

# The Grammaticalization of Motion Verbs into Directionals in Chol

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**Abstract**

Grammaticalization is a process by which a lexical item develops a grammatical function. It is a slow and continuous cross-linguistic process. The transition from a lexical to a grammatical item would happen in a chain of overlapping processes where it is generally assumed that conceptual change would precede form change. Chol, amongst other languages, exhibits signs of grammaticalization as the motion verbs become directionals. This paper refers to two models, Hoder 2022 and Heine 1993, used to describe and define the processes used in grammaticalization. Based primarily on these previous works, this paper establishes that most Chol directionals were less advanced in the grammaticalization process with the two most common directionals, ‘toward’ and ‘away’, being more advanced.

## 1 Introduction

This paper will consider the grammaticalization process of motion verbs into directionals. Parallely, it will establish the degree of grammaticalization of directionals in Chol, a Mayan language spoken in Mexico. While the literature lacks to provide a specific definition for directionals, they are generally described as elements that indicate or specify the trajectory of the main predicate in a clause in semantic and functional properties rather than in morphosyntactic terms (Hoder 2022:92).

In Chol, directionals are derived from eleven intransitive verbs of motion. As shown in Table 1 below, the directionals are formally derived by adding the non-finite suffix *-l* to the root of the motion verb (Vazquez, 2011:165). In this language, all intransitive motion verbs were turned into directionals. Other languages like Mam also share this characteristic, but for others, like K’iche’, not all intransitive motion verbs are grammaticalized into directionals (Hoder 2022:164).

	Motion Verbs	Directionals
1	majl ‘to go’	majl-e(l), maj-a, ma ‘away’
2	tyäl ‘to come’	tyäl-e(l), ty-el, t-el, t-e ‘toward’
3	k’oty ‘to arrive there’	k’oty-e(l) ‘here to there’
4	jul ‘to arrive here’	jul-e(l) ‘there to here’
5	ñäm ‘to pass’	ñäm-e(l) ‘pass by’
6	sujty ‘to return’	sujty-e(l) ‘return’
7	käyty ‘to stay’	käyty-ä(l) ‘remain’
8	och ‘to enter’	och-e(l) ‘in’
9	lok’ ‘to exit’	lok’-e(l) ‘out’
10	lets ‘to climb’	lets-e(l) ‘up’

11	ju'b 'to descend'	ju'b-e(l) 'down'
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Table 1: Intransitive verbs to Directionals. (Vazquez 2011:165; Hoder 2022:146)

Chol directionals are considered a minor word class, like pronouns, prepositions, etc. (Vazquez 2011:145) They appear post verbally and are the last element of the verbal complex. Across Mayan language, directionals can appear in chains. For example, Akateko (Zavala 1994:109) allows for up to three directionals to be chained up. Chol allows for two chained directionals, but, as you can see in (1) and (2)<sup>3</sup>, in these cases the last member needs to be either *majlel* 'away' or *tyälel* 'toward', which are the two most frequently used directionals. (Vazquez 2011:168)

- |     |   |                |             |                      |
|-----|---|----------------|-------------|----------------------|
| (1) | tyi   | i-kuch-u-ø     | lok'-el     | majl-el <sup>4</sup> |
|     | PRFV  | A3-carry-TV-B3 | DIR:out-NF  | DIR:away-NF          |
|     | 'He carried it away (e.g. departing from a house).' |                |             |                      |
|     |   |                |             |                      |
| (2) | tyi   | i-chok-o-ø     | ju'b-el     | tyäl-el              |
|     | PRFV  | A3-carry-TV-B3 | DIR:down-NF | DIR:toward-NF        |
|     | 'He threw it down toward here.'                     |                |             |                      |

As can be observed from Table 1, the directionals, *majlel* 'away' or *tyälel* 'toward', exhibit various reduced forms which occur in free variation. Such phonological erosion is typical evidence of grammaticalization. (Vazquez, 2011) This kind of evidence is why it is intriguing to analyze how the grammaticalization process has influenced motion verbs and directionals in Chol.

Spatial orientation seems to have a prominent role in Mayan languages (Hoder 2022:91). This is reflected in the grammar through the use and presence of auxiliaries and directionals to represent space more accurately in the grammar (Haviland 1993:47). Section 2 of this paper will explain grammaticalization models and properties found in Heine 1993 and in Hoder 2022. In section 3, I will discuss how these concepts relate to Chol directionals and try to establish their general (weaker/stronger) degree of grammaticalization.

