub-types. Future research, therefore, can target different syntactic operations that produce different interpretations as well as morphological patterns for each sub-type.

APPENDIX A. THE LOCATION OF TAKESTAN IN IRAN



Source: Google. (n.d.). *Takestan, Qazvin Province, Iran*. Retrieved on 07/20/2019 from <https://goo.gl/maps/CdFE9JfmWH2>

APPENDIX B. TAKESTANI AGREEMENT MORPHEMES

	Person	singular	plural
simple present, progressive present.	1st	[-em(ε)]	[-om(ε)]
	2nd	[-i]	[-v]
	3rd masc.	[-e]	[-ende]
	3rd fem.	/-iε/→[-i-j-ε]	[-ende]

Agreement morphemes for both transitive and intransitive verbs with a present stem

	Person	singular	plural
simple past, imperfective	1st	[-im(ε)]	[-im-on]
	2nd	[-ij(ε)]	/-i-on/→[-i-j-on]
	3rd masc.	∅	[-inde]
	3rd fem.	[-ε]	[-inde]
simple perfect, progressive perfect	1st	/-æ-im(ε)/→[-ε-im(ε)]	/-æ-im-on/→[-ε-jm-on]
	2nd	/-æ-ij(ε)/→[-ε-ij(ε)]	/-æ-i-on/→[-ε-j-on]
	3rd masc.	[-i-∅]	[-i-nde]
	3rd fem.	/-i-v/→[-i-j-v]	[-i-nde]
plu-perfect	1st	/-æ-v-im(ε)/→[-ε-v-im(ε)]	/-æ-v-im-on/→[-ε-v-im-on]
	2nd	/-æ-v-ij(ε)/→[-ε-v-ij(ε)]	/-æ-v-i-on/→[-ε-v-i-j-on]
	3rd masc.	/-æ-v-i∅/→[-ε-v-i∅]	/-æ-v-inde/→[-ε-v-inde]
	3rd fem.	/-æ-v-iε/→[-ε-v-i-j-ε]	/-æ-v-inde/→[-ε-v-inde]

Agreement morphemes for intransitive verbs with a past stem.

APPENDIX B. TAKESTANI AGREEMENT MORPHEMES (CONTINUED)

	Person	singular	plural
simple past, imperfect	1st	/-em(ε)/	/-em-on/
	2nd	/-i/	/-i-on/→[-i-j-on]
	3rd masc.	/-eʃ(ε)/	/-eʃ-on/
	3rd fem.	/-eʃ(ε)/	/-eʃ-on/
simple perfect, continuous perfect	1st	/-i-m(ε)/	/-i-m-on/
	2nd	/-i-ø /	/-i-on/→[-i-j-on]
	3rd masc.	/-i-ʃ(ε)/	/-i-ʃ-on/
	3rd fem.	/-i-ʃ(ε)/	/-i-ʃ-on/
plu-perfect	1st	/-æ-v-im(ε)/→[-ε-v-im(ε)]	/-æ-v-im-on/→[-ε-v-im-on]
	2nd	/-æ-v-i/→[-ε-v-i]	/-æ-v-i-on/→[-ε-v-i-j-on]
	3rd masc.	/-æ-v-iʃ(ε)/→[-ε-v-iʃ(ε)]	/-æ-v-inde/→[-ε-v-inde]
	3rd fem.	/-æ-v-iʃ(ε)/→[-ε-v-iʃ(ε)]	/-æ-v-inde/→[-ε-v-inde]