## 2 Grammaticalization

The view on grammaticalization I will adopt is described in Hoder 2022 and Heine 1993. Hoder's publication represents a thorough examination of the grammaticalization process in various Mayan languages going more in depth than any other article I was able to find, and she expands upon Heine's original work. According to her, grammaticalization is a process where, in certain linguistic contexts, lexical items and constructions begin to develop and serve certain grammatical functions. (Hoder 2022:17) The cross-linguistic process is gradual and unidirectional.

Moreover, it is stated that conceptual changes would precede form change when lexical items are transitioning to grammatical ones (18). This process, called a grammatical chain, is a structure of overlapping stages of the lexical to grammatical development of linguistic entities (23).

Similarly, Heine (1993:54) defines an Overlap Model for grammaticalization composed of four successive grammatical chains relating to different aspects of linguistic behaviors: 1) desemanticization, 2) decategorialization, 3) cliticization, and 4) erosion. Each process will be addressed over the next subsections.

Based on Diwald (2008) and Lehmann (1985), Hoder (2022:24) defines six processes to describe the formal change of grammaticalized items and classify degrees of grammaticalization. In the following table, I

<sup>3</sup> Glosses are: A=Set A (ergative, possessive); B=Set B (absolutive); DET=determiner; DIR=directional; DT=status marker for positional in imperfective; EP=epenthesis; IMPF=imperfective aspect; IV=status marker for intransitive verb in imperfective; NF=non-finite suffix; PART=participle; PIMFV=status marker for positional in imperfective; PL=plural; PLEXC=plural marker for first person exclusive; PPRFV=status marker for positional in perfective; PRFV=perfective, REL=relative pronoun; STAT=stative suffix; TV=status marker for transitive verb in perfective.

<sup>4</sup> All examples are from Vazquez Alvarez 2011, unless specified otherwise.



attempted to associate the processes presented in Heine 1993 with the parameters presented in Hoder 2022 (as you can see in the last column). This will allow me to map Chol directionals on weaker or stronger degrees of grammaticalization.

Parameter	Weak grammaticalization	Process	Strong grammaticalization	Approximative Corresponding Concept(s) in Heine 1993
Paradigmaticity	Source items are loosely part of a semantic field	Paradigmaticization	Target items will come to fill mutually exclusive syntactic roles	Desemanticization
Paradigmatic variability	Source items can be used freely in communications	Obligatorification	Use of the target items will be systematically constrained and obligatory	Decategorialization Desemanticization
Scope	Source items can relate to complex constituents	Condensation	Target item will come to only modify a word or stem	Decategorialization
Bondedness	Source item can stand as an independent word	Coalescence	Target item will need to be affixed or even a phonological feature of the main verb	Cliticization Erosion
Syntagmatic variability	The item can initially appear in various place in the clause	Fixation	Target will be restricted to a specific slot	Cliticization
Integrity	Source items are often polysyllabic and have many semantic features	Attrition	The items will lose semantic features and morphemes to only retain a few or one	Desemanticization Erosion

Table 2: Parameters and processes of grammaticalization (Hoder 2022:24)

### 2.1 Desemanticization

Desemanticization is the process by which a source will be stripped of its semantic content to acquire its target form. In the event of grammaticalization, this process is defined by Heine (1993:54) in three stages. In its initial state, the source conveys a concrete lexical concept. After losing some of this concrete content, it shifts toward the more abstract meaning of the target and acquires a grammatical function. As Hoder (2022:18) mentions, recent studies have been framing the conceptual change with polysemous meanings. The chain of related meanings and uses is a gradient of more lexical to more grammatical meanings. Then, the semantic shifts would depend on a reanalysis of the form-meaning content, rather than content being stripped from the lexical item. This proposes a much more gradual process of conceptual change. While I cannot determine which of these models would be most accurate, I tend to lean more with Hoder 2022 who provides a more precise explanation for these processes Heine’s desemanticization process would generally correspond to the first three

processes in Hoder 2022 (paradigmaticization, obligatorification, and condensation) given that these three processes are also related to the paradigmatic axis and conceptual shifts.

## 2.2 Decategorialization

The term decategorialization refers to the process by which words undergoing grammaticalization will tend to lose morphological markers and syntactic characteristics that are normally associated with their initial lexical category. Heine (1993:55) denotes stages of decategorialization. In its source form, the verb has a full verbal morphosyntax. It will then lose certain verbal properties, like the ability to inflect for aspect, to be negated, or occur in other position in the clause. Target form would be obtained once the verb has lost virtually all its verbal properties. Hence, as a verb is grammaticalized, it loses lexical content to adopt grammatical content (Heine 1993:55). Similarly, Hoder (2022:23) refers to the process as recategorization.

## 2.3 Cliticization

Cliticization is the process through which the source will become a morphophonological appendix to its complement. In its source form, the lexical item, in this case the verb, is an independent word. After losing its status as an independent word, the verb develops into a clitic. If it is further grammaticalized, the verb could develop into an affix. It is also possible that the developing clitic does not merge with the main verb. In that case, the directional could potentially attach to another constituent or become an independent word, like an adverb (Heine 1993:56).

## 2.4 Erosion

The process of erosion, as defined in Heine 1993, is also a sign of grammaticalization. As words are grammaticalized, they may lose some of their phonological substance (Heine 1993:56). The general observation is that grammaticalized forms tend to be shorter than lexical ones. Looking at Table 2 on Hoder’s properties, erosion could be part of bondedness and integrity.

# 3 Discussion: Directionals in Chol

With a better understanding of grammaticalization, we can now analyse how the processes are exhibited in Chol. Through the concepts listed in Table 2, I will be able to establish a general idea of the degree of grammaticalization (weak or strong) in Chol directional.

Motion verbs typically express the movement or trajectory of a figure. Once grammaticalized, those semantic properties shift and the directionals may retain only a schematic meaning of the motion verbs (Hoder 2022:143). As seen previously, this process is called desemanticization. In Chol, we can observe that the combination of a non-motion verb and a directional will not imply literal movement of the referent, which should be the case if directionals retained the same meaning as the motion verbs (147). This is exemplified in (3) and (4) where the directionals *tyälel* and *majlel* still infer a sense of movement to the clause but not a literal meaning of a referent moving toward something.

- (3)

ch'äjäy-em-oñ

tyäl-el

get.sad-PART-B1

DIR:toward-NF

'I came sad.'
- (4)

buch-ul-oñ

majl-el

seat-STAT-B1

DIR:away-NF

'I go seated.'



This is something also observed by Haviland (1993:42) in Tzotzil directionals. He notes that the sense of motion seems to be inferred rather than coming from the syntax, particularly since directionals have no nominal argument. Hence, the semantic movement acts as an adverbial augmentation of the clause's event.

In the Cholan-Tzeltalan family, all directionals encode a sense of motion. The most frequent directionals are deictically anchored (Hoder 2022:145). This is also the case in Chol where *majlel* 'away' and *tyälel* 'toward' reference a motion toward or away from a deictic point. The other nine directionals indicate orientation without deixis (Vazquez 2011:223). Since main verbs of motion are also not deictically oriented, I propose that this semantic development in *majlel* and *tyälel* could be an instance of paradigmaticization, hence making those two directionals mutually exclusive. This could be further evidence that *majlel* and *tyälel* are more grammaticalized than the other directionals. However, while I did not find any example proving or disproving this hypothesis, it would be interesting to ask Chol speakers if constructions stringing *majlel* and *tyälel* one after the other would be grammatical. If this were possible, my hypothesis of paradigmaticization and mutual exclusivity would fail.

On the topic of decategorialization, Heine notes: "once a given expression is transferred from source concept to target concept, that is, from denoting a verb to carrying a grammatical function, it loses its properties characteristic of its former category" (Heine, 1993, p.50). This is observable in Chol in many ways. First, as motion verbs are grammaticalized into directionals, they lose their ability to inflect. The motion verbs listed in Table 1 typically take aspect and person markers. As intransitive verbs, they also receive the status marker *-i* in the perfective aspect, except for *käyty* 'to stay' since it is derived from a positional (Vazquez 2011:166). In (5) and (6), you can see examples of conjugated motion verbs in (a) and the corresponding directionals in (b).