Agreement morphemes for transitive verbs with a past stem

APPENDIX C. TAKESTANI VERBAL STEMS

no.	preverb-past root	preverb-present root	bare meaning
1	æ-gerd	æ-ger	buy, take
2	ɒ-der-d-en-æst	ɒ-der-d-en	make (sb) pee
3	ɒ-grd-æst	ɒ-gærd	return
4	ɒ-kæt	ɒ-gen	stop (snow, rain)
5	ɒ-kund	ɒ-kun	beat
6	ɒ-ndɒst	ɒ-ndɒr	find
7	ɒ-nɒ	ɒ-ne	put
8	ɒ-niʃt	ɒ-niʃ-in	sit
9	ɒ-pærd	ɒ-pær	win
10	ɒ-pærit	ɒ-pæriʒ	sift
11	ɒ-pærs-æst	ɒ-pærs	ask
12	ɒ-pærz-d-en-æst	ɒ-pærz-d-en	sift
13	ɒ-pɒt	ɒ-pɒtʃ	splash
14	ɒ-pitʃ-d-en-æst	ɒ-pitʃ-d-en	hide
15	ɒ-rbind	ɒ-rbin	cut (head)
16	ɒ-rit	ɒ-riʒ	sift
17	ɒ-særd	ɒ-sær	move aside
18	ɒ-ʃɒld	ɒ-ʃɒl	squeeze
19	ɒ-furd	ɒ-fur	make embarrassed, wash sordidly
20	ɒ-tɔʃt	ɒ-tɔʃ	beat
21	ɒ-tʃɒlt-en-æst	ɒ-tʃɒlt-en	move (water in a pot)
22	ɒ-tʃur-i-æst	ɒ-tʃur-i	fall (star), pour
23	ɒ-vænd	ɒ-væn	shake (tree for fruit)
24	ɒ-væʃt-en-æst	ɒ-væʃt-en	shake (cloth in air)
25	ɒ-vit	ɒ-viʒ	spread (cloth on rope for drying)
26	ɒ-zænd	ɒ-zæn	beat
27	ɒ-ʒɒlt-en-æst	ɒ-ʒɒlt-en	make dirty
28	ɒ-ʒɒrd	ɒ-ʒɒr	drink
29	ɒ-ʒɒst	ɒ-ʒɒs	close (door, window: not completely)
30	ɒ-ʒot	ɒ-ʒos	sleep
31	ɒ-niʃt	ɒ-niʃ	sit
32	o-gord	o-gor	pick up
33	o-kæʃt	o-kæʃ	rinse
34	o-pær-æst	o-pær	evaporate
35	o-pɒm-æst	o-pɒm	measure (with cup)
36	o-ʃgæld	o-ʃgæl	probe
37	u-lisd	u-lis	lick
38	u-rbind	u-rbin	cut into pieces (wool, milk)
39	u-sind	u-sin	rub

40	u-fōrd	u-fōr	open
41	u-tfīnd	u-tfīn	pick up (one by one)
42	u-vær-d-en-æst	u-vær-d-en	show
43	u-væz-æst	u-væz	dance
44	u-vit	u-viȝ	eradicate, cut (root)
45	be-ōrd	be-ōr	water (garden)
46	be-omēi	be-ōi	come
47	be-bænd-i-æst	be-bænd-i	become closed
48	be-bæst	be-bænd	close
49	bō-gōst	bō-gōn	insert
50	bō-vit	bō-viȝ	hang
51	be-vōft	be-vōz	lose
52	bēi-send	bēi-sen	ignite, inflate, turn on
53	bi-pit	bi-pitf	twist
54	bæ-ræt	bæ-ræȝ	send
55	be-ændot	be-ændōȝ	hang
56	be-ænzænd	be-ænzæn	break (into pieces: bread)
57	be-æfon-æst	be-æfon	hear
58	be-æftōi	be-æft	stand
59	be-ōfīnd	be-ōfīn	throw
60	be-bærd	be-bær	take (away)
61	be-bes-æst	be-bes	worn out
62	be-fæm-æst	be-fæm	understand
63	be-gærd-æst	be-gærd	turn, return
64	be-gæz-æst	be-gæz	sting
65	be-gerd	be-ger	hold
66	be-kælnf-æst	be-kælnf	scrape
67	be-kæf-æst	be-kæf	draw, pull
68	be-kæt	be-gen	fall
69	be-kōv-æst	be-kōv	probe
70	be-kerd	be-ker	plant, make (sb) enemy
71	be-læg-æst	be-læg	swag
72	be-lærz-æst	be-lærz	tremble
73	be-lōv-æst	be-lōv	bark
74	be-mōl-d	be-mōl	rub
75	be-mōs-æst	be-mōs	stick
76	be-pær-æst	be-pær	jump, fly
77	be-pō-æst	be-pō	watch out
78	be-pet	be-petf	cook, bake
79	be-rænz-æst	be-rænȝ	get offended
80	be-ræs-æst	be-ræs	ripe, reach
81	be-rōk-d-en-æst	be-rōk-d-en	persuade, force
82	be-rōm-d-en-æst	be-rōm-d-en	persuade, force