- (5) a. tyi k'oty-i-y-oñ=loñ  
PRFV arrive.there-IV-EP-B1=PLEXC  
'We arrived there.'
- b. mi' i-kuch-ø-o' k'oty-e(l) li tye'=bä  
IMFV A3-carry-B3-PL3 DIR:here.to.there-NF DET wood=REL  
'They carry the wood there.'
- (6) a. ya=x tyi käy-le-y-ø-o'  
there=already PRFV stay-PPRFV-EP-B3-PL3  
'They already stayed there.'
- b. tyi i-pul-b-e-ø **käy-ty-äl** ich  
PRFV A3-burn-APL-DT-B3 DIR:remain-PIMFV-NF chili  
'(to the owl) He left chilis burning.'

Based on the position they take in clauses, Chol directionals are restricted to post-verbal slots and need to be the last member of the verb phrase (Vazquez 2011:165,223). This is also something Haviland (1993:46) notes on auxiliaries and directionals in Tzotzil. He qualifies this behavior as clitic-like. In (7), we see the correct position of a directional and in (8) the sentence is ungrammatical since *ochel* is not right after the main verb.

- (7) Tyi i-chok-o-ø och-el jiñi tyuñ  
PRFV 3A-carry-TV-B3 DIR:in-NF DET rock  
'He threw the rock'
- (8) \*Tyi ichoko jiñi tyuñ ochel  
Intended meaning: 'He threw the rock.' (Coon, 2022:8)

Cliticization does not seem to be at an advanced stage in Chol. While the directional has become an independent word and is distinct from the motion verb, it still has not developed into a clitic, or even further grammaticalized into an affix. However, Heine does mention that such developments are not obligatory (Heine 1993:56). In the same way, I observe that Chol directionals are not yet completely bound to the main verb, which shows less boundedness, but they are fixed to a specific slot showing weaker syntagmatic variability and, so, are more grammaticalized (Hoder 2022:24).

Similarly, the two most used directionals *majlel* ‘away’ and *tyälel* ‘toward’ exhibit various degrees of phonological erosion. ‘Away’ can surface in three ways: *majle(l)*, *maj-a*, and *ma*. ‘Toward’ can surface in five ways: *tyä-e(l)*, *tyäl-e*, *ty-el*, *t-el*, and *t-e* (Hoder 2022:146). Higher degree of phonological erosion also has to do with cliticization. In Hoder’s concept that is equivalent to bondedness, where target items become affixed to the main verb, and integrity, where the target word loses some semantic and morphemic features. Both of which are observed with the two preceding Chol directionals.

Heine (1993) mentions that, by eroding, the grammaticalized item becomes dependent on surrounding phonetic material. He continues that “[s]ince grammaticalization affects only certain uses and contexts of that lexeme, erosion tends to be confined to such contexts while the lexeme is retained in its full form in other contexts.” (Heine, 1993:106-107) Based on this, we would assume that the eroded forms of *majlel* and *tyälel* should be restricted by certain contextual or syntactic constraints, but the data available thus far shows that they appear in free variation (Hoder 2022:146). This suggests that the grammaticalization of those two directionals is not complete. Overtime, a constrained use of the eroded forms may appear. It is also important to note that the nine less-eroded directionals might be showing signs that they will erode more overtime since the last consonant *-(l)* is already optional.

## 4 Conclusion

To conclude, this paper summarized the various processes of conceptual and formal changes that arise in grammaticalization chains. I particularly focused on four concepts presented in Heine 1993: desemanticization, decategorialization, cliticization, and erosion. To map Chol directionals on weaker or stronger degrees of grammaticalization, I also used six parameters (and processes) presented in Hoder 2022: paradigmaticity (paradigmaticization), paradigmatic variability (obligatorification), scope (condensation), bondedness (coalescence), syntagmatic variability (fixation), and integrity (attrition). With this background knowledge, I analyzed Chol directionals. In the grammaticalization process, they would lose some semantic content of the motion verb, but not all as directionals still inferred movement. Upon my observations, I proposed that *majlel* and *tyälel* once deictically anchored, might become mutually exclusive (paradigmaticization) which would be more evidence for their stronger grammaticalization. All Chol directionals have lost their status as verbs since they can no longer inflect and are fixed (weak syntagmatic variability) in a specific position in the clause. Cliticization is weaker but still apparent since directionals must occur after the verb (close to it). By looking at erosion, it was obvious that *majlel* and *tyälel* are more advanced in the grammaticalization process than their peers, who might, however, be on their way toward more phonological erosion. It would be interesting and insightful to compare the grammaticalization of Chol directionals with that of other Mayan languages in more depth. It might allow us to create a more specific Model for the degrees of grammaticalization than the one I was able to use in this paper.

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