83	be-erbæn-æst	be-erbæn	cry
84	be-erbet	be-erbeȝ	roast
85	be-ærvænd	be-ærvan	clean (house)
86	be-ervōrd	be-ervōr	grab
87	be-eryænd	be-eryen	buy, exchange
88	be-esbet	be-esbeȝ	lick
89	be-send	be-sen	rub (skin, pot)
90	be-sest	be-senȝ	cut (threat, rope, chain)
91	be-eȝwōld	be-eȝwōl	push
92	be-eȝwōt	be-eȝwōȝ	rupture (cloth)
93	be-eȝkæs-æst	bō-eȝkæs	look
94	be-eȝkest	be-eȝkenȝ	break
95	be-et	be-enȝ	water (garden)
96	be-tæi-i-æst	be-tæi-i	spoil, decay
97	be-tæhȝd	be-tæhȝf	beat (in game)
98	be-tōȝ-æst	be-tōȝf	scrape
99	be-tōv-d-en-æst	be-tōv-d-en	twist (thread)
100	be-tȝærd	be-tȝær	graze, pasture
101	be-tȝv-æst	be-tȝv	have/feel cold
102	be-vænd	be-væn	scatter
103	be-væz-æst	be-væz	jump
104	be-vōr-i-æst	be-vōr-i	fall suddenly
105	be-vet	be-veȝ	knit
106	be-zænd	be-zæn	beat, mix
107	be-zō-æst	be-zō	bear (give birth)
108	be-χænd-æst	be-χænd	smile, laugh
109	be-χend	be-χen	read, study
110	be-χes-æst	be-χes	soak
111	be-iærd	be-iær	do
112	be-duȝt	be-duȝf	milk (from)
113	bi-dut	bi-duȝ	sew
114	be-ilbind	be-ilbin	trample
115	be-nist	be-nis	write
116	be-irbind	be-irbin	cut off
117	bi-rut	bi-ruȝf	sell
118	be-si-æst	be-se	cut
119	be-sut	be-suȝ	burn
120	be-ȝei	be-ȝf	go
121	be-ȝurd	be-ȝur	wash
122	be-tȝīnd	be-tȝīn	pick up (flower, fruit)
123	be-gost	be-go	want
124	be-oȝprd	be-oȝpr	eat
125	be-χo-æst	be-χo	cough

126	be-ȝor-d-en-æst	be-ȝor-d-en	attribute, assign (with pressure), ruin down
127	be-gæł-æst	be-gæł	boil
128	be-kœft	be-kœf	kill
129	be-œmænd	be-min	stay
130	be-œmærd	be-mœr	die
131	be-rænd	be-ræn	run
132	be-ræst	be-ræs	send
133	be-ræt	be-ræȝ	broom, sweep
134	be-tæn-æst	be-tæn	be able
135	be-tæs-æst	be-tæs	flatulent
136	be-tſœr-æst	be-tſœr	drip
137	be-zæn-æst	be-zæn	know
138	be-ȝœmb-æst	be-ȝœmb	shake
139	be-ȝœnd	be-ȝœn	chew
140	be-guz-æst	be-guz	flatulent
141	dæft	der	have, own
142	gærd-æst	gærd	become
143	vdt	vdtȝ	say

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